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CONTENTS.

PAGE

Human Personality in the light of Hypnotic Suggestion. By FREDERIC W. H. MYERS 1

On some Physical Phenomena commonly called Spiritualistic, witnessed by the Author. By PROFESSOR W. F. BARRETT 25

Note on the above Paper. By PROFESSOR BALFOUR STEWART, F.R.S. . 42

Results of a Personal Investigation into the "Physical Phenomena" of Spiritualism, with some critical remarks on the Evidence for the genuineness of such Phenomena. By Mrs. H. SIDGWICK 45

The Possibilities of Mal-Observation in relation to Evidence for the Phenomena of Spiritualism. By CHARLES C. MASSEY 75

Note on the above Paper, by PROFESSOR H. SIDGWICK, and further Discussion 99

Experiments in Muscle-Reading and Thought-Transference. By MAX DESSOIR 111

On Telepathic Hypnotism, and its relation to other forms of Hypnotic Suggestion. By FREDERIC W. H. MYERS 127

The Calculus of Probabilities applied to Psychical Research. II. By F. Y. EDGEWORTH 189

Automatic Writing. III. By FREDERIC W. H. MYERS 209

Opening Address at the Twenty-fourth General Meeting. By PROFESSOR BALFOUR STEWART, F.R.S. 262

Peculiarities of Certain Post-hypnotic States. By EDMUND GURNEY . 268

Experiments in Thought-Transference. By ANTON SCHMOLL . . . 324

Accounts of some so-called "Spiritualistic" Séances. By PROFESSOR H. CARVILL LEWIS, M.A., F.G.S., and Others 338

The Possibilities of Mal-Observation and Lapse of Memory from a Practical Point of View:—

Introduction. By RICHARD HODGSON 381

Experimental Investigation. By S. J. DAVEY 405

Multiplex Personality. By FREDERIC W. H. MYERS 496

Stages of Hypnotic Memory. By EDMUND GURNEY 515

Note on Certain Reported Cases of Hypnotic Hyperæsthesia. By FREDERIC W. H. MYERS 532

Critical Notices:—

A. Binet and Ch. Féré, *Le Magnétisme Animal*. By EDMUND GURNEY 540

Dr. Gilles de la Tourette, *L'Hypnotisme et les Etats Analogues au Point de Vue Médico-légal*. By O. ELTON 555

Dr. J. Ochorowicz, *De la Suggestion Mentale*. By FRANK PODMORE 562

Library Catalogue 569

List of Members and Associates 587

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SOCIETY FOR PSYCHICAL RESEARCH.

PROCEEDINGS OF THE GENERAL MEETING ON

October 29, 1885.

The seventeenth General Meeting of this Society was held at Queen Anne's Mansions, St. James' Park, on Thursday, October 29, 1885.

PROFESSOR W. F. BARRETT, VICE-PRESIDENT, IN THE CHAIR.

The following paper was read:—

I.

HUMAN PERSONALITY IN THE LIGHT OF HYPNOTIC SUGGESTION.

BY FREDERIC W. H. MYERS.

Εἵλετο δὲ ῥάβδον, τῇ τ' ἀνδρῶν ὄμματα θέλγει
Ὧν ἐθέλει, τοὺς δ' αὖτε καὶ ὑπνώοντας ἐγείρει.

The facts and inferences contained in the present paper will be novel, and even startling, to many of my readers. Whatever may be thought of the *success* of my argument, I shall hope at least to deserve some credit for *candour*. Being deeply interested in a particular method in matters psychological, and believing that this method ultimately leads to certain positive results which I hold to be of the utmost value, I am nevertheless about to show that this very method leads in the first place to certain *negative* results, which so far as they go—and that is very far—do at least appear directly to contravene those very conclusions which I hold as so uniquely important.

The method to which I refer is that of *experimental psychology* in its strictest sense—the attempt to attack the great problems of our being not by metaphysical argument, nor by merely introspective analysis, but by a study, as detailed and exact as in any other natural science, of all such phenomena of life as have both a psychical and a physical aspect. Pre-eminently important for such a science is the study of abnormal, and, I may add, of *supernormal*, mental and physical conditions of all kinds. First come the *spontaneous* states; sleep and dreams, somnambulism, trance, hysteria, automatism, alternating consciousness, epilepsy, insanity, death and dissolution. Then parallel with these spontaneous states runs another series of *induced* states; narcotism, hypnotic catalepsy, hypnotic somnambulism, and the like, which

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afford, as though by a painless and harmless psychical vivisection, an unequalled insight into the mysteries of man. Then, again, after studying the machinery thus thrown slightly out of gear, after isolating and exaggerating one process after another for more convenient scrutiny, we may return to those normal states which lie open to our habitual introspection, having gained a new power of disentangling each particular thread in the complex of mentation, as when the microscopist stains his object with a dye that affects one tissue only among several which are indiscernibly intermixed.

This method, though not absolutely novel, is relatively novel. In its germ, indeed, it is at least as old as Aristotle, to say nothing of those obvious speculations on sleep and dreams which everywhere form the rudiments of psychological inquiry. But it is now being revived, after pretty general neglect, in a manner far more systematic than was ever possible before, for the simple reason that the advance of physiology during the last century has supplied an unprecedented quantity of raw material for the psychologist to work up.

The few men who, like Wundt, are both physiologists and philosophers, have naturally a leading part in such a task as this. But there is much to be done which such men as M. Taine and M. Ribot, not themselves practical physiologists, are better fitted to accomplish than the professed alienist or the practising physician. There is need even of special knowledge in directions other than biological, as the tractate of Professor Liégeois, presently to be mentioned, will sufficiently show. And, in fine, any student who honestly endeavours to assimilate the facts which lie ready to his hand, and to make experiments which are within the reach of ordinary intelligence and care, has at this juncture a fair prospect of attaining results of permanent value.

Such, then, is the method of inquiry which will be attempted. Next, as to the conclusions to be demonstrated—conclusions which, as I have implied, I should deeply regret to have to accept as complete or final. My own conviction is that we possess—and can nearly prove it—some kind of soul, or spirit, or transcendental self, which even in this life occasionally manifests powers beyond the powers of our physical organism, and which very probably survives the grave. Thus much I am bound in candour to say, lest in what follows I should seem to be mystifying the reader, or sailing under colours not my own. But I am not going to attempt to prove these opinions here:[1] on the contrary, I am going to try to show that certain strong, almost universal preposses-

[1] The reader interested in this topic is referred to an article on "Automatic Writing," in Part viii. of the *Proceedings of the S.P.R.*, and to the forthcoming book entitled *Phantasms of the Living*.

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sions, which make for my own creed, are in fact unfounded. I believe that I have a true and permanent self, but I shall here maintain that if I have such a self, I am certainly not conscious of him, and that, whatever he may be, he is at any rate not what I take him for. In other words, the old empirical conception of human personality must be analysed into its constituent elements before the basis of a scientific doctrine of human personality can safely be laid.

It is plain that if a question of such magnitude as this is to be dealt with in a short paper, it must be simplified in all possible ways, though at the cost of omitting many points, and of leaving many points so stated as to be open to easy attack. And first of all we want some kind of definition to start from as embodying the ordinary accepted notion of man's personality. Were this a systematic treatise, it would be necessary to discuss definitions of the Ego or Self advanced at different times by such various authors as Hume, Mill, Spencer, Kant, Schopenhauer, Maine de Biran, Wundt, &c., and to indicate the relation which the views here expressed bear to their different theories. But this task must be postponed; for the first thing needful is to present certain novel facts, with the singular conclusions to which they point, in as clear a light as possible. And we need to throw these facts into relief, as it were, upon some definition of man's personality which shall be expressed with care and precision, yet shall not bear too marked an impress of any one philosophical school. Such a definition I find in what is called the Common-sense philosophy of Reid. The passage (from the essay on the *Intellectual Powers of Man*) was published a century ago, but it will still, I imagine, express the views of the great bulk of my readers.

"The conviction which every man has of his identity, as far back as his memory reaches, needs no aid of philosophy to strengthen it; and no philosophy can weaken it without first producing some degree of insanity. . . . My personal identity, therefore, implies the continued existence of that indivisible thing which I call myself. Whatever this self may be, it is something which thinks, and deliberates, and resolves, and acts, and suffers. I am not thought, I am not action, I am not feeling: I am something that thinks, and acts, and suffers. My thoughts and actions and feelings change every moment; they have no continued, but a successive existence; but that *self* or *I*, to which they belong, is permanent, and has the same relation to all the succeeding thoughts, actions, and feelings which I call mine. . . . The identity of a person is a perfect identity; wherever it is real it admits of no degrees; and it is impossible that a person should be in part the same and in part different, because a person is a *monad*, and is not divisible into parts. Identity, when applied to persons, has no ambiguity, and admits not of degrees, or of more and less. It is the foundation of all rights and obligations, and of all accountableness; and the notion of it is fixed and precise."

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This seems a fair statement of the obvious verdict of introspection, of the conclusion to which we come when we regard ourselves as complete articles, as the child looks at her doll. But suppose that instead of taking ourselves for granted as ready-made articles, we look at ourselves not with the child's but with the dollmaker's eyes, and consider how we could most cheaply be turned out. What are the lowest elements, the simplest methods, from which we could educe this apparent psychical unity?

We start, then, with the single cell of protoplasm, endowed with reflex irritability. We attempt a more complex organism by dint of mere juxtaposition, attaining first to what is styled a "colonial consciousness," where the group of organisms is for locomotive purposes a single complexly acting individual, though when united action is not required each polyp in the colony is master of his simple self. Hence we advance to something like a common brain for the whole aggregate, though intellectual errors will at first occur, and the head will eat its own tail if it unfortunately comes in its way. We have got here to a state like that of the mad John Henry, who alternately boxes his right ear, saying that John is a ruffian, and his left, saying that Henry is a fool. We rise higher; and the organism is definitely at unity with itself. But the unity is still a unity of co-ordination, not of creation; it is a unity aggregated from multiplicity, and which contains no element deeper than the struggle for existence has evolved in it. The cells of my body are mine in the sense that, for their own comfort and security, they have agreed to do a great many things at the bidding of my brain. But they are servants with a life of their own; they can get themselves hypertrophied, so to speak, in the kitchen, without my being able to stop them. Does my consciousness testify that I am a single entity? This only means that a stable *cœnesthesia* exists in me just now; a sufficient number of my nervous centres are acting in unison; I am being governed by a good working majority. Give me a blow on the head which silences some leading centres, and the rest will split up into "parliamentary groups," and brawl in delirium or madness. Does memory prove that I was the same man last year as now? This only means that my circulation has continued steady; the brain's nutrition has reproduced the modifications impressed on it by stimuli in the past. My organism is the real basis of my personality; I am still but a colony of cells, and the unconscious or unknowable from which my thoughts and feelings draw their unity is below my consciousness and not above it; it is my protoplasmic substructure, not my transcendental goal.

Such, in rough outline, is the theory of human personality towards which psycho-physical inquiry seems at present to point. A metaphor may perhaps help us to picture to ourselves these two alternatives, and

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the kind of arguments which may be sought to prove or disprove either of them.

Let us suppose that we are looking at a *light*, a luminous appearance which we cannot closely approach, and that we are discussing whether the light proceeds from an incandescent solid body, or whether it is a mere shifting luminosity of marsh-gases, a will-o'-the-wisp.

Our first impression is that the light proceeds from a solid body, for the following reasons:—

(1) The light is brilliant, and has a definite *central* glow. That is to say, in the parable, that our sense of personality is strong, and our controlling *will* an unmistakable and definite authority.

(2) The light is *continuous*, with certain brief regular intermissions only, which we take to be caused by the supply of fresh fuel. That is to say, our *memory* seems a continuous thread, with only the regular intermission of sleep, during which we may suppose that fresh energy is being gained, without any real break in the personal continuity.

(3) The light is *stationary*, and while it lasts its general aspect remains much the same, subject to a gradual steady growth when first kindled, and ultimately to decline and extinction.

That is to say, our tastes and *character* remain pretty much the same. The special capacities for pleasure and pain, action and perception, which characterise each of us, do not change suddenly and arbitrarily, but grow with our growth, and slowly alter with our decay.

Now let us see how far these three elements of human personality, viz., central will, continuous memory, homogeneous character, retain their definiteness when subjected to analytic experiment. And I shall here consider one form of experiment alone. I shall treat only of the *hypnotic state*, a condition which affords us (in Professor Beaunis' words), "une véritable vivisection morale,"[1] but a vivisection, as I have already said, which is absolutely painless and harmless—nay, is often accompanied by direct benefit to its subject. By thus throwing the psychical machinery a little out of gear, by sending all the energy of

[1] This view of hypnotism, as above all things a *method of psychological experiment* (rather than as a mere physiological curiosity, or as a therapeutic agency) pervades all that Mr. Gurney and I have written on the subject, and was distinctly formulated in an article in the *National Review* for July, 1885, also printed in S.P.R. *Proceedings*, Part ix. The modern French school of psycho-physicists have also (M. Richet especially) been tending for some time towards this view, and Professor Beaunis has given it explicit expression in an article in the *Revue Philosophique* for July, 1885. Baron Du Prel, in his *Philosophie der Mystik* (Leipzig, 1885,) has insisted, with much ingenuity and detail, on the lessons derivable from hypnotic or spontaneous displacements of the threshold of consciousness.

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the engine through a few looms arbitrarily selected out of the myriads which are habitually at work, we can watch the effects of inhibition and exaggeration as applied to limited centres of psychical energy which we have no other way of isolating from the confused complexity of normal life. Hypnotism[1] is in its infancy; but any psychology which neglects it is superannuated already.

One further word is necessary before I come to the experiments themselves. It may be asked whether the French experiments which I am about to mention are altogether trustworthy; whether there has not been simulation on the part of the subjects who are credited with such extraordinary performances. I will briefly give my reasons for crediting the cases which I shall cite. In the first place, I have myself at various times obtained results, on subjects well known to me, which were altogether analogous to these French cases, though less striking and conspicuous. I must recommend this practical method of gaining conviction, above all others, to any serious inquirer. In the second place, various groups of experiments carefully performed by committees of the Society for Psychical Research, in which I took part, and recorded in our *Proceedings*, give results which are also in harmony with the results of Messrs. Bernheim, Beaunis, &c. And in the third place I have, through the kindness of Drs. Charcot, Féré, Bernheim, and Liébeault, myself witnessed typical experiments at the Salpêtrière in Paris, in the Hôpital Civil at Nancy, and in Dr. Liébeault's private practice; have been allowed myself to perform experiments (with the aid of Mr. Gurney and Dr. A. T. Myers) on the principal subjects whose cases are recorded; and have in other ways satisfied myself that the cases vouched for by Drs. Beaunis, Bernheim, Féré, Liébeault, Paul Richer, Charles Richet, and Professor Liégeois, have been recorded with

[1] I have used the term "hypnotism" throughout this paper, but I do not concede that the hypnotic phenomena are always produced by mere monotonous stimulation or other mechanical causes. I still hold to the view of Cuvier, that there is in some cases a specific action of one organism on another, of a kind as yet unknown. This theory is generally connoted by the term "mesmerism." Since the days of Braid there has been a tendency to exclude it as unnecessary and even fantastic. Mr. Gurney and I (with Dr. Despine, in France) stand almost alone among recent writers in adhering to it. Our contention has steadily been that no one has as yet advanced experiments numerous or careful enough to disprove the specific influence in question, and that certain of our own experiments, of Esdaile's, &c., come very near to proving it. It is worthy of note that Dr. Liébeault, of Nancy, the most experienced of all living hypnotizers, after practising hypnotism for twenty-five years on several thousand persons, and writing a treatise against the theory of specific influence, has recently convinced himself by still further experiment that such specific influence does in some cases exist. (*Etude sur le Zoomagnétisme*, par A. Liébeault, 1883.)

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the candour and accuracy for which the reputation of these *savants* is in itself no small guarantee.[1]

I may add that although the validity of the cases has been assailed from an *à priori* point of view by several writers, I cannot find that any competent person who has actually witnessed the experiments has expressed any doubt as to their trustworthiness. I am anxious that wider attention should be directed to these singular results, and further criticisms made. But in the meantime I think that the reasons given above justify me in treating them as veritable acquisitions to science.[2]

I begin, then, with the question of the light thrown by hypnotic experiments on human *free-will.* The reader will naturally dread the revival of so well-worn a controversy. But I venture to promise him something really new, namely a distinct experimental proof that my sensation of free choice in the performance of an action is perfectly consistent with the absolute foreknowledge of my action on the part of another person, and even with his distinct imposition of that action upon me. I begin intentionally with the smallest and most trivial cases. And first I take an experiment so common and rudimentary that probably many of my readers have seen it tried, though its full significance has hardly been realised.

I partially hypnotize a subject and say to him, "Now you can't open your eyes!" He keeps his eyes shut. "Now laugh!" He laughs. "Now your name is Nebuchadnezzar. What is your name?" "Nebuchadnezzar." I wake him him up and say, "You were hypnotized; you could not help obeying my suggestions." "Not at all," he replies. "I did exactly what I pleased. I shut my eyes because I was tired of looking at you. I laughed at your absurd belief in your own powers. I called myself Nebuchadnezzar merely in order to answer you according to your folly." "Very good; you have had your joke, but now the joke is over; you are not to adopt my suggestions if you can possibly

[1] I ought to add that neither Mr. Gurney nor I can always concur with these *savants* as to the exact *interpretation* to be placed on the observed phenomena; but this is a different and a more technical matter, which need not here be discussed.

[2] The experiments on which this paper is largely based will be found mainly in the following works:—Beaunis: *Recherches Expérimentales, &c.*, ii., Paris, Baillière, 1886. Bernheim: *De la suggestion dans l'état hypnotique et dans l'état de veille* (1884). Liébeault: *Du sommeil et des états analogues* (1886). Liégeois: *De la suggestion hypnotique dans ses rapports avec le droit civil et le droit criminel* (1884). Paul Richer: *Traité de l'hystéro-épilepsie* (2nd Edn., 1885). Charles Richet: *L'homme et l'intelligence* (1883). *Proceedings S.P.R.*, Vols. i. and ii. (Trübner, 1883, 1885). Dr. Pitres and the Bordeaux School have obtained precisely analogous phenomena, though I have not mentioned them here; wishing to confine this paper to cases of which I have some personal knowledge. Prof. Bernheim's new book, "De la suggestion et de ses applications à la thérapeutique," Paris, 1886, contains a great many fresh cases.

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help it." "Agreed." I make some more passes and again ask him his name. He is silent, and I press the question. "Nebuchadnezzar," he slowly and hesitatingly replies. I wake him up and ask him why he said this. "Oh, when the time came," he says, "I thought that I might as well call myself Nebuchadnezzar as anything else." Here we have a *confusion* of will; the subject could not in reality help making the suggested reply; he felt the hypnotizer's will *obsessing* him, but yet was just able to maintain a kind of awkward half-belief in his own spontaneity. My next example shall be a transitional case, extremely trivial, but interesting because the subject was able to describe with exactness the mode of upspringing of the impulse in her mind. I may remark that it is usually more difficult to implant these suggestions in a mind which has been well educated and is accustomed to self-control. A suggestion which will take effect in a heedless, vacant mind will often be crushed in its birth by a habit of repressing inopportune impulses. The subject of the present experiment had been many times hypnotized by me and was susceptible to suggestions, but she opposed so much sub-conscious resistance to doing anything *outré* or unusual that it was hard to hit on a suggestion of just the depth of absurdity which her unconscious mind would tolerate.

One day when she was in the hypnotic trance I suggested to her that soon after waking she would continue a task on which she was engaged with another lady, of colouring a large sketch which included some brickwork, and that she would paint the bricks *blue*. I repeated once or twice, "*Blue* is the prettiest colour for bricks; you will paint them *blue*." I then woke her, and, as usual, she remembered nothing which had been said to her in the trance. Very soon she began to paint the diagram, and when she came to the bricks she hesitated awhile, and then said to the other lady, "I suppose it would never do to paint these bricks *blue*?" "Why blue?" was the rejoinder. "Oh!" was the rather shame-faced explanation, "it only occurred to me that it would look rather nice." She was then told the true origin of this impulse, and she stated that the words "Blue bricks! blue bricks!" had been running in her head, and that the absurd notion of how well the colour would look had got such hold of her that she could not help making the childish proposal to use the blue paint. Here we have a vanishing trace of *obsession*, a subject feeling an apparently spontaneous impulse to perform the act suggested, yet just aware of an oddness in the way in which the impulse came. Next to this come the cases of complete illusion of free-will, where the subject in performing the suggested act is urged by an impulse which seems to him quite self-originated, and which he justifies, if called on to do so, by some imaginary reason of his own. I again intentionally select a case where the suggestion is of an absolutely trivial kind.

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Dr. Bernheim suggested to a hypnotized subject in the Nancy hospital that when he awoke he would take Dr. X.'s umbrella, open it, and walk twice up and down the covered gallery. He woke, took the umbrella, and walked as suggested, though with the umbrella *shut*. Asked why he was walking in the gallery, he answered, "C'est une idée ! je me promène parfois." "But why have you taken Dr. X.'s umbrella?" "Oh, I thought it was my own; I will replace it." I have seen many experiments of this sort, and it is hard to persuade the subjects that any mind but their own has started the trivial act.

The advantage of these *trivial* cases is, that they exhibit the power of suggestion pure and simple, without any kind of accompanying emotional shock. The idea is placed in the mind as quietly as a seed in the ground, and it works itself upwards into visible fulfilment at the appointed time with the same tranquil regularity as the springing blade in its season. But the infused idea may be of a more startling kind. A good subject may be made to do almost anything, and to justify the act on any trivial ground which occurs to him at the moment. Nor is this influence confined to the period of trance. In favourable subjects the command is executed even after the subject has been awakened, and appears perfectly normal. Professor Liégeois, whose speciality is medical jurisprudence, has taken much pains to induce Dr. Liébeault's patients to commit a number of crimes—as murder, theft, perjury, &c., and has made them give him receipts for large sums of money which he has never really lent them. I abridge a passage from his careful and conscientious tractate.

"I have spoken of my friend M. P., a former magistrate. I must accuse myself of having endeavoured to get him murdered, and this moreover in the presence of the *Commissaire Central* of Nancy, who witnessed the occurrence.

"I provided myself with a revolver and several cartridges. In order to prevent the subject, whom I selected at random from among the five or six somnambules who happened to be at M. Liébeault's house on that day, from supposing that the thing was a joke, I charged one of the barrels and fired it off in the garden, showing a card which the ball had pierced. In less than a quarter of a minute I suggested to Mme. G. the idea of killing M. P. by a pistol-shot. With perfect docility Mme. G. advanced on M. P. and fired at him with the revolver. Interrogated immediately by the *Commissaire Central*, she avowed her crime with entire indifference. 'She had killed M. P. because she did not like him. She knew the consequences. If her life was taken, she would go to the next world, like her victim, whom she saw (by hallucination) lying before her, bathed in blood.' She was asked whether it was not *I* who had suggested to her the idea of the murder. She declared that it was not so—that she alone was guilty, and that she would take the consequences." [It had not been *suggested* to her that her act was due to *suggestion*.]

Similarly Mlle. A. E. (a very amiable young person) was made by

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Professor Liégeois to fire on her own mother with a pistol which she had no means of knowing to be unloaded. She was also made to accuse herself before a *juge d'instruction* of having assassinated an intimate friend with a knife. When she thus accused herself she appeared to be in a perfectly normal waking state. And even the most *bizarre* actions, performed under suggestion, *look* perfectly spontaneous when the subject carries them out. The action may be *deferred* for hours or days after the suggestion is given. Professor Liégeois gave to M. N. a paper of white powder, informing him that it was arsenic, and that on his return home he must dissolve it in a glass of water and give it to his aunt. In the evening a note from the aunt arrived as follows: "Madame M. has the honour to inform M Liégeois that the experiment has completely succeeded. Her nephew duly presented her with the poison."

In this case the culprit entirely forgot his action, and was unwilling to believe that he had endeavoured to poison a relative to whom he was much attached.

Experiments like these will produce in the minds of many readers a feeling of moral shock and alarm. In the first place, they may naturally fear that a power like this may be abused for evil purposes, and the subject induced to commit real as well as imaginary crimes. And in the second place, they may suspect that even if no actual crime is committed, the mere fact of the subjection of the will to temptation must leave some stain on the moral nature of the subject who has thus acted out a guilty dream. I do not account the first of these apprehensions as chimerical, nor the second as squeamish; nay, I consider on the other hand that the advocate of hypnotic experiment is bound in candour to exhibit as fully as I have done the grounds for moral demur.

But speaking from the experience of those best qualified to judge, I feel justified in replying that there is little fear that cases like these will ever be more than the harmless curiosities of the lecture-room. As regards the danger of the suggestion of real acts of crime, it must be remembered in the first place that Professor Liégeois' subjects were the picked specimens of a sensitive nation, and that among thousands of English men and women perhaps not one case of similar susceptibility would be found. Again, there is a simple precaution which the French experimenters recommend as effectual. If a subject feels that he is becoming too sensitive, let him get some trustworthy friend to hypnotize him, and to suggest to him that no one else will be able to do so. This suggestion, it appears, fulfils itself like the rest, and the bane works its own antidote without further trouble.

For my part, especially where a female subject was concerned, I should recommend the still further precaution of not allowing any one except a trustworthy friend to hypnotize her at all. As to the second ground of apprehension, the possible tarnishing of the moral sense, or

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weakening of the moral fibre, by the mere performance, in however abnormal a state, of immoral acts, the requisite precautions are, I think, very easy to take. In the first place, the subject, unless told to remember the acts, will absolutely forget them—*always* when they are performed in the hypnotic trance, and *generally* when (like the poisoning of the aunt) they are performed by the subject after he has been awakened from the trance, and in a condition apparently normal. They remain no more in the subject's mind than if he had read them in a book and forgotten them. Certain precautions, nevertheless, may well be taken. I should avoid, for instance, making any suggestion which at all resembled a possible temptation of the subject's waking state. I should not myself like to dream of injuring some real personal enemy, but should feel no compunction if I dreamt that I had killed the Emperor of China. Now when the dutiful and affectionate Mlle. A. E. shot at her mother, it was not like a dream of yielding to a temptation, it was like the purely fantastic dream which has no root in the moral nature.

Professor Liégeois justly urges that his experiments have a practical value as showing that in the case of a person charged with some odd and motiveless offence, it is worth while to find out by experiment whether the act may not have been performed in a somnambulic state. In two cases already, persons thus accused have been hypnotized on a physician's suggestion, and it has been proved to the satisfaction of the judge that they were irresponsible for the acts ascribed to them, which had been performed, without waking intention, in a state of spontaneous trance.[1]

In fine, then, the hypnotic trance, like alcohol, chloroform, and other means of acting on the nervous system, can conceivably be employed by bad men for bad ends. But this evil is not hard to avert, and we shall see, on the other hand, that the trance has, in good hands, a *moralising efficacy* of great value—that it is a means not only to the advancement of knowledge, but to the improvement of character.

For the present I must return to the remark briefly made above that the fulfilment of the hypnotic suggestion can be postponed at pleasure for days, even for months, after the date when it is made. I abridge a characteristic case of Professor Bernheim's :[2] "In the month of August I asked S. (an old soldier), during the trance, 'On what day in the first week of October will you be at liberty?' 'On the Wednesday.' 'Well, on that day you will call on Dr. Liébeault; you will find in his room the President of the Republic, who will present you with a

[1] *Annales Médico-psychologiques*, 1881, p. 468. *Revue Scientifique*, December, 1883.

[2] *De la suggestion*, p. 29.

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medal and a pension.' I said nothing more to him on the matter, and on awakening he remembered nothing. On October 3, Dr. Liébeault wrote to me as follows: 'S. has just called at my house; he walked straight to my bookcase, and made a respectful salute; then I heard him utter the word "Excellence!" Soon he held out his right hand, and answered, "Merci, Excellence." I asked him to whom he was speaking. "Mais, au Président de la République!" He turned again to the bookcase and saluted, then went away. The witnesses of the scene naturally asked me what that madman was doing. I answered that he was not mad, but as reasonable as they or I, only another person was acting in him.'"

"I can say," says Professor Beaunis, "to a hypnotized subject during his sleep, 'In ten days you will do such a thing at such an hour,' and I can write in a sealed letter what I have told him to do. At the appointed hour the subject executes the suggestion exactly, convinced that he acts thus because he chooses, and that he could have acted differently; and yet, if I make him open the letter, he finds the deed which he has just done prescribed for him ten days beforehand."

I can hardly suppose that the mere perusal of a string of anecdotes like these will produce much effect on persons who have never themselves seen anything of the kind. But when one has become practically familiar with the course of the illusion, when one has seen the look of alert interest which accompanies the emergence of the suggested idea, in its due time, into waking consciousness, the look of eager decision with which the subject carries out the notion which he supposes to be so entirely his own, one cannot help feeling that the distinction between reflex and voluntary action has become dubious indeed. "A voluntary act," one is inclined to say, in Ribot's words, "is only a reflex act of the whole organism."

Far down at the beginnings of life comes the scrap of protoplasm with its power of re-acting to certain stimuli—a power which at first seems hardly to suggest anything more than a mere special complexity of molecular arrangement. Gradually the power of reaction becomes more and more subtle, yet for a long time no one suggests conscious will. Then with the higher animals we have the controversy whether they are *automata* or no,—whether they have a consciousness comparable to our own. Yet, even assuming that they have consciousness, it by no means follows that they have the sensation of free choice. It is even doubtful how far children and savages have this sensation. Anyone who remembers his early childhood clearly will probably recall occasions when he was performing what might have seemed an act of choice, but where the subjective sensation was merely of a bewildered waiting for some suggestion or impulse from without or within. The *act of choice*, even with many adults, is little more than a *pause* which gives the

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organism time to respond with an action which is almost as manifestly reflex as the knee-jerk after a blow below the patella.[1] The sense that we are *choosing* rests, perhaps, on nothing more than the degree of attention which the inevitable act requires; and the so-called choice, to use M. Ribot's phrase once more, is the mere verdict of a jury which only declares on which side the preponderating arguments lie, without itself adding force to any of them.

Now, in hypnotic suggestion, we actually supply the arguments which go to the subject's inward jury; we actually implant the impulses which, sometimes at once, sometimes after a long period of incubation, work themselves out inevitably in the appropriate acts. Just in proportion to the vigour and distinctness of our suggestion is the eagerness and accuracy of the fulfilment on which we can count. "Fixed fate, free-will, foreknowledge absolute," have been debated, if we may believe the poets, with somewhat abstract arguments, by men and devils since the epoch of the war in Heaven. The experiments above alluded to may not be altogether acceptable to human or demonic pride, but they do certainly infuse into the time-worn discussion a little freshness and fact.

I pass on to the light which our experiments throw on the nature of *memory*. And here, perhaps, more strongly than anywhere, is experimental psychology upsetting the old metaphysical views. How many pages have been written to show that the persistence of the one thread of memory through all changes is a proof of the true personality of man! And it used to seem reasonable to admit that there *was* in fact such a continuity of memory—that is, if we ignore the years before a man has gained his memory and, sometimes, after he has lost it, and agree to pass over the fact that he ever either sleep or dreams. But here again, hypnotism has brought into prominence a class of facts which used to be cited only as rare curiosities. The phenomena of *alternating memory*—formerly observed only in a few cases of accident or disease—are now commonly produced in normal persons, with every variety of relation between the new memory and the old.

My limits forbid me to enter on this complex topic, on which much has been already written.[2] The principal novelty which the skill and good fortune of the school of Nancy has enabled them to illustrate is the curious state of passage from one train of memory to another—the fading away of all recollection of a "suggested" action, though that

[1] I am speaking here of ordinary life; I am not discussing what kind of *contra-impulsive* power we can bring to bear in a moral crisis.

[2] See *Proceedings S.P.R.*, Vol. i., p. 222 *sqq.*, 287 *sqq.*; Vol. ii., p. 66 *sqq.*, 282 *sqq.*, &c.

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action may have been carried out in apparently complete wakefulness. I give an instance from Professor Beaunis[1] :—

"Mlle. A. E. had just arrived at Professor Liébeault's. As soon as she came in I said : 'In one minute you will go and change the places of the two busts (Thiers and Béranger) which are on that bracket.' At the suggested moment she performed the action, and had entirely forgotten it the moment after. Mme. H. A., who had come with her, said : 'I am sure that I should not have acted like that.' 'Very well,' I said, 'in one minute you will take a sou from my waistcoat pocket and put it in your pocket.' When the minute was over, after a moment of hesitation, Mme. H. A. rose, put her hand into my waistcoat pocket, took out a sou, and pocketed it. Shortly afterwards I said to her, 'Empty your pocket.' She looked at me with surprise, but did so, and in spreading out the contents found the sou, which she looked at for a moment, and then put in her purse. 'That sou is not yours,' said a bystander, 'You have just taken it from M. Beaunis.' She could remember nothing about this, and was by no means convinced that the sou was not her own."

Most persons have observed how easily a *dream* slips from the mind. We wake from an amusing dream, and resolve to repeat it at breakfast, but in a few minutes every trace of it has disappeared. The case given above is precisely similar. The act performed in obedience to suggestion did not in reality belong to the train of waking memories, and affected no permanent lodgment among them. Although the subject looked perfectly normal, and was normal in all other respects, both when the act was suggested and when it was performed, that special act was originated by nervous centres still affected (in some way at present inexplicable) by previous hypnotization. It would be remembered no doubt in a subsequent trance, though rejected by the waking current of memory.

I tried myself an experiment of this sort on Madame H. A., Dr. Liébeault having hypnotized her, on August 31st, 1885. I requested him to tell her that at seven o'clock that evening she would see me enter her *salon*, that I would pay her a few compliments, and ask to be introduced to M. A. if he were present. She was then awoke, and remembered nothing that had been said. On September 1st, Dr. Liébeault's servant was sent on some pretext to call on Madame A., who immediately said to her that one of the English gentlemen (describing me) had called on her the previous evening at seven. On September 2nd Madame A. came to Dr. Liébeault's again. I alluded to my imaginary visit, at which she looked much astonished, and said that she had certainly not seen me. We then asked whether she remembered the servant's visit on September 1st, but though this visit had lasted some time, and had been marked by one or two trifling incidents,

[1] *Revue Philosophique*, July, 1885, p. 14.

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it had all but entirely faded from Madame A.'s mind. It was still, as it were, a prolongation of the *dream ;* the conversation which had kept her thoughts on the hallucinatory incident belonged, in fact, rather to the hypnotic than to the normal stream of her existence. I then myself hypnotized Madame A., and asked, "Have you seen me since I met you last at Dr. Liébeault's ?" "Certainly ; you called on me at seven on August 31st." "Did anyone show me into or out of the room ?" No, you walked in alone." [No servant or other person had been ordered to appear in the hallucination, so my figure alone was seen.] "Was M. A. present ?" "No, I was alone." [This was unfortunate, as Madame A. would certainly have introduced the phantasmal visitor to her husband had he been there.] "What did I say ?" "You thanked me very politely for coming to Dr. Liébeault's." "Do you know that you just now denied that I had called ?" "Impossible ; I remember your visit perfectly well."

The hallucinatory visit, it will be observed, was *suggested* in the trance state, though *realised* in the midst of waking life. It therefore belonged properly to the trance-memory, and soon faded from the waking memory, like a dream.

If, however, the hallucination is very strongly impressed, and remains long dormant before realisation, it acquires lodgment enough in the mind to place it in the train of waking memory.

I abridge a report made by Professor Beaunis to the lately founded "Société de Psychologie Physiologique," of which Dr. Charcot is President [1] :—

"On July 14th, 1884, having hypnotised Mlle. A. E., I made to her the following suggestion, which I transcribe from my note made at the time :— 'On January 1st, 1885, at 10 a.m., you will see me. I shall wish you a happy new year, and then disappear.'

"On January 1st, 1885, I was in Paris. I had not spoken to any one of this suggestion. On that same day Mlle. A. E., at Nancy, related to a friend (she has since narrated it to Dr. Liébeault and myself) the following experience. At 10 a.m. she was in her room, when she heard a knock at the door. She said, 'Come in,' and to her great surprise saw me come in, and heard me wish her a happy new year. I went out again almost instantly, and though she looked out of the window to watch me go, she could not see me. She remarked also, to her astonishment, that I was in a suit of summer clothes—the same, in fact, which I had worn when I had made the suggestion which thus worked itself out after an interval of 172 days."

I was anxious to know how far Mlle. A. E.'s memory of the imaginary visit had resisted the proof that it had never taken place. I asked her on September 2nd, "Do you still imagine that Professor Beaunis called on you on January 1st ?" "He certainly called on me

[1] See *Revue Philosophique*, Sept., 1885, p. 330.

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on that morning." "But you know quite well that he gives you hallucinations, and that this was one of them—that he was not even in Nancy at the time?" "He certainly called on me," was again the reply; "*that* time it was no imagination." I might as well have argued with the heroine of *We are Seven*. The hallucinatory idea had persisted through so long a period of incubation that the waking brain had, if I may so say, ended by adopting and assimilating it.

These brief hints must suffice for the present to indicate that memory, as we know it, cannot prove the personality of man. "Memory's record" is not a book on clean paper, which we print as we go. It is a parchment palimpsest, on which one recent text is fairly legible, but which may show all forms of unknown scripture when the right re-agents are applied.

It is, perhaps, not strictly logical to discuss *character* under a separate heading from will and memory. Our character is a collection of *habits of choice*, determined partly by what we are hereditarily inclined to do, and partly by what we recollect of the results of previous actions. The required modifications of our brain represent the up-stored *memories;* our idiosyncratic reactions to special stimuli form, as we have seen, the organic basis of what we call our *will*. Any change in the contents of our memory, or in the sensibility of our organism, will be a change in our character too. But the effect of hypnotization in the formation of character needs to be dwelt on as a point, no longer of mere speculation, but of practical importance.

The civilised character differs, as we know, from the savage character in the gradual triumph of the higher centres of cerebration over the lower—of the centres which co-ordinate many ideas and memories, with a view to things abstract or remote, over the centres which respond to immediate excitations, with a view to the present moment's ease or enjoyment. The moralising process—the ἀνέχου ἀπέχου of the Stoic—is therefore a process of continually strengthened *inhibitions;* the higher centres learn to "bear and forbear" when the lower centres would fain snatch or rebel.

Now hypnotism, like education, is mainly a process of *inhibition*. Can we get the processes to coincide, and make people virtuous by hypnotic suggestion?

I believe that, to a great extent, we *can* do this; I believe that we can strengthen the brain's inhibitive power by hypnotism, much as we can weaken it by opium or alcohol.

And before going further, I must distinctly affirm that the hypnotic state is not *per se* a morbid phenomenon. It is no more morbid than sleep is morbid, and I hope to show elsewhere that it is in some ways even higher than the common sleeping or waking states. We must put on one side, moreover, the grotesque anecdotes which I have given

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as showing how far hypnotic susceptibility may go. These things are but the experiments made with a new drug, to show its dangers and determine its dose, before it is introduced into ordinary clinical practice.

Putting all these *bizarreries*, then, out of the question, let us first observe what is the moral tone of the somnambule when left to himself, as far as possible, *without* suggestions. In some important points it is the precise opposite of the *drunken* condition. Alcohol, apparently by paralyzing first the higher inhibitory centres, makes men boastful, impure, and quarrelsome. Hypnotization, apparently by a tendency to paralyze lower appetitive centres, produces a contrary effect. The increased refinement and the increased cheerfulness of the developed somnambule is constantly noticed. It is a moot point whether any "sleep-waker" has ever told an untruth;[1] and, so far as I know, no angry or impure gesture has ever shown itself spontaneously in the hypnotic state.[2]

We start then, as it seems, from a favourable moral diathesis; and we have next to inquire as to the result—(1) Of often repeated hypnotization; (2) Of definite suggestion of a moralising kind.

The first of these questions is complicated by the effects of hypnotization on bodily health, on which I cannot enter here. I will merely remark that Mlle. A. E., so often alluded to, has probably been hypnotized oftener than almost anyone living, and that the effect on her character seems to have been unmixedly good. I can answer for her being now a particularly sensible, cheerful, and kindly person; whereas she is said to have been moody and frivolous before the course of hypnotism began. Here, however, there has been coincident recovery of health (also ascribed to hypnotism); and it is not easy to discriminate between the moral and the physical improvement.

More definitely provable are the benefits resulting from *direct suggestion*—from the persistence, after waking, of some impulse or aversion inspired in the hypnotic state. It is especially in checking the abuse of stimulants that this treatment has proved useful. Charpignon[3] long ago recorded a case of a woman thus cured of a habit of over-indulgence in coffee. Alcohol is, of course, a more serious matter, and unfortunately chronic alcoholism renders its victim very hard to hypnotize. On the other hand, certain cases where cerebral shock has

[1] See Professor Beaunis in *Revue Philosophique*, July, 1885.

[2] It was long ago remarked by Elliotson and others that the attraction sometimes felt by a female subject for her hypnotizer is invariably the feeling of a *child*, not of a *woman*. Dr. Perronet, of Lyons, who has seen striking instances of this attraction, holds that it is a mere reflection of the hypnotizer's own self-love. "Il jouait mimiquement et phoniquement le drame qui se déroulait au fond de mon inconscient, et dont le principal acteur était l'amour de moi-même."—*Du Magnétisme Animal*, p. 20.

[3] *Physiologie du Magnétisme*, p. 238.

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altered the relation of the system to alcohol, afford a favourable augury. Thus one of the incidents in the extraordinary life-history of Louis V——[1] is the alternating inclination or dislike for alcohol after attacks of hystero-epilepsy. We need not, then, be surprised, if the effect which may be produced, as it were, accidentally, roughly, and unstably, by the shock of disease should also be produced, more gently and permanently, by repeated hypnotic suggestion. Professor Beaunis vouches, from his own observation, for the following case[2]:—

M. D. was a great smoker, and at the same time a great beer-drinker. His health was seriously menaced. Dr. Liébeault hypnotised him, and suggested to him that he would smoke no more and drink no more beer. The subject followed with docility the programme thus traced, and thus attained the result which his family's remonstrances and his own efforts had failed to secure. A few hypnotizations and suggestions had been enough to effect it.

Dr. Perronet[3] has had a similar case, when he inspired an habitual drunkard with a loathing for spirits which had persisted for some months at the date of writing. Such suggestions, however, will probably require occasional *renewal*, and Dr. Liébeault gives two cases which illustrate this need. A physician, addicted to drink, was induced by hypnotic suggestion to abstain for three months; but the taste for drink returned, and he did not visit M. Liébeault again. On another occasion an idle boy was taken to this potent moraliser, and it was suggested to him that he would henceforth be a model of diligence. The boy did actually work hard for some months, by an impulsion which he could neither understand nor resist, and rose rapidly to the top of his class. But the suggestion wore off, and then he obstinately refused to be hypnotized again, having by no means relished his involuntary *rôle*. His mother was weak enough to let him alone.

This young recalcitrant against *hypnotic moralisation* (if I may coin the phrase) no doubt said to his mother that it was a great shame to make a fellow diligent against his will, and that there was no good in learning things just because you could not help it. And other persons, who "would rather see an Englishman free than see him sober," may be inclined to side with the boy. They will say that you cannot get virtue into any man's head "by a surgical operation," and that where there is no moral effort there is no improvement worth wishing for. I partly agree with this principle; but we are here among the rudiments of

[1] *Annales Médico-psychologiques*, Jan., 1882. *Revue Philosophique*, Oct., 1885. See also the article on "Telepathic Hypnotism" in this volume.

[2] *Revue Philosophique*, July, 1885, p. 25. Dr. Richet has successfully used suggestion to give appetite to an invalid.—*L'Homme et l'Intelligence*, p. 193. Dr. Despine quotes some similar cases.

[3] *Du Magnétisme Animal*, p. 40.

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morality, and we need not fear that we shall lead our subject on unto perfection without his knowing it. His moral effort will have plenty of worlds to conquer even when he is no longer tempted to get drunk.

In its scientific aspect, at any rate, this power of *touching* the part of the brain desired is a forward step of just the kind that we are always looking for. We are gradually learning to localise and specialise our curative methods; we inspect and inject, if I may so say, with arms of precision; we hit a definite point instead of hurling our boluses vaguely at "the system."

Well, here we have a method of cerebral localisation, which—whether or not it gives us anatomical indications—is at least on the psychical side self-acting and almost infallible. The suggestion once made to the hypnotized brain, the brain itself picks out the centres which it is desired to stimulate or to inhibit. After what I have witnessed of suggestion, I hesitate to impose a limit to this power. I do not despair (for instance) of isolating or suspending at pleasure the different classes of sensibility—sensory, thermic, tactile, dolorous, or even classes more specialised than these. I do not despair of dissociating the intellectual from the nutritive—perhaps even from the emotional—current of our being, and hushing into the absorption of an Archimedes the stomach and spirit of a Carlyle. We hold the wand of Hermes, which we have not yet learnt to sway.

There is, however, no need for prophecy. What has been done and is doing is enough to show that here as everywhere the real advantage lies in knowing the facts. If we are multiplex beings, let us get the advantage of our multiplicity. If we are modifiable by circumstance, let us learn to modify ourselves. So long as we proclaim ourselves incompressible atoms, we shall not discover how to deal with our molecular structure. Until we confess what we are, we shall never become what we may be.

The task assigned to this paper has now, though briefly and inadequately, been performed. It has been shown that hypnotic experiments throw new light on the intimate nature of man's will, memory, character; that the flame of personality (to recur to our first metaphor), is found on inspection to be neither definite, permanent, nor stationary; but rather that the sense of free-will is shifting and illusory, and memory multiplex and discontinuous, and character a function of these two variables, and directly modifiable by purely physiological means. We have thus, indeed, the consolation of finding that hypnotism can not only *dissect*, but to some extent *amend* us; yet this will seem to most minds a paltry counterpoise to the depressing view of man's dignity and destiny which this train of argument implies.

I cannot here enter on the reasons which, as already stated, con-

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vince me that this method of experimental psychology, when carried farther, will conduct us not to negative but to positive results of the most hopeful kind. It must suffice to say—still in terms of our metaphor—that I believe that there *is* an incandescent solid, but that that solid is beneath our line of sight. This fact can only be recognised when the visible flames are examined not only with the telescope but with the *spectroscope;* that is to say when the phenomena of abnormal states are so scrutinised as to discover whether any of them are in fact *supernormal*, transcending the powers of man as hitherto unknown to us, and pointing to a higher stage of evolution. One such discovery, that of *telepathy*, or the transference of thought and sensation from mind to mind without the agency of the recognised organs of sense, has, as I hold, been already achieved. This is in itself enough to revolutionise the whole aspect of the problem, and to suggest that if so transcendent a capacity be indeed lurking among the obscurer and rarer vital phenomena, then the shifting phosphorescence which we feared might hang above decay, may in truth resemble rather that blaze of turbulent vapours which hides and bears witness of the sun. The proof of this, if it comes, must be slow in coming. But it has ever been men's error to lack patience when their highest interests were at stake. We hope too proudly, despair too decisively, from the half-conscious feeling that questions of primary importance must needs be settled one way or the other. For my part, I believe that many questions which the religious world deems to be already closed in one sense and the materialistic world in the other, are really only just beginning to come within the purview of science. I maintain that we are just learning to understand the first elements of problems which so many preachers have solved with a peroration, so many philosophers with a formula, so many physiologists with a smile or a sneer. It is, as I hold, to experimental psychology, to an analysis whose growing power we can as yet hardly realise, that we must look for a slow but incontrovertible decision as to whether man be but the transitory crown of earth's fauna, between ice-age and ice-age, between fire and sea; or whether it may truly be that his evolution is not a terrestrial evolution alone, not bounded by polar solitudes, nor measured by the sun's march through Heaven, but making for a vaster future, by inheritance from a remoter past.

FREDERIC W. H. MYERS.

APPENDIX.

Since this paper was read to the S.P.R. (October 29th, 1885), very great activity has been shown in France in the direction of hypnotic research. The "Bulletins de la Société de Psychologie Physiologique, 1885" (published by Félix Alcan, Paris, 1886), contain various cases

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of high importance. It must suffice here to say that the experiments detailed in this paper have been repeated and improved upon in many ways. An account of some experiments at Havre will be found elsewhere in this present part of the S.P.R. *Proceedings.*

And it seems desirable to add here a brief notice of the later development of the case of Louis V——, which I gave to the General Meeting of March 6th, 1886. A full account of Louis V——'s case, compiled by Dr. A. T. Myers, will be found in the *Journal of Mental Science* for January, 1886. Louis V—— is no longer at La Rochelle, and, with improving health, has ceased to exhibit these changes of personality.

At the end of 1885, however, he was in the asylum at La Rochelle, and the account here given represents his then state, as described by Drs. Bourru, Burot, and Berjon. I retain the present tense, for clearness' sake, though I have altered a few expressions.

Louis V—— is now in the asylum at La Rochelle, and has six personalities. I speak here only of the transition from State I. to State II. In what is now classed as State I. (though it was not the patient's earliest condition), he is paralyzed and insensible on the right side. He is talkative, violent, and arrogant. His language is coarse, and he addresses everyone with rough and impudent familiarity, giving nicknames, and making bad jokes. He is a Radical in politics, and an atheist in religion. He is extremely fond of holding forth on these topics, but his speech is indistinct and defective. Of his past life he remembers only certain portions, more or less akin to his present state. Among the six states, this is the only one in which there is right hemiplegia; and it is the only one in which the character is violent and bad. Whenever the left brain predominates, Louis V——'s disposition is good, though there are many variations in his intelligence and his memory, linked with variations in his motor and sensory systems.

Now let a bar of steel be placed on his right arm. His respiration becomes quick, his expression anxious; in about a minute the paralysis and the anæsthesia are transferred from the right side to the left. At the same time the difficulty of speech disappears, and the patient's pronunciation becomes easy and clear. Thus far, though the case is remarkable, it is not quite unique. But now comes the unique point. Together with the sensory and motor changes there is a change in memory and a change in character. He is now gentle, well-mannered, and modest. He speaks respectfully to the physicians whom a couple of minutes before he has been calling by abusive nicknames. Asked his opinion on politics or religion, he prefers to leave those matters to wiser heads than his own. He is obedient to discipline, and his expression of countenance is gentle and sympathetic. His memory embraces part of his stay at Sainte Anne, and at Bicêtre, at which latter asylum he imagines himself still to be.

And now I may point out a curious connection between this case and certain phenomena of automatic writing, previously discussed in these *Proceedings.* It will be remembered that Mr. Newnham, puzzled to account

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for the freakish and non-moral character of some of the replies written by Mrs. Newnham's hand, suggested, as a possible hypothesis,[1] that "if the untrained side of the brain be suddenly stimulated to action, its behaviour is apt to resemble that of a child whose education has not been properly attended to." In commenting on this and other cases, I endeavoured to show that there was reason to suppose that the *right*, or less-used, hemisphere was concerned in supernormal mentation; and I traced especially analogies between aphasia and cerebral automatism; the inference being that in each case work was thrown on dextro-cerebral centres which was habitually performed by sinistro-cerebral. I summed up (p. 60) by saying that "although I hold that the right hemisphere has much to do with Mrs. Newnham's replies, . . . I cannot find any well-recognised doctrine of cerebral localisation which authorises us to draw any conclusion as to the way in which a temporary predominance of dextro-cerebral centres might affect the manifestation of moral character; . . and I should of course be unwilling in such a matter to go a step beyond the consensus of the best scientific opinion. So far as the questions at issue are purely physiological, I can aim at nothing more than attentive study of the labours of others." I do not regret the caution of the tone here used, for I hold it eminently important that we who are thus speculating in a novel realm should not improvise a fancy physiology to suit our own ideas—that we should cite chapter and verse for any physiological fact or theory, on which we base further deductions. But now I find that the suggestion which I hesitated to accept in full, although all my own arguments pointed directly that way, simply for lack of a recorded case where right hemiplegia had involved a moral tone different from that involved in left hemiplegia in the same subject,—I find, I say, this very suggestion of the moral difference of the two hemispheres put forth and endorsed—though of course not as yet in a very confident tone—by physicians of eminence, *àpropos* of a case[2] on which no theory of the kind had been founded at the time when my paper was written. Corroborative instances, of course, are still needed, for the coarse organic injuries of the brain which are most commonly met with do not show themselves in *nuances* of character.

But it is to be observed that the most crucial test which could have been devised for the theory in question would have been one where (as in Louis V——'s case) the functions of the two hemispheres were subject to so profound a disassociation that there was actually a co-exclusive alternation of memories according as one or the other hemisphere assumed the predominance. Suppose that in an ordinary case of hysterical hemiplegia the hemiplegia is transferred by metallic contact, suggestion, or otherwise, from the right side to the left. Suppose, further, that the patient exhibits more

[1] *Proceedings*, Vol. iii., p. 22.

[2] M. Jules Voisin writes in the *Archives de Neurologie*, September, 1885, and *Ann. Méd. Psych.*, January, 1886. The opinion of MM. Bourru and Burot is given (with complete adhesion) by Dr. Berjon in his tractate *La Grand Hystérie chez l'Homme* (Paris: Baillière, 1886), p. 53. I need hardly say that the transfer of activity between the two hemispheres is almost certainly not the *only* alteration of cerebral action which occurs in these changes of state. See *Proceedings* iii., p. 43.

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irritability, &c., when paralyzed on the right than on the left side. Such a case would hardly afford a presumption that the highest ideational and emotional centres were *directly* affected by the transfer of the paralysis; the change in temper might merely depend on the greater or less *malaise* caused by some change in the affection of lower centres; for, of course, we cannot assume that a hysterical hemiplegia, whose external signs may be symmetrical whether it affects the right or left side, is in reality symmetrical in its internal or subjective manifestation.

But in Louis V——'s case the character, as it were, *starts fresh* with the transfer of the hemiplegia; it can exhibit itself untrammelled by any continuity of memory with the previous state; we can judge it *de novo*, and, so to say, from top to bottom. And we find that the predominance of the right hemisphere comports a marked reversion to savage characteristics, a marked emotional explosiveness and ideational crudity.

Let us see how this view coheres with what we already know of the difference between the two hemispheres. We start, of course, from the notorious fact that our right hands are more "dexterous" than our left; that is, that the sinistro-cerebral hand-governing centres are superior in development to the dextro-cerebral hand-governing centres. There has been some controversy as to how far this is the result of education in the individual, or how far it depends on some asymmetry of the circulatory system. I cannot, of course, give any opinion as to the original anatomical reason for the selection of the right as the dominant hand, but I can hardly doubt that the superiority in the sinistro-cerebral centres concerned is now a hereditary thing,—does not depend merely on the education of the individual child.

Going one step higher, it is now pretty generally admitted that the sinistro-cerebral speech-centres are more evolved than the dextro-cerebral. And here we come very near to an actual difference in the power of summing up ideas or emotions. For *signs* are so closely connected with thinking that it would surprise us to see an aphasic patient retaining for long the same mental clearness as before his affliction. And our emotions themselves are greatly modified by the expression which we give to them. An aphasic (for instance) who can express disagreement only by an oath is likely to lose his sense of controversial deference and courtesy. Well, what is now contended is, that just as there may be a right hemiplegia which does not involve aphasia, and, again, a right hemiplegia so far involving the higher centres that aphasia accompanies it, so also in this case of a dissociation almost unique in its profundity between the activities of the two hemispheres, there was made manifest a difference in stage of evolution between the *highest* sinistro-cerebral and dextro-cerebral centres—those which preside over emotion and ideation. And I go farther, and conjecture that this difference may exist in all of us, and that just as certain of our visceral arrangements retain the traces of our pre-human ancestry, and just as our dextro-cerebral speech-centres are often stammering, childish, or wholly inefficient, so also our dextro-cerebral "character-forming" centres—the centres which on that side of the brain sum up or represent our highest activities—may retain, in their inferior evolution, traces of that savage ancestry which forms the sombre background of the refinements and felicities of civilised man.

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And, furthermore, I suggest that while we habitually use our sinistro-cerebral character-centres with the same unconscious choice as leads us, for instance, to catch a rope flung at us with our right hand and not with our left, there are nevertheless certain states—supernormal as well as abnormal—in which our Ego (whatever that may be) expresses itself more readily through the dextro-cerebral centres, and assumes, therefore, a comparatively savage character.

If this be so, much light will be thrown on almost all that class of Spiritualistic manifestations which have been ascribed to *diabolic* agency. And if we are not ashamed of possessing a digestive system which includes the rudimentary "vermiform appendix,"—a motor system which includes the comparatively defective motor innervation of our left hands,—then surely we need not be ashamed of possessing an emotional and ideational system which includes dextro-cerebral elements some twenty generations or so in arrear of the epoch to which our brain, taken as a whole, entitles us to belong. For those who believe that our evolution has no assignable limit, there may even be something pleasing in such a token as this of the rapidity with which we are mounting on the endless way.

PROCEEDINGS OF THE GENERAL MEETING ON

Saturday, January 2, 1886.

The eighteenth General Meeting of the Society was held at the Rooms of the Society of British Artists, Suffolk Street, Pall Mall, on Saturday, January 2, 1886.

PROFESSOR SIDGWICK, VICE-PRESIDENT, IN THE CHAIR.

Mr. E. Gurney read part of a paper on "Collective Hallucinations," since embodied in *Phantasms of the Living.*

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PROCEEDINGS OF THE GENERAL MEETING ON

Saturday, March 6, 1886.

The nineteenth General Meeting of the Society was held at the Rooms of the Society of British Artists, Suffolk Street, Pall Mall, on Saturday, March 6, 1886.

PROFESSOR SIDGWICK, VICE-PRESIDENT, IN THE CHAIR.

The following paper was read:—

II.

ON SOME PHYSICAL PHENOMENA, COMMONLY CALLED SPIRITUALISTIC, WITNESSED BY THE AUTHOR.

BY PROFESSOR W. F. BARRETT.

In the printed statement of the objects of this Society, one of the subjects which the Society was founded to investigate is described as follows:—"An inquiry into the various phenomena, commonly called 'Spiritualistic,' with an attempt to discover their causes and general laws."

Whether Spiritualism be regarded as worthy or unworthy of serious inquiry depends, to a large extent, upon the place where each person draws the boundary line that, in his opinion, divides the possible from the impossible. There are some things upon which it would be sheer folly for any intelligent man to waste his time, such as circle squaring, or a search for the perpetual motion. These and such like things are placed beyond the pale of rational investigation at the present day by the extent of our already existing knowledge in those particular regions. There are, however, other matters which appear impossible, not from the range of our knowledge, but from the *extent of our ignorance* in those directions. Under this class of improbable phenomena might be included such things as fireballs, the sea-serpent, thought-transference, and what is known by the name of Spiritualistic phenomena; a few years ago the telephone and the phonograph would also doubtless have been here included. The essential difference between the two classes of improbable events is that the first involves a contradiction of laws which investigation has well established, whilst the second involves no

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contradiction, but only an extension of our knowledge in an unforeseen direction.

Forgetful of this broad distinction, some of our Members and Associates consider Spiritualism a subject so contemptible, because to them it is intrinsically impossible, that it ought not to have been included within the objects of our Society. I would venture to beg such of our friends to read the two masterly addresses which, as the first President, Professor H. Sidgwick delivered at the foundation of this Society, or Professor De Morgan's inimitable preface to a volume called *From Matter to Spirit.*

On the other hand some of our friends have gone to the other extreme, and vigorously express their opinion that the subject of Spiritualism should have occupied the first place in the programme of our operations. They urge that in importance and interest this subject surpasses all the other problems included within the scope of Psychical Research, and they complain that the Society has displayed far too great caution and reserve in dealing with a class of phenomena that has received the attestation of men of indubitable scientific repute, both at home and abroad. To such I have only to say that the Council of this Society recognised from the outset the interest that is attached to this question, and soon after the foundation of the Society a committee was organised for the purpose of investigating Spiritualistic phenomena. If no report of this Committee has been published, this has arisen not from any disregard of the importance of this subject on the part of the Council, but simply because the Committee itself has failed to make any report. I, for one, regret this omission, which no doubt arose from the Committee being unable to obtain any conclusive evidence. But I think it would have been better if a report, even of repeated non-success in obtaining trustworthy evidence, had been drawn up and duly presented to the Society. The failures of one generation are the stepping stones to success in the next, and in a subject so obscure and so full of pitfalls as that which goes under the name of Spiritualism, it is desirable that each investigator should state, with judicial fairness and scientific exactness, the conditions and the results of every experiment. Moreover, if the first instalment of evidence had been unfavourable to Spiritualism it would lead the public to have more confidence in the sincerity of purpose which animates us all, than if we only published evidence that told in favour of the marvellous.

I am aware that this is not the usual scientific method; thousands of experiments are made which never see the light simply because they have a negative result as regards the particular object of search. It is not worth publishing these, for all that could be said would be that nothing has been found out that was not perfectly well known before. But

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the psychological problem before us is of a different character. We cannot at pleasure command the instruments necessary for the inquiry, for they are living beings asserted to be comparatively few in number; hence, whenever it is claimed that with such and such an instrument such and such results ensued, I think our primary duty is to obtain permission to submit the instrument to a rigid, though it should also be a perfectly courteous and friendly examination. If the results of an adequate examination of say one or two dozen such living instruments of note show that in no single instance do they exhibit any phenomena new to science, then I, for one, think that we should publish this negative evidence, and, leaving Spiritualism aside, pass on to other more profitable fields of inquiry. Conclusive evidence unfavourable to Spiritualism has not yet been made public by any competent body of investigators, or by any single authority.[1] The sorry stuff that in general passes as criticism of any unfamiliar psychological phenomenon can only be explained by the general hurry in which everybody lives, so that the critics have no time to investigate or even to read the evidence which they profess to criticise.

Experience shows that the real difficulty with Spiritualism is in arriving at sufficiently *conclusive* evidence pointing one way or the other. Non-professional instruments or mediums are difficult of access; professional mediums—who make a living by their powers—are, very naturally, open to the charge of being conjurers in disguise, who can fail, without discredit, whenever they are too closely watched, and it is notorious how helpless an ordinary mortal is in the hands of a clever conjurer. But I think the difficulty of arriving at conclusive evidence has by some been over-estimated. Conjurers have not super-human skill. Let us obtain from the best authorities on conjuring the limits of what they deem possible in their art; then if, after imposing our own private tests in our own private rooms, results are obtained which con-

[1] Since the foregoing was written Mrs. Sidgwick has read an account of her prolonged personal investigation into the physical phenomena of Spiritualism, and the conclusion arrived at is distinctly adverse to the genuineness of the phenomena she witnessed. But though Mrs. Sidgwick's adverse testimony is the most damaging blow which Spiritualism, or rather a certain class of Spiritualistic phenomena, has yet received, it will be noticed that Mrs. Sidgwick is careful to point out that her evidence is not conclusive of the whole question; on the contrary, she expressly states, in the last paragraph of her able paper, that her own view is that "it is more probable than not that such things [that is the so-called Spiritualistic phenomena] do occasionally occur." Every lover of truth must feel grateful to Mrs. Sidgwick for her laborious and valuable inquiry. At the same time one cannot but regret that some of the simpler physical phenomena, occurring with unpaid mediums, were not accessible to Mrs. Sidgwick. It is to be hoped that if any reader of this paper knows of the existence of such manifestations he will at once communicate with the Hon. Secretary of the S.P.R.

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siderably surpass the limits of conjuring, and are otherwise inexplicable, we should be encouraged to persevere until a mass of evidence had been obtained commensurate with the very great antecedent improbability of the phenomena themselves. It is because I know much has already been done in this direction by men of high scientific position, such as, *e.g.*, the late Professor De Morgan, and Professor Zöllner, and Mr. Crookes, that I feel it is worth making a strenuous effort to obtain more evidence of the kind. Hence, at the risk of incurring scientific odium,—and I may add with much personal dislike to the subject itself —I feel it my duty to reiterate publicly my conviction that at any rate some of the simpler phenomena of Spiritualism are inexplicable by any causes at present recognised by science. The object of the present paper is to place on record some of the evidence upon which that conviction is based. I am not so foolish as to suppose anything I can say will make an appreciable difference in public opinion, or that my testimony is superior to, or ought to have more weight attached to it, than that of several other observers. But it will, I hope, lead some of our members and friends to come forward and inform us of any unexceptionable evidence they possess, until "we drive the objector into the position of being forced to admit the phenomena as inexplicable, at least by him, or to accuse the investigators either of lying, or of cheating, or of a blindness, or forgetfulness, incompatible with any intellectual condition except absolute idiocy."

I freely admit that very much of what passes among some Spiritualists as evidence has really no claim at all to this distinction, except as being evidence of the difficulty of preserving a sound judgment when dealing with these phenomena. How far my *own* judgment is at fault is not for me to decide. It is impossible for anyone to be entirely free from mental bias, but so far as I can I have striven to be an impartial witness to phenomena coming within the scope of my own observation.

Reviewing the numerous public and private séances which I have attended with different private and professional mediums, during the last 15 years, I find that by far the larger part of the results obtained have absolutely no evidential value in favour of Spiritualism: either the condition of total darkness forbade any trustworthy conclusions, or the results were nothing more than could be explained by a low order of juggling. A few cases, however, stand out as exceptions; the ones I will cite occurred in the years 1875 and 1876. Though notes of the cases to be cited were taken at the time, the evidence is, I admit, fragmentary and somewhat remote in time. This partly arises from my lessened interest in the phenomena and partly from the difficulty of obtaining anything like satisfactory evidence. I should add, moreover, that moral considerations also weigh with me; owing to the constant

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recrudescence of fraud on the part of many mediums with whom I sat, it became with me a doubtful question whether the gain to science was worth the moral risk to which one exposed the paid medium. The temptation to fraud on the part of the medium is of course very great, as must always be the case when a man's livelihood depends on the recurrence of phenomena which if genuine are out of his own control.

In the first two of the cases I am about to describe there was certainly no pecuniary inducement to fraud, as the sittings were with private family circles, and in none of the cases to be cited was there total darkness, that easy adjunct of fraud; furthermore, the phenomena occurring in all these cases were of so simple a character, the same thing being several times repeated, that one's attention was not distracted by the occurrence of various novel and unexpected results.

The first case I will describe came under my notice a year or two after I went to reside in Ireland. A solicitor, Mr. C., with his wife and family, had come to reside for the season in the suburban house of a friend and neighbour of mine, an Irish country gentleman, who had an utter disbelief in Spiritualism. I was, therefore, not a little amused, upon making Mr. C.'s acquaintance, to find that he had in his own family what appeared to be Spiritualistic phenomena actually then and there going on. When Mr. C. found I was interested in the matter, he kindly permitted me every opportunity of close and frequent investigation. The following observations, noted at the time, were in part published in a review I was then engaged in writing, and also referred to in the course of a paper which I read before the British Association at Glasgow, in 1876.[1] They embrace the record of numerous sittings, extending through the months of *August* and *September*, 1875. Present, besides myself, Mr. and Mrs. C. and their young daughter F., a bright, frank, and intelligent child then about ten years old. Time, 10 a.m. We sat at a large dining-room table facing the French windows, which let in a flood of sunlight, so that the sitters' feet as well as hands could be perfectly seen. Shortly a sort of scraping sound was heard on the surface of the table, the sound moving about, but was loudest when near the medium F. Raps were also heard, sometimes on the table, sometimes appearing to come on the backs of the chairs on which we sat. F.'s hands and feet were closely watched; they were absolutely motionless when the sounds were heard. After a few sittings the sounds grew in loudness, often being as loud as, and very much resembling, the hammering of small nails into a floor. They came more readily and more loudly when music was played, or a merry song struck up. Usually they kept time with the music, and altogether

[1] See *Proceedings* S.P.R. vol. 1, p. 238.

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displayed a singular degree of intelligence. Sometimes a loud rhythmic scraping, as of a violoncello bow on a piece of wood, would accompany the music. Again and again I placed my ear on the very spot on the table whence this rough fiddling appeared to proceed, and felt distinctly the rhythmic vibration of the table, but no tangible cause was visible either above or below the table. Experiments were made on the possibility of localising sounds such as were heard, and so far as my experiments went, I found that I could tell, approximately, the position where a knock was made by a friend hidden underneath a large table. The ability to localise a sound depends very much on the nature of the sound. The sounds made by a siren or by a singing flame are extremely difficult to localise, they may be anywhere about the room; but I feel pretty confident that the knocks and scraping sounds proceeded from a source certainly within a foot or two of the position assigned. Now I noticed particularly that the sounds—though fainter, it is true, than when near—were sometimes heard far away from the medium. On one occasion, when no one else was in the room, and it was broad daylight as usual, I asked my young friend the medium to put her hands against the wall and see how far she could stretch her feet back from the wall without tumbling down. This she did, and whilst in this constrained position—with the muscles of the arms and legs all in tension—I asked for the knocks to come. Immediately a brisk pattering of raps followed my request. All the while the child remained quite motionless. My reason in making this experiment was to test the late Dr. Carpenter's muscular theory of the cause of the sounds. Had Dr. Carpenter been present, I feel sure he would have admitted that here, at any rate, that theory fell through. Besides knocks there were occasional movements of the furniture. Seated one day at a large dining-room table, in full sunlight, Florrie and Mr. and Mrs. C. and myself being present, all our fingers visibly resting on the surface of the table, three legs of the table rose off the ground to a sufficient height to allow me to put my foot easily beneath the castor nearest me. Attempts to move the table by muscular effort, under similar conditions, entirely failed; it could be pushed about, not raised. On one occasion I asked that the knocks should come upon a small table, the medium being seated near to, but not touching the table. The sounds occurred as requested, and I placed one hand flat on the upper surface of the table, and the other on the under surface, and in this position I felt, or thought I felt, the slight jarring made by the taps on that part of the table enclosed between my hands. The sounds frequently occurred, as I have said, when the child was the only person present in the room besides myself. Under such conditions they occurred when I made her lie on a sofa and firmly held her hands and feet. On any occasion, upon repeating the alphabet, raps would occur

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at certain letters. Thus I was told that a lad named "Walter Hussey" was the invisible person engaged in making the sounds.

Though there was manifest intelligence in the sounds, it was a childish intelligence, and a hasty observer might therefore jump to the conclusion that it was the little medium herself playing tricks; and he would find incidents which might give a plausible support to his conclusion. Thus one day a word was misspelt by raps, exactly as the child would have misspelt that word, as I afterwards ascertained. Yet I can only say that a long and careful examination convinced me that trickery on the part of the child was a more improbable hypothesis than that the sounds proceeded from some unknown agency.

Nor could the sounds be accounted for by trickery on the part of the servants in the house, for in addition to my careful inquiries on this point, Mr. C. informed me that he had obtained the raps on the handle of his umbrella out of doors, when the child was by his side, and that the music master complained of raps proceeding from inside the pianoforte whenever the child was listless or inattentive at her music lesson. Mrs. C. told me that almost every night she heard the raps by the bedside of her child when she went to bid her child good night; and that after she had left the room and partially closed the door, she would hear quite an animated conversation going on between her daughter and her invisible companion, the child rapidly spelling over the alphabet, and the raps occurring at the right letters, and the child thus obtaining, with surprising rapidity, a clue to the words spelt out.

Still more violently improbable is the supposition that the parents of the child were at the bottom of the mystery, stimulated by a desire to impress their friends with the wonderful but imaginary gifts their child possessed. The presence of the parents was *not* necessary for the occurrence of the sounds which, as I have said, often took place when I was the only person in the room besides the child.

Hallucination was the explanation which suggested itself to my own mind when first I heard of the phenomena, but was dismissed as wholly inapplicable after the first day's inquiry; nor do I think anyone could maintain that different people, individually and collectively, for some weeks thought they heard and saw a series of sounds and motions which had no objective existence.

No! I was then, and am still, morally certain that the phenomena had a real existence outside oneself, and that they were not produced by trickery or by known causes, hence I confess I could come to no other conclusion than that we had here a class of phenomena wholly new to science.[1] In reviewing the evidence the critic must, however, make what

[1] It may be urged that the occult phenomena alleged by the Theosophists were of this inexplicable character, and believed in by numbers of intelligent

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allowance he thinks proper for my mental bias during the investigation, and further take into account the hypothesis that some children do exhibit an amazing passion for deceiving their elders, and some possess an extraordinary love of notoriety. For instance, I could a tragic tale unfold where these causes led a clever boy, in good position in society, and of juvenile piety, for twelve months to deceive his father, a distinguished surgeon, and all his family, by pretended Spiritualistic manifestations, which appeared at first sight inexplicable until the cunning trickery of the lad was discovered. But the two cases radically differ in this, that after examination by an outsider one case hopelessly broke down, the other did not. In the one case the phenomena were not beyond the capacity of a clever and wicked child, in the other the phenomena were, I venture to think, beyond the capacity even of the most clever and diabolical child. It was in assuming the goodness of their child that one family were misled; no such assumption was made in the other case, for the parents sensibly enough punished their child when the phenomena first broke out.

After some three months the sounds disappeared as unexpectedly as they had arisen. Assuming Miss C. to be an accomplished trickster animated by the love of notoriety, one would not expect the phenomena to droop and die away when constant practice had made the trick easy, and when the acme of success, as regards the growing interest of friends and the attention paid to herself, was within the performer's reach.

In a letter which I received a few days ago from Mrs. C., she writes:—

> Florrie has never had any return of her mediumship since 1875, when we were in Ireland. It died a sudden death there and then. I was not sorry for it, for I feared that had it continued when she was growing up, it would probably have developed more than we cared for or than was good for herself. Of the genuineness of the phenomena I have never had the slightest doubt, then or now.

And in a subsequent letter Mrs. C. gives her opinion which, though I do not agree with it, I quote:—

> I have no doubt that the intelligence which manifested was outside the circle, and though my mere conviction on such a matter is, of course, quite valueless, I still believe it was a so-called "spirit" totally disconnected from ourselves, and dominating her for a time. The manifestations were often violent, and for the most part very frivolous in their nature. I thought

and honest men. Nevertheless, after Mr. Hodgson's investigation in India no other conclusion is possible but that the High Priestess of Theosophy, Madame Blavatsky—round whom these marvels clustered,—is one of the most "accomplished impostors in history." But what are the facts? Directly circumspect and painstaking investigation was brought to bear upon these phenomena they were found to be fraudulent, and the mystery collapsed.

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therefore they could bring no advantage to the sitters to counterbalance the disadvantage to my daughter, then a mere child and easily excited. Hence, when the phenomena ceased I was not sorry for it on her account.[1]

The next case, which I will cite, is of somewhat less evidential value, as my opportunities for testing the phenomena under varying conditions were not so great ; but the case is of interest owing to the medium being a middle-aged lady in private life, who found this abnormal power gradually develop in her presence. In the spring of 1877, I was informed by a Mr. L., a well-known photographer in Dublin, that his cousin, Miss I., had mediumistic power, and I was invited to her house to make a careful investigation. I went a great many times during the spring and autumn of 1877, and took notes of what occurred. In moderate gaslight, enough to see to read small print, knocks and spasmodic movements of the table at which we sat occurred, and long religious messages were rapidly spelt out, sometimes by raps, sometimes by quick tilting of the table, which latter may, however, be disregarded, as it is impossible to eliminate the effects of unconscious muscular action except by a clear space intervening between the hands and the table, which was not the case here as a rule. I will quote the record of one séance on *May 10, 1877*. There were present only myself, Mr. L., and Miss I. The séance took place at Mr. L.'s house in the evening, one gaslight burning in the room. Seated at a small table, tiny raps soon occurred, like the ticking of a hard point on the oil cloth which covered the floor of the room. I confined my attention to these, and begged Miss I. to move to a larger and heavier table, some 4 feet square, and to adjust her dress so that I could see her feet. This she did. I sat close by her, carefully watching her feet and hands, which were however quite motionless.

Presently loud raps were given at this table beneath the hands of the sitters, so loud, in fact, they quite startled me. In character the sounds in general resembled the snapping noises occasionally made by furniture when the joints open under the heat of a room. But the sharpest and loudest cracks can be well imitated in strength and character by smartly striking a table with the edge of an ivory paper-knife. In obedience to my request a definite number of knocks were given : four double knocks were asked for and given ; knocks were asked to indicate the number of fingers held open, and were correctly given ; in two instances this was tried and correctly done

[1] Both Mr. and Mrs. C. were present when this paper was read. Mr. C. quite corroborated the opinion given by his wife of the genuineness of the phenomena, and informed me of several other remarkable phenomena, in connection with the mediumship of his daughter, which had not come under my notice.

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when I held my hand out of sight, so that the opened fingers were known to no one but myself. Knocks of different kinds were now heard all over the table; they kept time to the whistling of a tune, and showed an actuating intelligence that was most undeniable.

Addressing the table, I now asked if knocks could be given without the contact of the hand. Three knocks in reply were to be the signal for yes. Three knocks quickly came. The hands of both Mr. L. and Miss I. were now held up, and whilst they partially withdrew from the table, the knocks still came, not so vigorously, but still there they were. This went on for some minutes, till they ceased to be heard. A refresher was then given in the shape of a few moments' contact with the hands. Once more the knocks returned, and continued some time after the hands were removed.

Whilst noticing these facts, I observed a frequent uneasy movement of the entire table, and now it sidled about in a most surprising manner. Lifting their hands completely off the table, the sitters placed themselves back in their chairs with their hands folded across their chests; their feet were in full view, and under these conditions, and in obedience to my request, the table raised the two legs nearest to me completely off the ground, some 8 or 10 inches, and thus suspended itself for a few moments. Again a similar act was performed on the other side. Next came a very unexpected occurrence. Whilst absolutely free from the contact of every person the table wriggled itself backward and forward, advancing towards the arm-chair in which I sat, and ultimately completely imprisoning me in my seat. During its progress it was followed by Mr. L. and Miss I., but they were at no time touching it, and occasionally were so distant that I could perceive a free space all round the table whilst it was still in motion. When thus under my very nose the table rose repeatedly, and enabled me to be perfectly sure by the evidence of touch that it was off the ground, and, further, that no human being, consciously or unconsciously, had any part in this movement.

This sitting lasted two and a-half hours altogether. The results, it is true, were very remarkable and unaccountable; but though I had not the slightest doubt of the good faith of Mr. L. and Miss I., yet I do not adduce this evidence as unexceptionable. I should have preferred to have taken precautions which were not so easy to impose on a lady, and I should also have preferred to have had the séance in my own house. This latter objection was met by Mr. L. and Miss I. coming to my own house in the first week of September, 1877, and as before we three were the only persons present. The time was the afternoon, and there was plenty of daylight. Though the drawing-room was carpeted, the curious ticking sounds again occurred; these soon developed into louder raps, always in the neighbourhood of the medium, but I could not discover

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the slightest movement of the muscles of the hands or feet which would account for the sounds; nor were they muffled, but clear and distinct raps. There was always a remarkable intelligence and often a jocosity about the sounds, and when a tune was played on the piano the raps kept time to it. Suddenly, only the tips of our fingers being on the table, the heavy loo table at which we were sitting made a series of very violent prancing movements (which I could not imitate afterwards except by using both hands and all my strength); the blows were so heavy that I hurriedly stopped the performance, fearing for the safety of the gas chandelier in the room below.

Here, too, I cannot avoid the conclusion that the phenomena described are inexplicable on any known hypothesis. It is true the character of the pious platitudes spelt out by the table were just such as the medium herself (a Methodist) would be likely to concoct; and it was quite possible or even probable that unintentional muscular movements on her part caused the table to tilt and spell out these platitudes. Nor must we exclude from our view two considerations, first, how very difficult if not impossible it is to keep up a continuous vigilant watch on the hands and feet of any person—the whole of legerdemain is based upon this known failure in our habits of observation; and second (though there was no reason to suppose Miss I. was suffering from this malady), we must remember the extraordinary vagaries of hysteria: even experienced physicians have sometimes been led astray by the morbid and amazing cunning of patients suffering from this disease. But supposing that Miss I. had some ingenious mechanism concealed about her person whereby she could, by an imperceptible movement of her body, produce the sounds that were heard, this explanation would fail to account for the undoubted motion of a heavy table free from the contact of all present. After giving due weight to every known explanation, the phenomena remain inexplicable to me, but each reader will form his independent opinion, which will be so much the more valuable than mine as his knowledge is larger and his experience of these phenomena wider than mine.

With some hesitation I will now adduce a case of another order, namely, with a paid professional medium, who has since become well-known for his slate-writing performances, and who is therefore either an accomplished trickster or the possessor of most wonderful occult power. This is, therefore, a case wherein I should like to have had the co-operation and opinion of a good conjurer; I confess I distrust my own judgment. I will, however, endeavour to describe what occurred as faithfully as my notes of the performance admit. My principal reason for citing this case is that it affords an illustration of what appears to be utterly incomprehensible as a piece of trickery, and yet I cannot

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conceal from myself the fact that if the moral character of the medium should be found open to suspicion the chances are that it was after all only a piece of adroit legerdemain.

On January 5th, 1878, Mr. Hensleigh Wedgwood kindly arranged that I should have a séance in his own house in Queen Anne Street, London, with Mr. Eglinton. The observers present beside myself were Mr. Wedgwood and his sister, Mr. A. R. Wallace, and Mr. F. W. H. Myers.

The séance was held in Mr. Wedgwood's library at the hour of 4 p.m. When the medium arrived I was permitted to take whatever precautions I thought necessary to prevent fraud on his part. Accordingly I asked him to take off his coat and waistcoat and put on a black coat of Mr. Wedgwood's. The description of what follows is tedious, but I fear it is necessary, though no verbal description can ever be entirely satisfactory to one who was not present. Anticipating that the medium might easily slip his arms out of the coat sleeves, but that he would find it extremely difficult to get them out of his shirt sleeves, I took a needle and thread and stitched each sleeve of the white shirt he had on to the corresponding sleeve of the coat I had just put on him. I then stitched the wristband of each shirt sleeve so as to make it fit tightly around his wrists. He was then asked to sit down in a chair in the corner of the room and place his hands behind him; in this position thread was tied to each wrist and fastened to a nail driven in the woodwork of the adjacent bookcase. To prevent accidental breaking of the thread, and as a further security, a piece of red tape was passed through the button hole of his shirt, then through a button hole of the coat, then carried over his arms and the two ends tied very securely behind him; the two long loose ends of the tape were finally fastened, one to the nail in the bookcase on his right hand, and the other to the nail in the bookcase on his left hand side. I now asked him to place his hands, which, as I have said, were behind him, palm to palm; he did so, and I then tied his thumbs together very securely with a piece of black linen thread. It will thus be obvious he could, if he chose, move his legs freely and also turn or nod his head, but he could not move the trunk of his body nor his hands nor arms without breaking the fastenings, which I may add were sealed with sealing wax on to the bookcase as well as tied to the nails. A couple of small curtains, running on a rail over the medium's head, were now drawn nearly together in front of the medium, leaving a space of a few inches exactly opposite the central line of his body. Through this space his face and front of his body could of course be seen. The curtains hung down on each side of the chair on which the medium sat, so that his legs from the waist downward were entirely in front of the curtain. A gas jet, which was the principal light in the room (the heavy window curtains having been

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drawn) was now lowered, but there was plenty of light to allow of our seeing each other. We then seated ourselves close to the medium; I was so close to him that not a foot intervened between us. I could see that his head presently drooped and he went into a sort of trance, whether real or assumed I could not say. Knockings were now heard, and upon repeating the alphabet over slowly, a message was spelt out. I asked, "Can you move anything in the room?" It said, by knocks, it would try, but nothing was moved. Either one of us or else the knocks suggested putting some objects near the medium. I got up, went to the bookcase, and took out some three or four books at random. These I placed in a pile on the lap of the medium, and then, catching sight of a small hand bell, added this on the top of all.

Upon seating myself close in front of the medium, our knees almost touching, I noticed there was enough light in the room to read the time by my watch true to a second. In a few minutes after this, whilst watching the motionless figure of the medium, I distinctly saw the upper half of the pile of books move, the cover of the middle book opening and causing the ones above it and the bell to incline to a considerable angle, so that I was surprised to find that the bell did not fall off; in fact, it did not stir relatively to the cover of the book. The leaves of the book were now dropped one after another, and then opened up again. Then the lower book opened, and its leaves were deliberately let fall. The whole proceeding was exactly such as would occur if two hands were placed on each side of the volumes and their leaves slowly run over by first lifting up the body of the book and then allowing the leaves to drop past, the fingers rubbing against them as they fell. During this process some unseen support would be required to keep the bell in its place.

Now, if the medium had skilfully depressed or raised his knees, the books would have moved as a whole, and this is what did *not* occur. If he had cunningly contrived, unseen by five pairs of eyes, to fasten a thread to the cover of any of the books, he must have done so in full view of us all after he had been secured in his chair, and then the upper cover, or the book as a whole, would have moved, and this also is what did *not* occur.

When the curtains were drawn back the medium appeared to be fast asleep; the gas was turned fully up, and every fastening was found intact. As, however, I could see the body of the medium the whole time, the fastenings were of no particular value in this case, except to satisfy those who were not there. The medium presented the usual dazed appearance when he awoke shortly afterwards.

What hypothesis can we frame to account for what took place? If hallucination be the explanation it was a case of collective hallucination, for every one of the five observers present saw the same thing and

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described it in similar words afterwards. The occurrence was not expected beforehand, not, therefore, talked over as likely to happen, and accordingly no dominant idea had taken possession of our minds that this particular phenomenon would occur. Moreover, I was specially on my guard, for the mesmeric hypothesis was a favourite one of mine, but in this case it is certainly out of court. If fraud be the explanation, who was the operator? The good faith of the observers, all friends of each other, is unquestionable; but if this were not the case it was quite light enough to see that nobody's hands were meddling with the books. The medium may have been the operator, but I cannot myself conjecture how he accomplished the performance, even allowing he may have distracted our attention at a critical moment so as to make his preparations unperceived. The most plausible explanation of the whole affair is mal-observation and misdescription on my part, a clever bit of juggling in moving the books being mistaken for a larger movement, and ultimately exaggerated into the effect described. I have however quoted from my notes and am not conscious of any exaggeration. But I think we are bound to admit that if such an inexplicable physical phenomenon stood alone it is far more probable that my observation was inaccurate or my description exaggerated than that the occurrence actually took place as I have described.[1]

The question remains how far is it legitimate to apply this exaggeration hypothesis to each case as it arises and so in detail dispose of an imposing array of evidence. When the first observers of a slowly moving electric fire-ball recounted what they had seen they were naturally suspected of exaggeration, or as the victims of some illusion. But as concordant testimony from other independent observers came in disbelief had to be given up, and electric fire-balls are now accepted as an enigmatic freak of that inexplicable agency, electricity.

Similarly, if we had adequate evidence, physical phenomena, such

[1] I ought here to mention that I have had numerous sittings with "Dr. Slade" and Mr. Eglinton, and other mediums, for the purpose of obtaining what are called "Psychographic" phenomena, that is, writing by unseen agency on slates or other material. Whilst I was very much impressed with the successful results that I had with Slade in broad daylight and under conditions that seemed to render fraud impossible (and until I am shown how the writing could be accomplished by legerdemain I find it stupendously difficult to accept that hypothesis), nevertheless one notable fact must be set against Slade; namely, he entirely failed to obtain any writing within a carefully sealed box, albeit I left the box in his possession for some time. "Dr. Monck," another known medium, equally failed with the same box, and subsequently I caught the "Dr." in a gross bit of fraud, a piece of white muslin on a wire frame with a black thread attached, being used by the medium to simulate a "*partially* materialized spirit"!

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as I have described, might, without intellectual confusion, be regarded as unaccountable freaks of that mysterious agency we call mind. Of whose mind is another question, or whether that mind belong to a living human brain or to an invisible being. The real point at issue is simply this, have we at the present day a sufficient accumulation of good evidence from trustworthy, independent observers, to outweigh the antecedent improbability of the alleged facts?

For my own part, and with much diffidence, I venture to think we have now enough evidence, and have had enough any time this last dozen years, to establish in an unbiassed mind a presumption in favour of the existence of certain physical phenomena inexplicable by the physical science of to-day. We have not anything like enough evidence to convince the scientific world, or even to remove all doubt from an impartial jury who demand scientific precision. It may be the very nature of the phenomena will prevent our ever obtaining the *kind* of evidence that physical science demands. Still more remote is the probability of our being able in this region to exercise that successful prevision which science justly regards as the test of accurate knowledge, and of laws built thereon. Possibly the pursuit of experimental psychology, which our Society is stimulating throughout both Europe and America, will in time throw much light upon the causes of phenomena such as I have ventured to bring before the Society this evening.

But along with more evidence of the right kind I am convinced we need a somewhat freer use of hypotheses. The popular theories and easy-chair explanations of Spiritualistic phenomena are manifestly inadequate. As a stimulus to investigation let us be bold in discussing novel hypotheses whilst we are rigidly careful in experiment. "Never," remarks De Morgan, "has any way been made by observations alone. Facts have sometimes started a theory; but until sagacity had conjectured, divined, guessed, surmised what these facts pointed to, the facts were a *mob*, not an army." I am therefore of opinion that the most hopeful advance in this subject will be made by daring hypotheses based upon a study of the evidence afforded by private mediumship. Of course, many erroneous explanations will be made at first; our theories are almost sure to be wrong. Intellectual progress, like walking, is a perpetual falling and recovery.

With much respect for the opinion of those who have arrived at an opposite conclusion, and quite admitting that future evidence may show that I am wrong and they are right, so far nothing that I have myself seen has given me sufficient reason to believe that an extramundane intelligence operates in Spiritualistic phenomena. So far as the evidence is trustworthy, I, for one, believe it points to the conclusion that, under conditions which are so restricted that we

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are not put to intellectual confusion by frequent interruptions of the ordinary course of material laws, *mind, occasionally and unconsciously, can exert a direct influence upon lifeless matter.* Upon the living organised matter of the brain mind can and does act, *i.e.*, if we admit mind apart from matter. Obviously pure materialism must reject all Spiritualistic evidence, and hence the great theoretic interest which attaches itself to this branch of psychical research. The hypothesis I have suggested will be considered less presumptuous by those who have followed the weighty evidence we have obtained in favour of the direct action of mind upon mind in thought-transference.

It is however a recognised and wholesome axiom of science that before unknown causes are assumed to exist all known causes should have been exhausted, and not until they are shown to afford an inadequate explanation are we at liberty to take a new departure. This axiom we have carefully borne in mind in our experiments in thought-transference; let us be equally cautious and equally free from timidity here. Mrs. Sidgwick, in the paper that is to follow this, will, I believe, conclusively show how hopelessly inattentive our observation usually is; with the firmest resolution we mentally relax our attention from time to time. Students of optics know that whilst we think we clearly see the whole figure of a man or a group of things, with one simultaneous act of vision, the opposite is the case; we can only see clearly one point at a time, and unconsciously our eyes sweep from point to point over the objects before us. Thus the muscles of the eyes require intervals of rest, which intervals come and go unbidden and unknown, and at these moments we are oblivious of all but a speck in the scene before us. Furthermore, to gain the needful rest or relief from monotony, our eyes outwit our will, and surreptitiously wander at the slightest distraction.

Mrs. Sidgwick's acute observations will probably explain by known causes much that now passes as good evidence in favour of Spiritualism, just as unconscious muscular action and extreme tactile sensibility explain much that passes as thought-reading. It seems to me however almost as irrational to explain away the whole phenomena of Spiritualism by fraud and mal-observation as is the attempt of some of our hasty critics to attribute to collusion and "muscle-reading" the experiments upon which we base our belief in thought-transference. Such critics forget that every honest investigator is sure to strain known causes to their utmost limit before he is driven to adopt an explanation that runs counter to the generalised experience of mankind. No doubt astuteness beyond the ordinary lot of mankind is the inalienable birthright of all critics, but they might spare us a little common-sense.

But hypotheses of the *conditions* of success in experimenting are even more useful at present than hypotheses of the cause of the

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phenomena. I do not know that we have any right hastily to reject the working hypothesis of Spiritualists who say that sympathy, or at any rate the absence of mental antagonism, is a condition of success. I may be wrong, but I think sympathy is compatible with a calm judgment and clear and accurate observation; and it may be that in the psychological world it is as necessary as certain material conditions in the physical world. Imagine for a moment the problem reversed, that we were living in a spiritual world where the properties of ordinary matter were unknown, where thought was supreme, thought-transference the mode of communication, and where our affections without bodily effort determined our actions and our position in space. Imagine now a stranger from the material world coming to tell us, say, of the discovery of the electric telegraph. He explains all the phenomena, brings the instrumental appliances, and shows that by this means he can talk to a friend who is invisible. He now leaves us to repeat the experiment for ourselves. We bend our minds to this new and, as it appears to us, rather useless and ridiculous experiment; for it appears absurd that the thought of an absent person should require to come to us through the ticking of a needle, or the jumping up and down of a bit of iron, when we, by mere volition, can at once sympathetically communicate with any person, however distant. Overcoming our contempt we try, arrange the apparatus, and, as is our habit in the spiritual world, summon up our volition, but no answer comes; we exercise our utmost belief in and sympathy for our unknown friend at the other end of the line, but the experiment is a failure—no response arrives. Whereon the stranger from the material world comes to our aid and says, "Your states of mind have nothing to do with any material phenomenon, you have omitted an important experimental condition, for you have forgotten to close the circuit." But when we discuss this question with our neighbours we all come to the conclusion that the electric telegraph is silly and useless even if true; and it can't be true because, we argue, mental forces operate at enormous distances and therefore the interval of a hundredth of an inch or less that was required to close the circuit can make no appreciable difference in the transmission of thought. So we disbelieve in the electric telegraph, and look upon the stranger as a knave or a fool, probably both.

I think this is not an unfair nor uninstructive analogy. It is because all working theories on these debateable Spiritualistic phenomena are so unrelated to our existing knowledge of the *physical* world, that the psychological problems before us receive such scant recognition at the hands of scientific men. But let us take courage; the author of the *Vestiges of Creation*, referring to the ridicule with which his views were received, remarked:—"A novelty, however true, if there be no received truths with which it can be shown in har-

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monious relation, has little chance of a favourable hearing." And yet within a single generation from the time these words were written, thanks to the labours of Mr. Darwin and Mr. Wallace, the theory of Evolution has become a recognised part of biological science. In science, as in politics, the happier tendency of modern thought is "neither to mock, to bewail, nor to denounce men's actions, but to try to understand them."

In conclusion, I have, therefore, good hope that whilst Spiritualistic phenomena will be of little use to physical science, and I fear can never be demonstrated by purely physical methods of investigation, they may yet, in time to come, be accepted as an integral part of the dual world of matter and mind in the midst of which we live. And if so, the gain to human thought will be immense ; the present despairing, materialistic attitude of mind will give place to a more hopeful and withal a more humble attitude towards the infinite possibilities that are within our reach. And, if a personal allusion may be forgiven, I find, as I regard these phenomena, more and more help in understanding the laws of a spiritual kingdom, the mysteries of which Spiritualism cannot unfold, but the mental conditions of our approach to which it seems to shadow forth.

NOTE ON THE ABOVE PAPER.

By Professor Balfour Stewart, F.R.S.

I have read with much interest the paper by Professor Barrett, on some Physical Phenomena commonly called Spiritualistic witnessed by him. He expresses his conclusions in the following words : "Assuming the evidence to be trustworthy, I, for one, believe it points to the conclusion that, under conditions which are so restricted that we are not put to intellectual confusion by frequent interruptions of the ordinary course of material laws, *mind occasionally and unconsciously can exert a direct influence upon lifeless matter.*"

As this is a subject to which I have given a good deal of thought, I trust the Psychical Society will allow me to make one or two remarks upon it, and I am very sure my friend, Professor Barrett, will not object to this course.

Viewing the "Conservation of Energy" as the representative of physical laws, I nevertheless do not regard it in its birth, at least, as anything else than a scientific assertion—a very sagacious one, no doubt, but yet an assertion. We are in profound ignorance not only of the

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intimate constitution of matter, but of the nature of those forces which animate the atom and the molecule. Under these circumstances, chiefly to advance physical knowledge by means of a working hypothesis, but partly, it may be, as a weapon against visionaries, we have formulated an assertion known as the "Conservation of Energy." It is unquestionable that this *so-called law* has greatly extended our knowledge of physics; nor have we met with any strictly physical experiment capable of repetition under fixed conditions that is inconsistent with this law. Now, what should be our course of action when a visionary comes before us with some variety of "Perpetual Motion"? The moral certainty that we are invaded by presumptuous ignorance is, no doubt, a sufficiently good excuse for not discussing the project. But we have a less objectionable method of dealing with such a man by asking him to put his project in execution, and to produce his machine, which we will then carefully examine. The fact that no such machine has been produced, and, as I said before, that no physical experiment contradicts the great laws of Energy, goes surely very far to justify us in regarding these laws as true—as laws which hold in what I may call the physical market of the world, ruling the physical transactions between man and man.

But there are many who are not content with such a limited application of physical laws. *In the first place*, they repudiate the doctrine of free-will because they regard it as being inconsistent with such laws; *secondly*, they repudiate the possibility of what are called miracles; and, *lastly*, they repudiate (with contempt) the evidence for telepathy and more especially that for Spiritualistic phenomena which has come before the Society for Psychical Research.

One consequence of this mental posture is that interminable discussions have arisen between a certain class of men of science and the supporters of Christianity, the latter of whom have been far from judicious in their method of defence. These have until recently considered miracles as Divine interferences with ordinary laws, and hence as abnormal and intellectually incomprehensible occurrences, while the Protestant theologians have imagined that the power to work miracles ceased with the Apostles. This latter doctrine was probably assumed as a polemical weapon at the time of the great controversy with the Church of Rome. It goes without saying that this method of looking at things will not recommend itself to men of science, and thus an embittered and useless discussion has continued between two classes of men, neither of whom has seemed to be either able or willing to enter into the position assumed by the other.

Of late years, however, miracles have come to be regarded not as breaks of law, but as phenomena embracing a higher law—a doctrine which is a great advance upon its predecessor. Now the

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question naturally arises, if there be this higher law may there not be occasional traces of it to be met with in the world, even at this present age? It is, I think, exceedingly unfortunate that a large class of theologians have attempted to decide this question in the negative. It is not a question for them to decide, but for those who investigate matters of fact. This is in reality the question upon which the Psychical Society are engaged, and the circumstances which I have mentioned appear to me to lend an unusual importance to their investigations. Let us begin by allowing that the laws of Energy dominate the scientific market-place, and the scientific dealings between man and man. We are, I conceive, amply justified in extending this scientific assertion so far. But are we justified in extending it further? Are we, for instance, justified in asserting that under the very different conditions of things contemplated by the Psychical Society there may not be at least an apparent and *primâ facie* breakdown of these laws; and more especially, are we justified in absolutely shutting our eyes to all evidence that may be brought before us in favour of such apparent interruptions? I cannot think so. We must examine everything. Because a scientific statement applies to one set of conditions, must it necessarily apply to everything else? I have always thought that this had to be ascertained by investigation, and not by dogmatic assertion, and I therefore conceive that our Society is abundantly justified in applying the Baconian method of research to all occurrences.

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PROCEEDINGS OF THE GENERAL MEETING ON

Monday, May 3, 1886.

The twentieth General Meeting of the Society was held at the Rooms of the Society of British Artists, Suffolk Street, Pall Mall, on Monday, May 3, 1886.

F. W. H. MYERS, ESQ., IN THE CHAIR.

The following paper was read:—

III.

RESULTS OF A PERSONAL INVESTIGATION INTO THE PHYSICAL PHENOMENA OF SPIRITUALISM.

WITH SOME CRITICAL REMARKS ON THE EVIDENCE FOR THE GENUINENESS OF SUCH PHENOMENA.

BY MRS. HENRY SIDGWICK.

By the physical phenomena of Spiritualism, I mean those which, if correctly described, and not due to conscious or unconscious trickery, nor to hallucination on the part of the observer, exhibit a hitherto unknown force acting in the physical world, otherwise than through the brain or muscles of the medium. They are thus distinguished from the automatic phenomena, of which writing by the medium's hand, trance-speaking, and table-turning with contact are examples.

The physical phenomena alleged to occur consist in raps, or, as Mr. Crookes calls them, percussive sounds; in movements and levitation of furniture and other objects without contact; the playing of musical instruments, the appearance of lights, the human voice and musical sounds produced without instruments; the materialisation of human hands, faces, and complete figures; psychography, or direct writing and drawing without human intervention; spirit photography, or photographing of human and other forms invisible to all but specially endowed seers; unfastening of cords and bonds, elongation of the medium's body, the power of handling red hot coals, and the passage of solids through solids without disintegration.

My own experience does not include the whole of these phenomena, and is entirely inconclusive as to the genuineness of any, except, I

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regret to say, in certain cases where I clearly ascertained them to be spurious and fraudulent. In the first part of my paper I shall give an account of some of this experience. It is, of course, but one small contribution to the discussion, and does not in any way settle the important question whether the physical phenomena of Spiritualism are ever genuine. Many other witnesses have given their testimony, and there is a mass of literature on the subject. A good deal of this, however, seems to have been written rather in order to call attention to the subject than to convince, and at any rate gives so little detail either as to the Phenomena themselves, or as to the precautions taken to avoid deception and mistakes, that it can scarcely claim any scientific value. As regards the rest, I shall endeavour to show, in the second part of my paper, that the difficulties of the investigation have been underrated, and that, consequently, tests have been too easily accepted as decisive. On this ground much even of the remaining evidence—though not all—has also, in my opinion, to be rejected. I shall, however, only enter into general considerations, without giving the results of my examination of particular cases, since it would require a volume to do this in detail.

I.

My own practical experience in Spiritualism began in 1874, at a séance with Miss Showers, which I well remember on account of the interest excited by the idea that, notwithstanding the very inconclusive character of the phenomena that occurred, we might possibly be communicating with beings belonging to another world.

But my first séance of any importance was with Mrs. Jencken, formerly Kate Fox, one of the three sisters who started modern Spiritualism. The most striking séance I had with her was the fourth of a series held at my own residence, when we obtained a word written on a sheet of our own paper, under the table, in light which I believe would have been good enough to read ordinary print by. We thought that Mr. and Mrs. Jencken both had their hands above the table, and we could not detect any movement of their legs. But we were not well placed for observing this, as we were continually instructed by the "spirits" to lean over the table. The séance must have very much resembled one with Mrs. Jencken's sister, Mrs. Underhill, described by Mr. Dale Owen in the *Debateable Land*, p. 298. It impressed me a good deal, though even at the time—in those early days of our investigation, when our experience was less than it is now—we thought that Mrs. Jencken might have written the word with her foot, and the writing is just of the quality which can be so written without much difficulty.

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Within the last three years I have again had two short series of séances with Mrs. Jencken; but again with no conclusive results, except the discovery that she or her "spirits" are willing to claim, as Spiritualistic phenomena, accidental occurrences quite unconnected with her presence, and that she endeavours, as far as possible, to obtain from oneself the information required to answer one's question.

The raps that occur with Mrs. Jencken are, as is well-known, peculiar—quite unlike what one can produce oneself by rapping with the foot. They are loud double knocks, acquiring a special sound from the table, floor, door or other object on which they appear to be made. They will occur on the floor, causing it to vibrate, when she is standing up and her hands and the front part of her feet are visible and apparently motionless, and they will occur, if I remember rightly, both when her shoes are on and when they are off. In short, they are distinctly puzzling. As early as 1851, however, three medical professors of the University of Buffalo in America, Drs. Flint, Lee, and Coventry, investigated the double rap occurring in the presence of Mrs. Jencken's sisters—(Margaretta Fox now Mrs. Kane, and Mrs. Fish now Mrs. Underhill)—and concluded that they were produced by rapid partial dislocation and replacement of the knee joints and perhaps others.[1] They stated that they had experimented with another lady who could "exhibit all the phenomena of the sounds belonging" to what were then known as the Rochester Knockings (from the place where they first became known). She did it by partially dislocating the knee joint by an act of the will without any obvious movement of the limb, occasioning a loud noise; the return of the bone to its place giving a second sound and thus making the double rap. Challenged by Mrs. Fish, they tried some experiments with her and Margaretta Fox, which strongly supported their view. When the mediums placed themselves as they pleased, raps occurred as usual, but when they were placed by the Professors with their legs extended in front of them, their feet not touching each other, and their heels resting on cushions, in which position the necessary leverage was unattainable, no raps occurred. Nor did they when Miss Fox had her feet down, and Dr. Lee held her knees at the side over her dress, except when he intentionally relaxed the pressure, when two or three faint raps were heard. Knockings went on as usual when these precautions were not taken, but stopped the moment the knees were seized hold of. Mrs. Fish did not deny that the raps failed to occur under the conditions imposed by the Professors while they were present, but she asserted that they had occurred afterwards under the same conditions in the presence of other gentlemen

[1] See E. W. Capron, *Modern Spiritualism*, Boston, 1856.

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whom she named, but who do not seem to have come forward with their testimony. I regret that I was unaware of this explanation when I saw Mrs. Jencken, but our own experiments to some extent supported it, though not directed to that object, for no raps occurred when Mrs. Jencken sat with her feet in my lap, nor while she stood on a hassock with her hand on the door on which the raps were to be made, while I held back her skirts with a shawl; nor when she stood on the floor and I clasped her round the knees; but I do not lay stress on this last case as I do not think the pressure was of the kind required to prevent the lateral displacement of the joints described.

Our next medium was again an American—a professional medium —Mrs. Eva Fay. Besides a dark séance of an utterly inconclusive character, Mrs. Fay's ordinary performance consisted in a séance, during which she sat with her hands tied together behind her back to a staple in the wall, and her neck tied to another staple. Various objects were placed on her lap, a curtain held up in front of her, and immediately the objects on her lap were moved about in various ways, a glass of water drunk, a pattern cut out of paper with scissors, &c. Without quite understanding how she did these things, we thought a simpler mode of fastening would be more satisfactory, and accordingly carefully sewed a tape or ribbon tightly round each wrist and fastened them to two separate staples, one on each side of her.[1] This position must have been much more comfortable than the one she prescribed, but no phenomena occurred, and she declined a proposal for further experiments. Later on we were shown by a conjurer a trick by which her own method of tying might have operated.

So far our experiences were not very encouraging, but in the autumn of this year, 1874, our hopes were considerably raised by hearing at first-hand of some remarkable physical phenomena—raps, levitation of the table, transportation of objects which took place in a party consisting entirely of friends. Unfortunately these sittings were discontinued by the medium of the party, on account of health, after a very short time.

I now come to what was by far the most important series of experiments we have made, those with Miss Wood and Miss Fairlamb (now Mrs. Mellon), of Newcastle, who, I believe, first developed as mediums for materialisation in the summer of 1874. Our attention had been called to this branch of the subject by Mr. Crookes's experiments with Miss Cook, accounts of which were published in this same year. I need hardly explain to my present readers that in a

[1] I write this from recollection, having kept no notes of séances with Mrs. Fay. Almost all the other experiences I describe were recorded in note-books immediately after their occurrence.

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materialisation séance the medium generally sits apart from the rest of the circle in what is technically called a "cabinet," but may be an adjoining room, or any portion of the séance room suitably screened off from the rest, so that he or she may be in almost total darkness, while the remainder of the circle enjoy a subdued light—usually *very* subdued. It is the business of the investigators to satisfy themselves that any figure which may come out of the cabinet is neither a made-up figure, nor the medium, nor a confederate. While the materialisation goes on the medium is usually supposed to be in a trance and unconscious.

Mr. Sidgwick, Mr. Myers, and Mr. Gurney had a series of séances for materialisation with Miss Wood and Miss Fairlamb in January, February, and March, 1875, at Newcastle. I was not there myself nor at six séances held in April, in London, at the lodgings of one of the party. The precautions taken to prevent the medium coming out of the cabinet consisted in various modes of tying and sealing, to the wall and into bags. They seemed pretty complete, the hypothesis of confederacy was difficult, and living figures undoubtedly came out into the room. Still, though we did not see how the thing could be done by trickery, we did not consider that decisive evidence had yet been obtained. The séances were now adjourned to the house where I lived. It was decided to discard the bag as too complicated, and tying round the neck with silk and sealing because it had so often been necessary to cut the silk, and because it seemed better to dispense with seals, which might, we thought, in the long hours spent by the mediums in the dark cabinet, be undone and reproduced by means of impressions taken in clay or bread. It would have been difficult to use a light for this purpose without detection, but perhaps not impossible, and I am not sure that seals cannot be manipulated without a light. In all our tests from this time forward we aimed at avoiding all possibility of physical discomfort to the medium. Long leather straps, cut out of single hides, so as to have no joining in them, were first used to secure the mediums, and were fastened round their waist and ankles by means of letter padlocks, which were thought superior to ordinary locks as avoiding the possibilities of duplicate keys and of picking. The other ends of the straps were similarly attached to marble pillars that supported the mantelpiece in the room which was used as a cabinet,—a small boudoir opening out of the drawing-room where the investigating circle sat. A door opening from this boudoir on to the landing was carefully secured to avoid all danger of confederacy. It was not only locked in the usual way, but a leather strap was passed through the keyhole and through a hole in the door-post and fastened with a letter lock. Of course the words used for the different letter locks were different, and were changed every day.

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I may here remark parenthetically that I have been very much surprised in reading accounts of séances at the confidence sometimes placed in locks, in cases were the medium could have no difficulty whatever in possessing himself of a duplicate key. Some other precautions taken to secure doors and other fastenings seem very inadequate; for instance, the gummed paper recommended by some mediums, which, in most cases, could easily be removed and replaced without detection.

Having arranged our tests as described, we began a series of four séances. At the first a vague white figure, which might have been a doll or perhaps mere drapery, appeared at the doorway, but did not come out. The second was a complete failure. At the third a small vague figure again appeared, and raps were made in places beyond the reach, we thought, of the hands or feet of the medium, but of course she might have brought something with her to make these with. We were getting depressed, especially as on this last occasion the disentrancement took a very long time, and finally left Miss Wood talking wildly, and apparently under the delusion that she had shot some one and was in gaol. We tried to get her upstairs to bed in the house, but she resisted so much that we had to give it up, and finally she was taken home to her lodgings about 6.15 in the morning, quiet, but still seemingly under the same delusion. The séance had begun at 7 p.m. She did not apparently recover her sanity till the following day. Whether all this was simulated it is difficult to say. There is some evidence on both sides. Somewhat similar phenomena, long entrancement, &c., occurred on other occasions. Once Miss Wood remained apparently in a sort of trance for about 51 hours, but the doctor who was called in thought it probable that she was pretending, as she would not allow him to feel her pulse. On the other hand, Miss Fairlamb had once to be brought out of the cabinet in a state which a doctor who was present said was a real faint—low fluttering pulse, &c.—impossible to simulate, though not impossible to induce artificially.

But to return to the séances I was describing. At the fourth Miss Fairlamb was the medium—Miss Wood not present at all—and an undoubtedly material human figure came to the doorway, stood there with its right foot on a chair, and allowed two members of the circle to come close to it and touch it. The only question was as to the sufficiency of the tests. The medium had been fastened round the waist and the left ankle, and when we experimented with the same fastenings ourselves, we found that she had come forward exactly as far as the ankle fastening would allow, supposing she had got free from the waist fastening. The left ankle—the one that was fastened—had not been shown. All therefore turned on the waist strap, and this we

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reluctantly concluded on examination, had not been so tight as to make it certain that she could not get out of it. This was not creditable to me, who helped to fasten her, but in my defence I must say that she was intentionally not fastened very tightly, in order to avoid the plea of discomfort which had been urged on previous occasions as a reason for removing certain fastenings, or as interfering with the manifestations, and the margin in the case of the waist is small.

So ended this series; and at the next, which was held at the same place in the following July, and lasted three weeks, a different test was used. The medium lay, without any fastening, in a hammock which was suspended over a pulley fixed to the ceiling of the cabinet, the other end of the suspending rope being attached to a spring balance which recorded[1] the weight of the hammock and its contents, and which was watched by one of the circle. There was an arrangement by which the member of the circle sitting by the spring balance could lower the hammock while the form was out (should one appear), so as to defeat any attempt to produce a constant pull on the balance by fastening the hammock to the floor or other part of the cabinet. The séances were nearly unsuccessful until the last. On the Friday and Saturday preceding the sitters had been brought up one by one to what purported to be materialised forms, but the face was not in a place in which it would have been impossible for the medium's face to be, and on the Friday it appeared to some members of the circle that the face was not satisfactorily connected with the drapery that purported to conceal the body. On Saturday, the 24th, at the last of the series of twelve séances, Miss Fairlamb was placed in the hammock, and Mr. Sidgwick observed the indicator of the balance. After some time Miss Wood went into the cabinet for a few moments "to give power," as it was said, and took in a light chair with her. Of course the cabinet was, to the best of our belief, destitute of furniture, or of any objects which could be placed in the hammock, and so far as we knew the mediums were never alone there before the séance began. After Miss Wood had joined the circle again, the weight went down to about 60lb.—a very little over. Then a form came out and kissed me through the white veil in which it was wrapped. Miss Wood was still in her seat, and this kiss could not have been given by Miss Fairlamb without leaving the hammock, and at the moment it was given Mr. Sidgwick lowered the hammock a few inches without producing any change in the weight indicated. So far things looked promising, for a certain fall of weight was not to be taken in itself as a presumption against the genuine-

[1] The apparatus was self-registering so far as the extreme changes of weight were concerned, but did not record the times at which the changes took place. It was for this reason that it required watching.

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ness of the phenomena, since it is thought by some Spiritualists that the medium may lose weight during a materialisation. Afterwards Miss Wood was called up to the form, which looked small and did not move very easily—it might have been a woman on her knees—and led it to various members of the circle. Two other forms afterwards came out in succession; the weight remaining approximately constant. When the last had retired, the disentrancement began, Miss Wood going again into the cabinet to help it.

After the séance I asked leave to search Miss Fairlamb. This she sharply and decidedly declined. She was reminded that she had agreed to be searched, but she said that was before not after the séance. This refusal produced an unfavourable impression on us, and left the evidence at best inconclusive. It was not impossible, though rather remarkable, that the amount of weight required should have been brought in to the cabinet by Miss Wood when she went in "to give power," and the idea that extra weight had been carried by the girls was rather supported by the fact that they had that day come in a cab instead of walking, as I believe they usually did.

However, we still did not think it right to drop the investigation, and as some friends of the mediums at Newcastle offered a more or less plausible explanation of the refusal to be searched, another series of séances was held with them through a period of three weeks, in August and September, 1875, at Cambridge. The results were again inconclusive, and in some respects suspicious. For the form came out of the cabinet three times, and it was found by trial afterwards that the medium could each time have come just so far without breaking loose from the fastenings. This coincidence was suggestive.

In the following October Mr. Myers had some further séances with the two girls at Newcastle, and once saw Miss Wood come out of the cabinet accompanied by a form, which, if not a materialised spirit, was an accomplice, and it was difficult to suppose that an accomplice could have got in without detection, though not absolutely impossible. This was again encouraging, and in January, 1877, we tried a final series of séances for materialisation at Newcastle. Miss Wood and Miss Fairlamb had by this time quarrelled, and used to sit separately. We first used, as a means of securing Miss Wood, a long bag of machine-made white net, which she got into head and all. The bag was so long that the end could be brought *outside* the cabinet, where it was drawn together with tape, and the ends of the tape nailed and sealed to the wall close to the mouth of the bag. We held four séances in this way with no result, and then the "spirits," through Miss Wood, told us to give up that test. Then we substituted a graduated tape, tied round the neck, and another round the ankle. The tape was sealed below the knot on to a piece of paper, and the seals traced round with pencil, and

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later with sympathetic ink, which we thought would betray the fact if heat were applied to the seals. The ends of the tapes were brought out of the cabinet, nailed through large sheets of white paper to the floor, and sealed over the nails. The light allowed at these séances was exceedingly poor. A small white figure came to the entrance of the cabinet—a brightish but irregularly shaped object, which on one occasion danced up and down, and which I remember thinking at the time might be the pillow provided for Miss Wood's head. This occurred at three successive séances. At the fourth we were told by raps that the medium was choking. I went to examine, and found that the knot had been moved an inch or more away from the seal, and close up to the neck, so that the tape appeared too tight. The "spirit," speaking through Miss Wood, claimed to have done this in playing with it. After vainly attempting to loosen the knot, which I could not do in the bad light, I cut the tape and removed it, leaving the ankle tape as the only security. We heard a good deal of rustling of the paper to which this was sealed, more than at any previous séance. After a considerable time, and much singing and talking, a figure—apparently that of a full-grown woman—draped in white, came out. The light was too low to distinguish anything but the general outline of the figure. I think the face was veiled, and when she touched my hand I could feel something like soft muslin between her hand and mine. The figure (twice at least) came out too far from the point where the tape was attached to the floor for it to be possible that it could be Miss Wood, with her ankle still bound. When the figure had finally retreated, we were kept a long time waiting and singing, before the séance was declared at an end. We then examined the fastening, and found the attachment to the floor intact, but the seal near the knot torn from the paper and split, one half remaining attached to each tape. A slight strain required to bring the two halves of the seal together showed that the knot was not exactly as it had been, and judging by knots made on other nights which I had kept, it was much tighter than I had made it. Also the part of the tape round the ankle was creased, strained, and dirty all over, as if it had been much handled and pulled, while after the previous séances it had been quite flat and unstrained, only dirtied in some spots obviously by the blacking on the boot, not by handling. We felt sure that either it had been forced over the heel, or that a loop large enough to pass over the foot had been obtained by moving the knot to a place below the seal,—an operation which the splitting of the seal rendered just possible. At any rate the indications of deception were palpable and sufficient, and we were not surprised to hear a few months later that a more aggressive investigator had violated the rules of the séance, and captured Miss Wood personating the "spirit."

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Some persons may perhaps wonder why we had not adopted such summary methods of investigation ourselves, but there was an implied understanding with the medium that we should not do so, which we should not have felt justified in breaking. It used to be alleged, too, at that time, that great injury to the medium, and even death might ensue from interfering with the materialised form; but though such seizures have now been very numerous, no permanent injury has ever been done by them to a medium, so far as I have been able to learn. Temporary disturbance seems to have occurred, but not more than might be expected as the result of a sometimes severe struggle with the captor, or of the shock and annoyance of exposure. For my own part, though I have no wish myself to adopt such methods of investigation, I think that both Spiritualists and non-Spiritualists ought to recognise that "exposers" have thrown valuable light on the subject.

While these final séances were going on with Miss Wood, we were also holding séances with Miss Fairlamb under different conditions, but with the same general result, namely, that all that occurred was within the power of the medium. We were also then concluding a series of collateral investigation with some other Newcastle mediums—the Petty family, who exhibited somewhat similar manifestations. This investigation had been carried on as long as those with Miss Wood and Miss Fairlamb, and with equally unsatisfactory results; but it would be tedious to go into details.

I have abandoned chronology in following our experiences with the Newcastle mediums. I have now to observe that several other unsuccessful and unsatisfactory series of séances contributed to the thoroughly unfavourable impression left by that last set at Newcastle. Thus, in the summer of 1876, we had an instructive series of four séances with a medium named Edward Bullock. At the first three very little occurred. The medium was accompanied by his mother, and perhaps she perceived that the conditions were not sufficiently favourable for fraud, and warned him. To the fourth séance he came alone. For the first part of the séance darkness was required, but as it was afternoon it was difficult quite to exclude the daylight, and, as a matter of fact, a little got round the curtains and faintly illumined the wall of the room behind the medium, enabling my sister and me to see him as a dark figure against a comparatively light background. Mr. Sidgwick and another gentleman who completed the circle faced the source of light, and could not see him. We all held hands round a Pembroke table, the medium's hands being held by me on one side and by the gentleman already mentioned on the other. The medium made slight twitching movements as on former occasions. Presently I saw him lean forward over the table with his head low

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down, but carefully keeping the hand I held in the same position as before. On the table were a musical box, a tambourine, and a bell. The two former were moved about and raps made with them, and both lids of the musical box were opened and shut. But none of these things occurred except when the medium was leaning over the table sufficiently to enable him to reach them with his nose and teeth. The bell was quite out of his reach, and was not moved at all. Sometimes he seemed almost to stand with a view to leaning over further, and when anything occurred that would require considerable exertion, I felt his hand grasp mine more tightly. The tambourine also floated about in the air. When this happened we saw the medium's head and body moving from side to side with an object like a tambourine projecting horizontally from his mouth. The tambourine was finally dropped on my lap, where it remained. The medium was not entranced, and was undoubtedly cheating deliberately, for he volunteered remarks about the phenomena, *e.g.*, about the tambourine touching him in its passage through the air. The gentleman who held the medium's left hand, and who was not placed so as to be able to see what was going on, was of a sensitive organisation, and felt during the performances the sensations which he always experienced at successful spiritualistic séances—shudderings and convulsive movements of the arms, I think they were—which shows that sensations of this kind afford no evidence of the genuineness of the manifestations.

This dark séance was followed by a so-called light one. The light allowed was feeble, but as will be seen it was too strong for the medium's purpose. He sat behind curtains which were pinned in front of his body so as to allow his legs, with his hands resting on his knees, to be visible. The light was sufficient to enable us dimly to see the hands. Presently we perceived that a handkerchief was placed on the left knee so as to bear a coarse resemblance to a hand, and subsequently by looking closely, the hand on the right knee was discerned to be a left hand. Lights then appeared, tambourine and bell were vigorously moved about in the cabinet, &c. Afterwards, in the course of futile attempts to draw the musical box into the cabinet, an arm was exhibited with a sleeve very like the medium's. We then observed the handkerchief slowly removed and the hand substituted, and the séance was declared at an end. Just before the removal of the handkerchief, it was observed that the hand on the right knee was now a right hand.

Probably Mr. Bullock was not a really skilful performer, and he may have acted wisely in his own interests when he gave up the career of medium and took to that of exposer of Spiritualism, as he did six or seven months later. We never told him what we had seen. Even Mr. Bullock, however, took in some people and enjoyed a brilliant, though

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brief career as a medium. Wonderful accounts of him may be found in the *Medium* newspaper for 1876. At our séance the gentleman whom I have already spoken of as present saw none of the indications of the medium's own agency, except a movement which he thought suspicious when the handkerchief was first placed on the knee.

About this time we had some private séances with Mr. Williams, but nothing of the least interest occurred. These with some in 1874 made up about eight or nine séances which Mr. Sidgwick has had with Williams. Only one manifestation of any importance took place, and that was the transference of a chimney ornament from the mantelpiece to the table, which happened at the very moment when Mr. Sidgwick jumped up to meet a late arriving member of the circle, and in doing so let go of the medium's hand, so that the solitary phenomenon coincided with a solitary opportunity for performing it by natural means.

I pass over several single séances of an inconclusive character with various mediums, of which the chief value was the experience gained at them, and come next to Dr. Slade's visit to England in 1876. We had about ten séances with him for slate-writing chiefly at his lodgings, but once in our own room and with our own table. We always obtained writing, but never under circumstances which appeared to us completely satisfactory, and when at the last séance he presented to us unasked, and under circumstances peculiarly favourable to a change of slates, a slate full of conversation-book phrases in five languages, and a text out of the Greek Testament, we had no longer any hesitation in drawing up a report to the effect that we thought he was probably merely a conjurer.

I give this report, which is dated September 10th, 1876, in full, though it is not written exactly as, in the light of further experience, I should have written it now.

The impression on my mind after about 10 séances with Dr. Slade—(about five in July and August, and five last week)—is that the phenomena are produced by tricks. I am inclined to think that no one ever sees the slate quite continuously from the moment they see it blank on both sides to the moment they see writing on it. I think it probably always disappears for one or more intervals (however short) under the table, and that during those intervals Dr. Slade sometimes changes it (having another concealed about his person, about the table, or about his chair), and sometimes rests it on his knee, or against the table, supporting the other end with his sleeve or his little finger, and writes on it. It is easy to write noiselessly on a slate with his fragments of pencil—quite as easy or easier than to make the loud sound usually heard.

I doubt the continuous seeing of the slate, because at the last four séances when we were carefully watching for that, we never once saw it continuously. At the previous séance—at which I was in the best place for observation—my attention was concentrated on observing whether he turned

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the slate in bringing it from under the table, which he certainly did not do. On thinking over the séance afterwards I could not remember that I had seen it continuously, though I had a very strong impression that I had done so. I now think that impression was probably false.

We took our own marked slate to these five last séances, and told Dr. Slade we were very anxious to get it written on while we held it in our own hands, or while it lay on the top of the table. We did once get writing apparently done while the slate lay on the table, but had no opportunity of seeing the under surface immediately before.

Dr. Slade had arranged that the last séance on Friday should take place in the evening after dinner. On Thursday he made me (I sat opposite him) hold our slate between me and Mr. Sidgwick in hopes of getting it written on. No writing came. On Friday when we arrived he told us that he felt extremely ill owing to a trying séance with a man who had a bad influence on him, and who had besides searched him more or less and generally made himself very disagreeable. He had been suffering from palpitations ever since. The spirits also informed us through him in a trance that they meant to do great things; would write on the slate held by me if they could, and that if Dr. Slade suffered from the effort they must be responsible. Dr. Slade made us hold our slate between us, and himself held one of his own. Mr. Sidgwick was next him, I opposite. After a few scrawls, &c., Dr. Slade held his slate tight against the table, and a long message (apparently) began to be written. At the same time Dr. Slade began to look very uncomfortable and to complain of feeling so. In a faltering voice he told Mr. Sidgwick to take hold of one corner of the slate. Mr. Sidgwick made attempts to see more under the table, but every time he moved Dr. Slade begged him to sit still, as every movement he made affected him (Dr. Slade). Presently he became entranced, and the spirits told us through him that the moment the writing ceased (the sound was going on all this time) we must go into the next room and send in the secretary with a glass of wine, or Dr. Slade would go into a rigid trance. After 10 minutes we were to return and continue the séance. He came out of the trance a little before the writing ceased, then brought the slate up on to the table and gave it to us. We took it into the next room and sent in the wine as directed. The slate was written on all over one side with sentences (of no interest) in each of the following languages—French, Greek, Italian, Portuguese, Spanish, English. The Greek was a quotation from the New Testament, the others complimentary phrases. The remainder of the séance was short, and nothing of interest occurred. The writing described above was rather neatly done, and the dots and accents put with so much precision where they were meant to be that it is impossible to suppose the writing was done by any man who could not see what he was doing.

The more we think over this séance the more suspicious it appears to us. The arrangements seemed so well contrived for deception. Being in the evening the light was necessarily less good, and though there was bright gaslight it was above the table, which threw a shadow. It was ingeniously contrived that Dr. Slade should use his own slate (thus getting an opportunity of changing) though we brought one ourselves. The illness gave him an opportunity of getting us hastily out of the room so that he could safely dispose of the second slate. I also thought the time occupied in

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apparently writing seemed unnecessarily long, but as I did not time it this impression goes for very little.

At the first séance we were at in July, I saw part of his hand moving as though writing and fancied the slate was resting on his knee. This occurred for two successive messages, a longish one and a short one. Each time the hand moved backwards and forwards about as much as would have been required to write the message, and each time I had no opportunity of seeing the portion of the slate on which the message was written, between this movement of his hand, and the time when the sound of writing came and the slate was produced written on. At the time I thought we were on the way to discover the trick, but at the next séance I observed the same movement and afterwards saw the slate with nothing on it. I now think he probably makes the same movements without producing results that he does in order to produce them, with a view of disarming suspicion. Thus on one occasion he laid the slate on the table to get it written on and made a difficulty about showing us the under side. We insisted, and there was nothing there. He then said we had broken the power for that time by insisting on seeing the under side.

I have never thought any of the phenomena other than writing which I have seen with Dr. Slade worth considering as evidence. My chair was raised with me on it, Dr. Slade's knee being against the side of the chair, and his hand on its back. The chair in the well-known place on the fourth side of the table, quite within Dr. Slade's reach I think, was several times raised and upset. A table ran forward from the corner behind Dr. Slade, but he was leaning very much forward at the time (because the slate insisted on being allowed to go far under the table) and I think his leg probably stuck out behind him, and his foot hooked to the leg of the moving table. Touches and grasps under the table can, I think, be done with the foot. A particular soft touch on the right side of the right leg of the person next Dr. Slade was often repeated, and though it must be rather difficult to get his foot there without ever letting his leg touch other people's, I think it would be possible, and it is suspicious that the touch so often comes in the same spot. We saw a hand one day in rapid movement between Mr. Sidgwick's body and the table, but it was when Dr. Slade's hand was under the table by way of holding the slate.

So much for our own experience. With regard to other people's, it is noticeable that there is no record, as far as I have seen in the *Spiritualist*, of a long message being written on a marked slate—thus excluding the possibility of the slate being changed. In Miss Jeffrey's case (as in ours) an excuse seems to have been made to use Dr. Slade's slate, instead of the one she brought, for the long message. As to the really important point of whether the slate was seen quite continuously—I do not think it is stated in any communication to the *Spiritualist*, except one from W. Whitear in the *Spiritualist* for August 25th. I cannot recall whether private friends have stated that they saw the slate continuously from the moment they saw it blank to the moment they saw it written on.[1]

My theory of the way the writing may be done does not account for the

[1] As will be seen later in this paper, further experience has led me to the conclusion that observers may be easily deceived as to the fact of their own continuous observation.

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person holding the slate feeling a pressure which seemed to follow the course of, and to be due to, the writing. This happened to Mr. Sidgwick when the writing in many languages was by way of being done, and also to a friend of ours.[1] Nor does it account, I think, in all cases for the sound, which cannot be produced by Dr. Slade scratching the slate when his hand is not on it.

There remains, too, Serjeant Cox's positive statements that various movements of objects occurred when Dr. Slade's hands were on the table upon his hands, and his whole body to his feet fully before his eyes, and when he was certain that not a muscle moved. (See *Spiritualist* for August 11th and 25th, 1876.) We were seldom able to see the whole of Dr. Slade's body, nor "by moving our heads slightly to see the whole space below the table," owing to the position in which Dr. Slade kept our hands. I think Serjeant Cox's statement that the chair which was lifted was far beyond any possible stretch of Dr. Slade's legs, and that the knee grasped was beyond his reach, must from his own account be (to say the least) exaggerated.

I have not stated five general grounds of suspicion which probably occur to everyone—namely, his conjurer-like way of trying to distract one's attention, his always sitting so as to have his right hand to manipulate the slate, the vague and general character of the communications, his compelling one to sit with one's hands in a position that makes it difficult to look under the table, and his only allowing two sitters at a time.

A few days after I wrote this report, Professor Lankester had his celebrated séance with Dr. Slade, and his exposure, so far as it went, supported the view to which our experience had led; but some of the evidence elicited at the trial which followed, shook for a time our confidence in our conclusions. Further experience, however, of the possibilities of conjuring, and of the extent to which even intelligent people may be deceived, combined with Dr. Slade's persistent objection to using securely locked and sealed slates brought by the sitters, have brought us back to the conviction that his performance is conjuring, and nothing but conjuring; the more so that other persons besides Professor Lankester affirm that they have caught him tricking. But his tricks certainly are and were clever, and as I know of two conjurers who visited him with friends of ours and failed to discover his *modus operandi*, I do not think it argues stupidity in a witness unacquainted with conjuring, if he fails to find it out either.

[1] From experiments I have since tried I think this experience must be due to imagination. By resting a slate on two tables, placing the hand on it, and getting some one to write on the under side, it can, I think, be ascertained that the vibrations cannot be followed in this way. I have also learnt experimentally that the sound of slate-writing cannot easily be localised with certainty, and that there are several ways of imitating it. It is worth remarking that one of the worst positions for localising the sound, if it be not on the slate, is with the ear on it. The illusion that the writing is being done on the slate is then easily produced in a person who does not know that the sound of real writing on it would generally under the circumstances be quite startlingly loud.—May, 1886.

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I have never seen slate-writing with Mr. Eglinton. Three sittings I have had with him have been perfect blanks, and he is almost the only medium out of 18 or 20 I have sat with, with whom I have witnessed no phenomena at all.

As an appendix to my narrative of personal experiences, I will add an account of some séances at which I was not present but which were conducted by the group of investigators to which I belonged, and have in various ways strongly influenced my view of the subject. They were a series with Mr. Haxby at the house of some friends of ours, Mr. and Mrs. H., in 1878. A sister of mine was present, and I have her written account, which is almost the same to me as my own, because she and I have investigated so much together that I know the exact value of her statements. At the séance I shall first speak of there were present the host and hostess, Serjeant Cox, Mr. and Mrs. Volckmann, my sister, two other ladies and a gentleman, and the medium. The cabinet consisted of an oblong space curtained off in one corner of the room. Mrs. Guppy-Volckmann sat at one end of the circle, or rather horseshoe, next the cabinet, and not more than two or three feet from it; Mrs. H. next to her, and my sister at the other end of the circle, so that she and Mrs. Volckmann were the two sitters nearest to the cabinet. "The light was that of a small oil lamp, with a coloured opaque shade, turned low, and with two books in front of it." It stood behind the sitters near the corner of the room (a small one) furthest from the cabinet. "There was also a little light from the fire." During the séance Abdullah and Toby—two supposed materialised spirits—successively appeared. My sister's account goes on as follows:—

The difference between Toby and Abdullah is simply that the former always appears considerably more bent than the latter, without beard or head ornaments, and with sleeves (I think). All that would be necessary to turn Abdullah into Toby would be to pull the large handkerchief which hangs [from Abdullah's head down his back] over the forehead, so as to conceal the ornaments, and to pull down the sleeves. Abdullah [dematerialised and materialised in the circle, that is, he] appeared to most of the circle to diminish in size, and finally vanish in front of the opening of the curtains of the cabinet, and also to appear in the same place and gradually grow up to his full size. This happened more than once. From my position being nearer than anyone else's, and from my seeing Abdullah more in profile while growing and diminishing, I was able to see the whole process distinctly. He went down on his knees—rather hastily—(others observing this too)—and then gradually bent down and forwards, moving his body back into the cabinet as he did so, and keeping the curtains closed above him. Finally he went flat on the ground, leaving only his head exposed, and then drew it in. I was able to see that he was lying down inside the cabinet, as the curtains do not quite reach the floor, and I saw the long line of white

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drapery all the way from the opening of the curtains towards the wall. The growing was done in exactly the same manner, a small bit of white being shoved out first, and then the head, &c. The ornaments on Abdullah's forehead do not appear till he is nearly grown up, and I am almost certain that I saw him throw back the flap of his head-handkerchief just as he became full-grown. Three times while Abdullah was in the circle we distinctly heard noises in the cabinet. First rattlings as of something knocking about the chair, next as of a stick striking the floor. This was done both in and out of time with the musical-box, and at the same time Abdullah moved about and carried the musical-box, waving it in his arms. . . . . The third noise was the banjo knocking about. Abdullah went into the cabinet between the times when the different sounds were heard. All these noises (as we found by trying ourselves afterwards) could be made by tying a weight or a banjo to a string attached at the other end to Abdullah's foot, and passing it over the bar of the chair in the cabinet. Little jogs of Abdullah's foot could thus make all the sounds.

* * * * * *

The last time that Abdullah vanished in this way he did it close to the wall, between Mrs. Volckmann and the cabinet. We saw him go down on his knees, and then all of a sudden he was gone. Mrs. Guppy-Volckmann declared that he was not close to the wall, and that he disappeared through the curtain and not at the opening, and that the curtain had never moved. Most of the circle saw the curtain move, and I saw him make a rush into the cabinet close to the wall, and saw his white drapery trailing behind.

After this an indistinct black object came out from the cabinet, close to the wall near Mrs. Guppy-Volckmann, where there was a deep shadow, and disappeared under the train of her voluminous black velvet gown. Others in the circle thought the black object disappeared, but did not see how or where to. Soon after Abdullah materialised from under the gown. As the white object first appeared it was obvious to me that it was the head and shoulders of a man lying on his right side. I was sure that his legs were concealed behind Mrs. Guppy-Volckmann's chair, and this Mrs. H. made sure of, as she stretched out her hand and felt the cloth of his coat there.

Serjeant Cox maintained that the noises made in the cabinet while Abdullah was out would require half a day's preparation beforehand.

The last thing that occurred at the séance was the appearance of Haxby (still entranced) at the opening of the curtain, and with him some white drapery purporting to be Abdullah. At the same time Joey spoke, having previously informed us that it was impossible to do this while a spirit was materialised. This appearance of Abdullah and medium together was quite similar to what we had seen on a former occasion.

At the next séance my sister sat in the place previously occupied by Mrs. Volckmann, who was not this time present. She says :—

Abdullah professed to dematerialise before us once as at the previous séance. My head was only about 1½ft. from him, and I saw him go through the same process as he did then. I saw his arms plainly till he was right

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down on the floor. Then he put up his hands to the cloth on his head bringing the part hanging behind over the top and front, to hide the tiara, and then pulled the whole off his head, the white cloth remaining as the last bit of Abdullah for a few moments. I saw his hair plainly as the cloth came off, and also his back inside the curtains.

Before this séance all the members of the circle, including an enthusiastic Spiritualist, whom I will call Mr. X., had been told what to expect. Mr. Sidgwick was present, and he appends this note to my sister's account.

I was seated at the furthest point in the circle: at the same time in witnessing Abdullah's disappearance I was unable even to imagine it anything else than the medium withdrawing gradually into the cabinet, having first fallen on his knees, and then gradually lowered his head. But Mr. X., who sat nearly as far off as, but certainly not farther than I did, remarked when the performance was over that "all our doubts must now be removed," and afterwards to Mr. H., on going away, that our materialisations were better than theirs in Paris.

Experiences like this make one feel how misleading the accounts of some completely honest witnesses may be. For the materialisations in Paris were those which the Comte de Bullet had with Firman, where near relatives of the Count were believed constantly to appear, and which are among the most wonderful recorded in Spiritualistic literature. And after all it appears that these marvellous séances were no better than this miserable personation by Haxby.

II.

Those who have followed me in this I fear lengthy, though yet incomplete, account of my own experiences, will agree with me that they certainly point to trickery as a more probable explanation than hallucination of most of the physical phenomena of Spiritualism. The hypothesis of hallucination has often been suggested, and has recently been again advanced by E. von Hartmann. So far as we yet know, however, sensory hallucination of several persons together, who are not in a hypnotic state, is a rare phenomenon, and not therefore a probable explanation. Moreover, I think that all who have had a large experience of Spiritualistic séances will agree in thinking that it is not at all generally applicable, partly because material traces of what occur so often remain, and partly because of the general agreement, not only of all the witnesses but of all the senses, as to what is perceived, as distinguished from what is inferred. There is, however, some reason to think that collective hallucination does sometimes occur at séances, and if so, the fact is very interesting, and it is important that careful independent records should be kept by

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sitters with a view to throwing light on the subject; but I feel sure that nothing of the kind has occurred within my own experience.

I must, however, carefully distinguish sensory hallucinations,—that is, perceptions which have no objective counterpart—from erroneous interpretations of what is perceived. Erroneous interpretations which arise from confusing what is observed with what is inferred—from a failure to "distinguish between facts and inferences from facts," as G. H. Lewes put it—are, I think, very common at séances. Our conclusions as to what we see or hear are always founded on a combination of observation and inference; but in daily life it is seldom necessary to distinguish between the two elements, since, when the object and its mode of presentation are familiar, our inferences are generally correct. But it is different when, owing to circumstances, such as a bad light, we have to infer more in proportion to what we perceive than usual; or when some one, *e.g.*, a conjurer or a ventriloquist, is trying to deceive us by presenting one object under the familiar aspect of another and suggesting false inferences. It is not uncommon to find people at séances encouraging each other in the belief that they see, say, a living human figure, when all that they actually *see* is something moving which is about the size of a human being; the rest is inference.

This is a simple form of the kind of error in question, but I believe it extends to cases much less easy to understand—namely, recognitions of departed friends. I have never myself been at a séance when any relatives of the sitters have been supposed to appear; but I know at first-hand of a case where a gentleman recognised his aunt, and then turned to the other sitters for information as to the presence of her most characteristic feature. The following is quoted by Mr. D. D. Home, *Lights and Shadows of Spiritualism*, p. 342, as the confession of an exposed medium:—"The first séance I held after it became known to the Rochester people that I was a medium, a gentleman from Chicago recognised his daughter Lizzie in me after I had covered my small moustache with a piece of flesh-coloured cloth, and reduced the size of my face with a shawl I had purposely hung up in the back of the cabinet. From this sitting my fame commenced to spread." The following, again, I quote from an account of a séance in a recently published Spiritualistic work:—"In this figure we both *instantly recognised* a sister of my wife, called Emily, who had been dead about six years. As Emily had been of a sallow complexion with black hair and eyes, recognition was easy. We both expressed our belief in the appearance of our relative, but the other members of the circle thought it was some one else." One party or the other (if not both) must have been mistaken here.

The same thing has happened as regards so-called spirit photographs. These have, in common with figures seen at materialisation

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séances in a bad light, the characteristics of being in general not very well defined, and of being draped in a way not common in ordinary life. At the trial of Buguet, the spirit-photographer, in Paris, in 1875, it came out that different people claimed the same photograph as a likeness of their respective friends, and some photographs I have seen by Hudson, a spirit-photographer in London, which have been differently recognised by different sitters, seem to me to have been taken from the same model. I observe that "M. A. (Oxon)," speaking of spirit-photographs, says: "Some people would recognise anything. A broom and a sheet are quite enough for some wild enthusiasts who go with the figure in their eye, and see what they wish to see. . . . I have had pictures that might be anything in this or any other world sent to me and gravely claimed as recognised portraits." (*Human Nature*, May, 1875, p. 202.)

There is a negative inference often even more hastily made as regards recognition—namely, that the figure seen cannot be the medium. I do not think that nearly enough margin is usually allowed for the effect of disguise and acting. A friend of mine once dressed up as a stranger and paid an afternoon call, with a letter of introduction, on her own mother, with whom she was living at the time, and was not detected. Her mother had some time previously dared her to succeed in disguising herself from her, which made it more remarkable. Why should a disguised medium be more certainly recognised?

For reasons of this kind much of the evidence from recognition obviously fails to come up to the required standard, and it is impossible to lay stress on any of it unless we have reason to know that the witnesses are on their guard against the possibilities of error, and have practised themselves in avoiding it. These remarks about recognition apply not only to materialisation but also to professed reproduction of the handwritings of dead friends. I am sure, from what I have seen, that these are liable to be hastily identified from a very superficial resemblance.

If then we must distrust the evidence from recognition, and can regard the explanation by hallucination as at most of extremely limited application, the only important question that remains to be asked—and this applies not only to materialisations but to all the physical phenomena of Spiritualism—is whether the precautions taken to exclude what may broadly be called conjuring have been sufficient. In the vast majority of recorded cases we have no evidence that they have been sufficient. In many it is indeed obvious they have not, and only those who have a very inadequate idea of the possibilities of conjuring can doubt it; but one cannot investigate Spiritualism for long without learning that some people quite sincerely think

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things inexplicable which they could do themselves if they tried. In other cases the absence of any mention of certain precautions leads one to doubt whether they were taken.[1] Other cases again are, no doubt, inexplicable as described, but this is not enough unless a very wide margin has been allowed for conjuring, for descriptions of conjuring tricks are also often inexplicable owing doubtless to the omission of some important detail which has escaped observation, or the insertion of some item which is a mere inference. No one—not even a conjurer—can expect to know all the possibilities of conjuring and to observe all the accidental circumstances which may on any particular occasion

[1] It seems to me undesirable that even men of established scientific reputation like Mr. Crookes and Professor Zöllner should hold themselves exempt from mentioning even the simplest precautions. (Crookes' *Researches in the Phenomena of Spiritualism*, p. 43; Zöllner's *Transcendental Physics*, translated by C. C. Massey, 2nd ed., p. 79.) It is a matter of common experience among scientific experimenters that they sometimes omit precautions which, when once thought of, seem obvious, even in their own line of work, and such omissions are especially likely to occur in the present investigation, owing to its highly novel character and the complicated sources of error to be guarded against. That Professor Zöllner did not always perceive and avoid important sources of possible error may, I think, be inferred from his writings. For instance, in describing the séance on December 17th, 1877, when he obtained four knots in a string of which the ends were tied and sealed together, he omits to mention that the experiment had been tried and failed before. We learn that this was so, accidentally as it were, from his mentioning it in another place and in another connection (*Abhandlungen*, Vol. ii., p. 1191), where he tells us that it was a long time before the "spirits" understood what kind of knot was required of them, and that before they did so he obtained knots, but not such as he wanted—knots, I infer, which could be made by ordinary beings without undoing the string. Now this fact obviously greatly affects the value of the experiment, for it makes it possible that Dr. Slade may have prepared a string similar to Professor Zöllner's at home, and brought it with him, and, notwithstanding Professor Zöllner's watchfulness, have changed it. (Professor Zöllner put the string round his neck during a portion of the time before they sat down to the table, in order not to lose sight of it. Afterwards it was placed with the sealed end on the table, Professor Zöllner holding it in position and the greater part of it hanging down below the table; and it was while so placed that, as was supposed, four knots were made in it. It is generally hazardous to infer from a description when a conjurer's opportunity occurred, but if pressed I should say that the most likely time seems to me to have been after the string was taken off the neck again,—perhaps while it was being arranged on the table.) Whereas if Dr. Slade had been totally unprepared for the experiment, we should have had, on the view that it was conjuring, to make the much more difficult supposition that he had prepared a similar string, or undone and re-done one of Professor Zöllner's, after the latter went to the house for the séance. The omission to mention this fact in describing the incident seems to me so unaccountable except on the supposition that the possible importance of it had not occurred to Professor Zöllner, that we must I think assume in other cases that he may not only have omitted to mention, but failed to see the importance of even obvious precautions.

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favour deception and perhaps never exactly recur. It may, I think, be fairly inferred that some leading Spiritualists do not allow a sufficient range for the possibilities of conjuring from the fact that they have on several occasions avowed their belief that certain public conjuring performances showed the conjurers to be mediums.[1]

Other believers in the physical phenomena of Spiritualism, or the same at other times, lay stress on the advantage that, as they urge, conjurers have over mediums. Conjurers, it is said, require their own stage and apparatus, whereas mediums will come to the investigator's own room, bringing nothing but what they wear, and often allow themselves to be searched: moreover, prizes have been offered to conjurers who will produce the same phenomena as the medium under the same conditions, and none have come forward to claim them, though, it is argued, "imposture can be reproduced at will." This last, however, seems to me a most unjustifiable assumption, since, as I have above observed, the success of imposture may frequently depend on accidental and unobserved opportunities; and it appears to me that mediums possess an advantage far greater than stage and machinery in being allowed to fail whenever they please. The conjurer would only compete with them on equal terms if he could secure witnesses doubtful whether what they saw was conjuring or not, and if he enjoyed the same immunity from any necessity to succeed, or to adhere to any programme. The following statement by "M.A. (Oxon.)" bears on this point. He says (*Human Nature*, for 1876, p. 267):—"The balance is largely against 'prepossession' influencing spiritual manifestations in any appreciable degree, so far as my experience goes. In 99 out of every 100 cases people do *not* get what they want or expect. Test after test, cunningly devised, on which the investigator has set his mind, is put aside and another substituted." In other words the evidence is rarely, properly speaking, experimental, which makes it necessary to allow a much larger margin than would be required in experimental evidence not only for trickery, but also for accidental mistakes and mal-observation, even if trickery, conscious or unconscious, were out of the question. And it must be borne in mind that the most excellent moral character in the medium is no guarantee against trickery unless it can be proved that he was in no abnormal mental condition when the phenomena occurred; and that extraordinary deceptions have been

[1] Thus Mr. A. R. Wallace considered Dr. Lynn's entertainment to be clearly mediumistic, and, as he describes it, it is certainly difficult to explain. Mr. B. Coleman and "M.A. (Oxon.)" asserted the same of Maskelyne and Cooke's. Others have also declared themselves in the same way about these and other conjurers. See the *Spiritualist*, May 15th, 1873, p. 205; Dec. 18th, 1874, p. 297; Oct. 15th, 1875, p. 189; August 17th, 1877, p. 78. *Medium and Daybreak*, August 24th, 1877, p. 538; April 2nd, 1886, p. 212, &c.

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carried on by hysterical patients and others with no conceivable motive but a desire to secure attention.

There is another reason why conjurers would often compete on unequal terms with mediums, and that is that it would not pay professional conjurers to practise the particular tricks required. Slate-writing, for instance, is not adapted to public performances, and the number of people who would pay guineas for the chance of perhaps seeing writing produced on a slate by conjuring is small. I have, however, been fortunate myself in meeting with an amateur conjurer whom I will call Mr. A., who had given some attention to the subject of slate-writing and could produce some of the phenomena. He very kindly gave me three or four séances, none of them in his own house nor with his own table, but otherwise under conditions externally similar to Dr. Slade's and Mr. Eglinton's, and I consider the experience gained most valuable. Dr. Slade had already taught me how very little I could observe at a time. Nevertheless it was a shock to me to find how easily Mr. A. could deceive me. At one of these séances a lady friend of mine was present who had not been told beforehand that I knew this was conjuring. She was interested in slate-writing, had seen some very good slate-writing phenomena with a medium, and observed Mr. A. in the same state of mind. She sat next him. The next day she wrote an account of what took place, still without knowing that it was conjuring. This is her account of the first occurrence.

I took slates with me, two ordinary ones and a folding slate. We first used the ordinary slates; they were cleaned, dried, and placed one on the other upon the table, a nib of pencil between them, and Mrs. Sidgwick's medium's and my hands resting on them. No writing being heard, Mr. A. and I held them underneath the table. Eventually, however, writing was produced whilst the slates were *on* the table in position I have before described. The message was a long one, covering completely one side of slate. We examined them when they were placed the second time on the table, and satisfied ourselves that they were clean. I am sure that the slates were not changed.

Those who have studied the records of slate-writing séances will have noticed that it is rare for sitters to have long communications, such as this was, written *on their own slates.* Short remarks of a few words or even lines on the sitters' slates are common, and long messages covering one side of the slate are common too, but on the medium's slates. At the time I had this sitting with Mr. A., I was under the impression that long messages on slates brought by the sitters never occurred, and consequently I was even more surprised than my friend at the result. To cover one side of a slate with writing obviously requires considerable time, and it seemed to me so inconceivable that Mr. A. could have had the opportunity to do it unobserved, that notwithstanding my

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friend's certainty that it was her own slate, and my own impression to the same effect, I came to the conclusion that it must have been changed. But I was wrong. It *was* my friend's slate, and Mr. A. *had* found an opportunity of writing on it. I was told afterwards how, and saw the possibility, but I do not believe I should ever have discovered it if I had not been told. I need hardly say that it was not done while we heard the sound as of writing going on. This is my friend's account of the next incident :—

The medium next asked me to fetch a book from the other room. I took one at random from the shelves of the library. [The shelves contained several hundred volumes.] Mr. A. saw me take it out, but did not touch it. I brought it into the room, and put it on a chair between Mrs. Sidgwick and myself, whilst we prepared another slate and bit of pencil. Being again satisfied that the slates were clean, the book, into which I had not looked and the name of which I did not know, was placed on the slate, all our hands resting on it as before. I mentally thought of a page and line, from which a quotation was to be made—both numbers, at medium's request, being under 10. After a short time writing was heard. On the slate was written "Cantor lecture will be given on Monday, at the Kensington Museum. This is all we have power to do." We looked at p. 2, line 7, the numbers I had thought of, but did not find the words quoted. The medium, however, was very sure that they would be found somewhere near, and he soon discovered on last line of p. 7, "Cantor lecture," and on second line of p. 8, "will be given on Mondays," and a few lines further down, "at the Kensington Museum."

The test having been only a partial success the medium proposed that we should try it again. He asked me to fetch a second book from the other room. I took up a "Journal" lying on the table. I did not look to see which number I had chosen. Medium asked me to think again of two numbers under 10, to determine page and line from which quotation should be made. I did so, and very shortly after was written in red chalk, "no such page." This was true, for on opening volume, we found it commenced at a hundred and something.

Assuming, as we must do, that the slates could be changed under our very eyes, without our perceiving it, these two incidents are not very mysterious, but the next is, perhaps, more surprising.

Mr. A. wished to try this test again, so I fetched a third book. This happened to be *Time*—both he and I saw the title. This time I told him the numbers I was thinking of, p. 8, line 5. We held one slate under the table and another, with the book on it, remained on the table ; both these slates were Mr. A.'s. After a time writing was heard, and it was on the upper slate that we found the quotation, correctly given this time, "The Imperial Parliament" [p. 8,] line 1, and then a few words taken from line 5. (The slate used was a large folding one with a lock belonging to the medium. Into this he slipped a sheet of paper and a bit of pencil. It was on the paper that the

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quotation was written. Mrs. Sidgwick had the key,[1] and it was she who opened the slate.) The séance was held by full gaslight.

The following incidents of the same séance are also instructive:—

Mr. A. asked him [the supposed spirit] to tell us any secrets about either of us, and we heard the sound of writing on the slate lying on the upper surface of the table. The sound continued when Mr. A. withdrew his hands a short distance from the slate, but ceased when he withdrew them to a greater distance. A long message was written again, covering the whole side of the slate, and commencing at a spot where the medium had previously requested it to commence by putting a small cross.

* * * * * *

One of our messages at request was written in different coloured chalks, the bits of which had been placed on the table underneath the slate.

* * * * * *

Before he left, Mr. A. held a slate with me under the table, and asked that the name of the animal written on the slip of paper I had chosen should be written on the slate. Writing was heard, the slate brought up, and I found *rhinoceros* in red chalk. This was correct, though how Mr. A. knew, or by what means the word was written, I have no idea, for the slate appeared to me to be clean when we put it under the table.

Without for an instant maintaining that Mr. A.'s performance was as good as, from the description of others, I suppose that Dr. Slade's and Mr. Eglinton's sometimes is, I am disposed to think that he too could have supplied Professor Zöllner with experimental proof of the existence of four dimensional beings, if Professor Zöllner could have seen him without knowing he was a conjurer.

Another conjuring performance, with which I had nothing to do myself, but of which a written account was sent to me by the gentleman concerned, may be worth mentioning in this connection, because it has the special interest of having been performed in the presence of a witness who was, as it were, behind the scenes. I should add that I have discussed the incident with this witness. A gentleman, whom I will call for convenience Mr. X., sat with a conjurer for slate-writing. Mr. X. held one slate in his left hand, and another lay on the table before him in such a position that he "could easily watch both." The latter was a double slate, hinged and locked, belonging to the conjurer. This Mr. X. unlocked, placed in it three pieces of coloured chalk, and re-locked it, putting the key in his pocket His account pro-

[1] The precaution of keeping possession of the key of the medium's locked slate is one often adopted with Mr. Eglinton, but it is of course perfectly useless, as there may be any number of keys.

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ceeds thus (I have italicised the part to which I wish most to call attention) :—"*After some few minutes, during which, to the best of my belief, I was attentively regarding both slates,* Mr. — whisked the first away and showed me on the reverse a message written to myself. Almost immediately afterwards he asked me to unlock the second slate, and on doing so I found, to my intense astonishment, another message written on both the insides of the slate—the lines in alternate colours, and the chalks apparently much worn by usage. My brother [who was looking on] tells me that *there was an interval of some two or three minutes, during which my attention was called away, but I can only believe it on his word.*"

The fact is that slate-writing as generally exhibited by Dr. Slade and Mr. Eglinton is not at all the simple phenomenon it is sometimes supposed to be. The table may be mentioned, for instance, as one of the complications apparently superfluous if the phenomena be genuine, but most useful as a screen and in other ways if they be due to conjuring. I cannot but think that this absence of simplicity in the conditions under which not only slate-writing, but the other physical phenomena are generally produced affords an important presumption against their genuineness.

And there are two further arguments against their genuineness which are gaining in force every year. The first of these is that almost every medium who has been prominently before the public has at some time or other been detected in trickery, or what cannot be distinguished from trickery except by hypotheses which appear to me violent and baseless. And the second is the absence of evidence which does not depend on the investigator's power of continuous observation. By continuous observation, I mean observation which is uninterrupted during a certain interval of time, varying in length according to circumstances,—this observation extending of course to all circumstances which can have affected the evidence. This kind of observation is seldom or never required, either in ordinary life or in scientific investigations, so that we have but little practice in it, or opportunities of estimating our power of exercising it. It is often on our want of power of exercising it that the success of conjuring depends, and it should be, and in many cases is, the aim of investigators into Spiritualism to make the evidence independent of it It is easy to devise experiments of various kinds which apparently introduce no new difficulties if the phenomena are genuine, which resemble in kind those we see, and omit none of the conditions said by (or through) mediums to be necessary, and which, if successful, would place some of the physical phenomena beyond all question of conjuring by eliminating the necessity for continuous observation or accurate recollection on the part of the investigator. But as far as I can ascertain no really good

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evidence exists that such experiments have ever succeeded.[1] Professor Zöllner devised some good ones, but they failed. He wanted, for instance, to have a knot tied in a continuous band cut out of bladder. The "spirits" explained that they had failed in this because "the band was in danger of 'melting' during the operation under the great increase of temperature," affirmed to occur during the passage of solid through solid. One would not have supposed that cat-gut (made up into a string) melted less easily, but knots were found in a piece of cat-gut with the ends sealed together. This, however, is not *necessarily* an occult phenomenon and the evidence that it was done at the séance after the ends were sealed, and not done by Slade at home and his piece thus prepared exchanged for Professor Zöllner's, depends on the latter's power of continuous observation.

The necessity of continuous observation at a slate-writing séance can hardly, I think, be eliminated except by obtaining writing on a slate securely covered. Many people have tried to obtain this with Mr. Eglinton, but I have never heard of any successful attempt except one of Mr. Wedgwood's. He took a pair of slates, tied and sealed together, to Mr. Eglinton, but obtained no writing and put the slates aside. Some months later he again took the slates to Mr. Eglinton's as they were, adding only gummed paper round the edges. This time he obtained a long message, but the experiment, as one eliminating the necessity for continuous observation, is vitiated, because we have no complete guarantee that (1) the slates were not tampered with in the interval, and (2) that a pair prepared in imitation was not substituted at the second séance. For Mr. Wedgwood had no reliable means of identifying his slates or his gummed paper so far as I have been able to learn. He has never, I believe, obtained writing on a securely closed slate except

[1] There is an alleged case of pieces of platinum being introduced into hermetically sealed glass tubes in Professor Hare's laboratory through the mediumship of a Mr. Ruggles, but in the only description I have seen there is no evidence of the identity of the tubes seen empty and those seen with the platinum in them 55 minutes later, except what depends on the watchfulness of the observers. Dr. S. A. Peter's description of this phenomenon is quoted in Zöllner's *Transcendental Physics*, Mr. Massey's translation (2nd Ed. 1882, p. 152). An experiment which may have been important is given in Dansken's *How and why I became a Spiritualist* (Baltimore, 1869). He tells us of an anonymous medium who had an iron ring put on and off his neck, which he says was seven inches less in circumference than the medium's head. But the evidence in several essential points is very incomplete. It is also asserted that private mediums have obtained phenomena independent of continuous observation. Baron du Prel, in *Sphinx* for June, 1886, says "Ich kenne persönlich drei Privatmedien bei welchen direkte Schriften nicht nur in Doppeltafeln *sondern überhaupt in unzugänglichen Orten vorkommen.*" It is to be hoped that these persons will place their evidence before the world with the detail required to make it scientifically valuable.

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on this occasion, though he has frequently tried. Another gentleman, Mr. F. W. Bentall, who gives us an account of his experiences with Mr. Eglinton (see *Journal* of the Society for June, 1886), and who was successful in obtaining writing on slates not securely closed, tried a large number of times and quite in vain with securely closed ones. At some of these trials he used a slate covered with a sheet of glass. The "spirits" explained that "the vital fluid—call it what you may—cannot be retained sufficiently long in the enclosed space to enable us to move the pencil with force enough," &c. Afterwards Mr. Bentall substituted wire gauze for the glass, so that there was no longer an enclosed space in the same sense, but the result was no better.[1]

I mention these experiences with Dr. Slade and Mr. Eglinton merely as illustrations of the kind of evidence I mean. Various other experiments, designed with the view of obtaining evidence of this kind, might be mentioned. For instance, some friends of mine have made many attempts to obtain writing in a hermetically sealed glass retort, containing paper and pencil, at dark séances with Mrs. Jencken, but they never succeeded. The tests described in connection with our investigation into materialisation phenomena were also intended to be of this kind. It is difficult to suppose that all conditions which eliminate the need of continuous observation are also such as exclude the operation of occult forces—if such exist. And if, as time goes on and experiments are varied, it is found that crucial tests invariably fail—that the phenomena continually stop short exactly at the point to which conjuring could conceivably go—the improbability that this is due to chance becomes greater and greater, and ultimately greater than the difficulty of supposing any amount of defective observation.

At present, however, notwithstanding this absence of what may be called crucial evidence for the existence of these physical phenomena beyond the recognised laws of nature, there is still some evidence which ought not to be set aside, and which, though, in my judgment, not enough to establish so vast a conclusion, still affords a *primâ facie* case, and makes it our duty to seek opportunities for further investigation. Without attempting here to go into the details of this evidence, I may refer the reader to that of Comte Agénor de Gasparin as to the movement of tables without contact in what seem to have been careful experiments carried on with his own family and friends (see De Gasparin, *Des Tables Tournantes et du Surnatural en Général*, Paris, 1854); also to the experimental evidence for similar phenomena obtained by the sub-Committee, No. 1, of the Dialectical Society (see *Report on Spiritualism*

[1] Of course, had these experiments of Mr. Bentall's succeeded they would only have been crucial, if he had some satisfactory way of identifying his slate, and of proving that it had not been tampered with.

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of the Committee of the London Dialectical Society, 1871). Also to some of Mr. Crookes' experiments with Mr. Home on the alterations of weight of a partially suspended board (see *Researches in the Phenomena of Spiritualism*, by W. Crookes, reprinted from the *Quarterly Journal of Science*, London, 1874). And, finally, I would refer him to "M. A. (Oxon's)" account of phenomena occurring through his own mediumship (see *Human Nature* for 1874).

Evidence of this kind makes me think that the investigation should go on, and may yet be fruitful; but I think we have enough experience to show that it is not worth while continuing it with established mediums under the conditions at present imposed.

This brings me to what, if these be genuine phenomena, is a point of great importance, namely, that there has been a large amount of hasty assumption as to the conditions under which the phenomena can and cannot occur. This can easily be proved by quotations from works on the subject. In some investigations this would be of comparatively little consequence—if a hypothesis has been mistaken by one investigator for a fact, the next investigator will probably find out the mistake and correct it; a little time would be wasted and that is all. But in our investigation it is very different. If there are genuine physical phenomena it is almost certain from the analogy of the automatic phenomena that they depend largely on the nervous and mental condition of the medium, and therefore on his beliefs. If, therefore, he believes, *e.g.*, that the phenomena can only occur in the dark, the consequence may be that with him they will only occur in the dark, and thus a mere conjecture may become a real, though quite artificial, condition. For instance, De Gasparin believed it essential that the circle should hold hands and form a chain, but—as I understand their description—the Committee of the Dialectical Society did not hold hands, and certainly there was no chain in Mr. Crookes' experiments with Mr. Home. The failure, therefore, of De Gasparin's circle to obtain phenomena when the chain was broken may be with some probability referred to their belief in the necessity of the unbroken chain. De Gasparin himself has some good remarks on the influence of such belief, though he does not apply them in the instance I have mentioned. Now I believe not only that many of the conditions supposed to be necessary, and which greatly complicate and hinder the investigation, have been assumed on very insufficient evidence, but that some of them at least have been deliberately invented to facilitate fraud.

And there is even another danger peculiar to this investigation, namely, that conditions may be invented unconsciously, so far as the medium is concerned, for it is known that the invention of false excuses for failure is one of the curious things that occur in automatic writing. It is very important, therefore, that those who find in themselves or

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their friends what seems to be mediumistic power—whatever that may be—should approach the subject in as unprejudiced a way as possible, and, in order to establish the genuineness of the physical phenomena, that they should aim at obtaining them under the simplest possible conditions.

In conclusion, I would repeat that it is not because I disbelieve in the physical phenomena of Spiritualism, but because I at present think it more probable than not that such things occasionally occur, that I am interested in estimating the evidence for them. I feel bound, however, to admit that by far the larger part of the testimony put forward as affording solid ground for a belief in them, which I have been able to examine, is of such a nature as to justify the contempt with which scientific men generally regard it; and though it is to be regretted, it is hardly under the circumstances to be wondered at, that this contempt is hastily extended to the *whole* of the testimony. If what I have written should contribute, in however small a degree, to the improvement of the evidence on this subject in the future, I shall feel that it has not been written in vain.

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PROCEEDINGS OF THE GENERAL MEETING ON

Monday, July 5, 1886.

The twenty-first General Meeting of the Society was held at the Rooms of the Society of British Artists, Suffolk Street, Pall Mall, on Monday, July 5, 1886.

PROFESSOR BALFOUR STEWART, F.R.S., PRESIDENT, IN THE CHAIR

The following paper was read:—

IV.

THE POSSIBILITIES OF MAL-OBSERVATION IN RELATION TO EVIDENCE FOR THE PHENOMENA OF SPIRITUALISM.

BY C. C. MASSEY.

In his opening address at the first general meeting of this Society, the President, Professor Sidgwick, while expressly evading "the difficulties of determining in the abstract what constitutes adequate evidence" of the phenomena called Spiritualistic (as well as of thought-reading and clairvoyance) nevertheless concluded with the following general statement of the sort of proof at which we ought to aim.

"We must drive the objector," he said, "into the position of being forced either to admit the phenomena as inexplicable, at least to him, or to accuse the investigators either of lying or cheating, or of a blindness or forgetfulness incompatible with any intellectual condition except absolute idiocy."[1]

As I am about to maintain that much of the existing evidence for the phenomena in question already places objectors in the dilemma thus succinctly indicated by Professor Sidgwick, I must ask leave to point out, with some approach to particularity, how, and under what circumstances, I conceive the dilemma to arise. This is the more necessary, because it will have at once occurred to all of us that the dilemma does not arise in the case of conjuring tricks, to which the

[1] *Proceedings.* (Vol. i., p. 16.)

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phenomena we are considering are usually referred by the incredulous. No one thinks the worse of his own or another's intelligence for not discovering a conjurer's trick; but most of us would feel ashamed of mistaking a conjurer's trick for a genuine manifestation of an unknown force. Nor is there, so far as I am aware, any mediumistic phenomenon on record which absolutely defies simulation under all circumstances and all conditions of observation. The whole evidence is a question of these circumstances and conditions, and to demonstrate that a conjurer can baffle observation under inferior conditions of these phenomena is quite beside the mark. We have to judge the evidence, as to answer an argument, at its best. The success of the conjurer with even the most intelligent spectators, depends on their overlooking the true conditions of the performance, and this again depends on their attention not being directed to the particular operation which decides, or is the condition of, the result. Any spectator who knew *exactly* what to observe would have already discovered the trick, and a very little practice in observation would enable him to detect the actual *tour de force* by which it was accomplished. This remark, of course, does not apply to the secrets of machinery, or elaborate scientific apparatus, and it is perhaps true that pseudo mediums and thaumaturgists have availed themselves of such mechanical means. But none of the phenomena relied upon by Spiritualists and the maintainers of a psychic, or nerve, force are at all explicable by contrivances which could baffle the well-informed observation of even an adept. If the medium is a conjurer, he may, of course, have some simple preparations, but to bring them into play he must succeed, as other conjurers do, by the ignorance of the witnesses of the particular thing to be done, on which all depends. By this particular thing I mean, as will appear when we come to consider the opportunities of a conjurer at a mediumistic séance, one definite act or operation which, under the circumstances of the experiment, has become the indispensable *condition* of the conjurer's success. In an ordinary conjurer's performance this never is known, and observation, therefore, wavers and is distracted by this uncertainty. The most important thing is, perhaps, just what never would occur to the mind as important at all. I shall endeavour to show (1) that at mediumistic sittings, under the best conditions, this uncertainty does not and cannot exist; and (2) that even inferior powers of observation, equipped with knowledge of the exact thing to be observed, and associated with average intelligence, are competent to baffle any conjurer in the world, provided only that the conditions of observation are physically easy. There must be sufficient intelligence to know that a conjurer's sole chance in that case lies in the possibility of withdrawing your attention from the single perception required of you. Very little will is required to be secure against this, because a dominant idea, even if for a

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moment in abeyance, is immediately re-excited by any foreign action, possibly designed to lay it completely asleep. This especially applies, as I know by my own experience in the slate-writing sittings, to offers of conversation, changes of hand induced by fatigue, and so forth; jealous vigilance is aroused by the smallest modification in the conditions.

In the June number of our *Journal*, only issued a few days ago, Mrs. Sidgwick takes up a position apparently opposed to the reception of general testimony of these phenomena, so far as they occur in the presence of professional mediums, and must be established by observation of any degree of continuity. This is a plain issue, and one on which it behoves us to have a clear opinion.

Now there is one broad distinction between the medium and the conjurer which makes it possible to get evidence with the one which the performances of the other can never afford. On the hypothesis of mediumship we should expect to be able to reverse one *essential* relation of conjurer to spectator, so that the latter shall be no longer a mere observer or looker-on, but shall be himself the principal actor in all the preparations, while the physical activity of the medium is reduced to the *minimum*. The conjurer can only mask his essential performance by his incidental and apparent performance. By this activity he obtains two indispensable advantages. For, first, he imposes on the spectator a multitude and succession of observations in uncertainty of the precise essential point to which attention should be directed to prevent or detect trickery. And, secondly, he is enabled to distract attention, or to impose inferior or impossible conditions of observation with regard to the particular operations which have to be concealed. We may, therefore, be quite sure that in order to baffle a conjurer it is only necessary to undertake all preliminary manipulations ourselves, and so to make our arrangements that mere observation has only to be directed to a single fact of sense perception, or at most to two or three such facts well within an average capacity of simultaneous or successive attention; and, further, that the conditions of this observation should be the easiest possible. If, moreover, we can reinforce the confidence which everyone must feel in his own senses up to a certain point by adequate contrivances to dispense with actual observation of any important particulars, we shall reduce the problem to the most extreme simplicity that human experience admits of. For testimony to phenomena obtained under such conditions to be of the highest evidential value, it is only necessary that the witness should in some way assure us that the observation, thus simplified and directly designated by the preparations, was in fact made, or that when this assurance is not explicitly given, it is only because failure of the observation, under the circumstances, would have been inconsistent

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with a sane and waking condition. If there is any possibility left for observation to guard against, we must be satisfied that it was either such as *could not* have escaped attention, or one to which attention *was actually* directed. In that case, he only can question whether observation has really performed its office who doubts the capacity of the human mind and senses to take in the most elementary facts of perception.

Now I submit that testimony of this highest value exists, and exists even in abundance. But it will be perfectly idle to adduce cases in illustration of this proposition, if every case in which the evidence is apparently free from defect is assumed to be incorrectly described. That is the assumption which Mrs. Sidgwick is prepared to make, because in her view observation is defective, not only in what it omits, but in what it seems to assert.[1] I shall presently endeavour to show that this can only be true of general statements which fail to discriminate the elements of an observation, and which under the name of observation give us only a mental result instead of testifying to individual and indivisible acts of perception. And as to important elements which are assumed to be lost for observation, we shall have to see of what nature they must be, of what character and dimensions—in order that they may affect the result. And then the appeal must be to universal experience of the degree to which the senses can and cannot be stimulated by external occurrences without arousing attention sufficient for lively perception with notice by a waking man. It is true that mental preoccupation is *pro tanto* sleep in regard to everything upon which the mind is not actually engaged, and this preoccupation it is which the conjurer is supposed to induce. But it is always the nature of the particular act in each case to be performed by the conjurer unobserved, which must determine the degree of preoccupation in the witness necessary for the accomplishment of the former's purpose. Now, as regards this, if the *positive* observations of the witness respecting the physical conditions are generally trustworthy, we get thereby a measure of the conjurer's indispensable physical interference, and thus of the degree of stimulation to the witness's senses by such interference.

[1] "The juggler's art consists largely in making things appear as they are not. Can we suppose that it has caused facts which did not occur to be imagined, and facts which did occur to be overlooked, to the extent required to make the cases before us explicable by ordinary human agency?" (*Journal* p. 332.) As Mrs. Sidgwick has "no hesitation in attributing the performances" (those with which she was dealing) "to clever conjuring," though she says that "certainly some of the phenomena *as described* seemed to be inexplicable by the known laws of nature," this *positive* conclusion evidently requires the *positive* assumption of mis-description.

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In proportion to that stimulation must be the degree of preoccupation for observation to fail. So that it will not do to urge the abstract truth or experience of the liability of the mind to momentary preoccupation during a prolonged observation : we must in each case compare the degree of preoccupation supposable with the degree that is then and there requisite for the conjurer's purpose. And here the appeal must again be to common experience.

Having regard to the limits of our time, I am obviously unable to do more on the present occasion than offer a few samples from the bulk, and even as to some of these I must content myself with a brief reference to the essential character of the evidence as illustrating the points I have in view.

Now I will first take two or three of the experiments devised and instituted by the late Professor Zöllner with the medium Slade, selecting the briefest suitable accounts that I can find. The following will be found at p. 39 of the translation entitled *Transcendental Physics*. Zöllner says :—

> I took a book-slate, bought by myself ; that is, two slates connected at one side by cross-hinges, like a book, for folding up. In the absence of Slade, I lined both slates within, on the sides applied to one another, with a half-sheet of my letter-paper, which immediately before the sitting, was evenly spread with lamp-black soot. This slate I closed, and Slade consented to my laying it (which I had never let out of my hands after I had spread the soot) on my lap during the sitting, so that I could continually observe it to the middle. We might have sat at the table in the brightly-lighted room for about five minutes, our hands linked with those of Slade in the usual manner *above* the table, when I suddenly felt on two occasions, the one shortly after the other, the slate pressed down upon my lap, without my having perceived anything in the least visible. Three raps on the table announced that all was completed, and when I opened the slate there was within it, on the one side, the impression of a *right* foot, on the other side that of a left foot.

And this was just what Zöllner had himself desired with a view to obviate possible objections to a similar phenomenon obtained previously under inferior conditions.

Now I submit that this experiment reduces the supposition of mal-observation to the extreme of absurdity. It would appear from the account that the experiment was proposed to Slade only immediately before it was tried, so that there was no time for the preparation by Slade of a slate to be substituted for Zöllner's. But as we are now on the point of observation, I will suppose for the moment that possibility. It will then be seen that Zöllner's statement expressly excludes the possibility of a substitution *before* he placed the slate on his lap, so that Slade would have to effect it with his feet afterwards, and that though the slate

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was all the time partly in Zöllner's view, and when the least sensation would have instantly drawn his eyes to the spot.

I pass to another case from the same source (p. 81).

The experiment, says Zöllner, was as follows :—

I took two bands cut out of soft leather, 44 centimètres long (about 15 inches) and from five to 10 millimètres broad ($\frac{1}{5}$ to $\frac{2}{5}$ inch), and fastened the ends of each together, and sealed them with my own seal. The two leather bands were laid separately on the card-table at which we sat ; the seals were placed opposite to one another, and I held my hands over the bands (as shown in the plate). Slade sat at my left side, and placed his right hand gently over mine, I being able to feel the leather underneath all the time. Presently, while Slade's hands were not touching mine, but were removed from them about two or three decimètres (from eight to 12 inches), I felt a movement of the leather bands under my hands. Then came three raps on the table, and on removing my hands the two leather bands were knotted together. The twisting of the leather is distinctly seen in the plate, copied from a photograph. The time that the bands were under my hands was at most three minutes. The experiment was in a well-lighted room.

Here the arrangements had reduced the office of observation to the simple points (1) whether the bands lying before his eyes on the table were in fact connected at the moment Zöllner covered them with his hands; (2) whether Slade could and did touch them when they were thus covered; (3) whether Slade could or did either knot them at the moment Zöllner removed his hands, or then substitute others for them. If anyone thinks that either of these things could have happened unobserved, I can only say that I am sure he will not get any honest conjurer in the world to agree with him.

The following fact, from my own experience with the same medium, Slade, may be fitly adduced here.

It was in New York, on the evening of the 14th October, 1875, and was publicly recorded by me shortly afterwards, from notes taken immediately on my return to my hotel after the sitting. And my recollection of it is still perfectly distinct. It was at Slade's own room, brightly lighted with gas. The floor was carpeted. We sat at a table in the centre of the room, three of us, Slade opposite to me, my friend Colonel Olcott at the end on my left and on Slade's right. There was no one else present. Slate-writing experiments were proceeding between Olcott and Slade, when a chair *on my right*—at the end of the table opposite Olcott—was thrown down by some undetected force. I got up, felt round the chair for any attachments, and then, producing a tape measure I carried with me for the purpose of my investigation, I took the shortest distance between the medium and the chair, as the latter lay upon the floor. It was just five feet, and on resuming my seat I

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could see a good clear space between the table and the prostrate chair. Meanwhile, Slade had not moved from his seat, and I requested him not to stir, and asked that the chair, which lay on my right, and which I could watch as nothing intervened between me and it, *might be picked up and be placed by me.* There was an interval of perhaps two minutes, during which time the medium, still engaged with Colonel Olcott, remained seated in the same position, as I know, because my range of vision from where I sat took in the whole general situation, though, as the prostrate chair and the free space of floor between it and the table were the main things to be observed, I kept my eyes steadily in that direction, and never lost sight of chair and floor for a moment. Suddenly I saw the chair move along the ground a few inches towards me, and in a direction slightly oblique to the table, and then, as I watched it and the open space between it and the table, medium, and everything else, it was jumped upon its legs and deposited at my right side, just as if some one had picked it up in order to take a seat beside me. No mediumistic phenomenon that I have witnessed has made stronger or more lasting impression upon me than this one.

On another occasion I was sitting alone with Slade in bright daylight, when his chair was drawn suddenly and considerably back, with him upon it. I at once pushed back my own chair from the table so as to command a full view of Slade's whole person. I then asked that my chair, with me upon it, might be drawn back. This was done almost immediately, to the extent of two or three inches. There could be no question either of Slade's agency in this, or of any unconscious action of my own, as I could, and did, see Slade from head to foot, and there was no time for gradual tension of the muscles of my own legs and feet against the floor in analogy with the process which no doubt often occurs in table-turning or tilting with contact of hands. I could multiply instances from my own experience in which observation has been similarly simplified and facilitated. When this is the case—and it will be found to be the case in a very large number of records—I contend that it is perfectly indifferent whether we are experimenting with a professional or with a private medium; and that the largest margin we can rationally allow for unknown possibilities of conjuring cannot prevent the issue being reduced, as is desired, to one simply of the *veracity* of the witness.

I must, therefore, take exception to the statement of Mrs. Sidgwick, in the paper read at our last meeting, that the evidence is "so seldom experimental; that is, that the observer so seldom knows beforehand what will be the precise phenomena and conditions."[1] The precise pheno-

[1] Abstract of Mrs. Sidgwick's Paper in the May number of the *Journal.* I had not before me the full text, now published in this volume.

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menon in the case of the slate-writing mediums, for instance, is always known beforehand, unless we confuse the term "phenomena" and "conditions," *i.e.*, conditions of observation. The only variation is in the possibility of imposing tests supplementary to ocular observation, and these usually originate with the observer himself. I may instance a case recorded only the other day (*Light*, May 22nd), in which the observer, Major le Taylor, went three times to Mr. Eglinton, each time obtaining the writing under a new test premeditated by himself. He did this on the very principle recommended by Mrs. Sidgwick, of allowing a very large margin for conjuring and for defects of observation. As to the conditions of observation, they are known beforehand in all those cases—and very numerous they are—in which the phenomenon is obtained under conditions of observation prescribed by the observer himself. In Zöllner's above cited cases (and others could be adduced from his book) phenomenon, test, and conditions of observation, were all prescribed by himself. In both my cases of the chairs (especially the first mentioned) the phenomenon was prescribed by myself, and, equally in both, the conditions of observation were the best conceivable, because the very simplest. Mr. Eglinton's mediumship is especially remarkable for successes obtained under tests and conditions imposed by observers. In addition to Major le Taylor's case, may be mentioned, as illustrations, several others with this medium. Thus, on January 5th, of last year, Mr. D. H. Wilson, M.A., goes with his wife and sister to Mr. Eglinton—these four being the only persons present. Mr. Wilson suggests obtaining by psychography an extract from a closed book.

Accordingly (he says) Mrs. Kimber (his sister) wrote on a slate the number of a *page;* Mrs. Wilson the number of a *line*, and it remained for me to choose the book from which Mrs. Wilson's line of Mrs. Kimber's page was to be written by psychography on the slate. For this purpose, with closed eyes,[1] I took a book from the medium's shelves, which held about 200 volumes. A crumb of pencil was placed upon the slate, on which Mrs. Kimber and Mrs. Wilson had written the number of the page and line respectively. A second slate of exactly the same size and form was placed over this one, and the book was put by myself on the top of the two slates.

Mr. Eglinton and Mrs. Kimber rested their hands on the book.

It should be noted that :—

1. Precaution had been taken that no one besides Mrs. Kimber knew what number she had written on the slate to express the page to be recited, the same being true of the number Mrs. Wilson had written to express the *line* of that page.

[1] The experiment was partly devised to test the presence of an intelligence outside the minds of all the sitters.

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2. The slates and book were all on the top of the table immediately before the eyes of all present. (The sitting was by daylight.)

3. The medium did not touch the book until the moment when he and Mrs. Kimber rested their hands thereon. It had been handled by myself alone.

After the lapse of a few seconds the sound of writing was heard within the slates. Upon the usual signal of three raps (also seemingly within the slates) to indicate the end of the experiment, I examined the slates, and found the following sentence, written on the under one, with the pencil resting on the full stop at the end. (I may mention that all the writings throughout the entire séance were conscientiously punctuated, and that every *t* was crossed and every *i* dotted.)

"Page 199, line 14, is a table, the last word is '0'."

Mrs. Kimber had written 199, and Mrs. Wilson had written 14.

I then opened the book (*Ghose's Indian Chiefs, Rajahs*, &c., Part II.) and turned to p. 199, which commences thus: "Table A. Estates belonging to the Hon. Maharaja Jotundra Mohun Tagore Behadur," &c.

The 14th line is as follows:—

"Shikharbâte, 24 Pargannas, 210 0 0."

Now though the form of Mr. Wilson's statement that the book had been handled by himself alone, before he put it on the slates as they lay upon the table before the eyes of all present, does not expressly or necessarily import that it had never been out of his hands from the moment he removed it from the shelf, I do not think anyone can seriously suggest that Mr. Eglinton had the several opportunities unobserved:—

1. Of reading page and line on the slate, although we are told that precaution (very easy to take) was taken against this very thing.

2. Of getting possession of the book, opening it, and finding page and line.

3. Of writing those 12 words and figures with their six *t's* and *i's* all crossed and dotted on the slate.

Were that possible, my own conclusion would be that human observation, under the simplest and easiest conditions, and with attention directed to the self-devised tests to be guaranteed by the observation, is absolutely worthless for any purpose and under any circumstances whatever. And I would here refer to the sensible remarks of Mr. G. A. Smith, upon a similar experience of his own with Mr. Eglinton, which will be found at p. 301 of the *Journal*.

Other investigators with Mr. Eglinton have obtained tests similar to the above, with variations devised by themselves, making the operations to be performed unobserved by the medium still more complicated. I will only here refer to the experiment recorded by Mr. J. S. Farmer and Mr. J. G. Keulemans in *Light* of October 17th, 1885. It is too long to quote, but should be referred to as showing what elaborate

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and ingenious arrangements observers can sometimes make for their satisfaction with results entirely successful. Other cases will be found in the June number of the *Journal*. The following instance, recorded by Mr. Alfred Russel Wallace in the *Spectator* of October 7th, 1877, is another illustration of the security an investigator can command by taking all the arrangements into his own hands. The medium was Dr. Monck. Mr. Wallace says :—

The sitting was at a private house at Richmond, on the 21st of last month. Two ladies and three gentlemen were present, besides myself and Dr. Monck. A shaded candle was in the room, giving light sufficient to see every object on the table round which we sat. Four small and common slates were on the table. Of these I chose two, and after carefully cleaning and placing a small fragment of pencil between them, I tied them together with a strong cord, passed around them both lengthways and crosswise, so as effectually to prevent the slates from moving on each other. I then laid them flat on the table, without losing sight of them for an instant. Dr. Monck placed the fingers of both hands on them, while I and the lady sitting opposite placed our hands on the corners of the slates. *From this position our hands were never moved till I untied the slates to ascertain the result.* After waiting a minute or two, Dr. Monck asked me to name any short word I wished to be written on the slate. I named the word "God." He then asked me to say how I wished it written. I replied "Lengthways of the slate," and then if I wished it written with a large or small g. I chose a capital G. In a very short time writing was heard on the slate. The medium's hands were convulsively withdrawn, and I then myself untied the cord (which was a strong silk watchguard, lent by one of the visitors), and on opening the slates found on the lower one the word I had asked for, written in the manner I had requested, the writing being somewhat faint and laboured, but perfectly legible. The slate with the writing on it is now in my possession.

The essential features of this experiment are that I myself cleaned and tied up the slates, that I kept my hands on them all the time, that they never went out of my sight for a moment, and that I named the word to be written and the manner of writing it after they were thus secured and held by me. I ask, how are these facts to be explained, and what interpretation is to be placed upon them?

ALFRED R. WALLACE.

I was present on this occasion, and certify that Mr. Wallace's account of what happened is correct.

EDWARD T. BENNETT.

In other cases it is the character itself of an unexpected phenomenon which leaves no escape from the evidence other than suppositions of mendacity or hallucination. The following instance of this from Zöllner is so remarkable that at the risk of again quoting what is already known I must give it at length, which I am the rather induced to do, because Mrs. Sidgwick has apparently not thought the

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evidence of this distinguished man of science to be worthy of any special mention.[1] The séance was at the house of Zöllner's friend, Herr von Hoffman mid-day on May 6th, by bright sun-light. Zöllner says:—

I had, as usual, taken my place with Slade at the card table. Opposite me stood, as was often the case in other experiments, a small round table near the card-table, exactly in the position shown in the photograph illustrating further experiments to be described below. The height of the round table is 77 centimètres (about 2ft. 4in.), diameter of the surface 46 centimètres (about 16in.), the material birchen wood, and the weight of the whole table 45 kilogrammes. About a minute might have passed after Slade and I had sat down and laid our hands, joined together, on the table when the round table was set in slow oscillations, which we could both clearly perceive in the top of the round table rising above the card table, while its lower part was concealed from view by the top of the card table. The motions very soon became greater, and the whole table approaching the card-

[1] This was true so far as my recollection went, from hearing the paper read. But it will be seen from the text as now published, that Mrs. Sidgwick does advert, in some detail, to parts of Zöllner's testimony. So far as her objection to it refers to the absence of tests excluding the necessity of all "continuous observation," it would be obviously beyond the scope of a paper designed to vindicate the trustworthiness of observation to reply to it. But with regard to the objection (see foot-note, *ante* p. 65) to the celebrated experiment of the true knots in an endless cord, I think the value of the objection will be best appreciated by a reference to some conditions of the experiment, as the latter is not to be confounded with the one with the leather bands, of which I have given the account above. (I have italicised the word "*immediately*," in Zöllner's statement, for its obvious importance in relation to any suggestion of substitution *before* the experiment actually began. The emphasization of other words is by Zöllner.) After describing the cord, its dimensions, mode of knotting, and sealing the ends, &c., Zöllner says: "The above described sealing of two such strings, with *my own* seal, was effected *by myself* in my apartments, on the evening of December 16th, 1877, at nine o'clock, under the eyes of several of my friends and colleagues, and *not* in the presence of Mr. Slade. Two other strings of the same quality and dimensions were sealed by Wilhelm Webber with *his* seal, and in his own rooms, on the morning of the 17th of December, at 10.30 a.m. With these four cords, I went (17th December) to the neighbouring dwelling of one of my friends, who had offered to Mr. Henry Slade the hospitalities of his house, so as to place him exclusively at my own and my friend's disposition, and for the time withdrawing him from the public. The séance in question took place in my friend's sitting-room *immediately* after my arrival. I myself selected one of the four sealed cords, and, in order never to lose sight of it before we sat down at the table, I hung it round my neck—the seal in front always within my sight." The knots were obtained in a few minutes, the seal and Slade's hands having never been out of sight. The suggestion being that Slade substituted a previously prepared cord of his own, it is to be observed that such a substitution was *the very possibility* which Zöllner showed that he had in view by his precaution of hanging the cord round his neck. As there was *no delay*, such as, supposing Zöllner to have previously parted with the custody of his cords, would have

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table, laid itself under the latter, with its three feet turned towards me. Neither I, nor, as it seemed, Mr. Slade, knew how the phenomenon would further develop, since during the space of a minute which now elapsed nothing further occurred. Slade was about to take slate and pencil to ask his "spirits" whether we had anything still to expect, when I wished to take a nearer view of the position of the round table lying, as I supposed, under the card-table. To my and Slade's great astonishment we found the space beneath the card-table completely empty, nor were we able to find in all the rest of the room that table which only a minute before was present to our senses. In the expectation of its re-appearance we sat again at the card-table, Slade close to me, at the same angle of the table opposite that near which the round table had stood before. We might have sat about five or six minutes in intense expectation of what should come, when suddenly Slade asserted that he saw lights in the air. Although I, as usual, could perceive nothing whatever of the kind, I yet followed involuntarily with my

imposed on him the task of "continuous observation" of them, and have *conceivably* afforded a conjurer an opportunity, we cannot put the supposed substitution *before* the experiment. But Mrs. Sidgwick's suggestion that it may have been *afterwards*, *i.e.*, "after the string was taken off the neck again, perhaps while it was being arranged on the table," is equally inadmissible, (1) because we can say, with as near approach to certainty as possible, that the presence or absence of the four knots must have been ascertained at the moment of removal from the neck, or already before the removal, when the indication of success would induce an *instant* examination; and (2) because there is no interval assignable for "continuous observation" in the ascertainment of so simple a fact as the presence or absence of knots on a cord in a clear light, even if the fact had not been already ascertained by sight or touch before Zöllner actually took the cord from his neck. I confess it would not have occurred to me to anticipate such a suggestion as this. Nor can I see the least necessity for Zöllner mentioning the fact of trials on previous days. He showed his own appreciation of that fact, and of the supposable possibilities consequent upon it, by the very precautions taken. Indeed, I think the fact of former trials still further evinces Zöllner's extreme caution, since he would not trust to the strings already used, but either sealed new ones, or at least re-sealed the old, on the eve of the successful experiment. This circumstance, the then careful and elaborate sealing of the cords, even suggests that this particular precaution was a new one altogether, for which Slade would be unprepared, especially as Zöllner emphasises the fact that the sealing was performed in the absence of Slade. But the evidence stands in no need of this inference, for the reasons already stated. *Logically*, there was of course no obligation upon Zöllner to mention a fact which it would be legitimate to *suppose* in criticising evidence of this character, if the evidence did not expressly *exclude* it. The reader will judge whether there is any opening for Mrs. Sidgwick's inference that the possible importance of the fact had not occurred to Zöllner, or whether her consequent assumption that he may "not only have omitted to mention, but failed to see, the importance of even obvious precautions" is as violent and unwarranted as it seems to me to be. And I may here add the remark, that if "continuous" observation means *prolonged* observation, none was necessary in this, as in many other successful experiments; whereas if Mrs. Sidgwick's definition refers to *any* interval, however short, it would apply to all observation whatever, and the word "continuous" is misleading.

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gaze the direction to which Slade turned his head, during all which time our hands remained constantly linked together on the table; under the table my left leg was almost continually touching Slade's right in its whole extent, which was quite without design, and owing to our proximity at the same corner of the table. Looking up in the air, eagerly and astonished, in different directions, Slade asked me if I did not perceive the great lights. I answered decidedly in the negative; but as I turned my head, following Slade's gaze up to the ceiling of the room behind my back, I suddenly observed, at a height of about five feet, the hitherto invisible table, with its legs turned upwards, very quickly floating in the air upon the top of the card-table. Although we involuntarily drew back our heads sideways, Slade to the left and I to the right, to avoid injury from the falling table, yet we were both, before the round table had laid itself on the top of the card-table, so violently struck on the side of the head, that I felt the pain on the left of mine fully four hours after this occurrence, which took place at half-past 11.

But I am not prepared to admit that it is necessary to have recourse to exceptional manifestations, or even to manifestations under exceptional conditions of observation, to establish these facts in rational belief. With regard to psychography, for instance, I contend that locked slates, tied up slates, folding slates, your own slates, slates above the table when the writing is obtained, are all really dispensable precautions. What we most require, in order to be secure that the essential facts are within the compass of our observation, and that observation itself has not been distracted or relaxed, is that the phenomenon shall occur with simplicity and directness. If there is delay with changes of conditions, you must regard every such change as the beginning of a new sitting, and make a careful re-examination of the slates. If you do this effectually, not merely taking a careless glance to be able to say you have done it at all, the task of observation is thoroughly simplified under usual conditions. The following case from my own experience with Mr. Eglinton will show the extent of the claim I make for average powers of observation as against the possibilities of conjuring. The sitting was on April 10th, 1884. I wrote the account of it in the evening of the same day, and it was reported in *Light* of April 19th. The only other sitter besides myself and the medium was one of our Vice-Presidents, the Hon. Roden Noel, who fully corroborated my statement. We sat in broad daylight. We used Mr. Eglinton's slates, of which there was a pile upon the table at which we sat. I sat next to the medium, on his right, Mr. Noel was on my right. Passing over some preliminary experiments, in which writing in small quantities was obtained, I desire to challenge judgment on the question of mal-observation in what follows, which I copy from my own report in *Light*:—

Mr. Eglinton now laid one of two equal sized slates ($10\frac{6}{8}$ inches by $7\frac{5}{8}$)

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flat upon the other, the usual scrap of pencil being enclosed. *Both* slates were then, *as I carefully assured myself*, perfectly clean on *both* surfaces. He then *forthwith, and without any previous dealing with them*, presented one end of the two slates, held together by himself at the other end, for me to hold with my left hand, on which he placed his own right. I clasped the slates, my thumb on the frame of the one (¾-inch), and three of my fingers, reaching about four inches, forcing up the lower slate against the upper one We did not hold the slates underneath the table, but at the side a little below the level. Mr. Noel was thus able to observe the position. Mr. Eglinton held the slates firmly together at his end, as I can assert, because I particularly observed that there was no gap at his end. I also noticed his thumb on the top of the slates, and can say that it rested quite quietly throughout the writing, *which we heard almost immediately*, and continuously, except when Mr. Eglinton once raised his hand from mine, when the sound ceased till contact was resumed.

We heard the sound of writing distinctly, yet it was not, I think, quite so loudly audible as I remember with Slade. When the three taps came, denoting that the "message," was finished, *Eglinton simply removed his hand from the slates, leaving them in my left hand*, also quitting contact of his other hand with my left, I took off the upper slate, and we saw that the inner surface of one of them was covered with writing, 20 lines (118 words), from end to end written *from* the medium, and one line along the side by the frame, and "good-bye" on the other side. The writing was in straight lines across the slate, all the lines slanting from left to right. It begins about an inch from the top; from the bottom it is continued along one side (one line) and then there are three lines in the inch-deep space at the top, written in the reverse direction to that of the body of the message. The ability to produce the writing in any direction is thus shown. The writing is flowing, easy, and with a distinct character, as of an educated penman. I took the slate away, with me, and it is now in my possession.

I am glad that I took this latter precaution, for a reason to be mentioned. Everyone, I suppose, will agree that the production of all this writing, as described, by the medium while we held the slates, was absolutely and entirely impossible. The question is thus *apparently* reduced to the single point to which I wish to reduce it, whether such average powers of observation as mine and Mr. Noel's would be so deceived as to make our statement that Mr. Eglinton, after enclosing the pencil within the slates which we *then* "carefully assured" ourselves were *both* quite clean on *both* surfaces, "forthwith" and "without any previous dealing with them," presented those *same* slates to me to hold—whether, I say, our observation could be so deceived as to make that statement inconclusive on that important point. But as it is imaginable that a thin sheet of slate, already inscribed on one side, might be loosely fitted into the frame of one of the slates used, clean surface uppermost, so as to fall into the frame of the other slate, written side uppermost, when the first was placed upon the second, it is fortunate that I was able to exclude that suggestion by my possession

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of the slate on which the writing appeared, which, by-the-bye, was wrapped in paper, either by myself or by Mr. Eglinton—under my eyes, at my request, and carried away by me, *immediately* after we had examined the writing, the sitting being then closed.

The above case, therefore, aptly raises a question which I think has been greatly confused by vague apprehensions of unknown possibilities of conjuring, apprehensions, I may add, not at all sanctioned by the pretensions of conjurers themselves. So far as the art of conjuring relies on the fallibility of observation, the success of the conjurer depends on his being able to impose the conditions of observation at the critical stage in his proceedings. For very simple observations, such, that is, as are resolvable into two or three elementary acts of perception, are not fallible if these acts of perception are really performed. The conjurer has to prevent their being performed, while he deceives the mind into the impression that they have been performed. Under certain conditions this is easy to him; whereas under conditions not imposed by himself it is totally impossible. Now in studying evidence adduced by others there is one sure test for determining whether the conjurer's opportunity is or is not excluded by the evidence—I mean in cases where the statements of the witness, if taken simply at their *verbal* worth, would sufficiently exclude all possibilities of conjuring. It is only the best testimony—perfect *honesty* of statement being supposed—of which the verbal or apparent worth is a true measure of its real worth. And the reason of this is that very composite facts are often not analysed by the witness, and that an observation comprising several distinct acts of sense-perception is stated generally, as though it were a single and indivisible perception. We have then imposed upon us as evidence a conclusion of the witness's mind in place of an observation of his senses. The proof is not then reduced, as we desire to reduce it, to a question of veracity. For this purpose we must have particularity of statement, evidence that the witness has himself analysed the observation into the acts of perception constituting it, and that at the time of the observation. But however people may unconsciously misrepresent or exaggerate—as undoubtedly happens—this innocent looseness or inaccuracy belongs only to *general* statements of matters of fact, and as soon as the demand is made upon the witness for greater definitude, either at least a confessed lapse of memory exposes the worthlessness of the evidence, or the latter degenerates into conscious mendacity. Much of the value of cross-examination in judicial proceedings, for instance, depends upon the presumption that precise and definite misstatements cannot be *bonâ fide*. And the art of cross-examination—so far as this has for its genuine aim the discovery of truth—largely consists in reducing a general statement to the particular ones which it really involves. Now a scientific statement of fact is such a statement as

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leaves nothing to be elicited by this sort of cross-examination. And in considering the evidential value of the observations with which we are now concerned, we have always to see if possibly essential facts in the narration are capable of further analysis. The note of an uncritical judgment, either in making or receiving statements which should be scientifically accurate, is the unconscious presumption of the component elements of the fact stated, or to speak more accurately, of the several facts of observation by which the resultant fact is ascertained.

I submit that we have here the whole secret of the possible success of a conjurer who is without confederates or artificial appliances. We have at the same time a sure test for determining the value of observations with professional mediums, who must continue under the suspicion of being conjurers till these phenomena are generally recognised, which will perhaps not be until the laws of their occurrence are a little understood. I therefore respectfully urge that the objection to rely upon investigations with professional mediums is especially unworthy of the scientific spirit in which this Society professes to examine evidence. Our standard should be the highest, our criticism the severest; but the best testimony will leave no room for suggestions of mal-observation, and then it will only remain to see if, supposing the allegations to be strictly honest, the facts are still explainable by any recognised agency. We have heard of the necessity of allowing a wide margin for unknown possibilities of conjuring, and that sounds plausible enough until we come to ask what conjuring means, and must mean, under the conditions of these experiments. We then see that the margin for possibilities of conjuring is really a margin for possibilities of mal-observation. But when we get to the ultimate unit of observation —the indivisible, elementary fact of sense-perception—mal-observation by the attentive mind is no longer possible, and testimony which shows that there existed a mental direction to these particulars is testimony which excludes the margin for everyone who will not cheat himself with words for the evasion of his critical responsibility. I am, of course, aware that what I have here called "the indivisible, elementary fact of sense-perception" is further resolvable with regard to the primary functions of mind and sense; but for all that, the simplest nameable fact remains the starting-point of all experience, and illusion in experience begins with the mental combinations of which that is the unit. For all mere illusion or misinterpretation in relation to this simplest element of experience—as when a rope upon the path is taken for a snake— results from imperfect conditions of observation, or (what is the same thing from the subjective side) from pre-occupation of the mind by its own concepts. It follows that as long as the attention is given to an indivisible fact under proper conditions of observation, the conjurer's opportunity has not arisen. It arises first

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with the opportunity of the observer's own mind for self-deception. And if the witness is strictly veracious, it is logically certain that his evidence will itself betray to the critical eye the point or points at which the conjurer's operations were possible, if possible they in fact were.

But as general remarks on such a subject as the present require to be illustrated, let us consider what may be supposed to happen on a particular occasion, and what, in that case, an honest witness will and will not say. Suppose that at a conjuring performance for the simulation of psychography, the conjurer has already succeeded in writing unobserved upon one side of the slate, and wishes now to make you believe that both sides are clean before depositing the slate, with the inscribed side downwards, on the table, to be turned up when the phenomenon is supposed to have come off in that position. Now, if at this critical moment you do not prescribe your own mode of examination, either by taking the slate in your own hand and turning it over, or by seeing that the conjurer turns it slowly round before your eyes, he may be able, by a little manipulation, aided by a little talking and delay, or with the assistance of another slate for purpose of confusion, to present the same side to you twice over and make you think that you have seen both sides. (This, I should say, is the explanation recently suggested by the famous German conjurer, Hermann, of Berlin,[1] of the *modus operandi* in such a case.) But if that were so, the witness *could* not innocently use terms *expressly and definitely* inconsistent with what really happened; he could not, for instance, honestly say, as I said in the report I have read to you, that the medium did something "forthwith," "without any previous dealing with the slates," which the witness "*then* carefully assured himself" to be "both clean on both sides," whereas it was in the very fact of delay, of previous dealing, and of neglect of "careful" assurance that the supposed medium has found his fraudulent opportunity. The honest witness could not so frame his statement, because, though he might honestly forget, he could not honestly *invent* specific and positive acts of perception, for the appearance of which no mental inference or interpretation could be responsible. But we have an instance—an actual instance—ready to our hands of how he *might* express himself in such a case.

Mrs. Sidgwick quotes accounts from a lady friend of hers of several conjuring experiments in slate-writing as illustrating the fallibility of

[1] As this paper is going to press, I have received information that the Hermann here referred to (author of the article in the German *Sphinx*, from which the above and a subsequent statement is taken) is not the true Hermann of conjuring renown, but only a manufacturer of conjuring apparatus. The true Hermann is said to be now in London and about to experiment with Mr. Eglinton.

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observation.[1] Now I think every careful reader of these accounts will be struck by the abbreviated form of them, and by the frequent violation of the canon of evidence above mentioned, namely, that a composite observation shall not be stated generally, as if it were a single and indivisible perception. We should want to cross-examine this lady upon nearly every line of her statement in order to appreciate its evidential worth. But I will here confine myself to the single point of due examination of the slates in the experiment in which the writing was apparently on one of the same slates of which the lady says: "We examined them when they were placed the second time on the table and satisfied ourselves that they were clean." Continuous observation of the slates after they were thus deposited the second time is not *alleged* nor is any interval of time stated. But assuming that one of the slates was then already inscribed,[2] everything depended on the observation of their condition at that critical moment. Now you can only ascertain that a slate is "clean" by successive examination of both its surfaces, the evidence of which must, in the reasonable intendment of the witness's language, exclude all possibility of deceptive manipulation by the conjurer while the surfaces seem to be displayed. Otherwise there is nothing to show that the witness appreciated the prime importance of this observation. And as it is perfectly possible for a conjurer under certain conditions, or if he is allowed his own way, to make it seem to a spectator that slates are clean when they are not, so it is perfectly possible for an honest witness in such case to use this form of expression: "We examined the slates and satisfied ourselves that they were clean." But with every approach to definiteness and particularity of statement, we approach the limit beyond which honest mis-statement is no longer possible. How these particular tricks were performed exactly, I do not profess to know.[3] But so far as we have

[1] Mrs. Sidgwick's own observations on these occasions are not given in detail in her paper. As the criticism of them I read at the meeting referred to an account she had sent me, and which I erroneously supposed to be part of her paper, that criticism is now omitted.

[2] As is very doubtful upon the evidence, even without having to suppose such a failure of observation as would permit the writing to be performed after the slates were deposited. For there is *no* evidence that the slates then deposited (the second time) were both the *same* slates afterwards ascertained to be the lady's ("Miss Z.'s"). The "message" may have been written on one of her slates at an earlier period of the sitting, when the slates were under the table, and when, as I learn from the account sent me by Mrs. Sidgwick, one of "Miss Z.'s" slates was for a time discarded, *no observation of it meanwhile being alleged.* In that case, the substitution of the inscribed slate ("Miss Z.'s") for one of those upon the table is easily supposable in the absence of any *averment* of continuous observation of them. It is just such defects of testimony *on the face of it,* in the case of conjuring, which illustrate and confirm my argument.

[3] I had only the first case before me when my paper was written. As to the second and third I will only point out that we are not told that the slates were

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the evidence positively before us, it is rather useful as an illustration of what evidence ought not to be than of what it commonly is, or as affording any ground whatever for distrusting other evidence which on the face of it is free from defect.

In the course of her paper, Mrs. Sidgwick urged that the medium has an advantage over the avowed conjurer in being allowed to fail should the conditions be inconvenient. Now if the medium-conjurer could confidently foresee at the beginning of a sitting either that he would or could not get *all* the conditions required for success in the several successive operations he might have to perform, this privilege of failure would no doubt be very advantageous. But in many cases, especially in the slate-writing, the conjurer's conditions may break down at any point, and should strict conditions of observation be insisted upon at a late stage, no harmless failure, but exposure, must result. If, for instance, we suppose that "Miss Z.'s" slate was already

continuously under the hands of the whole party, or even that they seemed to be continuously observed at all. Before we are called upon to criticise evidence, it must at least present a *primâ facie* case for explanation. In the fourth case it was "Mr. A." who "slipped" the sheet of paper, on which the writing was found, into the locked slate, and this appears to have been done *after* "Mr. A." was told the page and line selected. I cannot agree with Mrs. Sidgwick that this case "is, perhaps, more surprising." (It will be understood that I do not attempt to exhaust the possible opportunities of the conjurer, with regard to evidence which seems to me so entirely lacking requisite exactitude and detail.) Passing to the account of the (other?) conjurer's performance in "Mr. X.'s" case, the simultaneous use of two slates apart from one another offers us a rather easy explanation without supposing such a *total* abstraction of attention for "two or three minutes" out of "some few minutes" (the duration of the whole experiment) as is suggested. We are told nothing of the position of the conjurer's hands (a point seldom omitted in the mediumistic reports), and it is not difficult to suppose that by successive feints he could first excite "Mr. X.'s" suspicions in relation to one slate, and then in relation to the other, thus getting him to fix attention on one at a time while the other was being written upon. The "whisking away" of the slate held by "Mr. X." was probably necessary on account of the writing having, under the conditions, to be executed on the upper surface and having to be made to appear on the reverse. A still easier supposition would be that the writing was indeed thus performed— probably a very few words—on the held slate with a much shorter diversion of attention to the other one, and that the latter—the locked slate—was a trick slate with message as described all prepared beforehand. A quite inexperienced observer with two separate objects to watch may easily be self-deceived as to continuous observation of both on one and the first occasion. But a *total* abstraction of attention from a *single* object, and that for two or three minutes out of some few minutes, and with perfect ignorance of the fact, the witness believing himself intent on observation all the time, could only be abnormal. But that is what we should have to suppose in a large proportion of the genuine slate-writing séances, nay, that the same thing could happen *repeatedly*, with experienced observers, and even with two or three such observers at the same time!

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written upon when it was to be deposited on the table, where would "Mr. A." have been, if "Miss Z." or Mrs. Sidgwick had resolved to examine the slates in her own way, and not as "Mr. A." chose that she should seem to do so? The conjurer in such a case has really two tricks to perform for one success, and usually he will have parted with the privilege of failure as soon as he has performed the first. So that though now and then an ingenious professional or amateur may succeed in one way or in another, repeated observations, reflection, and public discussion would soon lay bare all his resources, and there would be an end of him. The professional conjurer has a large repertory of tricks, and is constantly inventing new ones with all the aid which mechanical appliances, confederates, and his own stage, can afford. He can drop a trick as soon as it is in danger of discovery, and vary his entertainments indefinitely. The public go for amusement, and do not study or hear of the discoveries made by critical experts, by which the conjurer is soon warned off dangerous ground. Nor are professional experts interested in exposing each other's performances, but in repeating them for their own benefit; whereas against the medium they are all, with a few exceptions, banded. The medium, on the other hand, is especially developed for a comparatively few phenomena, which recur with him for many years as the main feature and attraction of his mediumship. A certain proportion of his visitors are habitual students of the subject, whose attention is open to every explanation that is put forward, and who have the advantage of their own systematic observations with the same and similar mediums. They are constantly obliged to defend themselves from the charge of credulity and mal-observation; each time they go to a séance they have the keenest inducement to obviate some objection to their own or others' evidence, or to meet some more or less possible suggestion as to the *modus operandi*. They improve their methods of observation, they direct it to fresh points, they devise and obtain new tests. Psychography alone has now been before the public of this country for 10 years. Some of the most famous conjurers, and many acute minds have engaged in criticism of the facts and of the evidence, and yet it has survived the ordeal as no single trick, or variations of a single trick, of such a character and under such conditions as this slate-writing could possibly survive it.

To deal at length with general objections to the genuineness of these phenomena is not within the limits of my present subject. Yet I may be allowed to advert to two or three which have been lately brought before us by Mrs. Sidgwick. There is the detected trickery—real and reputed—of mediums. As Eduard von Hartmann has pointed out, occasional trickery is antecedently to be expected from the exigencies of professional mediumship, having regard to the uncertainty with which the true force is developed. And the

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whole theory of mediumship points to influences and conditions which must result sometimes in actual deception, and sometimes in the mere appearance of it. It is a mistake to suppose that we can make this branch of psychical research quite independent of psychology. And there are features in this trickery which should make us look a little deeper than the conjuring and fraud theory for its explanation. Slade, for instance, now often cheats with an almost infantile audacity and *naïveté*, while at the same or the next séance with the same investigators phenomena occur which the most consummate conjurer might well envy. Then it is made an objection that tests designed to dispense altogether with observation in the presence of the medium have not been obtained, although they could not be conceived to present greater physical difficulties to a genuine occult agency than things actually done. There is in this a quiet assumption that we have not here to do with independent wills and intelligences, or with laws other than physical, which is quite illegitimate at the outset of our researches. But without having recourse to such suggestions, I need only point out that if human observation under the easiest conditions is at all to be relied upon, the evidence can become perfect without these tests, and can only be illogically prejudiced by the absence of them. A third objection which weighs with many is the failure of mediums with some investigators who, of course, on that account are credited, if they do not credit themselves, with too much astuteness, and with too great powers of observation for the medium to venture on his tricks with them. It is a remarkable illustration of this theory that Mrs. Sidgwick, who tells us that personal experience has made her form a very low estimate of her own as well as of others' powers of continuous observation, and who failed to detect the opportunities of an amateur expert in slate-writing, although she knew that a trick was to be performed, is one of those with whom that accomplished conjurer, Mr. Eglinton, has been uniformly compelled to exercise his "privilege of failure." It is another commentary on this view that I myself, and others upon whom Mr. Eglinton has found it very easy to impose, have had with him as many failures as successes, under precisely the same apparent conditions in both cases. The causes of failure as of success are at present too obscure for such arguments to be other than prejudicial and opposed to the scientific character at which we aim. No doubt it is a disappointment—and perhaps no one has felt that more severely than myself—that some of the most distinguished members of this Society have failed to obtain evidence through Mr. Eglinton. But we must remember the idea with which we started, and which was so well expressed by Professor Sidgwick in his first address to us. It was never supposed that these phenomena had the scientific character of

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being reproducible with certainty for any and every one who took the trouble to sit for them a few times. We were to accumulate testimony, to overcome opposition by the gradual accession of witnesses of good intelligence and character. There was no necessity for that if we could say to all the world—go to this or that medium and we guarantee to you personal evidence. The physicist does not rely upon testimony or ask others to rely upon it. But we pre-suppose that the phenomena with which we deal are not accessible to all. If, then, they are not accessible to some of ourselves, is our position in relation to them altered? No; we are estopped from making that demand of personal experience, and from making that objection of personal failures—we are "hoist with our own petard"! Seeing that innumerable observations, by new witnesses of undoubted character and intelligence, have accumulated since Professor Sidgwick first addressed us four years ago, it will be asked, it has been asked, whether there was indeed a mental implication in his words, so that the new evidence which was to subdue the world must be that of himself and a few especial friends. I suppose that would be disclaimed, but is it disclaimed in favour of a criticism which discovers all other evidence to be bad? By further and further depreciating the powers of human observation, by more and more magnifying the resources of conjurers, it is nearly always possible to suggest a chink or cranny for escape in this case, and another and different chink or cranny in that case. But the very object of accumulating evidence is to make such suppositions increasingly violent the larger the area of experience which they have to cover, until the hypothesis of mal-observation becomes the last resort of those who will not or cannot credit testimony until their own senses have had cognisance of the facts. I believe that distrust of human observation, to the extent to which that distrust is now carried, is not justified by experience, which would be almost impossible for the simplest acts of attentive perception if it were justified. Surely there is a larger view, a deeper insight into this already long chapter, swelling to a prodigious volume, of human evidence, than is afforded by this miserable theory of conjuring, and cheating, and imbecility. Are we not shocked by its inadequacy, by its disproportion to the total effect? That effect is dwarfed in popular imagination for a time, because the dominant culture has refused to recognise it, and has encountered the facts with the very narrowest conceptions in the armoury of its intelligence. But the effect is already one of the appreciable influences on human life and thought. Many a delusion has perhaps been that, but not delusions of observation which depend for their vitality upon an ever springing supply of recurrent fraud. Again and again has phenomenal Spiritualism been "exposed" and "explained"; every such incident, every such attempt, has been a new instruction to investigators, a new difficulty to the

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supposed conjurer. Yet fresh observers, with full knowledge of all that has happened and of all that is suggested, go to mediums and come away with the certainty that the phenomena are genuine. Even the first of living German conjurers, Hermann of Berlin, who had considered the subject of this slate-writing very carefully, went to Slade, and after witnessing the phenomenon under very ordinary conditions, professed his present inability to explain it.[1] He adds, I am glad to say, that he is to have a series of sittings with Mr. Eglinton in a few months, the results of which will be published. Dr. Herschell, a well-known amateur, has recently written to Mr. Eglinton in the following terms:—

For some time after my first sitting with you, I candidly confess that I worked very hard, both by myself and in consultation with well-known public performers, to find out a method of imitating psychography, and I do not think that there is a way that I have not tried practically. I have come to the conclusion that it is possible to produce a few words on a slate if the minds of the audience can be diverted at the proper time (a thing perfectly impossible under the eyes of conjurers, who know every possible way of producing the result by trickery, without instant detection). Beyond this, conjuring cannot imitate psychography. It can do nothing with locked slates, and slates fastened together. It cannot write answers to questions which have not been seen by the performer, as you are constantly doing. At the best it only produces a mild parody of the very simplest phenomena under *an entire absence of all the conditions under which these habitually occur at your séances.*

Allow me also to take the present opportunity of thanking you most sincerely for the opportunities you have given me of satisfying myself of the genuineness of psychography by discussing openly with me, as you have done, the various possible ways of imitating the phenomena, and of letting me convince myself, in detail, that you did not avail yourself of them.

I hope that you have had a successful visit to Russia, and that your health is now quite re-established.—With kind regards, yours sincerely,

GEORGE HERSCHELL, M.D.

W. Eglinton, Esq.

Our English conjurer, John Nevil Maskelyne, has publicly testified from his own experience, to the existence of an unrecognised force productive of physical effects.[2] But with the acknowledgment of such a force in the human organism must disappear the presumption against those more developed manifestations which depend on its relations to intelligence and will. The ascertainment of those relations are among the highest

[1] See an article by Hermann in the June number of the German magazine *Sphinx*. (But see note, *ante*, p. 91.)

[2] See correspondence in *Pall Mall Gazette*, Mr. Maskelyne's letter, 23rd April, 1885.

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functions of a society for psychical research, and I am not alone in believing that we should have found our scientific reward in beginning with a provisional faith in the material of our inquiries. In this region the laws and conditions are still almost wholly obscure, but of one thing in it we may be generally sure—that there can be no greater mistake than to investigate phenomena of psychical origin with a total disregard of psychical conditions. We are false to our hypothesis if we assume that adequate precaution against fraud is the *prime* condition of success, and that beyond this it is only necessary to bring an unprejudiced mind to the investigation. These are indeed *indispensable* conditions, but there may well be other and more positive ones not less indispensable. If we entertain the hypothesis of mediumship at all—and why else are we investigating?—it must mean for us something more than that in the mere presence of certain persons certain phenomena may occur. A medium is not like a bar magnet which can and must exhibit its special charactersistics under certain exclusively physical conditions. It is antecedently probable that something more is required of the investigator than the attributes of a fair-minded judge—a co-operation, namely, which will be best if it include some contribution of that unknown force on which the phenomena primarily depend, but which shall at any rate favour, and not repress, the development of that force in the medium. This sort of co-operation is a mental disposition perfectly consistent with the most scientific vigilance, and which, in my own case, I have found even promotive of it, because I was well resolved not to be conducive to my own deception.

It would be strange if in this Society we were to ignore the probable application of telepathy to the phenomena now in question. For telepathy in its principle must be far more than a mere emotional or ideal transfer upon special occasion. The inter-action of our psychical natures must be more intimate and influential than superficial consciousness betrays. I once heard it remarked, jestingly or seriously—I hardly know which—that the composition of an ideal circle for the investigation of these phenomena would be a man of physical science, a professional conjurer, a detective policeman, and an Old Bailey barrister. That suggestion represents the spirit which brings failure, and must bring failure, to every investigation of this character. And if you as a society wish for useful original research by your own agents, you must not choose your agents upon that principle. They must be persons thoroughly impressed with the great importance of exact observation and exact statement, but who combine with these pre-requisites some positive experience and some reasonable regard to the hypothesis on which you are investigating at all.

But original research is not necessary in the first instance. Many, of whom I am one, are of an opinion that the case for these phenomena

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generally, and for "autography" in particular, is already complete. And probably many of yourselves are of opinion that the time has arrived for your Literary Committee to deal with this question as it has already dealt with other heads of evidence. It might begin with the evidence of this "writing at a distance." But unless it is to arrive at a foregone negative conclusion, its judgment must not be guided by those who think that human observation, with the most express direction of the mind, is not to be trusted to ascertain the fact that a slate has been untouched for five minutes on a table before the eyes; or who are prepared, when they have before them exact statements of facts of observation, to assume that the facts have been mal-observed and misdescribed. For that way lies interminable doubt, and not progressive science.

NOTE ON MR. MASSEY'S PAPER.

In the paper that precedes this note Mr. Massey refers to certain remarks made by me at the first meeting of our Society, in a manner which suggests that he has misunderstood their drift. If Mr. Massey has misunderstood me, it is likely that others also may have done so: and since his comment on my present attitude is thrown in the form of a reported question that challenges an answer, it seems convenient that I should at once answer him by explaining the phrases that have been misunderstood. Mr. Massey begins his paper by quoting a sentence in which I described the sort of proof at which we ought to aim; he then gives several specimens of what he seems to regard as unexceptionable evidence for the genuineness of the physical phenomena of Spiritualism; then, on pp. 95-96, he refers to me (correctly) as urging the Society to accumulate testimony, to overcome opposition by the gradual accession of witnesses of good intelligence and character; and finally says, "Seeing that innumerable observations, by new witnesses of undoubted character and intelligence, have accumulated since Professor Sidgwick first addressed us four years ago, it will be asked whether there was a mental implication in his words, so that the new evidence which was to subdue the world must be that of himself and a few especial friends."

My answer is there was no such "mental implication"; but that the evidence which Mr. Massey affirms to have been accumulated, and of which his paper contains examples, is not the kind of evidence which I intended to urge the Society to accumulate. The evidence I had in view was evidence obtained in private circles of relatives or friends, where no professional medium was employed. That this was before my mind is apparent from several passages of my address:—*e.g.*, from the sentence preceding the one

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first quoted from me by Mr. Massey; in which I say that "it is due to the private families or private circles of friends whom we hope to persuade to allow us to take part in their experiments" that we should bring our evidence to the highest possible pitch of cogency.

So far as I know, there has been no important accumulation, during the last four years, of the kind of evidence which I had in view: the testimony of which Mr. Massey has spoken is testimony to marvels occurring in the presence of persons who exhibit them professionally for money. Now when I addressed the Society at its first meeting I intended to make it plain that we ought, in my opinion, to avoid paid mediums "as much as possible"; I did not indeed think that it would be wise to preclude ourselves by a hard and fast rule from employing the services of such persons: but I certainly hoped that we should be able to confine our investigation to phenomena "where at any rate"—as I said—"no pecuniary motives to fraud can come in." It is, in my opinion, upon evidence of this latter kind that the *primâ facie* case for investigating the physical phenomena of Spiritualism mainly depends. Certainly, if we had nothing but testimonies to marvels occurring in the presence of persons who charge a guinea a séance for exhibiting them, I for one should never have thought it worth while to consider seriously whether such reported marvels were due to anything more than skilful trickery on the one side and defective observation and memory on the other. The testimony that excited my interest in the subject was mainly testimony to phenomena occurring in private circles composed of persons who were very unlikely to have plotted to deceive each other or the public, or very unlikely to possess a high degree of conjuring skill. There exists already some noteworthy evidence of this kind—enough, in my opinion, to justify further inquiry, though not enough to constitute an adequate scientific basis for the momentous conclusion to which it points. I hoped that the operations of our Society might be directed towards improving the quality and increasing the quantity of this kind of testimony; and it was this hope that I intended to express in the address to which Mr. Massey has referred.

But this is not all. The cases which Mr. Massey has brought forward do not merely exemplify a kind of experiment different from that to which I announced that our Society's attention would *in the main* be directed; they exemplify a kind of experiment which I hoped that we should avoid altogether. The three persons through whose mediumship Mr. Massey's marvels are supposed to have been produced are not merely persons who make a trade of exhibiting phenomena: they are persons to whom imposture has been brought home by irresistible positive evidence. We learn from the *Spiritualist* (November 3rd, 1876) that when Monck was charged at Huddersfield in 1876 with

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imposture under the Vagrancy Act, it appeared that conjuring apparatus had been found in his room; and Mr. Henry Lodge and another well-known resident in Huddersfield deposed on oath that Monck had confessed to them that he practised deception on sitters. In the case of Slade, Mr. Massey himself admits that he "now often cheats," though he pleads that this cheating—when discovered—shows an "almost infantine audacity and naïveté": for my own part, I cannot doubt that Slade attempted to cheat me in 1876, in a manner which, though "audacious" was not exactly "naïve." As regards Eglinton—if Mr. Massey has read the statements of Archdeacon Colley in the *Medium and Daybreak* (November 1st and November 15th, 1878), and the reports in the *Spiritualist* (February 14th and March 21st, 1879), of statements by Mr. Owen Harries, he will scarcely doubt that Eglinton was, some 10 years ago, engaged in the manufacture of spurious "materialisations" with the aid of a false beard and muslin: and I think it clear that in 1882 Eglinton co-operated with Madame Blavatsky in the production of a spurious Theosophic marvel.

If it had occurred to me, when I addressed the Society four years ago, that we should be seriously urged to investigate the performances of "mediums" whose trickery was proved and admitted, I should certainly have repudiated the suggestion with all the emphasis that I could command. But I then believed—and ventured to say—that Spiritualists had been impressed by the "evidence accumulated in recent years to show that at least a great part of the extraordinary phenomena referred to spiritual agency by Spiritualists in England and America are really due to trickery and fraud of some kind." I hoped, therefore, that educated Spiritualists would generally agree with me in condemning what I called "the obstinacy with which mediums against whom fraud has been proved have been afterwards defended," and in regretting that such persons should, as I said, "have been able to go on with their trade after exposure no less than before." I never thought that we should be called upon to give direct encouragement to this trade by undertaking a formal investigation of the "phenomena" exhibited by such persons.

H. Sidgwick.

FURTHER DISCUSSION BETWEEN MR. MASSEY AND PROFESSOR SIDGWICK.

Since I have misunderstood Professor Sidgwick as to the *exclusive* character of the evidence he proposed we should accumulate, I can only urge, after careful re-perusal of his first address to the Society, that I had some excuse. For, in the first place, the suggestion in that address is not that we should "confine" our investigations to phenomena occurring with private mediums, but that we should "as much as

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possible direct" investigation thereto. Secondly, Professor Sidgwick had said in the same address :—"I do not presume to suppose that I could produce evidence better in quality than much that has been laid before the world by writers of indubitable scientific repute—men like Mr. Crookes, Mr. Wallace and the late Professor de Morgan," and he went on to urge that evidence of this superior quality should be accumulated. Now it is notorious that the authorities named appealed largely and chiefly to evidence they had obtained through mediums who, at one time or another, were professionals, and against some of whom, moreover, acts of imposture have been alleged on apparently strong grounds. Then, again, when Professor Sidgwick said :—"But we can no longer be told off-hand that all the marvels recorded by Mr. Crookes, Professor Zöllner, and others, are easy conjuring tricks, because we have the incontrovertible evidence of conjurers to the contrary," I was surely entitled to infer that evidence thus referred to—Professor Zöllner's being exclusively with Slade—was part of the *primâ facie* case of the Society. There is nothing in the address at all suggestive, even, of the proposition that evidence with professional mediums cannot be raised to a point at which suppositions of "skilful trickery on the one side, and defective observation and memory on the other" would bring the investigator's intellectual condition within the description of "absolute idiocy."

It is also allowable, I think, to refer to the facts that Professor Sidgwick himself, and several other active members of the Society, have, since the date of that address, made repeated attempts to obtain personal evidence of the phenomenon of 'Psychography" with Mr. Eglinton, and that several conjurers have been employed by or on behalf of some of these gentlemen to investigate with the same medium. I am quite unable to understand on what ground a conjurer could be employed, if not the supposition that he might encounter conjuring. It is also to be observed that "conjuring" and "cheating" are not convertible terms. It is rather a strange inference that because a man has been detected in trickery he is therefore a consummate conjurer. And the known trickery of mediums is of such a character as to raise no presumption whatever that they are conjurers. The trickery has been most frequent in so-called materialisations, when it was facilitated by the worst conditions of observation, and by the absence of precautions against the introduction of disguises, &c. And with all respect for Professor Sidgwick, I should say that if he detected Slade in attempts to cheat him in the slate-writing, the conjuring could scarcely have been of a high order, or such as (in his own words), "conjurers cannot find out." The fact probably is that conjuring, like other arts, is rarely self-taught from the first, but requires instruction by trained experts. Now the early

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antecedents of most of the better known mediums have been ascertained, and not only is there no trace of any connection with conjurers, but usually their mediumship for the simpler—but not therefore easily simulated—phenomena has been observed in their childhood or very early youth, before they could be credited with ability to carry out habitual deceptions, and before the pecuniary motive could present itself. I may add that though Professor Sidgwick now rests his objection to professional mediums chiefly on a presumption of their conjuring capabilities, I find nothing of that in his first address, the preference for private mediums being there put merely upon the absence of ordinary—or at any rate pecuniary—motives to fraud. I have always thought this a weak point in his position, if our aim is to obtain exact proof. There would be, I think, more force in his present objection, if (1) the presumption of conjuring ability were legitimate, which I believe it is not, and (2) if, admitting that presumption, it can in no case be repelled by observations, or by precautions combined with observation. My paper was an attempt to deal with this second question, and will no doubt be appreciated at whatever worth the argument may possess, in connection with Professor Sidgwick's statement of his own position.

C. C. Massey.

In pointing out Mr. Massey's misrepresentation of the drift of my remarks, I said nothing to imply that it was an inexcusable misrepresentation. I had no wish to raise this personal question; but, as Mr. Massey has raised it, I may perhaps make my position—which he still misunderstands—clearer by answering it. I think, then, that Mr. Massey was not justified in representing me as having *urged the accumulation* of the kind of evidence with which his paper deals—the records of the "phenomena" exhibited by paid mediums admitted to be tricksters—in the face of my distinct statement of opinion that we ought to work with private mediums "as much as possible," and my expression of surprise at the encouragement given by Spiritualists to detected impostors. But I quite admit that it was excusable in him to suppose that evidence of this kind might have more weight with me than is in fact the case: for in the address which he quoted, while I tried to trace clearly the lines of investigation which our Society ought—in my opinion—to adopt, I intentionally left obscure my estimate of the value of the evidence that had already been collected. My reason for this reserve will be readily understood. I was speaking as president of a society newly formed by the combination of two heterogeneous elements—persons convinced of the genuineness of the alleged effects of spiritual or occult agency, and persons, like myself, who merely thought the

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evidence for their genuineness strong enough to justify serious inquiry. In this situation, I thought it my duty to lay stress on the points on which—as I hoped—the audience I was addressing might agree, leaving in the background the points on which I knew that we differed. I hoped we might agree on the manner in which evidence was to be collected in future; I knew that we differed on the value of the evidence that had been collected in the past. Hence I expressly disclaimed any intention of discussing the weight to be attached to this evidence; in speaking of the past I merely said on behalf of my new allies what might in my opinion be said with truth. They had been stigmatised as dupes of coarse and bungling tricksters; it seemed to me only fair to point out that some of the tricks had, at any rate, baffled experts in conjuring. Taken alone, indeed, this fact would have seemed to me of little importance. I have no great difficulty in supposing that certain unscrupulous persons, skilful enough in certain peculiar kinds of trickery to baffle the insight of conjurers, find the best market for their skill in exhibiting their tricks, at a guinea a séance, to Spiritualists and investigators: at any rate, this suggestion is not so improbable as to render it necessary to resort to the hypothesis of spiritual agency or occult forces in order to avoid it. But, taken in connection with the testimonies to private mediumship, these inexplicable phenomena of professional mediums seemed to me worth noting.

Mr. Massey further quotes a sentence in which I disclaim the presumption of supposing that I could produce evidence better in quality than much of that produced by men like Mr. Crookes, Mr. Wallace, and De Morgan; and infers that as these gentlemen largely experimented with professional mediums, some of whom lie under grave suspicions of imposture, *therefore* I must have intended to encourage investigation with paid mediums and detected impostors, in spite of my explicit statements to the contrary. This inference seems to me strained and unreasonable. In uttering the disclaimer in question I was not thinking at all of the character of the mediums employed—that was a point I intended to discuss afterwards—but merely of the scientific position of the investigators and the impressiveness of their accounts. The phrase was, indeed, stronger than any I should now use, after four years' additional experience. Still, if I had now an opportunity of repeating, with a private medium of unblemished character, some of Mr. Crookes' "further experiments on pyschic force" (see his *Phenomena of Spiritualism*, pp. 36, 37), or De Morgan's most striking experiment with Mrs. Hayden (see p. xliii. of the preface to *From Matter to Spirit*), I would spare no pains to avail myself of it; and if I could obtain similar results with sufficient repetition and variation of conditions, I should regard them as

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evidentially important. But I should certainly not put them forward as evidence if I knew the supposed medium to be a detected impostor. Nor should I seek evidence from such tainted sources;—not because I hold that evidence involving tricksters *cannot* be raised to a pitch that would exclude explanation by trickery, except on the supposition of the investigator's idiocy; but because an extended experience has led me to regard the chance of its being so raised as too slight to counterbalance the palpable evil of encouraging an immoral trade. Suppose that such descriptions as Mr. Massey and others have given of Eglinton's slate-writing had been given of the performances of an avowed conjurer: surely no one would have suggested that we were forced to the supposition of idiocy or mendacity or hallucination on the part of the observers: and if not, the supposition cannot be any more necessary in the case of Eglinton.

Mr. Massey holds that my preference of private mediums to admitted impostors is a "weak point in my position" if "our aim is to obtain exact proof." It is clear from this that he mistakes my position. He regards unblemished character and stringency of tests as alternatives: I regard them as conditions which we should aim at combining. But, as I have often said, I do not expect to obtain cogent proof of an unknown law of nature by a single experiment: I do not hope to get it by anything less than a large accumulation of experiments of the best attainable quality.

Mr. Massey further suggests that I have changed my ground in now resting my objection to paid mediums partly on a presumption of their conjuring capacities. He will find, however, that I have drawn attention to this characteristic, as belonging to professional but not to private mediums, in an address which I delivered a year later. (See *Proceedings*, Vol. I., p. 249.) The reason that I did not mention this, as well as the pecuniary motive to fraud, in prescribing the lines of investigation in my first address, was merely that it seemed less easy to eliminate with certainty. We can be sure that we have not paid a given person, but we cannot be sure that he has not long practised trickery, though in some cases we can show it to be highly improbable that he has practised it sufficiently to become an expert trickster.

By the way, I entirely agree with Mr. Massey that cheating—even successful cheating—and professional conjuring are quite different things. I do not suppose that Slade and Eglinton could succeed as rivals of Maskelyne or Verbeck. But I have no reason—nor has Mr. Massey offered any—for regarding their powers of slate-writing as altogether self-taught; nor do I think it marvellous that, even without any training by avowed conjurers, they should have acquired a high degree of skill in this special line during their many years of practice.

Mr. Massey seems to think it inexplicable, supposing Slade to be a

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mere trickster, that I should have seen through him on one occasion (in 1876), whereas some of his performances have baffled professional conjurers. I cannot think that the art of finding out unknown tricks is so entirely technical as this inference assumes; nor does it seem to me improbable that Slade should be sometimes careless with persons who appear easy to take in, or sometimes clumsy in adapting himself to the supposed tastes of his customers. In my case, as I conceive, he hoped to impress an academic mind by presenting unasked a slate inscribed with five sentences in different modern languages, obviously taken out of a conversation-book, and one phrase out of the Greek Testament. I did not exactly see the trick done; but I saw when substitution might have taken place; and, considering the performance in the light of later exposures, I cannot doubt that it was a prepared trick.

Finally, Mr. Massey is surprised that, my views being what they are, I should have attempted to obtain personal experience of Eglinton's "phenomena," with the assistance of experts in conjuring. I certainly should not have done this, had I known what I now know of Eglinton's antecedents; nor, I think, even without this knowledge, if it had not been for the situation in which I was at the time placed, as President of the Society. In accordance with my wishes—expressed in the address above referred to—our "Physical Phenomena Committee" avoided the employment of paid mediums; but their efforts to obtain evidence elsewhere led to no satisfactory result, and murmurs began to be heard from Spiritualists among us that we were neglecting an unequalled opportunity of obtaining conclusive phenomena through the mediumship of Eglinton. I was anxious that our committee should adhere to their rule, so far as their official investigation went, and that none of the Society's funds should go in paying guineas to a professional slate-writer; but I thought it better to make some concession to the murmurers, and I preferred to make it by arranging privately for a series of experiments with Eglinton. Having come to this resolution, it seemed clearly desirable to seek the co-operation of a conjurer. The scientific object of any such investigation must be to exclude possible known causes of the apparently inexplicable phenomena. In the case of slate-writing, the most obvious of such causes was trickery, at any rate somewhat similar to a conjurer's: I therefore thought it important to get the aid of an expert in conjuring as a means of bringing our experiments up to the highest attainable pitch of conclusiveness, whether the result was positive or negative. And I thought that we were fortunate in obtaining the assistance of an accomplished amateur—Mr. Angelo J. Lewis—who was prepared to enter on the investigation with a perfectly open mind. That he obtained no satisfactory result does not surprise me, knowing what I now know of Eglinton.

H. SIDGWICK.

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I am sorry to be obliged to take up some further space in consequence of Professor Sidgwick's latest remarks. Here is the passage, in his first Address, which *immediately* follows the already quoted reference to the evidence of Crookes, Wallace, and de Morgan, and on which I chiefly base the representation considered by Professor Sidgwick to be without justification (italics are mine) :—" But it is clear that from what I have already defined as the aim of the Society, *however good some of the evidence may be in quality, we require a great deal more of it.*" If the recommendation, that we should as much as possible direct our investigation to phenomena with private mediums, is to be read as a " distinct statement of opinion " that we ought to avoid paid mediums as much as possible, I can only remark that that either is or is not consistent with what Professor Sidgwick said elsewhere in the same Address. In my view, it is consistent, because we may well prefer investigation with private mediums, and may yet attach high importance to the accumulation of the best evidence with professional mediums—such evidence as that of Zöllner, &c.—whether obtained within or without the Society. It is to be observed that I was not speaking of *original* research by the Society, and that I said nothing to imply that Professor Sidgwick had encouraged this or that sort of direct investigation by the Society. We get our facts—our evidence—from alien sources at least as much as from our own experience. Estimating more highly than I do the difficulty of avoiding imposture with paid mediums, Professor Sidgwick might well deprecate the regular employment of them, as bad economy of time and resources, and might nevertheless recognise the importance of accumulating testimony equal to that of which he said we want " a great deal more of it." Professor Sidgwick has therefore not quite correctly stated the inference I drew from his words, and it is hardly necessary for me to insist on such passages as " it is highly desirable that the investigation of these matters should be carried on by men who have tried to acquaint themselves with the performances of conjurers," though I fail to see the high desirability of this if investigation is to be restricted as Professor Sidgwick thinks it should be. And further, as he even now admits that evidence with those he calls tricksters *may* be raised to a pitch that would exclude explanation by trickery, it is obvious that my worst mistake lay in supposing that he would feel obliged to acknowledge that such evidence had been accumulated since he addressed us in 1882, and not in the supposition that he had recognised the possibility of this happening with paid mediums who had been under suspicion. I thought we had reached the pitch of evidence at which the question of the sort of medium would be admittedly as indifferent to Professor Sidgwick as it is to me. He thinks otherwise. But I am still unable to see my " misrepresentation."

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I need not now dwell on what seems to me the *petitio principii* involved in the supposition of such descriptions as I and others have given of Eglinton's slate-writing being given of the performances of an avowed conjurer, because much of my paper was an attempt to show that such a supposition is an impossible one. No mere conjurer has ever yet submitted, and none ever will submit, to some conditions under which the slate-writing has been repeatedly observed with Eglinton, or will ever undertake to produce the *appearance* of such conditions, so as to induce a witness to give such an account as I consider really good evidence.

Professor Sidgwick seems to have misunderstood the bearing of my observation with regard to his supposed detection of Slade (which it seems was no detection at all). It is not in the least "inexplicable" to me that a good conjurer should occasionally be careless, and should thus be detected by one who is not an expert. But my argument was that such trickery, so detected, certainly raises no presumption of consummate conjuring capabilities. I do not say it *excludes* the hypothesis of the latter, though I think it is decidedly unfavourable to it. All I say is that you must have other grounds to go upon, and that even if you think you have such other grounds, the detected cheating is rather in your way than otherwise. It is a fact *prima facie* so far at variance with great conjuring capabilities that it would have to be exlained in some such way as that in which Professor Sidgwick explains it.

And this brings me to Professor's Sidgwick's references to my admissions of trickery by mediums. Now, in the first place, I believe that a very great deal of what seems to be trickery is only apparently such. And I hold that the appearance of it is not only explainable, but is actually necessitated by the hypothesis of mediumship. To make good this remark would require a distinct paper. But even where the physical agency of the medium is undeniable, I cannot, upon grounds well understood by Spiritualists, always, or even commonly, infer that the agency is voluntary. That there is a residue of conscious, intentional fraud I am, of course, aware. But as regards Mr. Eglinton in particular, I must in justice say that I have made no admissions, and that I do not believe he has *ever* tricked—consciously or unconsciously—in the slate-writing, though I am quite prepared to hear that with him, as with other mediums, deficient power has had its usual accompaniment of "suspicious" results. But as my opinion of his "mediumship" is quite independent of any estimate of his character, I am exempt from the obligation to form a decided judgment on certain of his alleged antecedents—a judgment I should find more difficult than Professor Sidgwick has found it.

C. C. Massey.

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Should any reader still feel an unexhausted interest in the question whether Mr. Massey's misrepresentation of my advice was justifiable, I must ask him to read the address itself—which he will find at the beginning of the first volume of our *Proceedings*—along with the polemical reference to it in Mr. Massey's paper. He will, I think, easily convince himself (1) that the "we" who were urged to "accumulate fact on fact" were precisely and palpably the same "we" who had previously been advised to "direct investigation, as much as possible, to phenomena where no pecuniary motives to fraud can come in;" (2) that my aversion to encouraging the trade of detected impostors was expressed quite unmistakably; and (3) that the complimentary phrase in which I referred to the investigations of our predecessors could not reasonably be understood to qualify my subsequent distinct recommendations. But I can hardly imagine that any reader will take this trouble; it is now very unimportant—even to myself—whether I expressed my opinion as clearly as I intended four years ago. What I chiefly desire is to prevent any further misapprehension of my views. I have long held that the great scandal of modern Spiritualism is the encouragement it has always given to the nefarious trade of professional impostors. I feared that the formation of the Society for Psychical Research would almost inevitably have some effect of this undesirable kind; and I determined, at any rate, to do all I could to reduce the extent of the evil. I did not propose a rigid rule of avoiding "paid" mediums or "subjects"; partly thinking that some pecuniary compensation for loss of time might be found necessary, in the case of prolonged investigation with any persons of limited leisure. But I certainly hoped that we might avoid altogether the kind of evidence on which Mr. Massey's paper entirely relies—the reports of the "phenomena" of persons like Monck, Slade, and Eglinton. In the case of Monck, Mr. Massey tacitly admits that imposture has been proved; that Slade "often cheats" he has expressly stated; as regards the evidence against Eglinton he declares that he would have some difficulty in forming a decided judgment. This point, then, I must leave for the reader to decide, after studying the evidence to which I have directed his attention;[1] if he should still think it right to spend his guineas on Eglinton, he will at any rate—I hope—not suggest that he is acting in accordance with my recommendation.

For my own part, I have come to the conclusion—not by *à priori* reasoning, but from much personal experience and examination of the experience of others—that it is only under very exceptional circumstances that the serious student of Spiritualism should investigate the

[1] Members and Associates of the Society for Psychical Research will find the evidence given in the *Journal* for June, 1886, pp. 282-287.

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"phenomena" of a professional and paid medium. That any one who is induced by narratives of marvel to enter on this line of investigation should first take all the pains in his power to acquaint himself with the possibilities of producing by trickery the appearance of such marvels—this proposition, I conceive, will be generally admitted. But Mr. Massey at least seems to think that no trouble of this sort need be taken by the investigator who confines his attention to private mediums. This is not my view. On the contrary, I hold that in the case of private, no less than professional mediums, it is very important that the investigator should be, if possible, competent to judge how far the results that he describes—or rather his impressions of them—could be produced by trickery; at least, if his evidence is to afford any effective corroboration of the medium's own assertions. I am far from aying that the study of conjuring will always enable him to judge correctly on this point, nor do I even think that it would be in all cases the best method of training his judgment, but I think that it is likely to be useful in most cases; it would at least tend to prevent his testimony from being vitiated—as much Spiritualistic evidence now is—by expressions of confident reliance on the most palpably inadequate tests.

H. SIDGWICK.

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EXPERIMENTS IN MUSCLE-READING AND THOUGHT-TRANSFERENCE.[1]

By Max Dessoir.

There appeared recently in Leipzig a work by the well-known Professor of Physiology, Dr. W. Preyer, entitled "The Explanation of Thought-Reading." In this book the author gives a detailed explanation of muscle-reading, as exhibited in the late performances of Messrs. Bishop and Cumberland. but denies the possibility of any other kind of thought-transference. It may be not out of place, then, to describe some experiments which I made in the summer of 1885.

I began my investigations by seeking to determine the range of muscle-reading, and I found that—apart from all other modes of contact—a gentle touching of the shoulder sufficed for definite guidance. In what follows, the person willing and thinking is spoken of as the "agent," and the person searching, or receiving the "transference," is spoken of as the "percipient."

1.—Sitting on June 15th, 1885.

Agent:—Ewald Weiss, Stud. Mus., Berlin, S. W. Wilhelmstrasse, 28.
Percipient:—Max Dessoir.

Herr Weiss thought of this—that the percipient was to go through several rooms to a bronze figure, take it down from a cupboard, stroke it, and then put it down. He was then to go further, and sit down on a particular chair. Complete success.

It is clear how the result was attained. The percipient has his eyes bandaged, and his attention concentrated upon himself. By unconscious muscular guidance he is led to the bronze figure.

The question now arises, how can there possibly be a guidance *upwards?*

As regards this point, I have had the following instructive experiences: First, if the percipient wants to move away from the spot, the agent always guides him back, so that he notes: "There is something more to be done here." Secondly, the pressure on his shoulders diminishes, since the hands of the agent involuntarily rise a little, in consequence of his thoughts being fixed on the higher position. The percipient concludes with certainty from these signs that his activity is to be concentrated in an upward direction. The stroking of the figure, which at first sight seems remarkable, is explained by the fact that every agent has, as it were, a code of confirmatory muscular movements expressive of satisfaction. When I let my hands slip down along the figure—entirely by accident—I was clearly sensible of this approving pressure; this induced me to repeat the movement until a cessation of the pressure indicated to me that this part of my task was accomplished. I was then guided by the unwitting

[1] The original, of which the following is a translation, was sent to us at the close of 1885.

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agent to the chair which had been chosen, and a strong downward pressure impelled me to the natural movement of sitting down.

2.—Sitting on June 25th, 1885.

Agent:—Ewald Weiss.
Percipient:—Max Dessoir.

The percipient was to fetch a walking-stick out of the corridor, carry it to the window, and lay it there in the window-groove (*Fensterrinne*).

Complete success. Nevertheless (my notes continue), when the percipient came to the window he wanted first to place the stick in the corner, then he hung it to the window-sill (*Fensterbrett*), and afterwards twice moved it about over the sill. Then, finally, he laid it down correctly.

The first part of the experiment was obviously successful on the principles with which we are already familiar; but the hesitation in the second part deserves further consideration. The chief condition of course is that the percipient shall above everything be as far as possible "without thought" (*gedankenlos*), in order to submit completely to the guidance; but if he is compelled to take a line of his own, he will try whatever it is easiest and most natural to do under the circumstances. Acting on this canon of experience, I first placed the stick in the corner; but as I was about to move away, the pressure on my shoulders prevented me, and I knew that I had made a mistake. I then tried until I discovered the right thing, and could then describe this trial also as successful. After these indications, the one additional experiment which I select for attention, out of many others, is easily comprehensible; it shows, however, an interesting variation. I quote it from the notes.

3.—Sitting on June 10th, 1885.

Agent:—Heinrich Biltz, Student of Chemistry, 14, Schellingstrasse.
Percipient:—Max Dessoir.

A match-box had to be found, a match struck, and a candle in another room to be lit with it.

The percipient found the match-box, opened it, took a match from it, and seized the right candlestick. But then it occurred to him—as he immediately said himself, before he knew what he ought to have done—that there was no candle in the candlestick, and that hence it was useless to strike the match. He therefore left it undone.

This case shows clearly how detrimental it is for the percipient to depend upon deliberate reflection (*regelrechte Ueberlegungen*) instead of following his instinct. A single trial would have sufficed to show whether the match ought to be kindled or not.

In the experiments which now follow, any unconscious muscular movement, such as I have described in the preceding cases, is altogether excluded. They were so arranged that agent and percipient sat at one table at a distance from each other of between half a metre and three metres. There was either no contact at all, or *in a few cases* the agent placed his hands gently upon those of the percipient. Under these conditions, experiments were made in guessing numbers. The percipient did not, of course, write the number down, but spoke it. When the percipient wished to

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speak, the contact sometimes made was discontinued, lest the pressure of the hand should afford any clue.

4.—Sitting on June 1st, 1885.

Agent:—Heinrich Biltz.

Percipient:—Max Dessoir.

THOUGHT.	GUESSED.
2	4
2	7
10	53
20	75
35	35, 85
19	18
78	11

The percipient was [previously] informed whether the number consisted of one digit or of more.

5.—Sitting on June 25th, 1885.

Agent:—Ewald Weiss.

Percipient:—Max Dessoir.

THOUGHT.	GUESSED.
8	1, 8.
33	Percipient continually sees a "3" in all possible shapes, but cannot discover the second figure, which in truth was also "3."
6	6.
10	Nothing.
11	44.
3	"I see a 7, but it oscillates above." Pause. Then—"3."

Insignificant as these results may be, I think that some conclusions may still be drawn from them. Whereas at the first sitting of this sort the only success was a single half-correct result out of the whole seven trials; 24 days later, out of six trials one was right at the first attempt, two at the second attempt; another was half right; and only two were failures. Even of these two, the case 11—44 should not count as an absolute failure, owing to the great similarity in the appearance of the two numbers.

Thus there is no doubt as to an increase in the capacity of the percipient, and I am convinced that nothing more than further practice was necessary in order to get splendid results.[1] In this, as in other matters, practice makes perfect. In the course of this paper, we shall encounter yet further proof that the susceptibility to affection from the thoughts of others can be developed by practice. The best proof is, in the first place, that the results were always the poorest at the beginning of any special class of experiments, and, in the second place, that the classes of experiments only more recently practised had comparatively the fewest results to show.

Experiments in the discovery of objects thought of, where there was no contact with the agents, show no better results than the ordinary proba-

[1] This opinion seems far too confident; and it is very doubtful whether Herr Dessoir's theory as to the effect of practice heightening the percipient's susceptibility is at all generally borne out.—Ed.

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bilities would warrant. But as I have conducted only 11 experiments of this kind, the question of practice and improvement does not enter; and it has, moreover, to be remembered that the effort to perceive is apt to bring the would-be percipient out of the completely passive state in which he ought to be. At any rate, I have seldom succeeded in perceiving mentally an object (pencil, pen, &c.) thought of; and the number of trials (8) has been too small for any safe conclusion. Unfortunately, my time did not enable me to go thoroughly then into every branch of the experiments; and I thought it better to make myself familiar with some portions, instead of going on with all of them and getting only small results.

I proceed to give my few observations on the transference of *words* thought of.

6.—Sitting on June 16th, 1885.

Agent:—Ewald Weiss.

Percipient:—Max Dessoir.

In the first two cases, the percipient was told that the words were names of towns; in the others only that they were nouns.

THOUGHT.	GUESSED.
Rome	Hamburg.
Como	The first is round—towards the left; the second like an *a*; then something which I can't distinguish; then an *a* or *o*.
Antwort	A ———.
Lesen	*E*hre.
Ja	The word has only two letters. The first is a K or J, the second like a small *d*.

Here also, I think, a progress is unmistakable,[1] although not one of the cases can be described as entirely successful.

Similarly in the following experiments, which I will not consider in any further detail, there can be no question of a satisfactory result;[2] it is, indeed, only the beginning of a series, which I was unable to continue.

The *modus operandi* was as follows:—The experimenters sat two metres apart; the agent imagined the particular card plainly on the ground; the percipient had, *as also in every other case*, his eyes bandaged with a thin silk handkerchief.

7.—Sitting on May 24th, 1885, and on the following Days.

Agent:—Heinrich Biltz.

Percipient:—Max Dessoir.

THOUGHT.	GUESSED.
1. Knave of Spades	1. Queen of Spades.
2. Ten of Spades	2. Nine of Diamonds.
3. King of Hearts	3. King of Clubs.

[1] The trials are too few to justify any such conclusion, even had the success been more appreciable than it was.—Ed.

[2] It is not clear what is meant. The series shows an amount of success beyond what chance would be likely to produce. But it is all too short; and moreover the cards were not (as they always should be) selected at random from a pack, but were apparently fixed on at will by the agent, who almost confined himself to aces and court cards.—Ed.

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	THOUGHT.		GUESSED.
4.	Knave of Diamonds	...	4. Queen of Diamonds.
5.	Eight of Diamonds	...	5. Eight of Spades.
6.	Queen of Diamonds	...	6. Knave of Spades.
7.	King of Spades	...	7. King of Hearts.
8.	Knave of Diamonds	...	8. Ten of Clubs.
9.	Ten of Spades	...	9. Ace of Diamonds.
10.	Ace of Hearts	...	10. Ace of Hearts.
11.	Queen of Hearts	...	11. Queen of Hearts.
12.	King of Clubs	...	12. King or Queen of Clubs.
13.	Ace of Spades	...	13. Ace of Hearts, Ace of Spades.

Without wishing to draw any conclusions from these trials, I pass on at once to that branch of the inquiry to which I have given the most attention, the reproduction of *diagrams*.

The *modus operandi* was as described above. Herren Weiss and Biltz acted alternately as agents, except in No. 7, where Herr Wilhelm Sachse [of 10, Kirchbachstrasse, Berlin, S.W.] was the agent. Twenty-one trials[1] were made in all, the following account of which I for the most part quote from the notes. I have copied the diagrams[2] as accurately as possible from originals which I have preserved, and give them in the order of the experiments. I may remark that the success was affected by the mood of the agent and of the percipient at the time. The sittings were held between June 4th and June 20th, 1885 ; as the experiments, therefore, are spread over *very many* days, it is more difficult than in the previous observations to estimate any development.

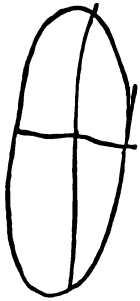
[1] The 21 include all the cases where Herr Dessoir himself was either agent or percipient, but do not include three trials in which Herr Biltz tried to act as percipient, and which were failures. These must be set against three successes of Herr Biltz (Nos. iii., vi., and x.) in the series given. In that series, two attempts of Herr Dessoir as percipient—one of them (to the eye) a success, and one a failure—are omitted, owing to some uncertainty as to the conditions.—Ed.

[2] The diagrams on pp. 116-123 are not taken from Herr Dessoir's copies, but from the originals themselves, which Herr Dessoir forwarded for the purpose at our request.—Ed.

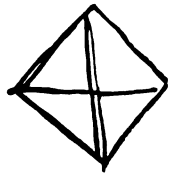
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I.

ORIGINAL.



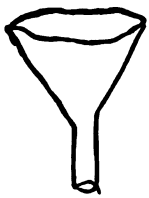
REPRODUCTION.



Agent: H. B.

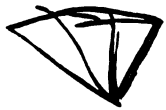
II.

ORIG.



Agent: H. B.

REP. 1.

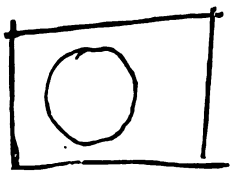


REP. 2.



III.

ORIG.



Agent's name omitted.

REP.



It appears here that the agent's image included an impression of the left part of the frame. M. D.

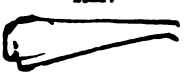
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IV.

ORIG.



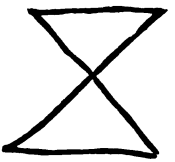
REP.



Agent: H. B.

V

ORIG.

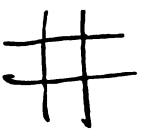


Agent: H. B.

REP. 1.



REP. 2.



REP. 3.



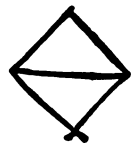
REP. 4.



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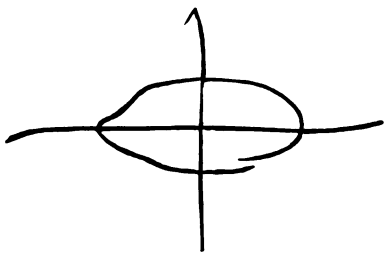
VI.

ORIG.

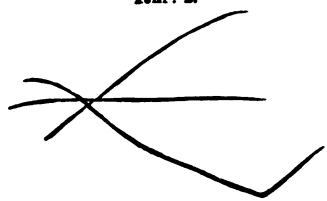


Agent: M. D.

REP. 1.

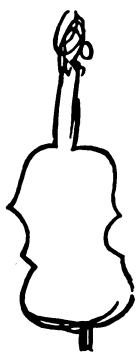


REP. 2.



VII.

ORIG.



Agent: W. S.

REP. 1.



REP. 2.

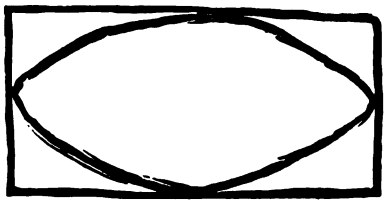


While the second reproduction was proceeding, an interruption occurred which prevented its completion.

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VIII.

ORIG.



Agent: H. B.

REP. 1.



REP. 2.



REP. 3.

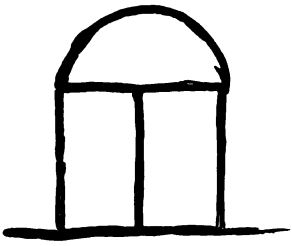


REP. 4.



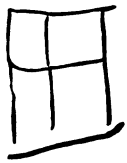
IX.

ORIG.

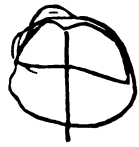


Agent: H. B.

REP. 1.



REP. 2.



REP. 3.



The percipient said, "It looks like a window."

X.

ORIG.

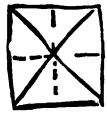


Agent: M. D.

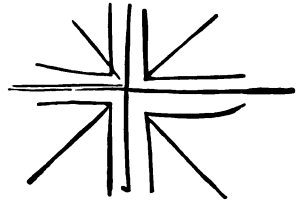
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REP. 2.



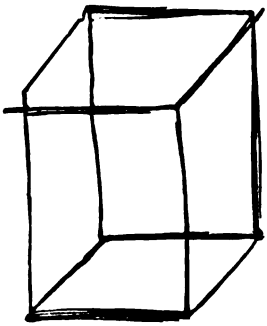
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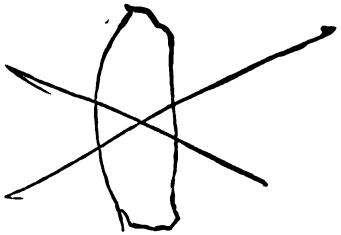
XI.

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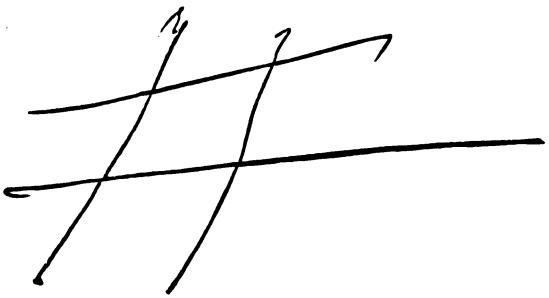


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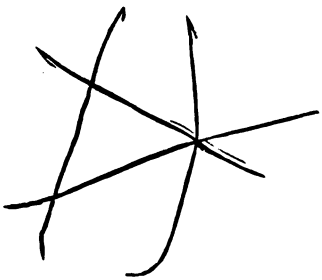
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REP. 2.



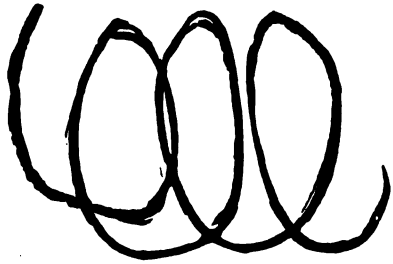
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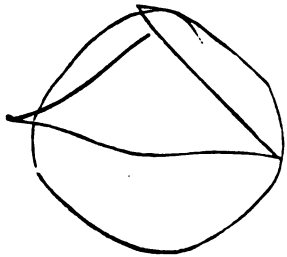
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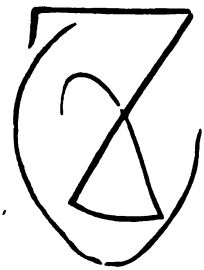


Agent : H. B.

REP. 1.

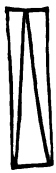


REP. 2.



XIII.

ORIG.



Agent: E. W.

REP. 1.



REP. 2.



The percipient said, "It looks like a window."

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XIV.

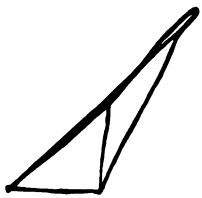
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Agent: E. W.

XV.

ORIG.



Agent: E. W.

REP. 2. REP. 3.

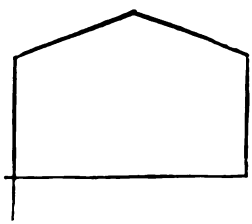




The *first* attempt at reproduction appears to have been a failure.

XVI.

ORIG.



Agent: E. W.

REP. 1. REP. 2. REP. 3.







XVII.

ORIG. REP. 1. REP. 2.



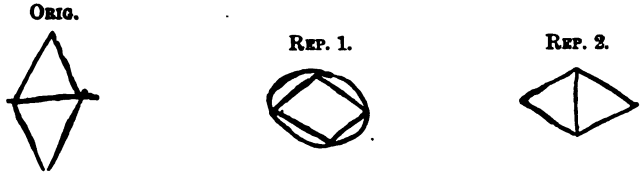




Agent: E. W.

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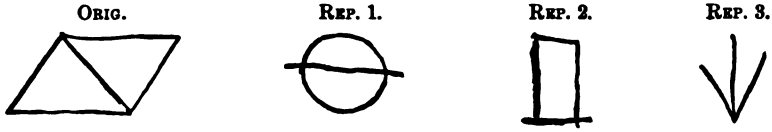
XVIII.



Agent: E. W.

The percipient said, "I see two bright triangles, but I cannot tell exactly how the second is situated."

XIX.



Agent: E. W.

In concluding this brief account, I will summarise the results which I would venture to draw from my experiments.

I have always, as has been seen, taken part myself in the experiments, and have never been a mere looker-on. This was for the purpose of guarding against every form of deception to which I might otherwise have fallen a victim, and of finding the key to the explanation of the phenomenon. Although this last hope has not been fulfilled, owing to the small amount of time that I could devote to these observations, I have, nevertheless, noticed some not unimportant points.

The preliminary conditions of a successful sitting appear to me to be:—A very quiet locality, with plenty of fresh air and a moderate temperature. Only persons ought to take part in the experiments whose presence is agreeable to the percipient, and who he knows will not be disturbed or annoyed by occasional failure. The percipient must be in a calm and contented frame of mind; the agent must be in sympathy with him, and must himself have the knack of conducting the experiments easily and pleasantly. The eyes of the percipient should then be bandaged with a light silk handkerchief, in such a way that the bandage passes also over the ears.

The agent and percipient then proceed respectively in the manner described above.

The agent should now form, as vividly as possible, a mental picture of the object—best imagined as a shining white on a black background. This picture he should hold fast with the greatest energy, and let no other thoughts interfere with it. The percipient, on the contrary, must endeavour above everything not to strain expectation in looking for the emergence of the image, but simply to wait quietly. He should empty his brain, as it were, of all disturbing imaginations, and gaze with closed eyes into a deep

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darkness. There will then soon emerge in it images of objects, diagrams, &c., which seem to change into one another. He should be patient until one of these remains quietly before him, and seems definite to him. Then he should take the bandage off, and draw what he has seen.

Frequently, at the moment of drawing, the image disappears, and cannot be correctly fixed on the paper. In this case another trial ought to be made. When he has drawn he should ask, "Is it right?" And the answer should be only No or Yes. If he now desires it, a second experiment may be attempted; but more than two should not be made, as this fatigues both agent and percipient.

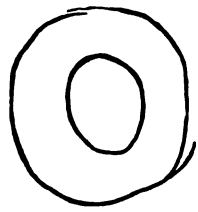
I have only one further remark to make—that deception, conscious or unconscious, is altogether out of the question as regards the foregoing cases. The above-named gentlemen, as well as myself, pledge their word to that effect.[1]

MAX DESSOIR.

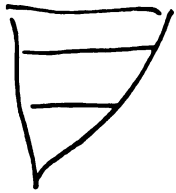
The following shorter record is taken from the monthly journal *Sphinx* (Leipzig), for June, 1886, and we have not seen the original diagrams. The experiments were made at the house of Baron Dr. von Ravensburg, whose wife was the percipient. Herr Max Dessoir drew the originals on the spur of the moment, out of the Baroness von Ravensburg's sight, and taking care that his pencil should move noiselessly. He and the Baron then concentrated their attention on the figure, which the Baroness, sitting at another table, endeavoured to reproduce, after a time varying from 20 to 45 seconds. (The Baron did not take part in the first experiment, which, it will be seen, was a failure.)

I.

ORIG.



REP. 1.



REP. 2.

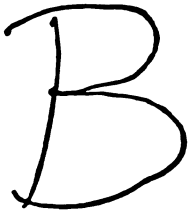


[1] Herr Weiss and Herr Biltz are known to us, through correspondence, independently of these experiments. They and Herr Sachse have sent us certificates of the accuracy of the record of the experiments in which they were respectively concerned.—ED.

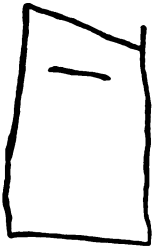
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II.

ORIG.



REP. 1.

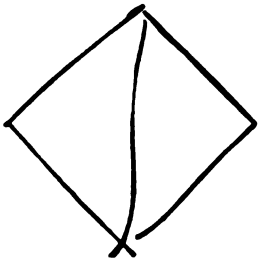


REP. 2.



III.

ORIG.



REP.



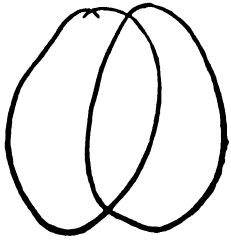
The correction was made by the percipient before the original was shown to her.

IV.

ORIG.



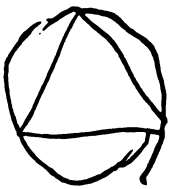
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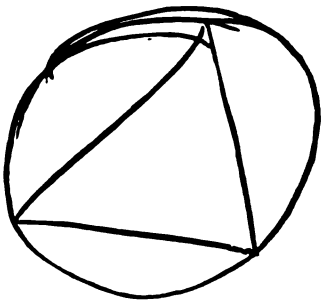
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V.

ORIG.



REP.



The percipient said, "It is a circle outside, and there is something else inside it;" then, after a pause, "A triangle." She then drew the reproduction, and added that the circle was an imperfect one.

With respect to these experiments, the Baron and Baroness von Ravensburg have sent a note of corroboration, of which the following is a translation :—

"18, Zietenstrasse, Berlin, W.

"July 9, 1886.

"We certify that the report of our sitting for a trial of thought-transference, which appeared in the sixth number of *Sphinx*, is throughout in correspondence with the facts, and has been drawn up with complete accuracy.

"FREIHERR GOELER VON RAVENSBURG.

"ELIZABETH, FREIFRAU GOELER VON RAVENSBURG."

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VI.

ON TELEPATHIC HYPNOTISM, AND ITS RELATION TO OTHER FORMS OF HYPNOTIC SUGGESTION.

By Frederic W. H. Myers.

§ 1. The nucleus of the following paper consists of some personal observations of a remarkable hypnotic subject—observations which the kindness of Dr. Gibert and Professor Pierre Janet enabled me to make at Havre, April 20-24, 1886.

The most striking feature in this case was the *sommeil à distance*, or, if I may so term it, *telepathic hypnotism*;—the production, that is to say, of sleep and other hypnotic phenomena by the will, or mental suggestion, of a person at a distance from the subject.

This is not, of course, the first time that such a phenomenon has been observed. In *Phantasms of the Living* (Vol. I., Chap. 3; Vol. II. Supplement, Chap. 1; and Additional Chapter) will be found a collection of the more trustworthy cases; and Mr. Gurney has pointed out their analogy to the *spontaneous* cases of telepathy, of which that book furnishes many examples. But from the side of *hypnotism* no attempt whatever, so far as I know, has been made to correlate this hypnogenous[1] force or suggestion at a distance with hypnogenous agencies employed in the subject's actual presence,—hypnogenous suggestion which actually reaches his ear. The mesmerists proper, talking of their vital influence, have said, "This influence can sometimes act over great distances." And more recently the *suggestionists*, if I may so term them, have sometimes spoken of this distant command as though it were merely a form of suggestion—as if it fell under that heading with as little difficulty as the mere *deferred suggestion*, which works itself out at a distant time, instead of working itself out at the same time, but at a distant point of space.

The confusion involved in both these modes of expression is great. The mesmerists have ignored the difficulty of supposing that an effluence which they hold actually to emanate from eyes and fingers can operate through stone walls and across streets filled with the interfering influence of other men and women. And the suggestionists seem to me never to have analysed what is meant by *suggestion*—a word of indispensable convenience, but which, as I shall endeavour to show, has been used to include methods of hypnogeny which differ widely from one another.

[1] I must adopt from the French the word *hypnogeny* for the production of hypnotic states: *hysterogeny* for the production of hysterical states; *dynamogeny* for the production of increased nervous activity; *œsthesiogen* for a substance whose contact or proximity gives rise to unexplained nervous action.

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After narrating, therefore, my observations on Madame B.'s *sommeil à distance*, I felt unwilling to leave the case as a mere isolated marvel, and unwilling also to connect it with more familiar forms of hypnotism by what seem to me mere vague phrases about an extension of "the range of mesmeric influence," or of "the scope of suggestion." So I have briefly reviewed some other recent cases—Dr. Héricourt's, Dr. Dusart's, Drs. Bourru and Burot's—and have then endeavoured, in a provisional and very imperfect manner, to analyse the various forms of hypnotic suggestion, and to correlate them, in an intelligible series, with the numerous and disparate methods of experimentally inducing the hypnotic trance which have been practised by competent observers. I have been obliged to do this very briefly, and to omit any discussion of the true definition and limit of "hypnotic phenomena" themselves. This, too, needs doing on a more comprehensive plan than has been yet attempted.

§ 2. Before giving my own notes on Madame B.'s case, it will be necessary to furnish some account of M. Pierre Janet's previous observations, as recorded in his "Note sur quelques phénomènes de somnambulisme." (*Bulletins de la Société de Psychologie Physiologique*, Tome I., p. 24.)[1] Professor Janet was kind enough to allow me to peruse his notes, taken mainly at the actual moment of observation; and, although I am naturally not at liberty to print any matter as yet unpublished, I can vouch for the scrupulous care with which he has compiled his account of the case.

I had also the advantage of conversation with Dr. Gibert and his family, who are well acquainted with Madame B. Dr. Gibert is the "Doyen du Syndicat Médical de la France," and a leading physician at Havre. He has long practised hypnotism, which he has directed mainly to therapeutic ends. Madame B., while at Havre, is received into the house of a sister of Dr. Gibert's; and his family, who have access to the somnambule at all hours, confirm Professor Janet's estimate of her simplicity and honesty of character.

Of the genuineness of the induced somnambulism in this case no doubt has been felt, so far as I know, by any observer. The anæsthesia, the contractures, the variations in reflex action, &c. (as well as the woman's previous history), supply sufficient evidence on this point. But even after this fundamental fact has been proved (which in the present state of our knowledge of hypnotism is not very difficult), there remains a question, less definite indeed, but highly important, as to the temper of mind which the subject carries with her into the trance. Thus, for instance, there is, of course, no doubt as to the reality of the trance of "la nommée Wit-"—whom, thanks to Dr. Féré's kindness, I have

[1] See also *Phantasms of the Living*, Vol. ii., p. 679.

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observed at the Salpêtrière—the asylum, or rather the arena, of her hystero-epileptic exploits. But "Wit-" is the very type and culmination of the hysterical diathesis, and her trickiness and love of notice are so integral a part of her that while she runs through her phases of catalepsy, lethargy, and so on, one still suspects (if I may so say) a cataleptic cunning and a lethargic vigilance as to the operator's will.

Madame B., the subject of these researches, is of a very different type. She is a heavy, middle-aged, peasant woman, with a patient, stolid expression, and a very limited intelligence and vocabulary. She has, indeed, been more or less somnambulic from childhood, and a Dr. Féron, since dead, and other persons, seem to have experimented on her long ago. But she has never made hypnotism her business; she was drawn to Havre by some medical kindness received from Dr. Gibert; and care is taken that she shall not make money out of her stay. Her trance-state is never mentioned to her in her normal state; nor does she in any way seek notice as a "sensitive"; on the contrary, she plainly dislikes being sent to sleep from a distance, and has repeatedly tried to prevent it.[1] I have seen her only in the trance-state, and I share the general impression that what she says in that state is naïvely and sincerely said, and probably gives a true account of her own feelings and actions.

I will now briefly summarise M. Janet's principal results.

α. Induction of trance in presence or close proximity of subject.

Sleep usually induced by holding her hand. She is then only responsive to the operator. He alone can make contractures disappear, &c. Gaze from operator's eye unnecessary. Slight pressure of thumb suffices; but no pressure (except *severe* pressure on thumb) is efficacious without mental concentration—operator's *will* to put her to sleep. "This influence of the operator's *thought*, extraordinary, as it may seem, is here quite preponderant; so much so that it can take the place of all other influences." Will *without* touch induces sleep. Taking precautions to avoid suggestion, it is found that (1) M. Janet, while sitting near her, sends her to sleep when, and only when, he wills it; (2) M. Gibert from adjoining room sends her to sleep, M. Janet remaining near her, but not willing; there is evidence that the sleep is of *M. Gibert's* induction, for she is in *rapport* with him only; whereas had sleep come from suggestion of operator's proximity, the suggestion would probably have been derived from *M. Janet's* close presence. Nevertheless, she did know that Dr. Gibert was in the house. (The question as to degrees of proximity will be discussed later on.)

β. Induction of trance at a distance from subject.

[1] M. Janet says (*Rev. Philosophique*, August, 1886) that Madame B., when awake, is not aware that she can be hypnotised from a distance. My remark applies to her knowledge and acts in the incipient or completed trance.

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Oct. 3, 1885. M. Gibert tries to put her to sleep from distance of half-a-mile; M. Janet finds her awake; puts her to sleep; she says, "I know very well that M. Gibert tried to put me to sleep, but when I felt him I looked for some water, and put my hands in cold water. I don't want people to put me to sleep in that way; it puts me out, and makes me look silly." She had, in fact, held her hands in water at the time when M. Gibert willed her to sleep.

Oct. 9. M. Gibert succeeds in a similar attempt; she says in trance, "Why does M. Gibert put me to sleep from his house? I had not time to put my hands in my basin." That the sleep was of M. Gibert's induction was shown by M. Janet's inability to wake her. M. Gibert had to be sent for.

It is observable, however, that MM. Janet and Gibert can *now* (April, 1886) operate interchangeably on the subject; her familiarity with both seems to enable either to wake her from a trance which the other has induced.

Oct. 14. Dr. Gibert again succeeded in inducing the trance, from a distance of two-thirds of a mile, at an hour suggested by a third person, and not known to M. Janet, who watched the patient.

γ. Influence exercised from a distance during trance.

On Oct. 14 she had been put to sleep at 4.15, as aforesaid. At 5, at 5.5, and at 5.10 she rose, exclaimed, "Enough, don't do that," then laughed once, and added, "You can't; if you are the least distracted I recover myself," and fell back into deep sleep. At those moments M. Gibert had attempted to make her perform certain acts in her sleep. Similar results followed from a mental command given in her proximity during her sleep.[1]

δ. Deferred mental suggestion.

On Oct. 8 M. Gibert pressed his forehead to hers, and gave a *mental* order (I omit details, precautions, &c.) to offer a glass of water at 11.30 a.m. next day to each person present. At the hour assigned she showed great agitation, took a glass, came up from the kitchen, and asked if she had been summoned, came and went often between *salon* and kitchen; was put to sleep from a distance by M. Gibert; said, "I had to come; why will they make me carry glasses? I had to say something when I came in." Two somewhat similar experiments were made October 10th and 13th.[2]

§ 3. Thus far M. Janet's account of the autumn experiments, postponing any description of the *stages* through which the subject

[1] Before our arrival in April, 1886, Dr. Jules Janet effected a curious transference of sensation. He went into an adjoining room and burnt his right wrist severely. Madame B. uttered piercing cries, and clasped her wrist in the same place. See *Rev. Phil.* for August, 1886, p. 222, for details.

[2] Some further cases are given in *Rev. Phil.* for August.

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passed. In February and in April, 1886, Madame B. was again brought to Havre, and some successful experiments (tabulated below) were made before my arrival on April 20th.

I give next my own notes of experiments, April 20-24th, taken at the time in conjunction with Dr. A. T. Myers, and forming the bulk of a paper presented to the Société de Psychologie Physiologique on May 24th.

"I have been asked to write an account of some instances of somnambulic sleep induced at a distance, which I observed at Havre, through the kindness of Dr. Gibert and Professor Pierre Janet, April 20-24th, 1886. This account is founded on notes taken by me at the time, and revised on the same or following days by Dr. A. T. Myers, who was present at the experiments throughout. Other observers were Dr. Gibert, Professor Paul Janet, Professor Pierre Janet, Dr. Jules Janet, Dr. Ochorowicz, and M. Marillier, some of whom have given, or are about to give, independent accounts.

"I shall confine myself to the cases of production of sleep at a distance by mental suggestion, with one case of deferred mental suggestion of an act to be performed. In order that the phenomenon of *sommeil à distance* may be satisfactory, we have to guard against three possible sources of error, namely, fraud, accidental coincidence, and suggestion by word or gesture.

"The hypothesis of *fraud* on the part of operators or subject may here be set aside. The operators were Dr. Gibert and Professor Pierre Janet, and the detailed observations of Professor Pierre Janet, elsewhere published, sufficiently prove the genuineness of Madame B.'s somnambulic sleep. And, in fact, to anyone accustomed to hypnotic phenomena the genuine character of Madame B.'s trance is readily apparent.

"The hypothesis of *accidental coincidence* would be tenable (though not probable) did the events of April 20-24th constitute the whole of the observed series. But the number of coincidences noticed by Dr. Gibert, Professor Janet, and others has been so large that the action of mere chance seems to be quite excluded. It is to be observed that, as Professor Janet tells us, the subject has, during an observation of several weeks (maintained by Mlle. Gibert when Professor Janet is not present), only twice fallen *spontaneously* into this somnambulic sleep (when no one willed her to do so); once before our arrival, on looking at a picture of Dr. Gibert, and once on April 21st, as narrated below.[1] On the other hand, the observed cases of sleep deliberately

[1] Of the spontaneous sleep on April 21 (mentioned in *e.g.* Case i.), M. Janet writes (*Rev. Phil.*, August): "Elle se rendormit spontanément deux heures après avoir été réveillée, mais elle était dans une période où je l'endormais tous les jours plusieurs fois, et elle avait simplement été mal réveillée. D'ailleurs, pendant ces deux heures d'intervalle, elle n'avait pu ni parler ni manger: elle était donc restée malheureusement dans un état de demi-sommeil."

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induced from a distance amount, I believe, to at least a dozen.[1] I exclude, of course, the very numerous occasions when sleep has been induced by an operator present with the patient, by holding her thumbs, looking at her, &c. This, however, brings us to the third source of doubt, whether the sleep may not on *all* occasions have been induced by some *suggestion*, given perhaps unconsciously, by word or gesture. It was thus that I was at first inclined to explain Cases I. and II. among those that follow, but the other cases here given seem to negative the supposition.

"I still, however, would explain by mere suggestion all the experiments which I saw made with the *magnet*. On one occasion, when I had gone into an adjoining room with the magnet, and this was known to all present, Madame B. followed me, as though attracted. She was taken back to her place, and shortly afterwards I came and sat beside her with the magnet in my pocket, no one knowing that it was there. No effect whatever was produced on the subject. I made some other experiments with the magnet, with a similarly negative result. I would strongly recommend that when magnetic experiments are made with sensitives the following precautions should be used, which our experience in the Society for Psychical Research has shown to be necessary for the exclusion of suggestion.

"1. Only electro-magnets should be employed, in order to effect sudden and noiseless transitions from the presence to the absence of magnetic force.

"2. The operator in charge of the commutator should be in a different room from the subject.

"3. Care should be taken that no indication as to the state of the magnet should be drawn from the 'magnetic click' which accompanies the magnetisation of the electro-magnet. [The subject's ears may be stopped, or the click repeated many times running, so that it is impossible to tell whether there have been an even or uneven number of clicks, and consequently whether the condition of the instrument is or is not changed.]

"It is not necessary here to go into further detail. Suffice it to say that it is not safe to trust to an apparently lethargic or anæsthetic state in the subject as a guarantee against her gathering suggestions from the words or manner of persons present. If, moreover, she be susceptible of mental suggestion, the effects of such suggestion may be mistaken for the effects of magnetic influence.

"I. I pass on to describe the first case of *sommeil à distance*, April 21st. At 5.50 p.m. (an hour which was selected by drawing lots among various suggested hours), Dr. Gibert retired to his study and endeavoured to send Madame B. to sleep in the Pavillon, at a distance of

[1] This number, as will be hereafter seen, has since been increased.

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about two-thirds of a mile. She was to fall asleep in the *salon;* whereas she habitually sits in the *kitchen* of the Pavillon (a house occupied by Dr. Gibert's sister).

"It was supposed that the command would take about 10 minutes to operate, and at about six Professor Janet, Dr. Ochorowicz, M. Marillier, my brother and myself entered the Pavillon, but found that Madame B. was not in the *salon* but in the kitchen. We immediately went out again, supposing that the experiment had failed. A few minutes later Professor Janet re-entered with M. Ochorowicz, and found her asleep in the *salon.* In the somnambulic state she told us that she had been in the *salon,* and nearly asleep when our arrival startled her, and had then rushed down to the kitchen to avoid us; had returned to the *salon* and fallen asleep as soon as we left the house. These movements were attested by the *bonne,* but it of course seemed probable that it was merely our arrival which had suggested to her that she was expected to fall asleep.

"On this day she was ill and exhausted from too prolonged experiments on the previous days. In the afternoon she fell asleep of her own accord, and in the late evening (11.35 p.m.), when she had long been in bed, M. Gibert willed that her natural sleep should be transferred into somnambulic, and that she should dress and go into the garden of the Pavillon. Nothing followed on this attempt, unless an unusually prolonged sleep and complaints of unwonted headache next day were to be in any way connected herewith. On the whole, had I left after these experiments only I should have referred the phenomena to suggestion of the ordinary hypnotic kind.

"II. On the morning of the 22nd, however, we again selected by lot an hour (11 a.m.) at which M. Gibert should will, from his dispensary, (which is close to his house,) that Madame B. should go to sleep in the Pavillon. It was agreed that a rather longer time should be allowed for the process to take effect; as it had been observed (see M. Janet's previous communication,) that she sometimes struggled against the influence, and averted the effect for a time by putting her hands in cold water, &c. At 11.25 we entered the Pavillon quietly, and almost at once she descended from her room to the *salon,* profoundly asleep. Here, however, suggestion might again have been at work. We did not, of course, mention M. Gibert's attempt of the previous night. But she told us in her sleep that she had been very ill in the night, and repeatedly exclaimed: 'Pourquoi M. Gibert m'a-t-il fait souffrir? Mais j'ai lavé les mains continuellement.' This is what she does when she wishes to avoid being influenced.

"III. In the evening (22nd) we all dined at M. Gibert's, and in the evening M. Gibert made another attempt to put her to sleep at a distance from his house in the Rue Séry,—she being at the

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Pavillon, Rue de la Ferme,—and to bring her to his house by an effort of will.[1] At 8.55 he retired to his study; and MM. Ochorowicz, Marillier, Janet, and A. T. Myers went to the Pavillon, and waited outside in the street, out of sight of the house. At 9.22 Dr. Myers observed Madame B. coming halfway out of the garden-gate, and again retreating. Those who saw her more closely observed that she was plainly in the somnambulic state, and was wandering about and muttering. At 9.25 she came out (with eyes persistently closed, so far as could be seen), walked quickly past MM. Janet and Marillier, without noticing them, and made for M. Gibert's house, though not by the usual or shortest route. (It appeared afterwards that the *bonne* had seen her go into the *salon* at 8.45, and issue thence asleep at 9.15: had not looked in between those times.[2]) She avoided lamp-posts, vehicles, &c., but crossed and re-crossed the street repeatedly. No one went in front of her or spoke to her. After eight or ten minutes she grew much more uncertain in gait, and paused as though she would fall. Dr. Myers noted the moment in the Rue Faure; it was 9.35. At about 9.40 she grew bolder, and at 9.45 reached the street in front of M. Gibert's house. There she met him, but did not notice him, and walked into his house, where she rushed hurriedly from room to room on the ground-floor. M. Gibert had to take her hand before she recognised him. She then grew calm.

"M. Gibert said that from 8.55 to 9.20 he thought intently about her; from 9.20 to 9.35 he thought more feebly; at 9.35 he gave the experiment up, and began to play billiards; but in a few minutes began to will her again. It appeared that his visit to the billiard-room had coincided with her hesitation and stumbling in the street. But this coincidence may of course have been accidental.

"IV. Later in the evening M. Gibert made to her a *mental suggestion*, by pressing his forehead against hers without other gesture or speech. The suggestion (proposed by me) was that at 11 a.m. on the morrow she should look at a photographic album in the *salon* of the Pavillon. She habitually sat in the kitchen or in her own bedroom and sewed; so this was an unlikely occupation for a morning hour.

"On April 23rd, MM. Marillier and Ochorowicz went to the Pavillon before 11 and ensconced themselves in a room opposite the *salon*. At 11 Madame B. entered the *salon* and wandered about with an anxious, preoccupied air. Professor Janet, Dr.

[1] It will be seen from the synopsis of experiments given below that the afternoon and not the evening, was the time of day usually chosen.

[2] It was not unusual for her to sit in the *salon* in the evening, after the day's occupations were over.

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Myers, and I entered the Pavillon at 11.10 and found her obviously entranced; eyes open, but fixed; anxious; wandering.

"She continued thus till 11.25. We remained in a room where she could not see us, though, by looking through the partially-opened door, we could see her. At 11.25 she began to handle some photographic albums on the table of the *salon*; and at 11.30 was seated on the sofa fixedly looking at one of these albums, open on her lap, and rapidly sinking into lethargic sleep. As soon as the talkative phase of her slumber came round she said, 'M. Gibert m'a tourmentée, parce qu'il m'a recommandée—il m'a fait trembler.'

"I believe that this was a genuine instance of deferred mental suggestion. But where a suggestion is known to so many persons as was the case here, it is hard to feel sure that no word has been uttered by any one which could give a clue to its nature.

"V. On this same day, 23rd, M. Janet, who had woke her up and left her awake, lunched in our company, and retired to his own house at 4.30 (a time chosen by lot) to try to put her to sleep from thence. At 5.5 we all entered the *salon* of the Pavillon, and found her asleep with shut eyes, but sewing vigorously (being in that stage in which movements once suggested are automatically continued). Passing into the talkative state, she said to M. Janet, 'C'est vous qui m'avez fait dormir à quatre heures et demi.' The impression as to the hour may have been a suggestion received from M. Janet's mind. We tried to make her believe that it was M. Gibert who had sent her to sleep, but she maintained that she had felt that it was M. Janet.[1]

"VI. On April 24th the whole party chanced to meet at M. Janet's house at 3 p.m., and he then, at my suggestion, entered his study to will that Madame B. should sleep. We waited in his garden, and at 3.20 proceeded together to the Pavillon, which I entered first at 3.30, and found Madame B. profoundly sleeping over her sewing, having ceased to sew. Becoming talkative, she said to M. Janet, 'C'est vous qui m'avez commandée.' She said that she fell asleep at 3.5 p.m.[2]

Professor Janet's paper in the *Revue Philosophique* for August, 1886, enables me to give a conspectus of the experiments on *sommeil à distance* made with Madame B. up to the end of May. M. Janet makes his total 22 trials, 16 successes, but he seems to have omitted the experiments of October, 1885. The distance was in each case between ¼ mile and 1 mile.

[1] M. Gibert was not with us; but M. Janet often came to see her after M. Gibert had hypnotised her.

[2] On these two occasions (V. and VI.) no one actually saw her asleep before we entered the Pavillon, since we desired Mlle. Gibert not to watch her, for fear that she might guess that an experiment was going on.

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NO. OF EXPER'MENTS.	DATE.	OPERATOR.	HOUR WHEN GIVEN.	REMARKS.	SUCCESS OR FAILURE.
	1885.				
1	Oct. 3	Gibert	11.30 a.m.	She washes hands and wards off trance.	½
2	,, 9	do.	11.40 a.m.	Found entranced 11.45.	1
3	,, 14	do.	4.15 p.m.	Found entranced 4.30: had been asleep about 15 minutes	1
	1886.				
4	Feb. 22	Janet		She washes hands and wards off trance.	
5	,, 25	do.	5 p.m.	Asleep at once.	1
6	,, 26	do.		Mere discomfort observed.	0
7	March 1	do.		do. do.	0
8	,, 2	do.	3 p.m.	Found asleep at 4: has slept about an hour.	1
9	,, 4	do.		Will interrupted: trance coincident but incomplete.	1
10	,, 5	do.	5.-5.10 p.m.	Found asleep a few minutes afterwards.	1
11	,, 6	Gibert	8 p.m.	Found asleep 8.3.	1
12	,, 10	do.		Success—no details.	1
13	,, 14	Janet	3 p.m.	Success—no details.	1
14	,, 16	Gibert	9 p.m.	Brings her to his house: she leaves her house a few minutes after 9.	1
15	April 18	Janet		Found asleep in 10 minutes.	1
16	,, 19	Gibert	4 p.m.	Found asleep 4.15.	1
17	,, 20	do.	8 p.m.	Made to come to his house.	1
18	,, 21	do.	5.50 p.m.	My case I.: trance too tardy.	0
19	,, 21	do.	11.35 p.m.	Attempt at trance during sleep: see my case I.	0
20	,, 22	do.	11 a.m.	Asleep 11.25: trance too tardy: my case II.: count as failure.	0
21	,, 22	do.	9 p.m.	Comes to his house: leaves her house 9.15: my case III.	1
22	,, 23	Janet	4.30 p.m.	Found asleep 5.5, says she has slept since 4.30: my case IV.	1
23	,, 24	do.	3 p.m.	Found asleep 3.30, says she has slept since 3.5: my case V.	1
24	May 5	do.		Success—no details.	1
25	,, 6	do.		Success—no details.	1
					19

We have thus 19 coincidences and 6 failures[1]—the failures all more or less explicable by special circumstances. During Madame B.'s visits to Havre, about 2 months in all, she once fell into ordinary sleep during the day, and twice (as already mentioned) became spontaneously entranced, one of these times being on April 21, a day of illness and failure. She never left the house in the evening except on the three

[1] Cases 1 and 4 were practically successes, but I have counted them as one success and one failure.

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occasions on which she was willed to do so (experiments 14, 17, 21). Trials of this kind had to be made after dark, for fear her aspect should attract notice. The hours of the other experiments were generally chosen at the moment, to suit the operators' convenience; sometimes, as I have said above, they were chosen by lot.

§ 4. I pass on to a brief analysis of a similar case contributed by Dr. Héricourt to the Société de Psychologie Physiologique, November 30th, 1885 (*Bulletins*, Tome I., p. 35.)[1]

α. Induction of trance in presence or proximity of subject. M. Héricourt obtained trance by holding Madame's D.'s hand, then by touching her hand, then by willing alone. Passes or grasp of hand had no effect unless accompanied by will. He induces trance without visible suggestion, from one end of the room to the other, by sudden effort of will while she is talking, &c.; if he relaxes his will she recovers herself.

β. Induction of trance at a distance. One day he tries to send her to sleep from his own house, at Perpignan (say 300 yards off), at 3 p.m.; then forgets her; then at 5 p.m. wills to wake her. She tells him spontaneously that at 3 she fell asleep (quite unusual with her during the day); servant came in; could not wake her; shook her; made her partly conscious, with violent headache, which suddenly disappeared at 5 p.m. Experiment tried from adjoining room in a way to avoid expectant attention. Success.

γ. Influence exercised from a distance.

M. Héricourt could impress no definite suggestion from a distance, but when he thought fixedly of Madame D. she experienced severe pain in the præcordial region. This gradually increased, and led to cessation of the experiments. [Compare cases where an abortive epileptic attack is replaced by epileptiform migraine.]

§ 5. The next case which I shall notice is perhaps the most remarkable of all. I quote it from a paper presented, December 28th, 1885, to the Société de Psychologie Physiologique, by Dr. Gley, the well-known physiologist.[2] But the case is Dr. Dusart's, recorded by him in the *Tribune Médicale*, May 16th and 30th, 1875. Dr. Gley knows Dr. Dusart; and assures me that the account is compiled from careful notes taken at the time.

α. Induction of trance in presence or proximity of subject.

Dr. Dusart induces trance on Mlle. J. by passes: observes that they are ineffectual without his *will:* tries will alone: succeeds more than 100 times: never fails.

β. Induction of trance at a distance. M. Dusart forgot one day to order Mlle. J. to sleep till a certain hour on the morrow, which he usually did.

[1] See also *Phantasms*, &c., Vol. ii., p. 683.
[2] See also *Phantasms*, &c., Vol. ii., p. 685

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At a distance of 700 metres from her house he remembers the omission; gives order mentally to sleep till 8: finds her asleep next morning. "How is it that you are asleep?" "I am obeying you." "You mistake; I left you without giving any order." "True; but 5 minutes afterwards I perfectly heard you tell me to sleep till 8 o'clock." To test this Dr. Dusart leaves her asleep, telling her to sleep till he gives order: gives mental order two miles away, at 2 p.m.: she wakes at 2 p.m. Experiment successfully repeated several times: once he keeps her awake by mental order, from a distance, while her father tries to induce trance; she is aware that his influence is at work.

§ 6. These cases, and others like them, seem, then, to enforce on us the conclusion that telepathic hypnotism is a fact—that certain of the phenomena commonly described as hypnotic are occasionally produced by the influence of an operator at a distance, under such conditions that no previous suggestion could have been given.

We must return, in fact, to the conclusion arrived at by the committee of the French Academy of Medicine which sat, as is well-known, from 1826 to 1831, and reported through M. Husson. The fifteenth section of that Report runs as follows:—

"Lorsqu'on a fait tomber une fois une personne dans le sommeil magnétique, on n'a pas toujours besoin de recourir au contact et aux passes pour la magnétiser de nouveau. Le regard du magnétiseur, sa volonté seule, ont sur elle la même influence. Dans ce cas, on peut non-seulement agir sur le magnétisé, mais encore le mettre complètement en somnambulisme et l'en faire sortir à son insu, hors de sa vue, à une certaine distance et au travers des portes fermées."

This, however, is a statement which, taken by itself, would not be likely to obtain effective lodgment in the mind. That it may become truly credible, it must be co-ordinated with cognate facts; it must be presented, not as a mere isolated anomaly, but as an item in some wider group of phenomena. It suggests two inquiries; first, whether other non-hypnotic cases of telepathy exist; and secondly, whether the hypnotic agencies already recognised can be so arranged as that this telepathic agency, this hypnotisation from a distance, should be presented as the culminant phenomenon in a continuous series. Now to the first of these questions, our whole work on *Phantasms of the Living* supplies the answer. There do in fact exist (we maintain) so many cases and classes of telepathic influence that this hypnotic class falls naturally into its place as a species which we should have felt bound to look for on merely analogical grounds. To the *second* question (as I have already said) no answer, so far as I know, has been yet attempted. I do not recall any attempt to correlate this telepathic hypnotism with the other methods of hypnotisation on which different experimenters have relied. The elder English school of *Mesmerists*—

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believers, I mean, in a specific, vital effluence or influence—(as opposed to the *Hypnotists* proper, or believers in a mechanical agency alone in the induction of trance),—the mesmerists, I repeat, have altogether missed the distinction between the exercise of vital influence in the presence of immediate proximity of the subject, and its exercise at a distance, say, of half-a-mile. When they have had cases of this distant kind to record they have mentioned them as mere extensions of the specific vital power, without even attempting to show how it can be that an effluence emanating from one man's nervous system, and pervading another man's nervous system by some sort of actual diffusion, can operate in precisely the same manner at distances across which no physiological activity (with the one exception of the skunk's) has been known to project itself.

And the difficulty which is thus ignored by Elliotson and Townshend is consciously dismissed as insoluble by the more cautious observers whom I have been quoting in this paper. For convenience' sake they use the analogy of *suggestion* and speak of "suggestion at a distance"; but they make no attempt to connect this *distant* suggestion with that suggestion in the subject's actual *presence* with the efficacy of which we are now so abundantly familiar.

And I need hardly say that in my own view, also, no complete solution of the problem is possible. We are entirely ignorant of the nature of the force which may be supposed to be operative in the production of telepathic phenomena,—to impel or facilitate the passage of thoughts or sensations from one mind to another without the intervention of the recognised organs of sense.

§ 7. Yet it seems to me that there is something which it is possible to attempt; something which must needs be now attempted, in however fragmentary and provisional a manner, if there is to be any unity, any sense of *ensemble* in hypnotic experimentation; if the results which different observers obtain in such different ways are to throw upon each other the light which they are capable of affording. Some attempt, I repeat, must be made to show the possibility of a transition from the merely mechanical hypnogeny which the majority of modern writers admit, to the vital or mesmeric hypnogeny which Mr. Gurney and I (in accordance with Cuvier, Esdaile, Elliotson, &c.) have defended in these *Proceedings*, and which now again (apart from our directer arguments) is receiving a kind of reflected or inferential probability from these well-accredited cases of "*sommeil à distance.*" And, furthermore, such an attempt should show also what kind of connection is empirically found between this *vital* hypnogeny and the *telepathic* hypnogeny with which this paper is mainly concerned—between the effect, that is to say, of the operator on the subject in the subject's presence, and his effect at a distance. And in order to get any clearness into our notions, we must

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attack at once the extremely difficult question: What do we mean by *suggestion?* When we say that a subject is hypnotized by *suggestion*, what is the nature, what are the analogies of the force which we suppose to be brought to bear upon him?[1]

First, then, we must observe that the word *suggestion*, as a cause of the hypnotic trance, may have at least four different meanings, viz., (1) verbal suggestion, (2) self-suggestion, (3) mental suggestion from a person present, (4) mental suggestion from a person absent.

Ordinary *verbal suggestion* is, of course, a method of inducing the trance as to which all are agreed. No one accustomed to these experiments is surprised if when an operator says "Sleep!" to a subject whom he has often previously hypnotized, that subject falls into the trance. Very little attempt, however, has been made to co-ordinate this method of hypnogeny with the other methods generally admitted (viz., monotonous stimulation and similar mechanical processes), and confusion is frequently introduced at this point by mixing up psychical with neural terms—by talking in the same breath of "inhibition of nerve-centres" and of "expectant attention." But when we come to consider any of the wider problems—such as whether or not mechanical stimulation is the sole originator of hypnotic phenomena—we find ourselves obliged to reduce our terms to a common denominator, and (however vaguely or hypothetically) to form some conception of the *neural* side of each operation.

Such an inquiry of course takes us on to very insecure ground. We know next to nothing of the neural correlates of ideas or states of mind so complex as some of those which occur in the hypnotic state. We are dealing with a problem which bristles with unknown quantities,—where the physiological correlate of "will," if I may so say, is x, and of "consciousness" y, and of "attention" z. But the hopeful peculiarity of hypnotic phenomena is that in them the unknown $x\ y\ z$ are mixed up and interchanged in all kinds of ways with—I do not say known,—but less completely unknown—elements, namely with sensory stimuli of various kinds, familiar and unfamiliar, which form a sort of $a\ b\ c$,—quantities indefinite indeed, but varying only within certain assignable limits. And though no complete solution to our equations is possible, we may so manipulate them as to get a rather better notion of what $x\ y\ z$ are likely to be than if, (as the pure metaphysician seems sometimes to do), we merely arranged and rearranged the unknown symbols

[1] The chapter on "Sujets et Procédés" in Dr. Cullerre's *Magnétisme et Hypnotisme* (Paris, 1886) may serve as an example of the *incoherence* of our present knowledge of hypnogenous processes. Dr. Cullerre has taken pains to collect a good many recent experiments, but he arranges them in a confessedly empirical—almost haphazard—fashion. [See, however, Dr. Chambard's scheme in my Addendum.]

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as fancy prompts. If, however, we try to use only terms of *neural* action, we incur a new danger—the danger of using words, originally definite, in such a way as to imply more knowledge than we really possess. The use that has been made of the word "inhibition" has often, I think, landed us in quite as much vagueness as the "expectant attention" which is the common *psychical* attempt to give the *mot de l'énigme*. For myself I hold that the enigma of hypnotism has no single answer which solves it. I do not believe that the methods by which hypnotic phenomena can be induced—any more than those phenomena themselves—form a *distinct class*, or can be altogether separated from other modes of acting on the nervous system. And I shall therefore prefer myself to use a quite general expression, and to speak throughout of "stimulation of nervous tracts." For all these nervous changes involve, at any rate to begin with, some sort of stimulation, and it is presumable that few or none of them affect the whole brain, or the whole nervous system, in an identical manner throughout. But after making these explicit reservations I must ask the reader to bear them in mind once for all,—since their repetition in every paragraph would render this paper, already cumbrous, altogether unreadable.

Once more. In the remarks which follow I shall class as "hypnotic" or as "quasi-hypnotic" certain phenomena which may seem to have little connection with the familiar phases of the hypnotic trance—to be more plausibly referable to the all-embracing category of *hysteria*. In a survey such as I am attempting, some such laxity of demarcation is, I think, unavoidable I am not going to attempt a formal definition either of hysteria or of hypnotism—an attempt from which those writers have abstained most carefully who have had the widest acquaintance with both affections. The word hysteria, as has been often remarked, designates a mere congeries of nervous symptoms. We cannot deduce these symptoms the one from the other; we cannot present them as radiating from a central lesion. And as regards hypnotism we are scarcely more advanced. We have not reached—we shall probably be long in reaching—any physiological conception which can co-ordinate its Protean phenomena. From the view which would class the "névrose hypnotique" as a mere branch of hysteria I dissent strongly and altogether. I hold emphatically that hypnotic changes are primarily physiological rather than pathological;—supernormal, let me say, rather than abnormal; that while on the one hand they may gradate imperceptibly into hysterical and epileptic instabilities, yet on the other hand they may resemble, or even surpass, the beneficent and developmental changes which follow a judicious moral and physical regimen.

But while thus repudiating a conception of hypnotism which seems to me to result from a too exclusive practice among subjects already

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diseased, I admit, and even maintain, that the French hospital experiments of the last few years have thrown much additional light on the connection between hypnotism and various abnormal states. They have shown us intermediate cases, interchangeable symptoms, unsuspected transitions of every kind. As the briefest way of illustrating what I mean I will describe a single case of Dr. Pitres'—a case which seems to stand just halfway between what is definitely hysterical and what is definitely hypnotic.

Albertine M., one of Dr. Pitres' best hysterical subjects,[1] is liable, beyond the ordinary hysterical accidents, to a rarer affection of her own. Every now and then she irresistibly falls asleep. Her sleep is perfectly placid, her pulse and respiration normal. Closer inspection reveals two singularities. Her eyelids constantly tremble. A limb raised into the air remains in the attitude where it is placed. Both of these are characteristically hypnotic symptoms. And yet more conclusive characteristics remain. Speak to her, and she will reply. Suggest hallucinations, and she will adopt them. Blow on her eyes, and she will awake.

This seems the description of a spontaneous hypnotic trance. And when we learn further that Albertine can in fact be hypnotized by ordinary means, and that in the induced hypnotic trance and in this spontaneous trance she presents certain phenomena both of anæsthesia and of sensibility to metals which she presents in no other state, the identity of the two trances may seem established.

Yet Albertine's history shows us that the "attaque de sommeil" is in reality the survival or residue of hystero-epileptic attacks of the ordinary kind, which have disappeared under treatment. When she first came under Dr. Pitres' care she suffered several times a day from such attacks, preceded by a complex aura, and including a *phase épileptoïde*, a *phase de convulsions cloniques*, and a *phase délirante*. In the *phase délirante*, (like many similar sufferers,) she maintained the attitude imposed on her, and could reply to questions, and was susceptible of provoked hallucination. And gradually the attacks have dwindled down, so to say, into the *phase délirante* without the delirium, —into the state of gentle sleep, which has never yet spontaneously terminated, in which I first described her. The prodromic aura remains recognisable; but this too has suffered transformation; it has assumed a more prolonged, a more psychical character; it is diluting itself, if I may so say, into a mood of mind.

I have thought that this concrete example might best illustrate the points of contact between hysterical and hypnotic states. In what

[1] See his two tractates, *Des suggestions hypnotiques* (1884); *Des zones hystérogènes* (1885).

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follows I shall keep as far as possible to what must be deemed hypnotic, avoiding, at any rate, the distinctly *morbid* causes, the distinctly *degenerative* phenomena, to which the name hysterical is with least question to be applied.

§ 8. Let us try, then, to arrange the various modes of hypnogeny in the order of their simplicity.

As simplest of all I should place mere *massive* stimulation.[1] I suppose that most animals and most men are capable of being "thunderstruck"—of being thrown into a state which our ancestors called *sideration*, and which we now call *cataplexy*.[2]

It has been pointed out that it is probably in some state of this kind that animals really are when they are supposed to be "shamming dead," the shock of terror having exhausted for the time their nervous energy, and rendered them incapable of motion.

This is the condition so often induced at the Salpêtrière, where the sudden sound of a gong, or a bright light suddenly introduced, will throw many of the hystero-epileptics into a quasi-cataleptic state. The *Iconographie de la Salpêtrière*, and Dr. Paul Richer's treatise on *La Grande Hystérie*, contain striking pictures of this sudden conversion of the excited woman into the senseless statue. A crash of a brass band, the bark of a dog, will sometimes check the fierce volubility as if a spring had snapped. As in Virgil's battle of the bees,

> Hi motus animorum atque hæc certamina tanta
> Pulveris exigui jactu conpressa quiescunt.

This instantaneous inhibition may be made useful in various ways. One of Dr. Paul Richer's plates represents a whole string of women assembled to be photographed, and then immobilised in attitudes of astonishment and terror by a sudden stroke of the gong. On one occasion a thief was accidentally detected by this method. Her hand was in a drawer when a gong sounded, and she was found some time afterwards dumbly and fixedly grasping the pilfered goods.

Madame B., I may add, was herself susceptible to this form of massive stimulation. On April 24th, while she was in the sleep-talking state, a clap of thunder was heard, and immediately induced in her

[1] In opposing massive to localised or to specialised stimulation, we shall of course remember that all stimulation is more or less local and more or less special in character. Under massive stimulation I place the cases where the *quantity* seems more operative than the *quality* of the stimulus applied. With some subjects shock of any strong kind seems equally effective; others will respond to feeble stimulations of special kinds, but are unaffected by the loud noises, bright lights, &c., which are here ranked as massive stimuli.

[2] This word was coined, I believe, by Preyer, and applied to the condition of hens staring at a chalk line; but it is now more commonly used for sudden nervous shock which immobilises the subject.

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violent convulsions and marked opisthotonos of the usual hysterical kind.

These experiments on the cataplectic effect of massive stimulation have naturally been made for the most part either on animals or on hysterical subjects, who can be thus impressed by shocks which (like the gong's sound or the electric flash) are in themselves insignificant, and leave no injurious results. To apply the requisite degree of shock to a healthy subject would be quite indefensible. But occasions of terror and astonishment will sometimes spontaneously arise; and real life offers many an intermediate stage between the minute of stunned bewilderment and the *stupor attonitus* of the asylums, where one overwhelming moment seems to have paralyzed the mind for ever after.

Shocks of this generalised kind can admittedly initiate almost any amount of visceral, circulatory, vaso-motor disturbance. It is, therefore, antecedently probable that other hypnogenous methods—being, as it were, secondary or specialised forms of general shock—will be able to exercise a powerful influence of this same kind. Remembering (say) the effects of fright on a rabbit, we need not be surprised that in Dr. Liébeault's practice on the impressionable poor of Nancy hypnotic *suggestion* should be found a cheap and easy substitute for cathartics. Remembering that a startling disgrace may set up diabetes, we need not think it incredible that slight temporary bleeding or blistering should follow the command impressed on a previously-sensitised subject. On purely analogical grounds it is, I think, probable that every constitutional disturbance (and some such disturbances result in good, and not in evil) which sudden shock can produce, will be capable of being reproduced or adumbrated among the results of technically hypnotic methods—of methods, that is to say, which by concentration and specialisation *economize* the amount of shock necessary to affect the system. And here it may be well to point out that I am classing the effect of sudden shock as *hypnotic*, although such shock does not, perhaps, directly produce the most interesting phase of hypnotism,—namely, the sleep-waking. or somnambulic state.[1] It *directly* produces the two phases known as catalepsy and lethargy,[2] and some-

[1] Despine (*Etude Scientifique sur le somnambulisme*, p. 205) cites a case where a fright induced first "léthargie lucide" then "somnambulisme."

[2] See Richer, *La Grande Hystérie*, p. 524, sqq. I may say here that though on some important points I cannot bring myself into accord with the school of the Salpêtrière, I recognise in the fullest manner that theirs is the leading collection of instances; that Dr. Richer's book embodies a greater mass of skilled observation of these abnormal states than is contained in any other single volume. Dr. Féré's numerous and important observations have issued from the same school. [As this paper passes through the press Dr. Bernheim's new and larger book on Suggestion takes a foremost place among works dealing with the *therapeutic* aspect of hypnotism.]

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times a state of wandering dream. And this (with M. Richer) I consider amply enough to rank sudden shock among hypnogenous agencies. No one can feel more strongly than I the primary interest of the somnambulic state. But it is not a *constant* element in the hypnotism produced by any method whatever. There is, in fact, no one symptom which by itself can be taken as essential to a hypnotic case. As the results of shock we have cataleptic retention of attitudes impressed on the limbs, open and fixed eyes, anæsthesia, suggestion from gesture, contractures, increased muscular irritability,—all these in various combinations, suddenly checked by means which dissipate hypnotic states, and leaving no trace in the memory. This is enough, I think, to justify us in treating the effect of *shock* as a kind of rude primary type of hypnotic change.

§ 9. Next in order to general shock, or the change or exhaustion produced by *massive* stimulation, may be placed *monotonous* stimulation, as from the tick of a watch, &c. This is usually alleged to be much the same thing—the exhaustion being now effected by repeated small stimuli, instead of by a single stimulus of excessive strength. [1] The process is an interesting one, though it has not often been successfully applied. It is noticeable that Dr. P. Richer dismisses it in a few lines when he is discussing the various methods in use at the Salpêtrière.[2] Yet monotonous stimulation is frequently spoken of as if it were the accepted type of hypnotic procedure. What is the reason of this? The reason, as I take it, is a curious and complicated one; namely, that two common modes of procedure have been classed under monotonous stimulation, whereas this phrase is an inadequate description of one of them and a misleading description of the other. The two modes of procedure to which I refer are Braid's upward and inward squint, and the "passes" of the ordinary mesmerist.

And first as to Braid's method of the fixation of the gaze on a point above and between the eyes. It is at once obvious to anyone who tries the experiment that the sensation thus induced is totally different from the sensation of hearing a watch tick. The ordinary person will not be hypnotized by either the one or the other, but, while he will very soon become unconscious of the watch's tick, he will feel a constantly growing and very peculiar fatigue as he continues the upward convergent gaze. This fatigue is, of course, in part merely muscular, from the strain put simultaneously on the two internal *recti* muscles, but there is

[1] I do not myself feel sure that the exhaustion usually alleged in such cases actually exists. I think that the ticking is very likely a mere form of suggestion. Life is full of monotonous stimuli (the movement of the screw in a steamer, &c.) which very many people have attended to for long periods, without any record of trance thus induced.

[2] *La Grande Hystérie*, p. 530.

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also an ache which can be imitated by sharp pressure with thumb and finger on each side of the root of the nose, and which partly results, as I conceive, from the actual pressure of the ball of the eye against the nerves of the orbit—when the eye is, as it were, *jammed* into the position into which it normally sinks gently in sleep. And the correctness of this interpretation is sustained by two facts,—one well-known, and the other a personal observation of my own, which I doubt not that many other persons have made before me. The first fact is that mere pressure on the ball of the eye (*pression des globes oculaires*) is a frequent method in France for inducing hypnotic trance,[1] especially in hysterical subjects. The second fact is that a pinch applied to the root of the nose, or a strong pressure between the eyes, is often similarly effective in the mesmerisation of healthy subjects,—more effective than the "passes," whose monotony is sometimes deemed so essential.[2]

And passing on from these closely-analogous pressures, we come next to Richer's pressure of the vertex (first advocated by Dr. Richer in 1878), which he finds to produce hypnotic trance and contracture; and the pressure on the heads of hens, which the practical henwife employs before any operation of minor surgery on her restless brood. The jealously-concealed *attouchements* of Rarey,—perhaps even the cruder practice of dropping leaden plugs down the ears of horses,[3]—belong to the same category. And these lead us on to Pitres' and Charcot's doctrine of "hypnogenous zones,"—special points, that is to say, which are found (symmetrically arranged or otherwise) on the

[1] M. Lasègue is cited as the originator of this method.—Richer, *op. cit.*, p. 524.

[2] The precise mechanism and effects of the upward and inward squint have never been satisfactorily worked out. Professor Macalister has kindly promised to make certain *post-mortem* experiments bearing on these points, and to communicate the results to the Society. Pending an exacter inquiry, he thinks it possible that the forced upward gaze involves a strain on the capsule of Tenon, and consequent drag on the sclerotic, with intra-ocular tension of the vitreous chamber;—as well as intra-orbital pressure on certain branches of the fifth nerve. If this be so, Braid's squint would *combine* the intra-ocular tension of the French pressure of the eyeball, with the pressure on the fifth nerve which is effected by squeezing the root of the nose. I find that this squeeze is used empirically for checking hysterical attacks, quite apart from any belief in "zones hystéro-frénatrices." It is a familiar fact that the same pressure arrests a sneeze.

[3] Of course the stupifying effect of sudden deafness is operative here; but see Dr. Taguet's case (*Ann. Médico-Psych.*, Vol. xi., 1884, p. 328), where the "occlusion du conduit auditif à l'aide d'une boulette de colon," finds its place as a hypnogenous agency along with "la compression digitale des opercules," and the "pression sur l'ovaire droite,"—this last a typical instance of ordinary action on a hysterogenous or hypnogenous zone.

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surface of many patients, of such a nature that pressure on them induces hypnotic trance.[1] Braid's squint, therefore, is, I think, best defined as a pressure on a rudimentary hypnogenous zone of wide diffusion,—a region, that is to say, which is in many persons endowed with that peculiar sensitiveness which sets up a sudden, and suddenly-removable, nervous disturbance of a pervasive kind. As we shall see later on, this amounts to saying that Braid's squint is a form of *localised*, rather than of *monotonous*, stimulation.

Secondly, as to the passes of the ordinary mesmerist. Here, as it seems to me, there has been a curious antagonism of theories, extreme on one or the other side, which has obscured the actual phenomena encountered in practice. On the one side the ardent believers in a "vital effluence" have often exaggerated the importance of "passes"; have often spoken as though every detail of manipulation produced a separate specific effect. And, on the other side, opponents of Mesmer's theory have sometimes been anxious rather to explain away the effect

[1] I cannot go into the elaborate experiments which Charcot, Richer, Pitres, &c., have made on these "zones hypnogènes, hystérogènes," &c. But a few words may indicate the connection thus established between hysterical and hypnotic phenomena. There have been few observations of the kind in England, where hystero-epilepsy is comparatively rare, and in the following sentences I shall mainly follow Dr. Pitres. If a hystero-epileptic patient be carefully examined it will almost always be found that there are one or more points or tracts pressure on which either provokes or arrests the hysterical attack. Among these points are often the top of the head, the ball of the eye, the orbital region; just the points with pressure on which we are so familiar in hypnotic experiment. That these points are not merely imagined by or suggested to the patient is shown by such incidents as the fall of hair growing thereon, or by their accidental discovery while the patient is unconscious. [See also Ch. Féré in the *Progrès Médical*, 1882, p. 42.] They disappear temporarily under the influence of electricity, local anæmia, &c., and have sometimes been permanently abolished by *suggestion* in the hypnotic trance,—another indication of their kinship with hypnotic changes. Patients possessing these zones are also frequently exposed to attacks on hearing some word which recalls a particular set of memories,—the specialised suggestion having the same effect as the localised pressure. [See Pitres, *Des zones hystérogènes*, p. 30.] Furthermore, on the same or other patients points are frequently found, pressure on which will not produce a hysterical attack, but will produce a sleep of the nature ordinarily classed as hypnotic, or will modify the phases of such a sleep, or will awaken into ordinary life patients previously hypnotized by other means. [These last points are styled *hypno-frénatrices*; for they check, instead of generating, the hypnotic trance; but I shall avoid all terms not absolutely needful.] Sometimes a *slight* pressure on a certain point induces a hypnotic trance (which can be conducted through its characteristic phases), while a *violent* pressure on the same point induces hysterical convulsions. Galvanism, local anæmia, hypodermic injections, &c., are found to abolish for a time the hysterogenous zones but to leave the hypnogenous unaltered. On the whole, it would seem that the hypnotic effects are not indeed a mere branch or a mere commencement of the hysterical effects, but are nevertheless related thereto in a manner as yet unknown.

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of such passes than to explain it, rather to show that no vital effluence was proved thereby than to determine by experiments of their own how much of truth might lurk in those enthusiastic assertions. And since these mesmeric passes were of the nature of slight stimuli to sight, touch, or hearing, many times repeated, it seemed that *monotonous stimulation* was an obvious and sufficient cause for the effect produced.

Yet I venture to say that persons who have themselves practised this form of hypnotization will be inclined to ascribe its effect to any one of several causes rather than to the monotony of the procedure. As commonly practised now, by Dr. Liébeault, for instance, who has mesmerised some thousands of persons during the last 20 years, the passes and touches made are brief and variable, and although Dr. Liébeault was till lately a strong opponent of Mesmer's theory, his actual experience prevented him from crediting the results of his procedure to monotonous stimulation, and he ascribed them rather to *suggestion*, to the concentration of the subject's mind on the idea of going to sleep.[1]

§ 10. And, in fact (as I have implied above in speaking of the value of pressure between the eyes), there would often be much more reason to attribute the effect of mesmeric manipulation not to mere "passes" but to pressure on a *hypnogenous zone*, of which I have already spoken, and which, under the heading of *localised* stimulation, I would place next to the massive and the monotonous stimulation which we have already considered. For here we have a pressure applied to certain points or tracts, empirically discovered and varying in each case, which serve, as it were, as the trains of gunpowder to fire, if a nervous explosion is to be induced. I speak of a nervous explosion, because these specially-endowed points are more often hysterogenous than hypnogenous,—that is to say, it is oftener possible to induce a hystero-epileptic attack by localised pressure than to induce a mere hypnotic trance.

"I have shown," said Brown-Séquard,[2] who was one of the first to draw effective attention to these zones, "that certain points in the cerebro-spinal centres are able to cause the disappearance of the properties of other parts of the nervous system; and that the same or other points are endowed with another property not yet studied, by virtue of which irritative lesions of these points can augment the activities, or intensify the properties, of more or less distant parts. The influence thus manifested is *dynamogenic*."

As an instance of well-defined inhibitory points, I will cite the case of Louis V——. In him, as in most cases of hysterical

[1] *Du sommeil et des états analogues*, p. 18, &c.

[2] *Comptes Rendus de l'Académie des Sciences*, March 29th, 1880. See also *Comptes Rendus* for 1879, pp. 657, 888.

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hemiplegia, the inhibitory points vary symmetrically with the transference of the hemiplegia from the one to the other side. When he is in his state of dextral hemianæsthesia and hemiplegia, a finger (query, also a stick or other neutral substance?) applied to his left forehead produces "the immediate and complete arrest of the functions of the life of relation";—of all perception on the patient's part of the world outside him. So long as the finger remains pressed to the forehead he is senseless and motionless,—"suspendu et inhibé" altogether.[1]

Here then, by a localised pressure of the simplest kind can be induced at once the very maximum of inhibition. And here again, as in the case of massive stimulation, I would point out that we may well expect that a number of minor phenomena and earlier stages of sleep may in other cases be produced by a method which, in one case at least, is so profoundly effective.[2]

The subject of localised stimulations is one of wide importance in these studies. I must refer the reader to the researches of Brown-Séquard, Pitres, and Paul Richer, and will merely observe that we have here a *specialised hyperæsthesia* of a very significant kind. It appears that the peripheral terminations of various nerves, without inducing any modification of the surface which is obvious to ordinary inspection, have acquired the power, when pressure is applied to them, of setting on foot definite and varied processes of systemic change. The effect produced by touching some of these inhibitory points can only be compared to the effect of an electric shock.

§ 11. And this brings me to the fourth head of my enumeration of hypnogenous agencies.

We have discussed the *massive* stimulation of the whole nervous system; *monotonous* stimulation, tactile, auditory, or visual, and *localised* stimulation of specially sensitive points, any one of which methods may induce in appropriate subjects the state of trance.

And now we come to a class of cases where the agencies—still testifying by the suddenness, vigour, and specificity of their effects to the existence of certain internal tracts of supernormal sensibility—gradually come to indicate something as yet unreached. They gradually cease to be mere exaggerations of influences felt by ordinary persons,—they show powers of affecting the organism possessed by substances which we have

[1] Dr. Brullard, of Nancy, has met with a case where the mere closure of the subject's eyes, apparently by any person, induced somnambulism.—Brullard, *Considérations générales sur l'état hypnotique*, p. 84, (Nancy, 1886).

[2] Madame B.'s two thumbs are hypnogenous points. Pressure on them (by whomsoever exerted) induces trance, sometimes accompanied by convulsions. This was so, at least, when Dr. Myers and I saw her, but one would desire always to trace such cases from the *beginning*, to make sure that *suggestion* has nowhere intervened.

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been accustomed to regard as inert, or as operating only in other ways. Here, then, the interest centres rather on the specialisation *without* the subject than on the specialisation *within* him;—we can more easily hope (that is to say) to detect or classify the "æsthesiogens" which affect the organism thus supernormally than to detect or classify the centres of internal susceptibility whose ready response disturbs the subject's nervous equilibrium.

And here, too, recent experiments are to some extent bridging over a gulf which at first appeared insurmountable. The effect of *medicamentous* substances, in mere contact, is so extending our conception of hyperæsthesia that the effect of *metals* in contact is not so absolutely isolated a conception as when it was first observed that the touch of gold or iron induced or removed spasmodic rigidity.

I must confess that in this region I depend entirely on the experiments of others. I have seen nothing myself of a nature to persuade me that the external application of a substance habitually inert when thus exhibited can have any effect upon the nervous system. Nor can I here enter fully into the evidence which has nearly convinced me that such is the case.[1] It must suffice to say that the advocates of these specific influences (almost all of them French medical men) seem to me to be at present in possession of the field; and that the palmary case

[1] The question as to the possibility of proving the influence of metals, &c., seems to stand somewhat as follows.

On the affirmative side it is necessary to show that,—

1. Definite æsthesiogens have produced definite and constant effects, while other substances have produced no effects.
2. The subject has not been aware (either by permission or by fraud) of what the substance under trial was.
3. There has been no suggestion, by any word or gesture of the operator, that any given result was expected. To this it is desirable to add a fourth condition, namely,
4. That the operator himself has no expectancy of the result attained. This last proviso is meant to guard against thought-transference. Unless, indeed, there is some independent evidence of thought-transference between the operator and subject, this explanation can hardly be *pressed*; but I suspect, nevertheless, that thought-transference has vitiated many experiments.

On the negative side it has sometimes been shown:—

1. That on some subjects any substance indifferently produces the supposed effect (*e.g.*, *mustard*, Dr. Adler, of Berlin, in "A contribution to the Study of the Bilateral Functions," &c., in *British Medical Journal*, Vol. i. of 1879).
2. That many cases depend on suggestion only; *e.g.*, Dr. Hughes Bennett, *British Medical Journal*, Vol. ii. of 1878., p. 759 [only *one* case cited]. Dr. Carpenter, *British Medical Journal*, Vol. ii. of 1871, p. 867. Dr. Reynolds, *Lancet*, Vol. i. of 1877, p. 728.

There have, no doubt, also been instances of fraud, though I cannot find any case cited in detail. [Mr. Wakley's so-called exposure of the Okeys, still cited

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of Louis V——, reported upon concordantly by at least four physicians, must be taken into account in any future discussion of this subject.

Hypnotic or quasi-hypnotic phenomena can be induced in Louis V—— by certain metals, by certain medicaments (other than metals), by magnets, and by electricity.[1]

I must not enter into the details of the elaborate experiments which have now been made on him and on other subjects by MM. Bourru, Burot, Mabille, Richet, &c.

There are two points only which I need notice here. One is the confirmation which certain earlier experiments—English, French, and German—say, for instance, those recorded in the *Zoist*—afford to these more recent and exact observations. Mr. Gurney and I have elsewhere pointed out (*Proceedings*, Vol. III.) the reservations with which Dr. Elliotson's evidence in the *Zoist* should be taken—his eagerness to ascribe any improvements in his patient's health to mesmerism; his impatient neglect of the precautions necessary to establish a real connection of cause and effect. But though he had the faults of a headstrong temperament, there was no doubt either as to his capacity

in 1877 by the *Lancet* in an editorial (Vol. ii. of 1877, p. 646) as valid, was altogether inconclusive.]

It must be remembered that suggestion is undoubtedly a *vera causa* of effects of this kind. In some cases the metals may be really inert, and the suggestion may produce all the effects. In other cases the metals, &c., may be operative, but suggestion may either exaggerate or counteract their operation. The question is whether there are or are not cases where suggestion is excluded, and I think that there is a sufficient residue of such cases to justify a provisional belief. Without going exhaustively into the subject, it may be enough to give the following references in support of this view. Report of Committee of Société de Biologie (Charcot, Luys, Dumontpallier) in *Gazette Médicale*, April 28th, 1877; Dumontpallier and Magnin, *Comptes Rendus, Société de Biologie*, 1881, p. 349; 1882, p. 147; Charcot's lectures, translated in *Lancet*, Vol. i. of 1878, pp. 81, 158, 302, 393; Wilks, *British Medical Journal*, Vol. ii. of 1878, p. 102; McCall Anderson, *Lancet*, Vol. ii. 1879, p. 41, Vol. ii., 1880, p. 207; Stone, *St. Thomas' Hospital Reports*, Vol. ii., 1880 (cited *Proceedings Society for Psychical Research*, Vol. ii., p. 59); Landouzy and others cited by Chambard, *Dictionnaire Encyclopédique des Sciences Médicales*, third series, Vol x., p 367 ("Influence of Magnet"), and especially Bourru and Burot's case, above cited. As regards the transference of hemi-anæsthesia by magnets (the form of æsthesiogeny which has been most debated) the reader should especially consult Féré's *L'Hypnotisme chez les Hystériques* (*Revue Philosophique*, Vol. xix., p. 1). See also Vigouroux, "*Métalloscopie, métallothérapie, esthésiogènes*" (*Archives de Neurologie*, 1881), and for transference in healthy subjects, Rumpf, *Archives de Neurologie*, January, 1885.

[1] Phosphorised water, for instance, produces sleep and hallucinations; jaborandi produces catalepsy; and these and other states can be made to pass into a typical hypnotic somnambulism, in which, and in which alone, the memory of the states induced by the æsthesiogens is retained. (Berjon, *La Grande Hystérie chez l'homme*, Paris: Baillière, 1886, p. 65, &c.)

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or his good faith, and his scattered observations on the effect of the contact of gold, iron, &c., on his patients—observations which are not pressed into the support of his own therapeutic theories—still possess, I think, a serious importance.[1]

My second reflection is obvious enough, though I do not remember to have seen it in print. It is that if these specific influences of a long range of substances, some of them previously supposed to be inert (as here applied) in reference to the human organism, be admitted, then it becomes far more readily conceivable that the human organism itself is not inert in reference to another human organism ;—that there *is* some specific vital influence such as the mesmerists have claimed.

In Dr. Berjon's tractate we find records of the influence on Louis V——, and on a female patient, of the following substances or forces. With contact : Copper, platinum, gold, hydrogen, sulphate of copper, potassium bromide, potassium iodide, sulphur, antimony, ammonium, chloride, carbonic acid, electricity (dynamic and static) ; magnet : human hand. Without actual contact : Gold, mercury, hydrogen, chloride of gold, acid nitrate of mercury, cyanide of mercury, sulphate of iron, perchloride of iron, iodine, opium, chloral, and other narcotics ; tartar emetic, &c. ; scammony and podophyllin ; champagne, and other alcoholic drinks; valerian, cantharides, camphor, jaborandi, pilocarpin ; magnet; or a human hand held near the body.

[1] See, for instance, his paper on " A Cure of Convulsive and Rigid Fits," *Zoist*, Vol. ix.

[2] Among the actions of medicaments at a distance which Dr. Berjon records there is one which is all the more curious, inasmuch as the physicians concerned do not appear to have been aware of its special oddity.

Among the medicaments which were held in stoppered (not sealed) bottles, at about 3 inches from the back of the neck of Louis V—— and a female subject were laurel-water and nitro-benzol (" *essence de mirbane* "). Now these are very odorous substances, and we cannot exclude the supposition that the subject smelt them, and was led by the mere suggestion to act in a certain definite manner, when he or she smelt that special odour. But there is a difficulty here. Nitro-benzol is to ordinary senses pretty nearly identical in smell with laurel-water,—and is, in fact, habitually used in the cheap confectionery and other trades as an inexpensive substitute for oil of bitter almonds, the scent of prussic acid being precisely reproduced. But these two subjects, the Jewess and Louis V——, invariably distinguished nitro-benzol from laurel-water, and acted consistently in each case. There was a remarkable hyperæsthesia of some kind, and, considering the effects of the non-odorous substances, it is far from clear that the sense of *smell* was even in this case primarily concerned.

Dilute nitro-benzol provoked convulsive shocks of the arms, and movements as though of drawing with a pencil. Laurel-water with Louis V—— gives rise to convulsive movements of the chest, hiccough, salivation, and tingling of the chest.

With the Jewess it gives rise to a religious ecstacy which takes about a quarter of an hour to run its course. Her eyes are upturned and fill with tears ; her arms and hands are raised heavenwards ; her face expresses beatific

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A further and fuller account of these experiments is still expected. I may here give a few samples of the results obtained. The first experiments were made with metals, which were applied to the skin, to see whether transference of the hemiplegia could thus be produced. Lead, zinc, and silver produced no effect. Copper produced a temporary return of sensibility, and a temporary vaso-motor modification, so that a prick on the skin which had not previously bled, bled while a sheet of copper was superposed. Platinum produced an itching sensation, but no transference. Steel produced transference. Gold produced transference, but along with the transference it produced severe pain. The objective character of this influence of gold was shown by a curious incident. Dr. Mabille one day supported Louis V— during a "crise," and the doctor's gold ring touched the patient's hand for several minutes. When the epileptic recovered consciousness he complained of pain in that spot, a "brûlure" appeared there, and the redness lasted for several weeks. "Les phénomènes physiques persistants," says Dr.

vision. She then prostrates herself in adoration and weeps with her head on the ground. Finally she throws herself backwards, with convulsive movements of chest and diaphragm and an expression of grief. This ends in sleep, and she can be thrown into somnambulism and questioned on what she has seen. She says that she has seen the Blessed Virgin in a blue dress starred with gold; that "malheureusement elle n'est pas de sa religion," (for she is not a *converted* Jewess), and that the Virgin has reproached her with her misdoings (which exist, in fact, independently of any form of creed), and has thrown her down on the ground as a sinner. When awakened to ordinary consciousness, "elle se moque des personnes qui lui parlent de la Vierge."

By varying the substance applied, the experimenters have discovered that it is the essential oil of laurel which produces the ecstacy, while the hydrocyanic acid produces the convulsions.

Now I need hardly remind my readers of the prominence of the *laurel* in the descriptions of the procedure of the Pythoness at Delphi. The δάφνη, indeed, generally means the bay or *laurus nobilis*, but in such vague traditional descriptions as we have in Plutarch (*Pyth. Orac.* 6) of the *burning* of laurel leaves before vaticination, or in Lucian (*Bis. Accusat.* 1) of the Pythia's *chewing* the laurel leaf, it is impossible to be sure what genus is meant. [For vaticinatory dreams generated by laurel, see Bötticher, *Baumkultus der Hellenen*, p. 346.] The *prunus lauro-cerasus*, or cherry laurel, may perhaps have grown along with the bay, γυάλοις ὑπο Παρνησσοῖο. And it becomes, surely, a very possible supposition that some early Pythia was accidentally susceptible to something of the same specific influence as these hysterical patients at Rochefort; and that some part at least of the tremors and ecstacies of later prophetesses consisted in a repetition by suggestion or tradition of the excitement which in some πρωτόμαντις was genuine and uncontrollable. We should thus have a *hysterical succession*, such as that which (if we are to trust the comments of the rival school of Nancy) "la nommée Wit--" is likely to found among many generations of patients in the hystero-epileptic wards at the Salpêtrière. [As this paper passes through the press, similar instances of the effect of magnets and medicaments at a distance are given by Dr. Dufour; *Ann. Méd.-Psych.*, Sept., 1886.]

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Berjon, (*Op. cit.*, p. 19) "rendaient toute simulation inadmissible." The next step was the discovery that gold would act at a distance. "Il suffit d'approcher un objet d'or, une montre, une pièce de vingt francs à 10 centimètres, pour que le sujet, qui n'a pas vu ce qu'on lui présente, accuse une vive douleur." Mercury, acting through the glass bulb of the thermometer, was similarly painful. Hydrogen, on the other hand, produced a quite different effect. "Une éprouvette contenant du gaz hydrogène est mise au contact de la main; le malade manifeste une vive satisfaction et il rit; le rire est continu et spasmodique:—aucun phénomène de transfert ne se produisit."

The medicaments were for the most part held in stoppered (not sealed) bottles, wrapped in paper, a few inches from the back of the subject's neck. The effects produced were curiously connected with hypnotism by the fact that though they often constituted a crisis which left no waking memory, and could not, at its height, be suspended by hypnotization, yet when the effect of the drug was declining it was possible to throw the subject into the somnambulic state, and then to obtain from him an account of the sensations which the drug had produced. The effects of the several drugs were roughly analogous to their known effects, but presented some new and constant features. It is claimed that these characteristic effects were produced when the experimenter was not aware what drug he was holding in his hand; nay, even that when the experimenter was mistaken as to what drug he held in his hand, the phenomena were still such as the drug actually presented should induce.

These experiments are still under discussion; nor have I myself seen any effects of this kind which might not have been due to suggestion. Nevertheless, as already implied, the evidence for the specific effect of contact with *gold*, for instance, on certain subjects seems to me very strong; and I therefore recur to the point urged above; namely, that it seems not unreasonable to suppose that if a human body is so abnormally sensitive as to enter into contracture at the touch of gold, and to distinguish gold by contact alone, or by proximity alone, from other metals, it may not be altogether insensitive to the touch of another human body—another centre, that is to say, of forces and perceptions like its own.[1]

[1] Between susceptibility to metals, &c., and susceptibility to the influence of *living* bodies, susceptibility to the proximity of *dead* bodies would occupy an intermediate place. Perhaps we may thus explain the following narrative sent to us as a "ghost story" of unusual type and good attestation. It comes from Mrs. Wheeler, 106, High-street, Oxford, who is known to Mr. Podmore.

"In the summer of 1874 we moved into the house we now occupy, 106, High street, Oxford. We had the house on lease for some years, but had never lived in it, having let the upper part of it.

We took as our bedroom the lower of two rooms built over an archway at

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Rather it seems probable that just as the hypnotic effect of mere massive or mere monotonous stimulation may be connected by the intervening link of localised stimulation, with the hypnotic and other neural effects of the contact or even the proximity of specific inanimate substances or specific non-vital forces, viz., magnetism and electricity, even so may these specific effects be themselves connected with the specific effects of *vital* contact, *vital* proximity.

the side of the house. On the first night that we slept there I woke up just at 12.45 (I heard a church clock striking the quarters), with a feeling that there was something terrible up in the roof. I don't know what it was, but I lay awake with this feeling for nearly an hour, and then I woke my husband and told him of it, and he fetched me some brandy.

I found, however, that I could not shake off the feeling and go to sleep again. I could not even stop in the room, but came out into the sitting-room, and sat up there until 5 a.m., when I went back to bed. I did not have the horrid feeling at all when I was out of the room.

The next night I woke again at 12.45 a.m., with the same dreadful feeling, though not quite so bad as the first night. The same thing happened night after night for some weeks, and I woke up at the same time with the same feeling of something horrible up in the roof. I did not sleep any night, I believe, from the time I awoke—12.45—till after 5 o'clock.

Once, I remember that I went up into the passage over our room, and tried to get at the space under the roof, but found that I could not do so; and once, in the day-time, I tried to get into the space under the rafters, through the bedroom, where there had once been a means of communication, but I found that it was built up, and that I could not get there.

At last my health would not stand it any longer, and I went away on a visit to a brother at Cambridge. Whilst there, I heard that the roof over the two bedrooms had fallen in, and forced a bedstead through the floor of the upper room into our own bedroom. That I took as a sufficient explanation of my feeling of horror.

It was not for some weeks afterwards that I learnt by accident (my husband had purposely concealed the fact from me, fearing the effect on me in my weak state of health), that the dead body of a child had been found, hidden under the rafters of the roof, over our bedroom. The body was dried up like a mummy, and the head was twisted round. It was evidently the body of a new-born child that had been murdered and placed there for concealment.

ELLEN M. WHEELER."

"Mr. Wheeler fully confirmed his wife's account of the incident, and assured me that he recollected distinctly his wife's distress of mind, and her saying that she felt sure that there was something wrong up above their heads.

"F. PODMORE.

"*May 24th*, 1884."

The following corroboration is extracted from a local paper:—

"*Oxford Times*," *Saturday, 26th September*, 1874.

"A SKELETON IN THE ROOF.—Yesterday week (*i.e.*, the 18th) the decayed rafters of a corner of the roof of premises in the occupation of Mrs. Wheeler, bookseller, High-street, suddenly fell in, when the skeleton of a child was dis-

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§ 12. But here let us pause; for we have arrived at a point where we may hope to get some insight into the mechanism of *suggestion;* that is to say, of the first of the four forms of suggestion which I distinguished earlier in this paper—the verbal suggestion of a person present with the subject.

And first let us try to realize exactly what verbal suggestion will do.

covered, which appeared from its condition to have been secreted there for a number of years."

Somewhat similar is another case, received from a lady well known to me, who prefers not to give her name.

"*June* 11*th*, 1883.

"In the summer of 1872, my father occupied a rectory house not far from Blisworth, in Northamptonshire, for a few weeks, and I went down to spend three days with him and my mother at Whitsuntide; my two children and their nurse being already there. The room given to me was over the dining-room; next door to it was the night nursery, in which my nurse and children slept, the rest of the inmates of the house being quite at the other end of a rather long passage. I hardly slept at all the first (Saturday) night, being possessed with the belief that some one was in my room whom I should shortly see. I heard nothing, and I saw nothing. The next morning, Sunday, I did not go to church, but betook myself to the dining-room with a book. It was, I remember, a perfectly lovely June morning. Before I had been a quarter-of-an-hour in the room, and whilst wholly interested in the book, I was seized with a dread, of what I did not know; but in spite of the sunshine and the servants moving about the house, I found it more intolerable to sit there than it had been to remain in the room above the night before, and so, after a struggle, and feeling not a little ashamed, I left the room and went to the garden. Sunday night was a repetition of Saturday. I slept not at all, but remained in what I can only describe as a state of expectation till dawn, and very thankfully I left on the Monday afternoon. To my father and mother I said nothing of my two bad nights. The nurse and children remained behind for another week. I noticed that the nurse looked gloomy when I left her, and I put it down to her finding the country dull, after London. When she returned she told me that she hoped she would never have to go to stay in that house again, for she had not been able to sleep there during the fortnight, being each night the prey of fears, for which she could not account in any way. My father left this rectory at the end of the summer; and some time afterwards he was talking of the place to me, and mentioned laughingly that before he entered it the rector had 'thought it right to let him know that that end of the house in which I and my children were put up was said to be haunted, my room especially, and that several of his visitors—his sister in particular—had been much troubled by this room being apparently entered, and steps and movements heard in the dead of night. I do not like to let you come in,' he added, 'without telling you this, though my own belief in it is small.' Within, I think, a year or 18 months at most of my father's leaving, the house had to undergo considerable repair, and amongst others, a new floor had to be laid in the dining-room. On taking up the old boards four or five (I forget which) skeletons were found close under the boarding in a row, and also close to the hearth-stone."

Some analogous cases are recorded by Stilling and other writers. This physical explanation would apply only to a small proportion of the narratives sent to us as indicating the continued operation of deceased persons.

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Here again we may most conveniently begin with its most advanced or conspicuous effects,—cases where the mere utterance by a casual bystander of one special but apparently harmless word, like "frogs" or "telegram,"[1] throws the subject instantly into the convulsions, delirium, and insensibility of a hystero-epileptic attack. At first sight this might seem the strangest of all effects of verbal suggestion; yet it is soon seen to be a mere intensification of familiar phenomena,—an exaggeration of the brain's reflex irritability quite in keeping with the other *exaggerations* which characterise the hysterical state.

We are all familiar with the extraordinary sensitiveness which a particular group of memories may acquire in healthy minds,—the mother's sudden start, at her child's wail, from the slumber which her husband's snoring has left undisturbed,—the access of blinding unconsciousness to the surrounding scene which follows on the casual mention of some secretly-loved or secretly-dreaded name. Here, then, the touch, so to say, which falls on a definite region within the brain,—the region occupied by that hypersensitive group of memories, — produces an effect analogous to the effect produced by a touch on some hypersensitive peripheral tract,—say the drum of the ear or the scar of an old wound. And just as this natural or traumatic sensitiveness of particular points on the surface is (so to say) parodied and exaggerated by the morbid and arbitrary sensitiveness of the hysterogenous zone, and the patient is thrown into convulsions by a touch which would merely have tickled the healthy subject, even so the instinctive or acquired sensitiveness which certain groups of memories in most of us possess is parodied and exaggerated by the morbid and arbitrary sensitiveness of the girl who because her companions once put frogs in her bed cannot hear the word "frogs" without a hystero-epileptic attack.

If then we can thus compare the hysterogenous suggestion to the pressure on a hysterogenous zone, may we compare the *hypnogenous* suggestion, which more directly concerns us, to pressure on a *hypnogenous* zone? To a great extent I think that we may. Note in the first place that hypnogenous suggestion is not really so simple and easy a thing as is sometimes represented. I doubt whether it is ever the case that *non-hysterical* patients can be hypnotized for the *first time* by a mere verbal command, without the *gaze or touch or will* of the operator. I think that all that we can fairly say is that when a subject has been previously hypnotized by other means, or has previously undergone hysterical attacks which involve, or at least predispose to hypnotic changes, that subject can often be hypnotized again by the mere verbal revivification of that group of organic memories which have been originated by the previous trance. If this be so, the hypnogenous suggestion

[1] Pitres, *Des Zones Hystérogènes*, p. 30

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would be allied to the hysterogenous suggestions somewhat as the pressure on the one class of zones was allied to the pressure on the other,—the lesser and more definite effect not being, indeed, a mere branch or commencement of the larger and more confused effect, but being related thereto,—say somewhat in the way in which the act of pressing the foot on the pedal of a piano is related to the act of sitting on its keyboard.

But the hypnotic suggestions with which we have to deal comprise many other suggestions besides that of falling asleep. They comprise the definite hallucinations, the definite commands, of which we have of late had so many examples. But here again it would be a mistake to assume that induced hallucinations, for instance, are a mere outcome or incident of the hypnotic state. Rather we may say that even as pressure on the pedal modifies the loudness and continuity of the sounds produced by striking each individual note, so (and in a much greater degree) do the general nervous changes of the hypnotic trance increase the definiteness, isolation, persistency, of the faint instinctive impulse to belief which follows when we hear a statement confidently made.[1] Hallucinations, though more easily induced in hypnotized persons, can often be induced in persons in the waking state, who have previously been hypnotized, and sometimes on persons who have never been hypnotized at all. I have myself repeatedly made a certain subject believe for a minute or two that she both saw and smelt a hole singed in her dress by an imaginary coal, although I could not hypnotize her, nor had she ever been hypnotized by anyone. The sight of children, or the remembrance of one's own early childhood, is enough to explain this state of mind. I can remember my own feelings at four years old, when a respected elderly friend stated that he was a bear, and simulated to some slight extent the movements of that quadruped. I knew all the time that it was Mr. S.; but the idea of bears, pre-existing in my mind, was so strongly stimulated that I was paralyzed with terror. It was an incomplete hallucination, induced not in a hypnotized but in an immature brain by a definitely-localised stimulation—by a touch on a group of exciting mental pictures which experience had not yet sufficiently partitioned off from the milder scenes involving only old gentlemen and sofas.

The susceptibility to suggestion, then, which characterises the hypnotic trance, involves in effect an exaggeration of the sensibility of groups of images within the brain, which—in the absence of control from inhibitory or co-ordinative centres—develop with greater readiness into hallucinatory perception, impulsive acts. Observe, however, that with hardly any subject are all suggestions equally efficacious.

[1] See Bernheim "*De la suggestion dans l'état hypnotique et dans l'état de veille*," (Paris, 1884), on this topic.

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Even when the operator seems to have obtained complete control—to be able to prompt a well-bred subject to theft and murder—he may still be unable to prompt to rudeness or indecorum. The explanation of this odd fact I take to be that the nexus of habit which opposes the infraction of rules which we constantly obey, though constantly in a position where we could break them, is stronger than the nexus of habit which opposes an act which we theoretically disapprove, but have never been within measurable distance of committing.[1]

Somewhat similarly, we find that hypnogenous zones generally occur in seldom-touched parts of the body, where the habitual link between sensation and responsive action is not strongly established.

I venture, then, to suggest that were the whole plexus of brain-operations unrolled before us, we should see the specific sensibility gaining one ideational centre after another, as suggestion is repeated, very much as one point after another on the periphery may become modified into a hypnogenous zone. And the stimulus of appropriate suggestion,—still in the first place peripheral, as given by voice or gesture, through ear or eye,—touches, as I conceive, a hypnogenous tract within the brain, and though no longer massive like the gong, makes up in precision for what it lacks in volume and intensity.

Thus far I am supposing that the subject will accept the suggestion to sleep, or other suggestions, with equal readiness at anyone's command. But this is not universally the case,—with healthy English subjects is almost never the case. Far more frequently there is a further specialisation,—again a specialisation *without* the subject superadded to the specialisation *within* him,—and we find that he can only be entranced by certain definite persons,—possibly by one person alone among very many who make the attempt. On what does this difference depend? What are the qualities in that complex entity, the human

[1] Different subjects vary greatly in this particular, affording sometimes, as Professor Beaunis has observed, a singular insight into the relative vigour of their inward motives. Some experiments of Mr. Langley's on animals, interesting in this connection, are described in his paper "On the Physiological Aspect of Mesmerism," read before the Royal Institution, March 14th, 1884. "In man," he says, "the phenomena of mesmerism are of a very much more striking character than they are in the lower animals. Speaking generally, this seems to be due to a greater interdependence of the various parts of the nervous system in the lower animals. In these, when any one centre is stirred up by exciting impulses, an irradiation of exciting impulses is apt to take place to all other centres, and the mesmeric state is in consequence apt to be broken. And, on the other hand, when a centre is inhibited, an irradiation of inhibitory impulses is apt to take place, and the whole nervous system is in consequence apt to be inhibited. Hence the activity, or suppression of activity, of particular parts of the central nervous system, which forms so conspicuous a feature of mesmerism in man, can be only partially produced in the lower vertebrates."

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operator, whose presence or absence involves these differing degrees of hypnogenous efficacy?

Heidenhain has suggested that differences in warmth or moisture between the *hands* of various operators are enough to account for these variations in power. To say nothing of other objections to this view, it is disproved by the fact that the touch or immediate proximity of the operator's hands is by no means an essential part of the mesmeric process. Again, this apparent *electivity* has been explained by suggestion of the ordinary kind—as though when A can entrance a subject and B and C cannot, this were because the subject had an idea to begin with that A alone could entrance him. But this view also has been, I think, sufficiently disproved by experiments on unconscious persons, on sleepers, and on young children.

And if previous suggestion—preconceived idea—cannot explain the fact of entrancement by one special person rather than another, then neither can it explain the incidents of the *rapport* which continues to exist during (or even after) the trance between the subject and the operator thus elected. That *rapport* shows itself in various ways. There may be a special sensitiveness to the operator's *voice*, so that his mere whisper is heard and recognised amid a Babel of other sounds. There may be, as in Dr. Taguet's case and in several of Elliotson's cases, a special sensitiveness to the *scent* of the operator, recalling the dog's power of discovering articles which his master has touched. There may be a vaguer sensitiveness to his presence,—or even, as I am inclined to hold, to his mere approach,—till the perception verges into what can no longer be called hyperæsthesia, but rather a clairvoyance or clairaudience, which does not strictly follow the lines of any special sense, but specialises itself in what seem arbitrary and unexpected ways, and detects qualities which have never before proved so directly discernible.

And, moreover, besides these sensory (or supersensory) elements in the mesmeric *rapport*, there is commonly what is called a psychical connection as well, an obedience of the subject to the operator's will, and his will only—a concentration of the enthralled attention into that single channel.

Various as are these phenomena, and impossible as it at present is to co-ordinate them adequately, I may perhaps venture to give to all of them alike the title of "selective hyperæsthesia,"—implying that the sensitised organism of the subject responds to one particular class of stimuli with more than normal readiness, and in other than normal ways. And I should compare the special sensitiveness to the operator's scent or voice to Louis V——'s sensitiveness, say, to opium in mere external contact; while the subject's sensitiveness to obscurer facts concerning the operator (as his mere approach or his maladies) may be

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paralleled with the sensitiveness of other subjects to the touch or proximity of gold, or of other substances which, when thus exhibited, are ordinarily inert.

§ 14. May not this notion of selective hyperæsthesia, when carefully dwelt upon, suggest to us that the "mesmeric *rapport*," the "vital effluence" of which Elliotson, &c., were wont to speak as of a single force or entity, may in reality be a varying complex of different elements? and that among these elements may be something which is neither "will-power" nor "character" in any psychical sense, but simply the specific effect of the proximity of certain living organic compounds? The subject feels Brown's "influence" and not Jones's, or feels Brown's influence soothing and Jones's distressing. But Brown and Jones, whatever else they may be, are at any rate aggregates of organic compounds, and it is possible that to these hyper-sensitive perceptions, Brown may differ as much from Jones as podophyllin from jaborandi.[1]

And thus we gradually find ourselves led up to the conception of a vital influence or effluence by a method which does not present this vital effluence as a unique, isolated, incomparable force, but rather as an advanced term in a series of influences, each one of which needs to be discovered by direct experiment, while the discovery of any one of them corroborates the efficacy of the rest. It is in this way, perhaps, by gradually fitting together a number of results obtained at separate points of a far-reaching line, that modern science has the best chance of confirming whatever may be sound in the interesting but enigmatical experiments of Reichenbach,—experiments which the writers in these *Proceedings* have never consented to set aside as illusory, though we have thus far found them almost impossible to repeat.

Returning to the special inquiry on which we are now engaged,—as to the true *modus operandi* of hypnotic suggestions of various kinds, let us note the results now reached. We have seen that suggestion in its simplest form—the verbal suggestion of any person taken at random—is analogous to the *localised stimulation*,—stimulation of a simple kind, but applied to particular nervous tracts,—which in some patients induces hypnotic or hysterical phenomena. And we have seen, again, that suggestion somewhat more differentiated,—the verbal suggestion of some one person who is alone capable of reaching the subject's attention,—is analogous to the *specialised stimulation*, as from metals or drugs

[1] Dr. Despine maintains (*Etude Scientifique sur le Somnambulisme*, pp. 134, sqq.) that "convulsive epidemics" are propagated by actual infection,—without sight or other suggestion of an ordinary kind. His instances seem to me inconclusive; but the point needs attention. (See *Ann. Méd.-Psych.*, 1879, Vol. ii., p. 141.)

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exhibited in a manner which would ordinarily leave them inert, which in certain patients is followed by results of such a singular kind.

§ 15. We come now to the third class of suggestion which we mentioned at the outset, namely *self-suggestion*; giving this name to cases where the trance does not, so far as we can tell, follow on any hint supplied to the patient by another mind, or on any external stimulus whatever,—where the subject does not suppose that anyone orders him, or desires him, or expects him to fall into the abnormal condition, but falls into it, as we say, "of himself."

This self-suggestion is one of the most difficult, and one of the least explored, branches of our subject. It involves, in fact, the whole connection between what we call *spontaneous* and what we call *induced* nervous changes; and moreover, as is commonly the case when the word *spontaneous* is introduced, the chief of all dilemmas—*free-will or necessity?*—looms in the background of the inquiry.

First, let us consider what are the cases which we have to explain. Under what circumstances do hypnotic or quasi-hypnotic nervous states appear without manifest external stimulus? I am bound to add the word "quasi-hypnotic," for I have insisted on the close connection between hypnotism and certain hysterical states, such as Albertine's "attaques de sommeil"; so that I must face the difficulty of *their* origination as well.

We find, then, that there are a few cases where subjects can throw themselves into trance by a mere effort of will. There are a few cases where subjects can maintain themselves in the trance by a mere effort of will; and there is a case where a subject in a state of complete inhibition originates phenomena otherwise producible only by the strongest hypnotic suggestion.

Again, we find that there are cases where there is no question of deliberate choice on the subject's part; where the special nervous condition is hereditary, as in a famous family where "the sons in their nightly discursions ran against and awakened each other"; or where the trance appears as an idiopathic symptom in an otherwise normal person, as is so often the case with ordinary somnambulism; or where a tendency to trance and similar conditions follows upon some definite injury.

Now I think that most of these instances may be shown to be analogous to the "deferred suggestion" of recent hypnotic experiments,—nay, I hold that the perception of that analogy is essential to our comprehension of the experimental "deferred suggestion" itself. Thus much, therefore, I am bound to try to show. But I suspect that this is not the only analogy involved. I suspect that in some of the cases of self-suggestion where the element of *will* is markedly present, we have an analogy to another mode of hypnogeny, namely, to the induction of

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trance by an actual "vital effluence" from operator to subject. At any rate, whether this be so or no, I feel sure that we shall not get at the root of the matter without trying to realise what would be meant by such an hypothesis.

First, then, let us try to understand deferred suggestion, and its connection with heredity. We start with the fact, which to us is at present ultimate, that living matter has a tendency not only to respond to a stimulus A, but to be so modified by that stimulus that it thereafter responds in a rather different manner to A, when A recurs—and sometimes also to other stimuli, B, C, D. This is rudimentary or unconscious memory. As we get higher in the scale consciousness is superadded, and the memory of A persists while B, C, and D are occurring, even if it does not actually modify them. Suppose a physician says to me at dinner, "You have heart disease; you must go upstairs very slowly or you may die." This is a deferred suggestion to me to move slowly when the time comes for me to go upstairs. I *need* not think of it till that moment comes. But it impresses my mind so much that I continue to think of it while I am merely sitting at dinner—the consciousness of A persists through B, C, and D, though it will only modify my action when the cognate moment recurs—the going upstairs, which is a sort of A′ if the physician's warning were A. Here we have a deferred suggestion, consciously received, and consciously borne in mind till the time to work it out in action arrived.

But neither of these intrusions of consciousness is necessary to the efficacy of a deferred suggestion. In the first place, we know from common experience that the brain receives many impressions which do not at once rise into consciousness, but do so when a favourable opportunity offers itself. Only a small proportion of the impressions which certain powerful stimuli (as incipient asphyxiation or certain forms of fever) can summon into retrospective consciousness do actually rise into consciousness at the moment when they are received. These are deferred suggestions, not consciously received. Take the most trivial and familiar case. I glance down a list of books to see if a book by *Helmholtz* is in it. It is not, and I remember absolutely nothing of the list. Some time afterwards I see a book by *Herzen* advertised. I at once feel that I knew that there was an author of that name. His name, in fact, was on that former list, and I unconsciously received the deferred suggestion—only capable of revival by seeing the word *Herzen* again—that there was a scientific author of that name. Now deferred suggestion in the hypnotic state offers an exaggeration of such a case as this. I suggest to the hypnotized subject that when he leaves my room (after an hour of waking life) he will perceive that his hat is blue instead of black, or that he will send a telegram to tell me that it is a fine day. (For my present argument there is no difference

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between the suggestion of a hallucinatory percept or of an unmotived action.) When the fixed moment comes—the moment whose arrival is as A′ to my suggestion A,—that suggestion recurs and works itself out, though during B, C, and D, the events of the intermediate hour, no knowledge of A was present nor could be summoned into the conscious mind.

Yet between this absurd act and my forgetfulness of the name *Herzen* there is only a difference of degree. In the hypnotic subject's case one loom (so to say) in the vast manufactory within him has been disconnected from the general system of driving-gear, attached to driving-gear of its own, and set to turn out a special pattern, independently of the orders executed by the remaining looms in the factory. And similarly in my case the little bobbin (so to say) with the name *Herzen* inscribed on it, went on spinning by itself without connection with my general scheme of memories. Only it was so small an item that its disconnected action and its subsequent attachment to the main system attracted no notice, or, at least, excited no surprise. *Deferred* hypnotic suggestion, in fact, like the *immediate* hypnotic suggestion of which I have already spoken, is an advantage taken of the increased dissociability of mental elements which results from the inhibition of certain co-ordinative mental centres or activities in the hypnotic trance.

There are other conditions also in which suggestion can take a hold of the mind which the co-ordinative centres cannot check. I have spoken already of the excessive sensitiveness of certain groups of memories in childhood; for instance, the idea of bears. Well, this sensitiveness, prior to the age of co-ordination, may be taken advantage of to effect a deferred as well as an immediate suggestion. Just as my friend who told me that he was a bear, gave me for the moment something approaching to a hallucinatory percept of himself as a bear, so do some nurses talk to children about ghosts in a way which implants a deferred suggestion of horror in traversing churchyards, which no adult reason can overcome.

> "Trunken mussen wir alle sein;
> Jugend ist Trunkenheit ohne Wein,"

says the poet. And just as youth, with its strong irreflective impulses, its organic exhilaration, resembles the state of incipient intoxication, so does childhood, with its ready receptivity and want of co-ordinative power, resemble the hypnotic or sleep-waking condition. By hypnotizing the adult we restore to him the trustfulness of childhood, much as by slightly intoxicating the elderly we restore to them (as Plato has it) the vigour and enterprise of youth.

There is, however, a state in which we are even more susceptible to suggestion, have even less of co-ordinating faculty, of resisting power,

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than either in childhood or in the hypnotic trance. I allude to our condition before we are born—to the period at which the various looms are actually being placed in our manufactory, in rough accordance with the arrangement of similar looms in the factories of ancestral minds. And we most of us know to our cost that although we may improve the working of these looms in detail we have little power to modify their general type, or the principal driving-gear which connects them. And, to take the defect with which we are now concerned, some original weakness in that driving-gear may subject us to hystero-epileptic attacks, with their concomitant hypnotic phenomena.

I have perhaps said enough to explain what I mean by extending the analogy of deferred suggestion to this wide range of hereditary and (so-called) spontaneous manifestations of hypnotic phenomena. The impulse, as I hold, which ultimately induces those phenomena, has been already given to the organism,—either in that organism's first inception, or during the course of life,—in much the same way as the hypnotizer can communicate the impulse to sleep, or to perform some act, at a future moment which he determines by his own choice.

It is probable that many of those who accept this analogy at all may consider that it covers the whole extent of self-suggestive phenomena. They may think that *spontaneous* cases include *voluntary* cases, as a mere sub-division distinguished by the concomitance of a purely subjective sensation of *choice*. They may say that the pre-existent conditions of the organism determine in every case—in the so-called voluntary cases as fully as in the involuntary—the phenomena which that organism proceeds to manifest.

I do not here directly controvert this view; but I cannot help suspecting that there *is* a difference between hypnotic phenomena which occur spontaneously and those which seem self-induced by a direct effort of will;—or at any rate that this second class, in the apparent mode of their operation, afford an analogy with the influence which the "silent will" of an operator can sometimes—as our experiments have gone to show—exert on a sensitive subject.

I am not sure, however, that such words as *will*, *mental effort*, and *attention*, are the right words to use in such a connection. I think that we must not take for granted that this influence is necessarily accompanied with ordinary consciousness on the agent's part. It appears, for example, that a person himself in the sleep-waking state can mesmerise another person,—exerting apparently the same kind of influence, and the same kind of volition in directing it, as a normally-waking man can exert. Yet, in the case to which I specially allude, when the sleep-waker "came to himself" he was quite unconscious that he had mesmerised—and had for a long time refused to demesmerise—the

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other subject. It would seem then that in considering the genesis of hypnotic phenomena which are apparently *self-induced*, yet not precisely spontaneous, (as hereditary hysteria is spontaneous,)—we shall do well to consider phenomena originated in various nervous conditions besides that of normal wakefulness.

I shall cite three cases. In the first the subject was in a state of general "suspension and inhibition" profounder than any ordinary phase of the hypnotic trance. In the second the subject was already hypnotized. In the third the subject was in the normal state.

The first of these three cases may seem from one point of view to be eminently *in*voluntary,—eminently a case where the previous history of the organism determined the recrudescence of an impressive scene. But—as will be seen—it has some puzzling features. Oddly enough we have here, and here alone, an actual suggestion made in so many words by a man to himself;—and here, too, we have the remarkable production, without external stimulus, of those vaso-motor disturbances which form at present the extreme limit of the hypnotizer's power over the subject's physical organism. Who could expect the somnambule to direct his spontaneous energy to the production of hæmorrhage or vesication? Yet the history of Louis V——, one of the most important documents which Nature has ever submitted to the psychologist, affords an example of self-suggestion pushed to this almost incredible length.

In the first place it must be explained that, according to the testimony of four physicians who have tried experiments with Louis V—— at two separate asylums,[1] hæmorrhage and bleeding stigmata can be evoked in him by *external* suggestion. The first recorded experiment of the kind was as follows. The patient being in the somnambulic state, one of the doctors said to him: "At four o'clock you will fall asleep, come into my study, sit on that chair with your arms crossed, and bleed at the nose." The crossing of the arms was, of course, to prevent his touching his nose. When four o'clock came he fell into the hypnotic trance, went and sat in the chair with his arms crossed, and after a few moments began to bleed at the nose.

Again, the doctor traced the subject's name on his two fore-arms with a blunt instrument, and told him, in the somnambulic state, "At four o'clock you will go to sleep and bleed on the lines which I have traced on your arms."[2] Shortly before four o'clock he was

[1] See Drs. Bourru and Burot, *Comptes Rendus de le Société de biologie*, 12 juillet, 1885, for experiments at Rochefort, and Dr. Mabille, *Progrès Médical*, 29 août, 1885, for experiments at La Rochelle. See also Berjon, *op. cit.*, p. 36, sqq.

[2] The fact that the arm was *touched*, though with a blunt instrument, may suggest that the subsequent redness and even bleeding were the mere effect of

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examined, and his arms were then without marks. At four he fell asleep, and on his left (non-paralysed) arm the tracings stood out in red relief, and a few small drops of blood oozed from them. On the right, or paralysed, side, there was nothing apparent.

And this leads us to the phenomenon of self-suggestion on which I wish to dwell. I translate from Dr. Mabille's paper, read at the Congrès scientifique de Grenoble, 1885, and reprinted in the *Progrès Médical*, as already cited. "On August 5, 1885, at my visit, about 8.30 a.m., in presence of Dr. Ramadier, assistant physician of the asylum of Lafond (La Rochelle), and of M. Chauvelot, house-physician, I plunged V—— into somnambulism, and, anxious to check his sleeplessness, I said to him: 'This evening, at eight, you will say to the attendant, Ernest: "Ernest, come and help me to bed, I want to sleep." Then you will go to bed and you will sleep till five in the morning. During your sleep you will hear nothing, see nothing, feel nothing. You understand me, V——?' 'Yes, sir.'

"At about 7.57 p.m., V——, who was walking in the court-yard, stood still with a fixed gaze, underwent some slight convulsions of the face, as is usual with him when the moment fixed for a suggestion draws nigh,

contact. We do not, in fact, know how far vaso-motor reflex excitability may go in the production of phenomena analogous to the so-called "tache cérébrale," or red mark produced by pressure on the skin in many morbid conditions. It would have been more satisfactory had Dr. Mabille, &c., explicitly taken account of this possibility. Nevertheless, it certainly appears:—

1. That Louis V—— was so frequently touched in various ways that any tendency to *tache cérébrale*, or subcutaneous hæmorrhage, must have been observed; and if the marks lasted for *months* (as is recorded of the marks on the arm, Berjon, p. 36), he must have been covered with such marks.
2. That precautions were taken (p. 36) to prevent his touching himself for "some minutes" before the bleeding appeared. The *tache cérébrale*, so far as I know, appears within two or three minutes after the touch, if at all.
3. Professor Beaunis' experiments (*Recherches Expérimentales*, &c., Paris, Baillière, 1886, p. 29) on the production of redness and cutaneous congestion on Mlle. A. E. by suggestion, are confirmatory of Dr. Mabille's. Here also Professor Beaunis does not state that he tried whether other points touched without suggestion would become equally red, no doubt considering that it was obvious that Mlle. A. E., who leads an active life, was not thus affected. Fortunately, on Sept. 3, 1885, I had myself an opportunity of trying the experiment on this same subject. I quote from Mr. Gurney's note made on the same day:—

   "Mlle. A., hypnotized by M. Liébeault in about three seconds, and immediately afterwards *most severely* pinched by E. G. on the arm, without giving the slightest sign of sensation. Liébeault slightly pricked the knuckle of the middle finger of the right hand, and told her that a patch of redness about the size of a 50-centime piece would form there; and also that a similar patch would form on the corresponding

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and fell into the sleep, or rather into that intermediate state which M. Dumontpallier has described. His hyperæsthesia of the left side disappeared. He repeated to his attendants the words previously cited, and at 8 p.m. precisely slept profoundly. From that moment onwards, while I was unable to wake him, for he saw, heard, felt nothing, and the pressure of his hysterogenous zones had no effect, V—— spontaneously renewed this series of experiments to which he had been previously submitted. Thus, he pressed with his fingers on the balls of his eyes, as if to be thrown into lethargy, opened his eyelids to pass into catalepsy, rubbed the top of his head to pass into somnambulism, and entered on the following dialogue, putting the questions and making the answers himself.

"Q. You hear me? A. Yes, sir.

"Q. Give me your arm. A. Yes, sir.

"Q. V——, a quarter of an hour after you wake there will be a V on your arm at the place which I mark (here he marked a place on his arm), and it will bleed. You understand, I wish it to bleed. A. Yes, sir.

"Q. V——, count to ten and awake at *seven*.

> part of the other hand. The other hand was not pricked or touched in any way. F. W. H. M. also gave her a scratch on the arm, in order to see whether this would also become red after a short interval. She was then woke, and in about 15 minutes the patches had formed as predicted; that on the left hand being a little less red and distinct than that on the right. Half an hour after this both marks had completely disappeared. There was no redness where the scratch had been given. Mlle. A.'s hands were not under the strictest scrutiny throughout, but she was close to us, and talking during the whole time that elapsed between her waking and observation of the patches, and anything like continuous rubbing must, we think, have been noticed. M. Liébeault has complete confidence in her integrity, and all his experience of her goes to show that she retains no memory on waking of what has passed during her hypnotic sleep."

The following rules, I think, should be observed in experiments of this kind:—

1. Before asserting that a result is obtained by *suggestion alone*, repeat the experiment on the same subject with all the other circumstances, but without the suggestion.
2. Before asserting that a result is due to a *particular process alone* (as shutting or opening the subject's eyes, rubbing the top of the head, or special points on the head, &c.), let that process be repeated on a subject who does not know what to expect by an operator who has no theory on the subject whatever.

The rigid application of these rules might, I fear, reduce certain well-rounded theories to a somewhat lean and scrappy condition.

Professor Delbœuf (*Revue Philosophique*, August, 1886) has amusingly shown how readily one subject will imitate while entranced the hypnotic phenomena which he has observed in another.

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"V—— counts 1, 2, 3, 4, 5, 6, 7, seems to wake from his sleep; then continues to count 8, 9, 10 and stops. Loud snores then indicate that he is asleep. Then, about a quarter of an hour after this dialogue V—— was seized with the crisis which we usually observe in him when the stigmata have been suggested to him. At the end of this crisis we examined his arm and we saw a V, and the V was covered with blood. This bloody effusion was produced at a place where a V had been suggested by me on August 3, in the presence of Drs. Barth and Delarue, of La Rochelle, according to the method of Drs. Bourru and Burot.

"The same phenomena were twice produced during the same night, in the same place, and by the same procedure. V—— then awoke exactly at 5 a.m., without knowing that he had been asleep, and with the conviction that he had just been picking flowers in the garden of the asylum. We have here, then, a hæmorrhage produced during induced somnambulism, without any external agency, in the place of the pre-existing stigmata, by what I think I may call *auto-suggestion*. And this auto-suggestion (as well as all the other phenomena which I observed during the night of August 5-6 in the presence of Dr. Ramadier and M. Chauvelot) was of *cortical origin*, since the initiation of peripheral impressions was for the time suppressed. It was like the awakening and exteriorisation of sensations already stored up in the organism."

Here at last, I may observe incidentally, is the true explanatory parallel to the case of Louise Lateau. Here is a case where there is no pretence of miracle and no possibility of fraud; a case where the very mechanism of stigmatisation is laid bare from beginning to end, and the asylum-patient retraces the doctor's visit with the same reality of starting drops of blood with which the pious ecstatic renews the story of the Crucifixion.[1]

Passing from this exceptional state of profound entrancement to the commoner phases of hypnotism, I will next cite a remarkable case

[1] The difficulty of keeping abreast of modern experiment,—and the danger of confident negations,—are illustrated by the following passage from a little book of Dr. Maudsley's, entitled *Natural Causes and Supernatural Seemings*, (London, 1886).

"There is not on record," he says (p. 261), "a single well-authenticated case, nor is there any sound argument to justify the preposterous opinion, which has been broached by some quasi-scientific authors, that these stigmatic bleedings might be produced naturally by the exceeding and specific intensity of the imagination acting upon the particular areas affected. The supposition that the zinc [in a well-known case of fraud] was perforated by the intensity of the imagination, would be scarcely less preposterous." Whether an idea is "preposterous" or not is a subjective question, and depends on what goes before and what behind it in the speaker's mind. But "quasi-scientific" is a more objective term; and Dr. Maudsley's use of it here seems to prove that he has not had time to acquaint himself with the experiments of Drs. Bourru and Burot, nor with those of Professor Beaunis, contained in the *Recherches Expérimentales*

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of Dr. Pitres'[1], where the subject, in the somnambulic state, was able to suggest to herself that it was impossible to awaken her.

Dr. Pitres' subject, "Albertine," (already mentioned,) is liable to accesses of hysterical aphasia, which she greatly dislikes. One day Dr. Pitres suggested to her, in the hypnotic trance, that she would be unable to speak when she awoke, and would continue aphasic for 24 hours. The suggestion succeeded; all that day she could not speak. Some time afterwards Dr. Pitres again hypnotized her, and made the same suggestion. But she rebelled, and said that if he persisted in giving her this order she would not let herself be awakened. He did not believe that she could prevent him from waking her, and blew on her eyes and tried other accustomed means. Nothing would wake her, and he was obliged at last to promise that she should only be aphasic for five minutes. Then he woke her without difficulty. The experiment was repeated many times.

Here, then, we have a well-marked case of self-suggestion in the hypnotic trance itself. M. Pitres does not state whether Albertine can hypnotize herself, by a mere effort of will, in the waking state. From the account given, it rather appears that the trance itself has facilitated the self-suggestion,—that the same condition of supernormal susceptibility which renders her subject to the commands of her hypnotizer renders her subject also to a command of her own. And I would point out that this accords with my hypothesis that in self-suggestion the subject may be exercising on himself, from within, a force or influence truly analogous to the force or influence which the hypnotizer exercises on him from without.

Passing on, again, from the self-suggestion of the subject already hypnotized to the self-suggestion which throws the waking subject into trance, we find ourselves on a path of "yogism" and mysticism which would lead us far from the present discussion. I shall cite one case only, where the act of will is strongly marked,—the waking choice even determining the hallucinations which are to adorn the self-induced trance.

Dr. Liébeault[2] was acquainted with a "somnambule naïf,"—a deaf-mute of the name of Loué, who apparently, even before the scene which I am about to relate, was able to entrance himself by an effort of will. Dr. Liébeault told this man that the dead could appear to the living, and that, if he concentrated his mind on his father, his deceased

already cited. Applied to Drs. Bourru and Burot, such an epithet would be unwarrantably discourteous. Applied by Dr. Maudsley to Professor Beaunis, it would provoke a smile. But I repeat that it would be unjust to charge any such intention on Dr. Maudsley,—who wrote, it is clear, in mere ignorance of the recorded facts.

[1] Pitres, *Des suggestions hypnotiques*, Bordeaux, 1884, p. 54.

[2] *Du sommeil et des états analogues*, pp. 259, 282.

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father would probably appear, and that he (Loué) would remember the interview. "Le somnambule," says Dr. Liébeault, "se mit aussitôt à baisser la tête ; sa respiration devint bruyante, sa figure prit une expression sérieuse, et au bout de quelques minutes il se leva, l'œil fixe, et se dirigea vers la porte de l'appartement. Les témoins de son rêve et moi nous le vîmes tendre la main, déposer un baiser dans le vide,'—and, in fact, he went through the scene of an interview with the phantom of his evocation.[1] From that date he frequently repeated the process, firmly believing that it was veritably the dead who came. He profited also by his new-found power to procure himself imaginary interviews with living personages of a less sacred character. These interviews, though they also seemed real at the time, he always knew to have been mere hallucinations. But as regards the interviews with the dead, the kindly doctor, kinder than those unwelcome friends of Horace's *halluciné*,—allowed the poor man to rest in a belief whose destruction would have robbed him of his most valued joy.

'Pol me occidistis, amici,
Non servastis,' ait, 'cui sic extorta voluptas
Et demptus per vim mentis gratissimus error.'

Cases like this,—where choice and effort seem so deeply engaged, do certainly take us far away from the mere 'attaques de sommeil,' for instance, of the congenitally-unstable Albertine. They bring us face to face with the question : Is this *will* or *attention* of the subject's, which he uses to induce the trance, a new force introduced amongst the forces of his organism from some source independent of or pre-existent to that organism ? This, of course, leads us at once to the old problem as to the existence or non-existence of anything which may be properly termed a *soul*, independent of the known physical organism.

But, nevertheless, without directly grappling with such a problem as this, we can, I think, discern an instructive difference between this direct self-suggestion and the mere accidental stirring or gradual maturation of external excitations received in the past.

[1] A parallel instance of self-suggestion will be found in the *Archivio Italiano per le Malatie Nervose* for 1883, Part 4 : thus summarized in *Ann. Méd.-Psych.*, 1884, Vol. ii., p. 467. "Une fillette de dix-sept ans, à demi idiote, est, quelques heures avant la mort de son père prise d'un sommeil magnétique ; hallucinations célestes (?). On arrive plus tard à 'lhypnotiser ; les mêmes scènes se reproduisent, mais on cesse les expériences, la malade ayant tenté à la suite de l'une d'elles à se suicider. Actuellement cette jeune fille se met elle-même en état d'hypnotisme, et s'en tire par les méthodes connues qu'elle pratique spontanément, tant l'extase lui est devenue agréable. On est obligé de l'en déshabituer."

Dr. Charles Despine's patient, Estelle L——, could also induce and modify trance at will.—*Observations de Médecine Pratique*, p. 62, &c. (Anneci, 1838.).

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First, let us suppose that when Dr. Liébeault's deaf-mute Loué, for instance, throws himself into a trance by an effort of will, without any mechanical stimulus, that effort is really a new force, cognisable by us only on the psychical side, and imported into the sum of forces previously manifest. In that case the new force will be a vital force exercised by himself on himself; and its nearest apparent analogy will be to the assumed vital force which Dr. Liébeault can exercise on him.

Next, let us suppose that he does *not*, by this act of will, import any fresh force from an unknown plane of being. Nevertheless he effects, by unknown means, some kind of change in a previously-existing vital equilibrium. He transforms some kind of latent capacity into a force which, after intermediate steps unknown to us, ends by throwing him into that special condition into which the "vital influence" of an external operator can also throw him. May we not, then, here again conjecture, as the simplest way of correlating the two phenomena, that the self-suggestion which sends the subject into sudden trance, at the bidding of his mere caprice of the moment, may involve some disengagement within him of the same force which, when exercised upon him from without, is that very "vital influence" or "effluence," in whose real existence we have independent grounds for believing?

A few more words may make my meaning clearer. In most cases of successful hypnotism there is some amount of voluntary attention on the subject's part. He co-operates with the operator by "fixing his mind" on the process; and, in fact, some theorists have thought that his fixation of his mind was the sole cause of the effects which follow. But what makes him fix his mind? He *chooses* to do so; that is all we can say. And it is this apparent act of choice, this voluntary direction of the attention to a particular idea, which is the stronghold of those who maintain that there are mental processes within us which are not inevitably determined by physical antecedents. I am not arguing either for or against this view; I am only reminding the reader that this voluntary attention of the subject's is something separate from the mere reflex psychical response to the operator's suggestion, and that it is an element which enters in varying degrees into all inductions of hypnotic trance, except those effected by sudden shocks, or upon sleeping, unconscious, infant, or insane persons or animals. And the question is whether we can get a little deeper than this mere statement, whether we can detect an analogy between this idiosyncratic impulse, this "*réaction personnelle*," and any hypnogenous agency which a man can exert upon others than himself.

And to this question I tentatively reply that perhaps when I *attend* to a thing, or *will* a thing, I am directing upon my own nervous system actually that same force which, when I direct it on another man's

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nervous system, is the "vital influence" of mesmerists, or the "telepathic impact" of which Mr. Gurney and I have said so much. And when I say "directing the force on my own nervous system," I am not speaking of myself as a kind of *angelus rector* without and above my organism. How the force is generated is an open question in the case of the suggestion which I exert *within* myself as in the case of that which I exert *without* myself. But whether the essence of those acts of will, or of attention, be an illation and infusion of forces which do *not* pre-exist in my organism, or a concentration or conversion of forces which *do* so pre-exist, I urge that that essential element may be the same in the one case as in the other.

§ 17. Whatever, then, the precise explanation of this form of self-suggestion may be, it forms a step between mere mechanical hypnogeny and that "vital influence," which in its turn serves as the starting point for so many fresh perplexities.

For no sooner do we fix our attention on what we have defined as the *third class* of suggestions—suggestions made *mentally* by persons in the presence or proximity of the subject—than we recognise that the theory of vital influence, already assailed on one side by the advocates of a merely *mechanical* hypnogeny, is assailable also, on the side *further* from ordinary experience, by anyone who should choose to maintain that the true agency which travels from man to man is a cause unconnected with corporeal proximity—that is to say, that it is never the "pass," or the gaze of the eyes, or the touch of the fingers which sends the subject into trance, but always an agency of that unknown "psychical" kind which our evidence shows sometimes to accompany the exercise of intense *thought* or *will*.

The cases which bring this question into prominence are especially those where the influence of the mesmerist (as in Dr. Esdaile's mesmerisation of a blind man) has been exercised from the distance of some yards, by gazing steadily at the subject.

Are we to suppose that there was here a real ὀμμάτων ἀπορροὴ—a veritable efflux of nervous energy from Dr. Esdaile's eyes, which impinged in some physical manner on the blind and unsuspecting subject? Or was the transfer of a purely telepathic kind? and was the direction of Esdaile's eyes on the subject a mere aid to concentration of thought or will?

Mesmer would have said that a real efflux from the eyes was here the efficient cause. The writers in the *Zoist* (including Esdaile himself), so far as they faced the problem distinctly, would have made the same reply. And recently Dr. Baréty (*Force Neurique Rayonnante*, 1882) has attempted to show that actual "neuric rays" are emitted by eyes and fingers, which are susceptible of reflection from mirrors, concentration by lenses, &c. "Nous croyons," he says (p. 37), "qu'il n'y a aucune

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témérité à conclure . . que la force neurique . . n'est qu'un mode particulier de mouvement . qu'elle agit par l'intermédiaire de cette matière subtile . que les physiciens appellent *éther*."

I think that there *is* temerity in such a conclusion, and I do not like to see the *ether*—the *deus ex machinâ* of a certain school of modern theorists—dragged in, if I may so say, by the head and shoulders, to explain anything, whether physical or psychical, which particularly puzzles us. Yet I think that Dr. Baréty's experiments should be repeated, and I am quite sure that we can have no *à priori* certainty that such rays as he alleges do not exist.

On the other hand Professor Janet's experiments with Madame B. (and many older experiments,) seem to show that the action of thought or wish may overbear the influence of proximity, even when operator and subject are sitting side by side.

"Cette influence de la pensée de l'opérateur," he says,[1] "quelque extraordinaire que cela paraisse, est ici tout à fait prépondérante, à un tel point qu'elle peut remplacer toutes les autres. Si on presse la main de Madame B. sans songer à l'endormir, on n'arrive pas à provoquer le sommeil ; au contraire, si l'on songe à l'endormir sans lui presser la main, on y réussit parfaitement."

Professor Janet is, of course, alive to the danger of mere *suggestion* in such a case ; and (as already mentioned) he goes on to say that he thinks that this supposition is met in several ways, especially by the fact that in sleep thus induced by *will*, Madame B. was under the influence of the person who had really willed her from the next room—not of the person who had been placed near her, and to whom, if mere *suggestion* induced the sleep, that suggestion might naturally have pointed.

Again, in the experiments in which we obtained localised anæsthesia, of a single finger only, and in a manner which seemed to exclude both monotonous stimulation and expectant attention as operating causes,[2] it nevertheless appeared that it was necessary for Mr. Smith to concentrate his attention on the subject's finger, as well as to point his own fingers towards it. But the concentration of attention did not suffice without the physical approach of the fingers as well.

The approach of Mr. Smith's fingers, it will be remembered, was concealed from any ordinary cognizance of the subject's senses. But before we can be sure of a specific vital influence we have to guard ourselves against possible *hyperæsthesia* of the ordinary senses ;—and this is difficult to do while the operator, however hidden, is himself present with his subject. We must desire cases where his influence shall in

[1] *Bulletins de la Société de Psychologie Physiologique*, Vol. i., p. 27. (Paris, Alcan.)

[2] See *Proceedings*, S.P.R., Vols. i., iii., reff. in Index.

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some way persist after his own removal, or become embodied in some substance otherwise inert.

§ 18. The most direct way, therefore, of testing the reality of "vital effluence" would certainly seem to be the so-called "mesmerisation of objects." Personally, I have witnessed very few experiments of this kind which led to any positive result;[1] but (as Mr. Gurney and I have elsewhere insisted,) the testimony of Esdaile and others in the matter is too strong to be set aside without diligent attempts to imitate their proceedings. Yet even here new ambiguities present themselves as our knowledge of *deferred* and of *telepathic* suggestion increases.

Professor Beaunis, of Nancy,[2] gave some counters to Mlle. A. (already often mentioned) in her waking state, and said: "If you at any time put one of these counters into a glass of *eau sucrée* and drink it, you will go to sleep." Mlle. A. forgot the liquid thus ordered. She tried wine, water, wine and water, in vain; at last she tried putting the counter into a glass of *eau sucrée*, drank it, and went to sleep at once. The suggestion, that is to say, which had disappeared from conscious memory was still operative below the threshold of consciousness. But if a case like this had occurred before the efficacy of deferred suggestions was understood, it would probably have been thought by the mesmerists of the day that the counter had been mesmerised by Professor Beaunis' contact, and that the *eau sucrée*, for some inscrutable reason, was a liquid peculiarly qualified to draw that counter's mesmeric virtues out.

So much for the possible confusion between *deferred suggestion* and *vital effluence*. And if we introduce the hypothesis of mental or *telepathic suggestion*, such as Dr. Gibert's mental suggestion to Madame B., that she should look at a certain book at a certain hour, a fresh source of ambiguity is introduced. Suppose that Professor Beaunis had *mentally suggested* to Mlle. A. that when she put the counter into *eau sucrée* and drank it she would go to sleep; and that this suggested result had actually occurred. It would then look precisely as though the *eau sucrée* had undergone some mysterious change; whereas the only change would have been that telepathically impressed on Mlle. A.'s mind by the mental suggestion previously made.

It would, of course, be easy so to arrange the experiment as to avoid possibilities of this kind; but it is important that they should be recognised; for experimenters who have been fortunate enough to encounter the rarer phenomena of mesmerism, have often overlooked the precautions which are needful if any conclusive proof of one or other hypnogenous agency is to be acquired.

§ 19. It is plain that we have here arrived at one of the hardest

[1] See *Proceedings*, S.P.R., Vol. i., reff. in Index.

[2] *Recherches Expérimentales*, ii., p. 89. (Paris, Baillière, 1886.)

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knots in the whole inquiry. It resolves itself into this: Is there one and only one form of influence which is not communicated by the ordinary channels of sense? Or is there an influence which is felt by a percipient only when the agent is very near him? and another influence which the percipient feels equally when the agent is at an indefinite distance? Readers of *Phantasms of the Living* will see that this problem—there dealt with on its psychical side alone—presents itself in an urgent manner when we attempt to establish an analogy between our experimental results in thought-transference and those spontaneously-arising impressions or apparitions which sometimes coincide with the death or crisis of a distant friend. Our parallel halts in so far that we have not yet succeeded in experimentally obtaining (in the sense of the direct communication of a thought, image, or sensation from one person to another,) thought-transference otherwise than between persons in close proximity. In *Phantasms of the Living* this difficulty has been pointed out, but no complete solution has been attempted.[1] Speaking for myself only, I am inclined provisionally to accept the hypothesis that more than one form of force, or at least more than one form of receptivity, is concerned in the phenomena.

The action of medicaments at a distance—at a distance measured by inches—on Louis V—— and others, has led MM. Bourru and Burot to suggest, in a tentative manner, that there may be a zone, immediately surrounding the person of a hyperæsthetic patient, to which his hyperæsthesia extends; so that certain objects, when placed within that zone, exercise a direct effect on his nervous system.

Hypotheses somewhat similar have been suggested by various other experiments, and analogy seems to me to point (though not decisively) in this direction. On the other hand one obvious objection to the view, namely the complexity which it introduces into the conception of telepathic action, does not seem to me to be important. We have given the name telepathy to a mass of phenomena which have in common only the fact that they involve transmission of thoughts or feelings from one mind to another, without the agency of the recognised organs of sense. But it would be rash to go beyond this, and to assume that we have at once lit on a single, simply-acting force or energy. So long as we can detect forces only by their influence on *ourselves*, not on registering instruments, we are likely not only to ignore what may be the most characteristic action of each force, but to confuse together disparate forces which exert on *us* something of the same effect.

§ 20. But here, I repeat, we come to one of the most difficult points in the whole inquiry. What is the relation between the supersensory transmission of thoughts and feelings in close proximity, and a similar

[1] See Vol. i., pp. 96-97. Note the case of Mr. S. H. B.

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transmission between persons separated by the whole diameter of the planet?

In order to answer this question we ought to be able to compare very many cases of telepathy at varying distances. *Phantasms of the Living* contains, I think, almost all the cases on which reliance can be placed, and they are not yet enough to admit of an assured comparison between the phenomena which occur (1) between persons in contact; (2) between persons in the same room; (3) between persons in adjoining rooms; (4) between persons at a distance of less than a mile; (5) between persons many miles distant from one another. We do not know where the breaks, if any, occur in this chain; we do not know what is the effect, on the one hand, of a material obstacle such as a wall, or, on the other hand, of what I may call a psychical *rapprochement*, as, for instance, a previous familiarity on the agent's part with the scene where the percipient sits. But (speaking in a guarded and provisional manner) we may note the following points:—

(1) Contact seems generally to facilitate transmission of thought and feeling, and the induction of the hypnotic trance.[1]

(2) Presence in the same room seems to be essential to most of our definite experiments in thought-transference, and to the induction (in the first instance) of the hypnotic trance.

(3) Presence in an adjoining room has occasionally sufficed for a direct experiment in thought-transference; and occasionally for the reproduction of the hypnotic trance when it has been previously induced by the same operator.

(4) *Perhaps* hypnotisation at a distance is easier when the distance is (say) of one mile rather than ten. Perhaps, too, there is a certain difference in the quality of the subject's sensations when the mesmeriser is at a distance. Thus Mme. B. (in this resembling one at least of Mr. H. S. Thompson's subjects[2]) always professed, not only to feel who it was that was thus influencing her, but to have a vague sense as of that operator's *presence* in the room. This I heard her say repeatedly in the hypnotic trance (in which she seems always to tell the truth as to her own sensations), nor has she, as I understand, been ever mistaken as to whether it was M. Gibert or M. Janet who had sent her to sleep from a distance.

(5) Lastly, when the telepathic influence is exerted over long distances we have very much less of direct experiment, but

[1] I need hardly repeat here that cases in which contact is permitted are not in themselves a proof of anything beyond unconscious muscular pressure, if the image or action be such as any form of pressure can suggest.

[2] *Phantasms of the Living*, Vol. i., page 99, and see note.

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very much more of spontaneous apparition. Our distant cases include, as we have often pointed out, all varieties of objectivation, from the mere sense of presence, or the "mind's-eye" view, to the actual phantom in apparent bodily form. But though these distant cases offer many phenomena not hitherto observed in experimental or contiguous cases, they present also many points of contact. Sometimes, for instance, it seems to be the *will* of the distant agent which impresses his phantasm on the percipient—sometimes the death of a distant friend seems to produce a quasi-hypnotic effect on the percipient, which, in one case, at least, seems to have amounted to a sort of agitated trance.[1]

Now there is, of course, a temptation to simplify the problem by assuming that in all these cases of supersensory transmission a force is acting which in the first place is identical, cognate, or correlated with known forces, and in the second place is the same for all supersensory action whether in contiguity or at great distances. Such expressions as "brain-waves" (Knowles), "mentiferous ether" (Maudsley), "force neurique rayonnante" (Baréty), "ondulationnisme" (Perronet)—to which many others will doubtless ere long be added—testify to this natural, though premature, desire to ticket or identify a force which (in the opinion at least, as I think I may say, of those who have expended most pains on tracing its effects) cannot at present be correlated with nerve-force, or with magnetism, or with ethereal vibrations of any kind, by any true physical demonstration.

And here, again, there is a temptation to the attainment of something of apparent simplicity by a just opposite road. We may say that telepathy is a *psychical* agency, and that there is an impassable gulf between all agencies which can be classed as *physical* on the one hand, and on the other hand, all agencies, whether apparently operating in proximity or at a distance, which we can as yet cognise on the psychical side alone.

But this view seems to me to involve a metaphysical, as those other views involved a physical assumption. I do not like to assume that any effect perceptible to human senses is without a physical cause of some kind—a cause, that is to say, which intelligences of adequate elevation could cognise objectively and deal with mathematically, as we deal with those forms of matter and force which our minds can at present embrace. Such physical cause or basis may no doubt be so remote from our ordinary physical conceptions that the philosopher may be justified in leaving it altogether out of the question, and in dealing with the interrelations of thought and emotion exclusively on the

[1] *Phantasms of the Living*, Vol. ii., p. 42.

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psychical side; but it seems to me that telepathy forces us into a position where it is no longer safe to assume any sharply-defined distinction of mind and matter,—where we must rid ourselves of every metaphysical preconception and look to experiment and observation alone.

We must remember that it is only quite recently that we have frankly accepted a physical basis or concomitant for all the operations which go on within our own minds. It was in this century that Lord Jeffrey maintained that "there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs, except in its perception of material objects, or in the spontaneous movements of the body which it inhabits." And even Mill, as is well known, regarded the concomitance of a neural change with *all* mental changes as an open question. We are now pretty well agreed that such concomitance does always and inevitably subsist within us; but we still speak of the interaction of thought and emotion– of the "world of mind"—as of a realm, or of operations, where no physical basis must be assumed. I think it possible that the facts of telepathy may compel us to extend our conceptions of physico-psychical concomitance, and to face the supposition that though forces may exist, and agencies operate, which the ordinary materialistic view altogether denies, yet these also may be correlated—though above the limit of our intelligence—with the force and matter with which our mathematical science already deals.

It will, of course, be apparent from the line of argument here adopted that I do not consider that the problem of the relation of *near* to *distant* supersensory transference admits at present of even approximate solution. Our recorded instances must receive many in addition, —nay, our notions of matter and of mind must pass through many a phase as yet unimagined,—before we can tell in what degree the mesmerist's gaze across the room resembles that strange and mighty impulse which carries the dying father's image across seas and continents to his unexpectant child. All that I have suggested is that there is a presumption in favour of *some* connection, *some* continuity; that the mingled similarity and dissimilarity of the phenomena at differing distances is such as may lead us to conjecture the joint action of cognate causes in varying proportion—of causes cognate but not identical, implying no single capacity of percipience, no single energy of communication.

§ 21. I can but note these points, on which fuller knowledge may come in time. For the present it must suffice to have endeavoured, in the *first* place, to supply additional evidence of the existence of telepathic hypnotism, or hypnotic suggestion at a distance; and, in the *second* place, to trace a kind of series or gradation—often interrupted, indeed, and largely hypothetical—between the simplest and commonest, and the rarest and strangest modes of hypnotic influence.

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Some of the hypotheses which I have thus advanced may be *erroneous*, but they cannot justly be said to be *gratuitous*. For they are advanced in order to correlate certain actually-observed phenomena, which must bear *some* relation to each other, and whose relation can only be properly discussed if some tolerably clear scheme is set forth as a basis for such discussion. I have cast, therefore, the suggestions of the preceding pages into a tabular form.

There are, indeed, several items in this scheme as to which the evidence seems to me at present inadequate. But I include these phenomena simply because the authority of competent physicians on the whole supports them. And by competent physicians I mean not men who, though competent in other lines, have made few or no hypnotic experiments, but men who having shown medical or physiological ability of a more general kind, have also taken real pains to experiment for themselves in this special direction. I am sorry to quote so small a proportion of English names; but the fact is that during the last ten years this inquiry has been very eagerly pursued by French *savants*, with some success also by Germans and Italians, but by Englishmen hardly at all. I have no controversial aim; and I desire to see the experiments of the French schools repeated and analysed by as many English men of science as possible.[1] But until such experiments are actually made, and reason shown for explaining the results otherwise than as the school of the Salpêtrière (for instance) explains them, I feel bound to disregard the mere *à priori* negations of men who have done little work of the kind themselves, and are not always familiar with the work done elsewhere. The difference in this matter between England and France is one which a few years will probably do much to remove. In England a practising physician is even now half ashamed of knowing much about hypnotism; the savour of charlatanism still hangs about the topic; and if he writes a book in which he has to allude to it, he shows more anxiety to disclaim error than to discover truth. Much the same was the case in France, till Charcot, Richet, Beaunis, and a few other well-known men took the subject up,—and in Germany, till Heidenhain took it up. The fashion has now changed, and the danger in France is now rather of over-eagerness to register new extensions of the fascinating inquiry. Under such circumstances, it seems plainly the duty of an English student to set forth the outlines of the subject as it stands at present, not vouching hastily for results as yet unconfirmed, but illustrating them whenever he can by some observation or reflection of his own. Such is the course which I have tried to follow; and the more pains which my

[1] The schools of Nancy, Bordeaux, the Salpêtrière, and the Pitié are on many points strongly opposed to each other. I consider such opposition as a necessary and advantageous characteristic of this stage of the inquiry.

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instructed readers may take to demolish my "provisional scheme," the more light will there be thrown on a subject which greatly needs it.

§ 22. PROVISIONAL SCHEME OF MODES OF INDUCTION OF HYPNOTIC PHENOMENA.

I. *Massive nervous stimulation.*	Sudden danger; cataplexy of insects; fascination of birds, &c. Sudden noise or light; esp. with hystero-epileptics. Sudden grief: "stupor attonitus."
II. *Monotonous stimulation.*	Tactile; fanning and perhaps manual passes. Auditory; tick of watch, &c. Visual; prolonged gaze on bright object; or human gaze.
III. *Localised stimulation; i.e.*, stimulation of ordinary kinds, but applied to abnormally sensitive points.	Mere touch on unaccustomed parts; holding heads of hens, &c. Braid's upward and inward squint (a kind of strain, or intra-orbital pressure.[1]) Pressure on hypnogenous points or zones, esp. in hystero-epileptics.
IV. *Verbal suggestion; i.e.*, localised stimulation of special tracts of a brain rendered previously sensitive as a whole, or locally.	Command of operator, in waking-life, in trance, or in "veille somnambulique." Deferred commands: (suggestions à longue échéance).
V. *Specialised stimulation; i.e*, from inanimate substances, in contact, but not normally active in this manner; and from non-vital forces.	Medicamentous substances in contact. Metals in contact. Magnets. Electricity: (unless the rare hypnogenous effect of an electric shock falls under Class I.).
VI. *Self-suggestion*, *i.e.*, determination by causes inherent in the organism.	Hereditary hysteria, &c., as it were the deferred suggestion of ancestors. Idiopathic somnambulism. Self-induced or self-prolonged trance.
VII. *Specialised stimulation from inanimate substances in proximity.*	Experiments of MM. Bourru, Burot, Mabille, Richet. Medicaments and metals without contact.
VIII. *Vital or mesmeric stimulation.*	Touch, of all or certain persons, not necessarily on hypnogenous zones.[2] Passes without contact, or mere proximity or human gaze.[2] Mesmerised objects.
IX. *Mental suggestion without contact, or telepathy; perhaps in more than one form.*	Exercise of will without touch or gaze, in the same or adjoining room, or at longer distances. Tendency to feel presence and to see phantasm of distant operator; link with quasi-percepts telepathically originated by death or crisis of distant agent.

[1] This must be *prolonged*, so comes also under Class II.

[2] Both these methods appear also in Class II.

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I must once more remind the reader that the above scheme is expressly intended to be *criticised*, not to be accepted as definitive. Truth, as we know, emerges more readily from error than from confusion, and it may be useful thus to substitute even the rudest ground-plan for the unmapped wilderness of modern hypnotic experiment. All the phenomena which I cite are phenomena which have received strong attestation. If they do not exist, let them be disproved in detail. If they do exist they must bear some relation to each other; they must be capable of some sort of logical arrangement. I shall be grateful for any hints which may enable me to improve this firstrough sketch. In the meantime I may at least hope that the "*sommeil à distance*," with which this paper primarily deals, no longer appeals to the reader as an entirely *isolated* hypnotic marvel. It has been connected—by questionable and imperfect links, it may be—but still connected with a great number of other scattered hypnotic experiments, which were themselves, when taken alone, scarcely less strange and incomprehensible.

§ 23. Before concluding this paper I must briefly describe certain other phenomena which I witnessed in the case of Madame B. Besides the fact of their occurrence in the same subject they have thus much of connection with the topics on which I have so far dwelt, that they tend to show how premature at present is any attempt to define the limit of hypnotic phenomena. For the attempt to restrict the nervous changes induced to catalepsy, lethargy, and somnambulism, is, as I hold, equally misleading with the attempt to restrict the methods of hypnogeny to monotonous stimulation and sudden shock.

Madame B. exhibits a phenomenon which is curious enough, even if it be a mere reflection from the mesmeriser's expectation; while if (as M. Janet holds) it is entirely spontaneous, the interest attaching to it is very great indeed. When hypnotised she falls, like most subjects, into a deep lethargic sleep, but, even if left undisturbed, she does not remain long in that condition. She passes through a kind of circular series of changes, sometimes more and sometimes less distinct, which bring her back again into lethargy, only to renew the series once more.

M. Janet has since described these phenomena at length in the *Revue Scientifique*, May, 1886.[1] I will not attempt to reproduce his article, but will give, in a slightly expanded form, the notes taken at the time by Dr. Myers and myself, adopting M. Janet's schematism as our basis. The remarks within square brackets show the degree of confirmation which each point received in our presence. Her first state is—

1. *Léthargie* (*vraie*).

Sight, hearing, and sense of pain absent.

[1] See also M. Richet in *Revue Scientifique*, June 12.

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[This appeared to be so, but I did not think it needful to ask for severe tests of anæsthesia.]

Firm pressure on different parts of arm induces contraction of muscles of hand and arm, removed by friction. [Yes.]

If a magnet is applied (say) to contracted left arm, contraction is transferred to right side; and this dextral contraction can then only be removed by stroking the *left* arm, viz., the arm originally contracted. [Yes, but this variety of the familiar experiments of Charcot, &c., in transference of hemianæsthesia, is of course liable to the usual suspicion of being a mere result of *suggestion.*] In one experiment of this kind in our presence the little finger of one contracted hand was not relaxed by the magnet; and, correspondingly, the little finger of the hand to which the contraction was transferred was not stiffened.

2. *Léthargie cataleptique.* Persistence of attitudes impressed from without, and slight contracture of muscle on deep pressure. [This state resembles spontaneous idiopathic catalepsy more closely than do the next two.]

3. *Catalepsie léthargique.* Persistence of *movements* externally initiated. [Simple movements of arm persisted; not so a less familiar movement of foot. I doubt whether this stage can be fitly classed separately.]

4. *Catalepsie, (vraie, ou catalepsie de Charcot.)* Eyes fully open and staring: suggestion of some familiar action (as folding of hands in prayer, raising of finger in command) carried out automatically through various stages, habitual behaviour in church, &c. In this state she was subject to the "prise du regard," *i.e.*, if M. Janet looked at her steadily, and then moved his head, she followed with her eyes. She did not follow the eyes of other persons. But M. Janet believes that if he touches a neutral person,—or if he touches A and A touches B, and B touches C, and C gazes on the subject, then the subject's eyes follow C.'s so long as M. Janet is touching A. [We tried this repeatedly, but the result was doubtful—the subject could not be kept long enough in the required state to eliminate chance.]

5. *Catalepsie somnambulique.* Susceptibility to hallucinations, (subject agitated when told that there are parrots before her), but no power of speech. [Another state as to whose separable individuality I feel much doubt.]

6. *Somnambulisme cataleptique.* Susceptibility to hallucination. M. Janet holds her hand and tells her that there are birds; she calls "Petit! petit!" Here again M. Janet believes that she only sees the birds when he holds her hand, or forms one of a chain. [The hallucinations provoked were so slight that I could not be sure of this. The word "cataleptique" hardly seems in place here.]

7. *Somnambulisme (lucide).* In this stage her eyes are shut, but her

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demeanour is alert and lively. She talks spontaneously, exhibiting a childlike character and freedom from shyness not seen in her normal state, and contrasting oddly with the patient, stolid cast of her features.

8. *Somnambulisme léthargique.* In this state contracture is evoked by superficial friction. Suggestions are still possible, but there is apparent sleep instead of apparent waking.

9. *Léthargie somnambulique.* In this state she dreams aloud; imagines that she visits distant places, &c.; and M. Janet loses control over her. From this condition she relapses into the "true lethargy" with which we began.

§ 24. The order in which I have given these states is that in which we saw them follow each other. I perceive that M. Janet in his article (*Revue Scientifique*) gives them in the opposite order; and says, "the pressure of the thumb makes the subject pass through all the states, proceeding from lethargy to catalepsy, while blowing on the eyes makes her pass through them in the direction of catalepsy to lethargy."

Such a distinction as that, I am inclined to think, must be in great measure accidental; some slight association, once set up, probably tends to repeat itself more and more readily. And with regard to all these variations, it certainly seemed to Dr. Myers and myself that they must not be insisted on in detail; that the only fact of clear importance was the subject's tendency to pass spontaneously through a cycle of nervous changes, which was no sooner ended than it began again. A similar tendency to recurrent states has been observed and systematised by Charcot and P. Richer among the hystero-epileptics at the Salpêtrière.[1]

§ 25. M. Janet concludes his description of Madame B.'s phases by some reflections which I will here summarise. "Some observers accord great importance to the phases of hypnotism, and consider them as states entirely distinct; others see in them only insignificant phenomena produced artificially by the operator. Madame B.'s case shows us that the three primitive states (*i.e.*, lethargy, catalepsy, somnambulism) are not of fundamental importance, since other states can be induced, in number as yet undetermined, which are equally definite and durable. On the other hand, I cannot regard these phases as mere accidents; they arise too naturally and recur too regularly for such a supposition. I consider them as stages of sleep *(degrés de sommeil)* through which the subject passes in going to sleep and waking up,—stages at which it is sometimes possible to arrest her. At each different stage, perhaps, different parts of the brain are excited or paralyzed. During lethargy the brain seems entirely paralyzed, and the contractures of this period seem to be mere exaggerated spinal reflex movements; then the different cerebral centres seem to awake gradually

[1] *La Grande Hystérie*, Dr. Paul Richer, second edition, Paris, 1885. See page 147, &c.

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during the succeeding phases; the muscular sense, touch, sight, hearing, —then, during the somnambulism, the regions which preside over intelligence and will. Thus all the phases of hypnotism, or even of [spontaneous] somnambulism which have yet been observed, may merely represent different stages of this sleep at which different subjects happen to be arrested."

I concur with the general drift of these remarks,—more philosophical, as it seems to me, than any attempt to fit the constantly-varying phenomena of hypnotism into one Procrustean scheme. Still, in my view, we need to go much further still. We need to free ourselves altogether from the notion that the stages which a hypnotized subject passes through are necessarily *degrés de sommeil*,—that his changes are changes undergone *en s'endormant et en se réveillant*,—or even that there is likely to be between stage and stage any familiar connection, any discernible filiation at all.

But with this hint I must conclude. As I have here tried to analyse some of the methods of hypnogeny, so also I should have liked to try to analyse some of the hypnotic phenomena thus induced. But this paper is already full enough of disputable matter. My hope must be that it may stimulate other observers to fresh experiment,—though they, like myself, may spell out but a few words of the ciphered message in which hypnotism writes for us the secret of the psychical mechanism of man.

ADDENDUM.

Since this paper was in print, I have come across a scheme of hypnogenous agencies in Dr. Chambard's tractate, *Du Somnambulisme en général*, Paris, 1881. Dr. Chambard has since been selected to write the article on "Somnambulism" in the new *Dictionnaire des Sciences Médicales*, and even in his "thèse" of 1881 he speaks from a good deal of experience in several hospitals. I translate his scheme below. As compared with the scheme which has been suggested in this paper both its concordances and its variations may afford us some instructive hints.

Chambard's Scheme of hypnogenous processes.

A. Empirical or mixed processes, termed magnetic.

B. Analytical or simple processes.

1. Psychical action.

   α. Affective. Faith. Expectant attention. (Carpenter.) Moral emotions and expressions. Expressive gaze.

   β. Intellectual. Mental inertia. Fatigue of the attention.

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2. Sensorial action.
   - α. Suppression of sensorial excitations. Simple closure of eyes. (Lasègue.)
   - β. Monotonous sensorial excitations, feeble and repeated.
     - *a.* Of sight. Fixed gaze on an object, brilliant or not.
     - *b.* Of hearing. Musical tone or noise. Watch (Weinholt,) diapason, &c.
     - *c.* Of touch. Contact. Pressure. Temperature. Frictions. Shocks. (Heidenhain.)
     - *d.* Cutaneous excitation determined by passes. (Heidenhain.)
     - *e.* Excitation of erogenous regions; ovarian pressure.
3. Mechanical action.
   - α. Modification of intra-ocular pressure.
     - *a.* By convergence of the optic axes.
     - *b.* By compression of the eyeball.
4. Physical actions. Action of magnet. (Landouzy.) Metallic plates. Static electricity.
5. Toxic action.
   - α. Anæsthetics; Ether, chloroform, &c.
   - β. Inebriants; Alcohol, haschisch, &c.

Now on this scheme I have to remark as follows:—

A.—A number of empirical methods are avowedly left unexplained.

B. 1.—I object, as already explained, to classing "psychical action" separately, as if it were altogether disparate from other effects produced on the nervous system. Such a word as "Faith" tells us nothing, in this connection. Moreover, I do not believe that "mental inertia" produces the hypnotic state at all. And "fatigue of the attention" should surely come under "monotonous excitations of hearing," if, as I suppose, Dr. Chambard means the kind of fatigue which is induced by prolonged listening to the ticks of a watch.

B. 2. α.—"Simple closure of eyes" surely does not produce the hypnotic trance on subjects who have never been previously hypnotized. I should rank it as one of the suggestions which succeed only when *recognised as suggestions*, not as in itself an efficient cause of trance.

B. 2. β. *a* and *b*.—Massive stimulations are here confounded with monotonous stimulations. The gaze at an electric light, or the sound of a gong, is not a *feeble* stimulus, and need not be *repeated*.

B. 2. β. *c*.—*Pressure*, again, is not necessarily a "feeble" or "repeated" form of excitation. Some of Dr. Chambard's own

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cases (Appendix to his tractate) strikingly illustrate the effect of a single touch on abnormally sensitive regions in a hysterical patient. I doubt the hypnogenous effect of changes of *temperature*. A cold wind will often *wake* a subject, (Esdaile, Elliotson,) but I do not know any cases where a mere rise or fall of external temperature has induced trance.

B. 2. β. *d*.—I have already maintained that on whatever cause the efficacy of "passes" may depend it is certainly not on *monotony* alone. The "passes" may often be varied and interrupted without appreciable detriment. I believe their efficacy to depend partly on the "vital influence" of the old mesmerists, partly on suggestion, and partly on pressure upon hypnogenous zones. Of course, monotonous movement, darkness, silence, and the mere effluxion of time, may contribute to sending the subject to *sleep*. But something more than monotony will generally be needed to cause that sleep to merge into hypnotic trance.

B. 2. β. *e*.—This sub-class is plainly referable not to monotonous excitations but to pressure on specially-sensitive zones.

B. 3.—I agree with Chambard that the fatigue induced by convergence of axes resembles the pain felt on compression of the eyeball. I should class both under the heading of hypnogenous zones. Heidenhain's view that Braid's squint operates by altering the cerebral circulation, (which I shall not here presume to contest,) is not inconsistent with this classification. It is perfectly possible that some or all of these localised pressures act by means of a mechanical influence on the circulatory system as well as by an influence of unknown character on the nervous system.

B. 4.—Chambard's "actions physiques" are included in my class of "specialised stimulations." I do not like his term; for his "sensorial" and "mechanical" actions are physical too. A fresh term is plainly needed to express such actions on the human frame as that of magnets and those of metals in contact (beyond mere effects of weight, temperature, &c.). Pending the suggestion of a more suitable term I should call such actions *supernormal*, as being unusual, but indicative of a more penetrating—not a diseased—sensitiveness on the subject's part.

B. 5.—I entirely agree that the effect of these toxic agencies is *analogous* to the hypnotic trance. But I do not think that trance dependent on *chemical* changes (deficient aëration of blood, diffusion of volatile ethers, &c.,) should be classed as *coördinate* with the trance induced by the hypnogenous agencies

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already discussed. In all of those classes the nervous change has been induced without the introduction of any material substance into the body; and though it is very difficult to define what agencies are to be called hypnotic, it seems plain that here at least a line can be drawn, and that changes dependent on wounds or poisoning—on mechanical rupture or toxic alteration of the tissues or fluids of the body—cannot be classed as hypnotic without making the word too vague to be of any real service.[1]

Finally, it will be observed that Chambard, while decisively admitting several non-telepathic agencies which I have noted as questionable, (magnet, electricity, &c.), has, of course, nothing to say as to telepathic influences. His scheme, therefore, is in my view inadequate to cover the cases adduced in this paper.

I must, therefore, consider Dr. Chambard's arrangement as *shallow* (in his want of coördination of psychical and physical agencies); as *confused* (in his cross divisions, as I have indicated, of the agencies which he does adduce;) and as *incomplete* (in his entire omission of hypnotization at a distance). But I say this with all respect for what seems to me to have been nevertheless a serviceable forward step: If my own classification is thought to be in any degree an improvement, this is due to the rapid advance in hypnotic experiment which the last five years have seen, and more especially to new light thrown, (as I venture to claim,) on all these topics by the establishment of telepathy as an actual and efficient cause. If my proposed scheme should so far subserve precision of thought as to lead to its own speedy supersession by some truer conspectus, its object will have been sufficiently attained.

[1] I may perhaps protest here against an occasional use of the word "hypnotic," both in French and English medical writings, as a mere equivalent for "soporific" or "anæsthetic," in speaking of drugs, &c. This is to obliterate the whole distinctiveness of a word to which it should be our aim to give all the precision possible.

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VII.

THE CALCULUS OF PROBABILITIES APPLIED TO PSYCHICAL RESEARCH. II.

By F. Y. Edgeworth.

In a former paper I stated the principal problems which this subject presents, and I showed that they are reducible to, or at least involve the following:—The total number of trials being N, the chance of success at a single trial u, $Nu =$ (as near as may be) m, the number of successes $m+n$ (m and n both integers); what is the probability of at least that degree of success being obtained, supposing that chance is the only agency, under a *régime* of pure chance. I stated that the solution of this problem depends upon the summation of the last $N-(m+n)+1$ terms of the binomial $[u+(1-u)]^N$. As the approximate value of that sum I put the expression—

$$\frac{1}{2}\left[1-\frac{2}{\sqrt{\pi}}\int_0^T e^{-t^2}dt\right], \text{ where } T=\frac{n}{\sqrt{2u(1-u)N}};$$

a formula of very general application in analogous inquiries. The conditions on which its validity depends are for the most part fulfilled in statistical investigations. They fail, however, in many of the problems which the Editors of this journal have submitted to me. It appears desirable, therefore, to take account of cases which lie outside what may be called the normal case and are not amenable to the received formula above written. Accordingly I propose[1] in this paper, first (I.) to take a theoretic survey of the methods appropriate to different conditions; and then (II.) to diagnose and prescribe for the various cases which arise in practice.

I.

A distinction of great theoretical importance is between those cases where (*a*) the binomial series which is to be summed (the binomial locus the area under which is to be evaluated) may be adequately represented by a probability-curve according to a well-

[1] For an extension of the following theory, the reader is referred to the writer's paper on "The Law of Error," in the *London Philosophical Magazine*, April, 1886.

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known theory[1] of Laplace and Poisson, and ($\bar{a}$) those cases where such an ancillary probability-curve is not available.

a. In order to see how far a law extends, the proper course is to ascend to the sources from which it is derived. In this investigation let us take Poisson[2] for our guide. Let us remount to the rugged heights from which he reasons down to the simple normal case and the received formula. While following in his steps let us adopt his notation; observing that his μ is our N, his p is our u, his q is our $(1-u)$, his m is our $m+n$, his n is our $N-(m+n)$. And we may confine ourselves to the case in which $(N+1)u$, or $(\mu+1)p$, is an integer, both because no theoretical difficulty is presented by the absence of this condition, and because whatever difficulty may arise can, in the researches under consideration, be avoided by taking N properly. This being conceded, we shall have Poisson's ρ very nearly equal to our n, and his r equetable to our T.

It is shown by Poisson that the probability of obtaining at least m successes, at most n failures, is represented by a fraction of which the numerator and denominator are integrals; the subject of integration being the same for both, but the limits different: the subject of integration is of the form $He^{t^2}(h' + 2h''t + 3h'''t^2 + \&c.)$, where $h'\ h''\ h'''\ldots$ are respectively of the order $\frac{1}{\sqrt{u}}\ \frac{1}{u}\ \frac{1}{u^{\frac{3}{2}}}\ \ldots\ldots$; if m n and μ be regarded as of one and the same order. For instance h' is $\sqrt{\frac{2(\mu+1)n}{(m+1)^3}}$ and h'' is $\frac{2(\mu+1+n)}{3(m+1)^2}$. Here, then, is presented a first condition upon which the applicability of the Laplace-Poisson analysis depends: namely, that m and n should be large enough to allow of their higher inverse powers being neglected.

A second condition is imposed by the inferior limit of the numerator integral. It is

$$\pm\left[n\ log.\frac{n}{q(\mu+1)} + (m+1)\ log.\frac{m+1}{p(\mu+1)}\right]^{\frac{1}{2}};$$

a quantity which Poisson calls k. In the case before us, where n is supposed less than $q(\mu+1)$ (the number of failures less than what might have been expected), the sign[3] of k is positive. The superior limit of the numerator integral is $+\infty$. The limits of the denominator integral are $\pm\infty$.

If we perform the work of integration for the numerator, so far as is possible by the ordinary formulæ of reduction, we shall find that the result consists of two parts, one under, and the other outside, the

[1] The analysis to which I allude is well expounded by Mr. Todhunter at p. 576 of his History.

[2] See Poisson, *Recherches sur la Probabilité*, &c., Chap. iii.

[3] *Cf.* Poisson, No. 76.

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sign of integration. The former involves k only as its limit. The latter is affected by k in this wise :—

$$He^{k^2}\tfrac{1}{2}\Big[2h''+3h'''k+4h^{iv}(k^2+1)+\&c.$$

The denominator is independent of k, being of the form [1]

$$\sqrt{\pi}\,H\,[h'+\tfrac{3}{2}h'''+\&c.].$$

Hence the quotient will be of the form

$$\int_k^\infty e^{-t^2}dt\Big[\,l+l''+l^{iv}+\&c.\,\Big]+e^{-k^2}\Big[\lambda'+\lambda''k+\lambda'''k^2\ldots.;$$

where the l's and the λ's descend with the same rapidity as the h's. The convergency of the first part of this expression is unaffected by the size of k. But the convergency of the portion outside the sign of integration is destroyed if $\lambda''k$, $\lambda^{2'''}k^2$, &c., do not constitute a descending series.

At this point a new division presents itself; between (β) those cases where the data allow us to attain the degree of precision usually ascribed to the Laplace-Poisson method: such that fractions (of the sought probability) which are of the order $\frac{1}{\sqrt{\mu}}$, or more correctly $\frac{1}{\sqrt{pq\mu}}$, are retained; and ($\bar{\beta}$) where the regulation degree of precision is not attainable.

$a\beta$. To satisfy the condition imported by β, it is necessary that the series λ', $\lambda''k$, $\lambda'''k^2$, should descend as rapidly as h' h'' h'''; therefore that k should not exceed the order of unity. To satisfy this requirement, it is a necessary and sufficient condition that ρ (the excess of successes over the number most probable on hypothesis of mere chance) should not exceed the order $\sqrt{\mu 2pq}$. That this is a sufficient condition may thus be shown. [2] Put

$$k^2=\Big(q\,(\mu+1)-\rho\Big)\,log.\left[1-\frac{\rho}{q\,(\mu+1)}\right]+\Big(p\,(\mu+1)+\rho\Big)\,log.\left[1+\frac{\rho}{p(\mu+1)}\right]$$

where $\rho=m+1-p(\mu+1)=(\mu+1)-n$.

Expand k in ascending powers of ρ; and, putting [3] with Poisson

$$r=\frac{\rho}{\sqrt{2pq\,(\mu+1)}},\text{ you have }k=r\left[1-\frac{(q-p)}{3\sqrt{2pq\mu}}r+\tfrac{2}{3}\frac{p^2-pq+q^2}{2pq\mu}r^2-\&c.\right.$$

[1] See Poisson, *op. cit.*, p. 193.

[2] The proof here given presupposes that $\sqrt{pq\mu}$ is considerable; as it is except when p or q are very small. The proposition is, however, independent of this condition. See my paper "On the Law of Error," *Phil. Mag.*, 1886, pp. 313, 320.

[3] *Op. cit.*, No. 78.

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Now, as ρ is of the order $\sqrt{2pq\mu}$, r (our T approximately) is of the order unity. Hence the terms of the above written expansion above the second are of the order $\frac{1}{pq\mu}$, and therefore may be rejected. And the value of k thus presented is of the order unity. Again, while this limitation of the size of ρ is sufficient, it is also necessary. For, differentiating k^2 with regard to ρ, we observe that the first differential is continually (from the zero of ρ and k upwards) positive. Hence k (taken positively) continually increases with the increase of ρ. Hence, if k is as large as is allowable when ρ is of the order $\sqrt{2pq\mu}$, k will be too large when ρ is above that order. Hence the stated limitation of the size of ρ is not only sufficient, but necessary.

Here arises a new principle of division: according as (γ) we do not insist upon the full degree of precision which is attainable, but are content with an approximation which does not take account of terms of the order $\frac{1}{\sqrt{\mu}}$; or ($\bar{\gamma}$) we seek the full degree of accuracy to which we are entitled: an approximation true up to the order $\frac{1}{\sqrt{pq\mu}}$, rejecting only terms of the order $\frac{1}{pq\mu}$.

$\alpha\beta\gamma$. In the first case we may reject the second term of the above written expansion of k. For it is evidently of the order $\frac{1}{\sqrt{pq\mu}}$. We may reject also the unintegrated portion[1] of our result. For that portion is an expression of the form $\bar{e}^{r^2}\lambda'$, where λ' is of the order $\frac{1}{\sqrt{\mu}}$. And it may be shown that for the values of r with which we are concerned, the ratio of $\bar{e}^{r^2}$ to $\frac{1}{\sqrt{\pi}}\int_r^\infty \bar{e}^{t^2} dt$ (the integrated portion of our result) is small in comparison with the order $\sqrt{\mu}$. For, as to values of r between 0 and 1, the ratio in question ranges from 2 to $\frac{3}{8}\sqrt{7}$. And for values of r above unity, the integral may be written (by an approximation due to Laplace):—

$$\frac{1}{\sqrt{\pi}}\left(\frac{1}{2r} - \frac{1}{4r^3} + \&c.\right)\bar{e}^{r^2}$$

Hence the ratio in question is of the order r, which by hypothesis is small with regard to $\sqrt{\mu}$. Hence, in every case (under $\alpha\beta\gamma$) the unintegrated portion of the result may be rejected. And we have thus the formula given in the former paper; which, as the last degree of accuracy is not required for the purpose in hand, the elimination of chance, may be regarded, I think, as the best formula for the case usually occurring in statistical inquiries, the normal case.

[1] Above, p. 191. Poisson, p. 196.

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To exhibit the character of the assumptions made, let us consider the following example. Let μ be 999, p $\frac{1}{10}$, q $\frac{9}{10}$, $p(\mu+1)$ 100, and m 126. Then $\rho=27$. $r^2=\frac{\rho^2}{2pq(\mu+1)}=\frac{729}{180}=4\cdot5$ $r=2\cdot12\ldots$ The value in the tables for

$$\frac{1}{\sqrt{\pi}}\int_r^\infty e^{-t^2}$$

is ·0014. In order to make the approximation correct up to quantities of the order $\frac{1}{\mu}$, we must first put for r $r-\delta$[1] where

$$\delta=\frac{q-p}{3\sqrt{2pq\mu}}r^2=\frac{8}{10\times3\times13\cdot417\ldots.}\frac{4\cdot5}{}=\cdot089 \text{ nearly.}$$

Expanding the integral thus modified, we see that in respect of the term before rejected (the second term of the expansion of k), there is to be added to our result $\frac{\cdot89}{\sqrt{\mu}}e^{-4\cdot5}$. Also in respect of the unintegrated expression there is to be added:[2]

$$\frac{2(\mu+n)}{\sqrt{\pi}\ 3\ \sqrt{2(\mu+1)\ (m+1)n}}=\frac{1}{\sqrt{\pi}}\frac{2}{3}\frac{1873}{\sqrt{2\times1000\times127\times873}}=\frac{1}{\sqrt{\pi}}\ \cdot008 \text{ nearly.}$$

The total addendum then is $\frac{1}{\sqrt{\pi}}e^{-4\cdot5}\left\{\cdot089+\cdot008\right\}$. In ordinary logarithms:

$$\begin{aligned}
log.\ \frac{1}{\sqrt{\pi}} &= -\ \cdot2486 = \bar{1}+\cdot7514\\
log.\ e^{-4\cdot5} &= -\ 1\cdot954 = \bar{2}+\cdot046\\
log.\ (\cdot089+\cdot008) = log.\ \cdot097 &= \bar{2}+\cdot987\\
\hline
log.\ Addendum &= \bar{4}+\cdot8
\end{aligned}$$

∴ the Addendum = ·0006 nearly, a quantity which, though certainly a considerable fraction of the result before obtained, viz., ·0014, may yet, I think, safely be neglected for the purpose in hand: which is to ascertain the probability of the given phenomenon (a certain degree of success) occurring by accident.

$a\beta\bar{\gamma}$. But, if greater accuracy is required, then we have only to make the two corrections which have been just described.

$a\bar{\beta}$. We revert now to the case where the data do not admit of our obtaining the regulation degree of accuracy. Here $\frac{k}{\sqrt{\mu}}$ must still be supposed fractional, though no longer a fraction of the order $\frac{1}{\sqrt{\mu}}$. In this case the expansion of k in ascending powers of ρ, the value of r,

[1] *Cf.* Poisson, p. 200, above. [2] Ib., p. 196.

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no longer afford us guidance. k may still be small with regard to $\sqrt{\mu}$, though ρ greatly exceed $\sqrt{2pq\mu}$. We may have still a result accurate to the fraction $\frac{k}{\sqrt{\mu}}$, viz. :

$$\frac{1}{\sqrt{\pi}}\left[\int_k^\infty e^{-t^2}\,dt + \frac{2(\mu+n)\,e^{-k^2}}{3\sqrt{2(\mu+1)(m+1)n}}\right].$$

There is apt to occur here the difficulty that the ordinary tables do not suffice for the evaluation of the integral, when k is large. The ordinary scales are unsuited to the enormous probabilities (in favour of a cause other than chance) which occur in psychical research. To obviate this, expand the integral in descending powers of t, and write for the sought probability :

$$\frac{1}{\sqrt{\pi}}\,e^{-k^2}\left[\frac{1}{2k} - \frac{1}{4k^3} + \ldots + \frac{2(\mu+n)}{3\sqrt{2(\mu+1)(m+1)n}}\right]$$

To illustrate this case, let us take the following example : as before, $\mu = 999$, and $p = \frac{1}{10}$; but now $m = 299$, and n accordingly 700. Here k^2, evaluated by ordinary logarithms according to the formula on p. 191 (where the logarithms are Napierian), becomes $66{\cdot}7352\cdots \times log._e 10 = 153{\cdot}757$. $k = 12{\cdot}4$. Meanwhile $r = \frac{\rho}{\sqrt{2pq\mu}} = \frac{200}{13{\cdot}4} = 15$; so that r^2 will no longer do duty for k^2. And, if we resort to the expansion of k in terms of r, we shall have at best a tedious route ; since it is not now by hypothesis, nor in fact, safe to stop at the second term of the expansion.

Substituting the values of $k\ \mu\ m\ n$ in the formula just written, I find for the sought probability $\cdot 0^{66}10 \times [\cdot 04 + \cdot 056] = \cdot 0^{67}1$, or $\frac{1}{10^{68}}$; where $\cdot 0^{66}$ is used as a symbol for 66 [$\cdot 0^{67}$ for 67] ciphers intervening between the decimal point and the significant figures of the decimal. By another method, to be mentioned presently, I find that the sought probability is between $\cdot 0^{67}15$ and $\cdot 0^{67}19$. The present method, therefore, gives a sufficiently accurate value.

$\bar{a}$. Having now exhausted all the branches of case a, we come to its negative, $\bar{a}$; which may be subdivided according as there does (δ), or does not ($\bar{\delta}$), exist a simple approximative form for the sum of the series under consideration.

$\bar{a}\delta$. To this category belongs the case discussed by Poisson in his No. 81 ; where N (to revert to our own notation) is large, u is very small, and $m+n$ is small, so that the fraction $\frac{m+n}{N}$ is neglectible. If we observe that Poisson's n in this section corresponds not now to the number of failures in our problem, but to the number of successes, a

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little attention will show that a formula appropriate to our case (where our $m+n$, though small, is still apt to be considerably above Nu) is the second formula given by Poisson (at the foot of p. 206). Only for our purpose to ascertain the probability of the failures being at most $N-(m+n)$, it will be proper to put for the Poissonian n not our $m+n$, but $m+n-1$; and to take not the whole of the second formula referred to, but the latter portion of it. In short, if we put $\omega = Nu$, then according to this method the probability of obtaining at least $m+n$ successes is

$$\frac{\omega^{n} \times e^{-\omega}}{n!}\left(1+\frac{\omega}{n+1}+\frac{\omega^2}{(n+1)\ (n+2)}+\&c.\right)$$

I have applied this method with success to the table of results given in *Phantasms of the Living*, Vol. I., p. 25; where the condition that $\frac{n}{N}$ should be neglectible was peculiarly well fulfilled.

$\bar{a}\delta$. There remain over the cases which do not possess any simple ancillary form. As far as I know, these cases do not admit of a solution comparable with the methods which have been described, in respect of concinnity and elegance. There exists, however, a rougher procedure, which has the advantage of being most efficacious exactly when the conditions upon which the general method (a) depends are least perfectly fulfilled.

The series which we have to sum is

$$\frac{N!}{[N-(m+n)]!\ [m+n]!}(1-u)^{N-(m+n)} \times u^{m+n}$$
$$+\left[\frac{N!}{\left[N-(m+n+1)\right]!\left[m+n+1\right]!}(1-u)^{\left(N-(m+n+1)\right)}u^{m+n+1}\right.$$
$$\left. + \&c.\right.$$

(where, as usual, the note of admiration imports the continued product of all the integer numbers up to and including that preceding the note). This sum may be otherwise written:

$$(1-u)^{N-(m+n)} \times u^{m+n} \times \frac{N!}{[N-(m+n)]!\ [m+n]!}\left\{1+\frac{N-(m+n)}{m+n+1} \times \frac{u}{1-u}+\&c.\right\}$$

The second term within the bracket is a proper fraction. For, even if n were zero, the term in question would be only just equal to unity; and by the increase of n the numerator is continually diminished, while the denominator is increased. Call this fraction v. It is easy to see that the third term is less than v^2, the fourth term less than v^3, and so on. Accordingly, the expression within the brackets forms a convergent series; which we can either sum by evaluating as many terms as we think fit, or by putting at once the expression without the

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brackets as an inferior limit, and the same multiplied by $\frac{1}{1-v}$ as a superior limit, of the sought probability. It will be observed that the series within the brackets is most convergent when v is smallest, and that v is smaller *ceteris paribus* according as n (the excess of success) is larger, and u (the probability of success at a single trial) is smaller. Now these are exactly the conditions upon which the increase of the Poissonian k, and therefore the failure of the Laplace-Poisson approximation, turns; so that the present method may be regarded as complementary to the Laplace-Poisson approximation.

As to the expression outside the brackets in the above-written expression, for the evaluation of $N!$, $(m+n)!$, $[N-(m+n)]!$, recourse may be had to a table of the values of *log.* $\Gamma(x+1)$; such as is given by De Morgan at the end of his treatise on the Calculus of Probabilities. In so far as such a table is only available for small numbers, in this respect again the present method is complementary to method a; of which large numbers form an essential condition.

Where tables of the Gamma-Function are not available, we must, I suppose, fall back upon the formula $x! = x^{x+\frac{1}{2}} e^{-x} \sqrt{2\pi}\left(1+\frac{1}{12x}+ \&c.\right.$; which it is not very troublesome to evaluate by the aid of logarithms.

Let us take by way of illustration the example above (p. 193), solved by another method; where $N=999$, $u=\frac{1}{10}$, $m=299$, $n=700$, the required probability is

$$\left(\frac{9}{10}\right)^{700}\left(\frac{1}{10}\right)^{299}\frac{999!}{700!\,299!}\left\{1+\frac{700}{300}\frac{1}{9}+\frac{699}{301}\frac{1}{9}+ \&c.\right.$$

log. $\left(\frac{9}{10}\right)^{700} = \overline{33}\cdot9698$ *log.* $299! = 612\cdot00868$

log. $\left(\frac{1}{10}\right)^{299} = \overline{299}$ *log.* $700! = 1689\cdot38418$

$2301\cdot39286$

log. $999! = 2564\cdot6046$

$2233\cdot5744$

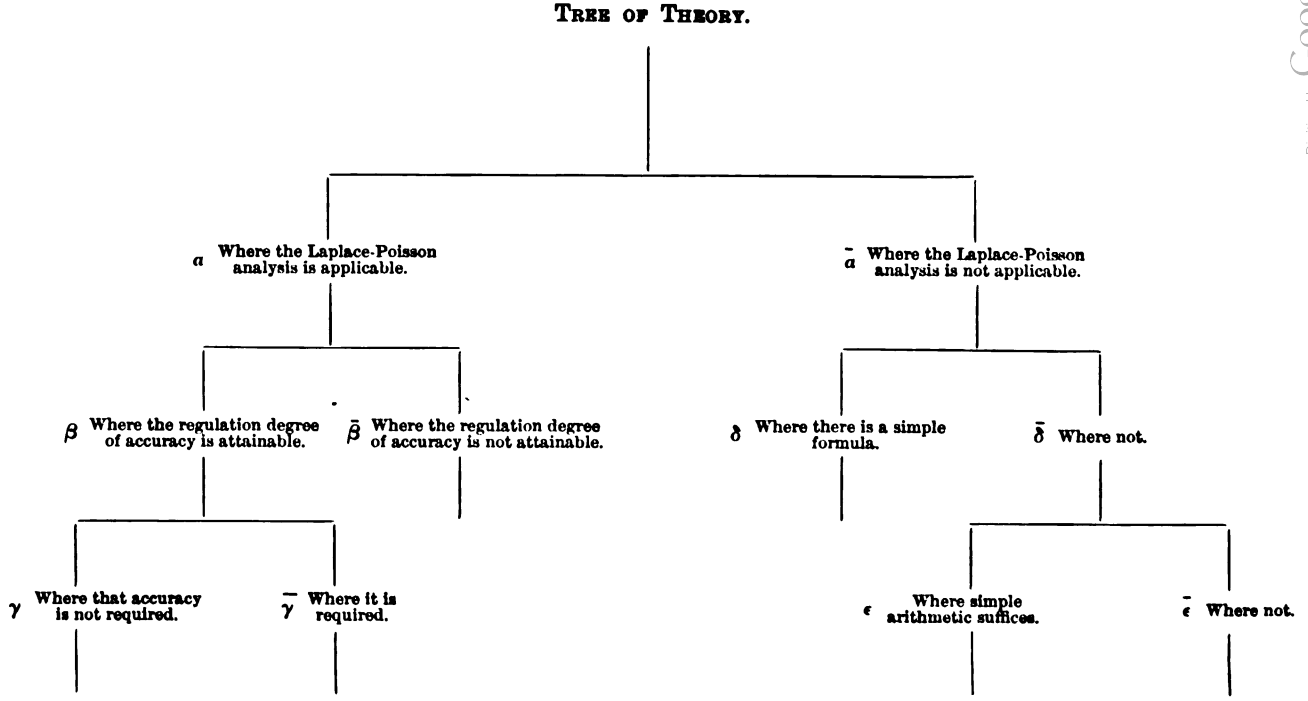
$$2233\cdot5744-(2301\cdot39286) = \overline{68}\cdot1815$$

Hence for an inferior limit to the sought probability we have $\cdot0^{67}15$; and for a superior limit the same quantity multiplied by $\frac{27}{20} = \cdot0^{67}2$.

I have applied this method with advantage to the problems presented in *Phantasms of the Living*, Vol. II., pp. 16-7.

If we distinguish within this category the case in which the numbers are small enough to be manipulated by ordinary arithmetic, we shall, I think, have exhausted all the branches of the subject. They are presented in the following logical tree:—

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II.

I propose now to sum up the practical conclusions of this and the preceding paper in a form adapted to the requirements of the general reader.

The problems which the subject presents are mainly three. It is required to appreciate by means of the calculus of probabilities the evidence in favour of some extraordinary agency which is afforded by experiences of the following types: (1) One person chooses a suit of cards, or a letter of the alphabet. Another person makes a guess as to what the choice has been. This experiment—a choice by one party, a guess by another—is performed N times. The number of successful guesses exceeds the number which is the most probable on the supposition of mere chance, viz., m, where $m = Nu$ (in the above-mentioned cases respectively $\frac{1}{4}N$ and $\frac{1}{24}N$), by a considerable number n, where $n = Nv$. (2) There are given a second and a third similar series of trials, in each of which the number of successes exceeds the number most probable on the hypothesis of pure chance, viz., $N'u'$ $N''u''$, by n' n'' respectively. Or (3) along with a number of such series there occur some in which the number of successes falls below the most probable number. What probability in favour of the existence of some agency other than chance is afforded by (1) a single series, in which the successes are in excess; (2) a set of series, in each of which the successes are in excess; (3) a chequered set of series in some of which the successes are in excess, in others in defect?

The answer to the first of these problems depends upon the answer to the following question: What is the probability that under a *régime* of pure chance—supposing that there were no disturbing cause at work—the observed excess of successes would occur? Call this probability p. Then the measure of the sought probability—that some agency other than chance has operated—is $1 - p$. [1] The first problem is thus made to depend upon a simple, or at least straightforward, calculation. The second problem is made to depend upon the first—or rather the question upon which the first depends—in the following manner. For each of the given series find the probability corresponding to the p which has been just defined. Call the set of values thus found respectively p_1, p_2, &c. The evidence in favour of a cause other than chance which is afforded by the whole set of series, the complete concatenation of data, is $1 - p_1 \times p_2 \times$ &c. Lastly, the third problem is thus resolvable into the second. Rearrange, without manipulation and cookery, but in a random fashion—the given chequered set of series into a smaller set of larger series: such that each of the new series may present excess. An example of

[1] See Note [1], at the end of Part II.

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this process is afforded by the problem mentioned by Mr. Gurney. There the data consisted of a set of ten series: each of them containing a thousand trials, and *one* of them presenting defect of successes—fewer successes than upon the hypothesis of pure chance would be most likely. If we lump this defective series with *any* of the nine remaining, there will result a composite series of 2,000 trials which presents excess of success. Our data will then be eight series of 1,000 and one series of 2,000 trials; each series presenting excess. The data thus modified exemplify our second problem.

Everything then depends ultimately upon the calculation of probabilities such as the above-defined p. In the preceding paper I stated the method of calculation which, as being required and proving sufficient for most, or at least many, statistical investigations analogous to those of *Psychical Research*, may perhaps be described as the general or normal method. In this paper there is attempted a more complete statement of the possible cases, and the treatment appropriate to each.

The cases constituted by the variety of our data may be divided according to the presence or absence of each of the following attributes:—

(*a*) The numbers of trials N small enough to admit of direct arithmetical computation.[1]

(*b*) The quantity $\frac{n}{2Nu(1-u)}$ [2] a small fraction.[3]

(*c*) The quantity $\frac{n}{\sqrt{2Nu(1-u)}}$ not greater than 2 [or 3].[4]

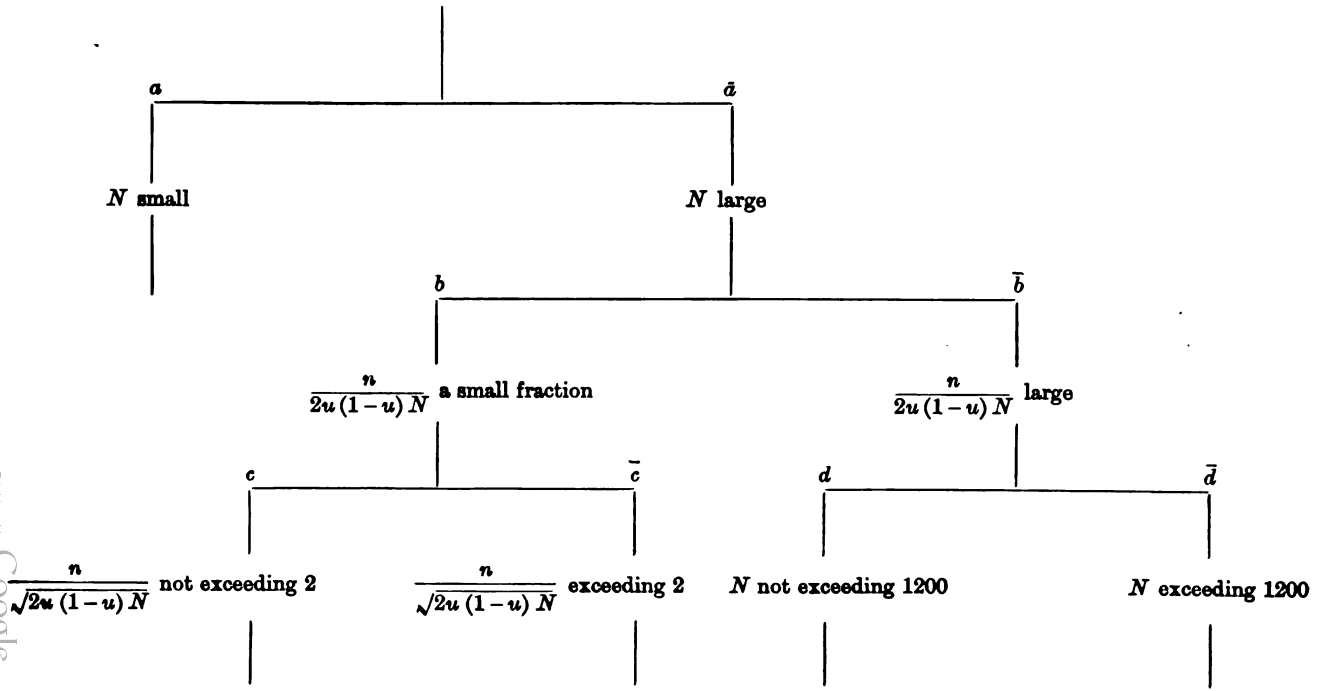
(*d*) N not exceeding 1200 (or the highest number for which the value of *log.* $\Gamma(N+1)$ is given in tables accessible to the operator).[5]

The presence of one of these attributes may be expressed by the corresponding letter, *e.g.*, b; its absence by the same letter with a negative sign superscribed, *e.g.*, $\bar{b}$. Thus the heading $\bar{a}bg$ refers to the case in which N is a large number, the quantity $\frac{n}{2u(1-u)N}$ is a small fraction, and the quantity $\frac{n}{\sqrt{2u(1-u)N}}$ does not exceed 2. As to the presence or absence of the fourth attribute nothing is stated; N may be either above or below the limit 1200. The variety of species thus constituted are represented by the accompanying *logical tree.*

[1] See Note [2]. [2] For the meaning of these symbols, see p. 198 above.
[3] See Note [3]. [4] See Note [4]. [5] See Note [6].

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Tree of Practice.



N = Total number of trials. u = Chance of success at a single trial. n = Excess of successes over Nu (being an integer, or the integer nearest to Nu).

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In examining these divisions I propose to give priority to the branches on the left, and to exhaust all the ramifications of each branch before proceeding to the branch next on the right. The order exactly resembles the devolution of real property according to English law. Our table corresponds with that given by Mr. Joshua Williams, in his lucid chapter on the descent of an estate in fee simple; if for the trunk of our tree we put Mr. Benjamin Brown, the purchaser, for a his elder, and for $\bar{a}$ his younger son.

A complete logical tree which has four bifurcations ought to present 16 ultimate divisions. But the task of examining so many cases is abridged by the observation that some of the branches are withered nonentities, and others, though existent, are unfruitful, and will not repay cultivation. Of the first sort is $a\bar{d}$; also $\bar{a}\bar{b}c$, which will be found to involve a contradiction in terms, except in the very rare case where the quantity $2u(1-u)N$ approaches unity, where, though N is large, u is exceedingly small. That case falls into the second category of rejectible branches. For the distinction of $\bar{a}\bar{b}$ into $\bar{a}\bar{b}c$ and $\bar{a}\bar{b}\bar{c}$ subserves no useful purpose, does not constitute a Natural Kind. To the same category belong the (existent) sub-divisions of a.

I proceed now, without further preface, to prescribe for and exemplify the particular cases.

a.

This is the case of N small (say not exceeding 10).

Rule: Expand $[u+(1-u)]^N$ by the binomial theorem; and add together the last $N-(m+n)$ terms of the expansion, those written in the second of the two following lines:—

$$(1-u)^N + N(1-u)^{N-1}u + \&c.$$

$$+\frac{N(N-1)\ldots(N-(m+n)+1)}{1\cdot 2\ldots\ldots(m+n)} + \&c. \qquad +N(1-u)u^{N-1}+u^N$$

The sum of the terms in the second line is the required probability (of the observed degree of divergence occurring by mere chance).

Example: In the experiment cited by Mr. Gurney at p. 251 of Vol. II. of the *Proceedings of the S.P.R.*, the "name thought of" was DOREMOND, and the "letters produced" were EPJYEIOD. Here, out of eight guesses, there are four successes; if success consist in guessing either the very letter thought of, or either of its nearest alphabetical neighbours, in short any one of an assigned consecutive triplet. The probability that a letter taken at random should fall within any assigned triplet is $\frac{1}{8}$. Accordingly (on the supposition that chance is the only agency), the probabilities of obtaining in the course of eight trials no successes, one success, two successes, &c., are given by

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the first, second, third, &c., terms respectively of the binomial $(\frac{7}{8}+\frac{1}{8})^8$. The probability of obtaining at least four successes is equal to the sum of the fifth and remaining terms; that is

$$70\left(\frac{7}{8}\right)^4\left(\frac{1}{8}\right)^4+56\left(\frac{7}{8}\right)^3\left(\frac{1}{8}\right)^5+28\left(\frac{7}{8}\right)^2\left(\frac{1}{8}\right)^6+8\cdot\left(\frac{7}{8}\right)\left(\frac{1}{8}\right)^7+\left(\frac{1}{8}\right)^8,$$

or ·011.

The probability in favour of an agency other than chance is about ·99. The odds against the observed event occurring by mere chance are about a hundred to one.

ābc.

This is the case of N large, the quantity $\frac{n}{2u(1-u)N}$ a small fraction (say less than $\frac{1}{4}$), and the quantity $\frac{n}{\sqrt{2u(1-u)N}}$ not exceeding 2.

Rule: Put $T=\frac{n}{\sqrt{2u(1-u)N}}$; and find the value of the integral $\frac{2}{\sqrt{\pi}}\int_o^T e^{-t^2}dt$ by means of the[1] tables attached to many treatises on the Calculus of Probabilities. Call that value P. Then $\frac{1}{2}[1-P]$ is the required probability.

Examples: (1) In the instance given by Mr. Gurney, at p. 241 of *Psychical Research*, December, 1884, N is 2927, u is $\frac{1}{4}$, and n is 57. Here $2u(1-u)N=\frac{3}{8}\,2927=1097{\cdot}6$. $\frac{n}{2u(1-u)N}$ is less than $\frac{1}{19}$ and $T=1{\cdot}7$. The case therefore falls under the category *ābc*. Referring to the table given with the article on Probabilities in the *Encyclopædia Britannica*, 8th and 9th editions, I find for the value $\frac{1}{\sqrt{\pi}}\int_o^T e^{-t^2}dt$ corresponding to $T=1{\cdot}7$ the entry ·9838. Hence for the sought probability we have $\frac{1}{2}[1-{\cdot}9838]=\frac{1}{2}[{\cdot}016]={\cdot}008$.

The probability of agency other than chance = ·992. The odds against the observed event being purely fortuitous are about a hundred to one.

(2) In the next instance cited by Mr. Gurney in the same passage, $N=1833$, $u=\frac{1}{4}$, and n is 52. Here $2u(1-u)N=\frac{3}{8}\,1833$. $\frac{n}{2u(1-u)N}$ is less than $\frac{1}{18}$; so that the case belongs to *b*. But the attribute *c* is not perfectly fulfilled. For $\frac{n}{\sqrt{2u(1-u)N}}$ is just over 2,

[1] If the values given in the tables consulted are of the integral $\frac{1}{\sqrt{\pi}}\int_o^\infty e^{-t^2}dt$ then put $\frac{1}{\sqrt{\pi}}\int_T^\infty e^{-t^2}dt$ for the sought probability.

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namely 2·1. However, *de minimis non curat calculus.* We may take the value given in the tables for $T=2$— *cum grano;* taking into account that we shall be over-rating the probability of mere chance, under-rating the evidence of a disturbing cause. For $T=2$ we have P, as defined in the Rule, ·99532. Hence p the sought probability = (is less than) $\frac{1}{2}[\cdot00266]=\cdot0013$.[1]

The probability of a cause other than chance = ·997. The odds against the observed event being purely fortuitous are about five hundred to one.

$$\bar{a}b\bar{c}.$$

In this case $\bar{a}$ and b are fulfilled as in the former case, but the condition that T should not exceed 2 is no longer fulfilled.

Rule: Evaluate $T^2=\frac{n^2}{2u(1-u)N}$. Put $a=(T^2\times\cdot434\cdots+\cdot2485)$. The required value is $\frac{1}{10a}\left[\frac{1}{2T}+\frac{2(2-u)}{3\sqrt{2u(1-u)N}}\right]$; an expression which may be simplified by ordinary logarithms.

Examples: (1) N is 976, u is $\frac{1}{8}$, n is 35.

Here $2u(1-u)N$ is $=271$, $\frac{n}{2u(1-u)N}=\frac{1}{8}\cdot\frac{n}{\sqrt{2u(1-u)N}}=2\cdot14$, an excess over 2 so slight that the case might safely be referred to the former category.[2] Keeping to the rule, however, we have $T^2=\frac{35^2}{271}=4\cdot5203$.

$$a=T^2\times\cdot434+\cdot2485=1\cdot962+\cdot248=2\cdot21.$$

$$\text{Also } \frac{1}{2T}=\cdot23,\ \frac{2(2-u)}{3\sqrt{2u(1-u)N}}=\cdot08.$$

Hence for the sought probability $\frac{1}{10^{2\cdot21}}\times\cdot3$. Which is reducible by logarithms to ·002.

The probability of a cause other than chance = ·998. The odds against the observed event being purely fortuitous are about five hundred to one.

(2) The general result of . . . N is 17653, u is $\frac{1}{4}$, $u=347$.

Here $2u(1-u)N=6620$, and n divided by this quantity is a small fraction. $T^2=\frac{347^2}{662}=18\cdot189$.

$a=T^2\times\cdot434+\cdot248\ldots=8\cdot14$. Whence for the sought probability $\frac{1}{10^{8\cdot14}}\left[\frac{1}{8\cdot4}+\cdot01\right]$, which with the aid of logarithms is reducible to ·000,000,000,8.

[1] See Note [4].

[2] See Note [4].

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The probability of a cause other than chance ·999,999,999,2. The odds against purely fortuitous origination are about ten thousand million to one.

$$\bar{a}\bar{b}d.$$

This is the case in which N is large, but not so large as to exceed the range of values covered by Table V. at the end of De Morgan's essay on the Calculus of Probabilities (*Encycl. Metrop.*), or a similar table accessible to the operator; while the quantity $\frac{n}{2u(1-u)N}$ approaches or exceeds unity.[1]

Rule: Write for the sought probability

$$\frac{\Gamma(N+1)}{\Gamma(m+n+1)\ \Gamma(N-(m+n)+1)} u^{m+n} (1-u)^{N-(m+n)}$$
$$\left[1 + \frac{u}{(1-u)} \frac{N-(m+n)}{m+n+1} + \frac{u^2}{(1-u)^2} \frac{(N-(m+n+1))}{m+n+2} \frac{(N-(m+n))}{m+n+1} + \&c.\right]$$

Evaluate the expression outside the brackets by means of a table for *log.* $\Gamma(x+1)$ (such as De Morgan's Table V.) and an ordinary logarithm table. Continue the series within the brackets as long as may seem requisite for accuracy. It will usually be sufficient to take account of the second term. Call this term ν, and the expression outside the brackets J. Then J—and, still more accurately, $J(1+\nu)$—is an inferior limit of the sought probability; $\frac{J}{1-\nu}$ is a superior limit.

Example: In one of the experiments recorded . . . . . $N=505$, $u=\frac{1}{4}$, $m+n=261$. Here $2N(1-u)u=189$. And, consequently $\frac{n}{2N(1-u)u}$, $\frac{145}{189}$, is dangerously large.

We resort, therefore, to the method appropriate to $\bar{b}$, *log.* $J=$ *log.* $\Gamma(505+1)-$ *log.* $\Gamma(261+1)-$ *log.* $\Gamma(244+1)+244$ *log.* $(\frac{3}{4})+261$ *log.* $(\frac{1}{4})$. Evaluating these quantities by means of De Morgan's Table V and ordinary logarithms, I find for the logarithm of J. $-38+\cdot823$, and for J $\cdot0^{37}666$. For a fairly accurate value of the sought probability, we have $\cdot0^{37}66\left[1+\frac{1}{3}\frac{261}{245}\right]=\cdot0^{37}66\times1\cdot355=\cdot0^{36}1$, the symbols $\cdot0^{36}$ $\cdot0^{37}$ being employed to denote respectively 36 or 37 *noughts* following the decimal point.[2] For a superior limit $\cdot0^{37}66\ \frac{1}{1-\cdot355}=\cdot0^{36}13\ldots\ldots$ The true value lies between the two given, if my work is correct.

The probability of a cause other than chance $=\cdot9^{37}$. The odds against purely fortuitous origination are a trillion trillion to one.

[1] See Note [6].

[2] Or is it easier to say $\frac{1}{10^{37}}$?

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$$\bar{a}\bar{b}d.$$

This case is like the former, except that we have not the advantage of the tables for *log.* Γ. We are therefore reduced to the laborious process of evaluating *log.* Γ for ourselves.

Rule: For the expression of the form *log.* Γ $(x+1)$, which occurs in the last case, put now the following[1] $-(x+\frac{1}{2})$ *log.* $x+\cdot 399$, and otherwise proceed as before.

Example: . . . $N=1403$, $u=\frac{1}{90}$, $m+n=162$, $N-(m+n)=1241$. Here $\frac{n}{2u(1-u)N}=\frac{146\cdot 4}{30.8}$, that is far above unity. We have, therefore, an aggravated case of $\bar{b}$. Put for the quasitum

$$J\left[1+\frac{1}{89}\times\frac{1241}{163}\right], \text{ or } J\left[1+\frac{1}{12}\right];$$

where *log.* $J=(1403\cdot 5)$ *log.*$1403-162\cdot 5$ *log.*$162-\cdot 399-1241\cdot 5$ *log.*$1241+162$ *log.* $\frac{1}{90}+1241$ *log.* $(\frac{89}{90})=1403\cdot 5$ *log.* $1403-162$ [*log.* $162+$*log.* 90] -1241[*log.*$1241+$*log.*$90-$*log.*89]$-\frac{1}{2}$[*log.*$1241+$*log.*162]$-\cdot 399$. Evaluating this expression, I find for *log.* J $-107+\cdot 921$. Whence $J=\cdot 0^{106}8$, (if as before we denote by $\cdot 0^x$ the sequence of x ciphers after a decimal point). And for the answer $\cdot 0^{106}9$.[2]

The probability of a cause other than chance $=\cdot 9^{107}$.[3] The odds against the observed event having a purely fortuitous origin are a [4]trillion trillion trillion trillion trillion trillion (a nonillion nonillion) to one—odds to describe whose vastness "number fails."

Notes to Part II.

[1] On the nature of this inference see, in addition to the preceding paper in this *Journal* (No. 8), my paper on "Observations and Statistics" in the *Cambridge Philosophical Transactions* for 1885, p. 148, *et seq.*

[2] It is, of course, impossible to fix where a ends and $\bar{a}$ begins. The boundary, like others in this paper, is not a hard and fast line.

[3] The ground of the distinction between b and $\bar{b}$ is twofold. First and foremost is the circumstance that, when b as defined in the text is realised, then it is allowable to substitute for the troublesome k of

[1] See Note [7]. [2] Or about $\frac{1}{10^{10^6}}$. [3] See Note [8].

[4] As I understand, a million million is a billion, a million billion is a trillion, a million trillion is a quadrillion, and so on up to a nonillion.

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Poisson (*Recherches*, Art. 76) the much more manageable r (*Ibid.*, Art. 78), in our notation $\frac{(m+n+1)-(N+1)p}{\sqrt{2pq(N+1)}}$. For $\frac{k}{r}$ is expansible in ascending powers of $\left(\frac{r}{\sqrt{2pq(N+1)}}\right)$, the first term being 1. Accordingly, if b is present, that is if $\frac{(m+n-Np)}{2pq \times N}$ is a small fraction, the first term only of the expansion need be retained. Further, the Poissonian r may be reduced to the still simpler expression which corresponds to the T of Mr. Todhunter (the Poissonian u, *Recherches*, Art. 79). It will be observed that these simplifications take for granted that $\frac{1}{\sqrt{2pqN}}$ is a quantity of neglectible order. This has not been formally postulated; but it follows from the condition that $\frac{\sqrt{n}}{\sqrt{2pqN}}$ is small (deductible from b), especially if, as universally the case in the problems of Psychical Research, and indeed most problems of the sort, that n is considerably greater than unity.

It follows, then, from condition b, that the integral portion of the sought probability may be written in its simplest form, viz., that employed by Mr. Todhunter in his formula for the central portion of the binomial (*History*, p. 576); in our notation

$$\tfrac{1}{2}\left[1-\frac{2}{\sqrt{\pi}}\int_0^T e^{-t^2}dt\right], \text{ where } T=\frac{n}{\sqrt{2pqN}}.$$

But, further, the same condition allows us to neglect the term outside the sign of integration. This term, in its unreduced form, is in our notation

$$\frac{\sqrt{2}\,(N+1+N-(m+n))}{3\sqrt{\pi\,(N+1)\,(m+n-1)\,(N-(m+n)}} \times e^{-k^2}.$$

Now, if condition b is fulfilled, it is allowable to expand the non-exponential part of this expression in ascending powers of $\frac{n}{N}$ and neglect terms after the first. Remembering that $m=Np$ (approximately at least, see above, p.), we have for the first term of the expansion $\frac{\sqrt{2}}{3}\frac{(1+q)}{\sqrt{\pi Npq}} \times e^{-k^2}$. And e^{-k^2} may, as above, be reduced to e^{-t^2}. Now this quantity may be neglected in comparison with the integral which is retained. For the latter may be written $\frac{1}{\sqrt{\pi}}e^{-T^2}\left(\frac{1}{2T}+\&c.\right)$ Whence the ratio of the unintegrated to the integrated portion is of the order $\frac{2T}{\sqrt{Npq}}$, or $\frac{n}{Npq}$, to unity. Whence the proposition.

To avoid mistakes, it may be added that if—as we approach the

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case of $\bar{a}\bar{b}$—it seems worth while to take some account of the term outside integration, then it must be remembered that its primitive form is modified, not only by its own expansion, but also by the change from r to T in the integral part. See Rule $\bar{a}b\bar{c}$.

[4] The ground of the distinction between c and $\bar{c}$ is the fact that in many of the books the table of the integrated error-function does not extend beyond the argument 2; in few or none beyond 3. The circumstance that the tables have not been carried further is connected with an important property attaching to cases where the observed *écart* exceeds two or three times the *modulus*, *i.e.*, to class $\bar{b}$: namely, that in these cases the evidence in favour of a cause other than chance has been regarded by the authorities as amounting to practical certainty. Where, as in the *Encyclopædia Britannica*, editions 8 and 9, the table is continued as far as 3, then the latter limit should be taken for our definition. In this case Example 2 of $\bar{a}bc$ and 1 of $\bar{a}b\bar{c}$ (pp. 202-3) fall unequivocally under $\bar{a}bc$. Employing the tables in *Encyclopædia Britannica*, edition 9, I find for the former example ·0015, and for the latter (interpolating between the entries for 2·1 and 2·2) ·0012.

[5] The second term need only be added when there is some suspicion that the condition b is not perfectly fulfilled; the case considered at the end of note [3].

[6] It will be gathered from the theoretical analysis that it is possible, with due caution, for one who knows the nature of the ground, to advance a great way along the lines of the received method of approximation. Thus many cases of $\bar{a}\bar{b}$ are amenable to the received general exponential formula; corrected not only by taking some account of the term outside integration (as suggested in the rule for $\bar{a}b\bar{c}$) but also by taking account of the second term of the expansion of k (Poisson, Art. 78). For instance, in the example under $\bar{a}\bar{b}d$ ($N=505$, $p=\frac{1}{4}$, $n=135$); if we employ the uncorrected exponential formula $\frac{1}{\sqrt{\pi}}\int_T^\infty e^{-t^2}$ we shall get a value $\cdot 0^{43}6$, which exaggerates by about a million times the odds in favour of a cause other than chance. To this value should be added: first $\frac{1}{\sqrt{\pi}} e^{-T^2} \frac{1}{\sqrt{2pqN}}$, about $\cdot 0^{43}14$, which still gives a very inaccurate result. For a better approximation, write

$$\frac{1}{\sqrt{\pi}}\int_{r+\delta}^\infty e^{-t^2} + \frac{\sqrt{2}}{3}\frac{1+q}{\sqrt{\pi Npq}} e^{-r^2}$$

where r has the value assigned on p. 191, and δ is the second term of the expansion of k (Poisson, Art. 78). Here, then, $r+\delta = 9{\cdot}84\left[1-\frac{1}{6}\frac{135\cdot 5}{189\cdot 4}\right]$. Substituting which, we have still an inaccurate result, but which has at least the advantage of erring on

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the safe side. It might be possible, by proceeding to another term of expansion, to bolster up the familiar formula. But I think that such corrections could not safely be employed by those who might not see the reason of them—the class to whom these rules are addressed. The method recommended in the text has the advantage of being straightforward and uniform. And, doubtless, the feeling of those whom I address is "*sit quidvis, simplex dumtaxat et unum.*" Nor, indeed, is the method here recommended more laborious, while it is much safer, than to correct the generally received formula (as Professor Lazarus proposes, *Assurance Magazine*, Vol. XX.) in some such way as that which I have just indicated.

[7] It need hardly be pointed out that the factor $\overline{e}^{x}$ disappears by division in the expression under treatment; and that ·399 is *log.* $\sqrt{2\pi}$.

[8] By the Poissonian unreduced formula (*Recherches*, Art. 77), I have found for this example $\cdot 0^{106}13$. It may be observed that the formula here prescribed for $\bar{a}\bar{b}$ is very similar to the unreduced Poissonian formula, but in extreme cases at least—I venture to think—simpler. For the sake of simplicity and uniformity, I have thought it best to exclude the less familiar Poissonian solutions (see Part I.) from a Praxis designed for the use of the lay reader.

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PROCEEDINGS OF THE GENERAL MEETING ON

October 25, 1886.

The twenty-second General Meeting was held at the Rooms of the Society of British Artists, Suffolk-street, Pall Mall, on October 25, 1886.

PROFESSOR H. SIDGWICK IN THE CHAIR.

Mr. F. W. H. Myers gave an account of a novel class of experiments—some of which he, Mr. Gurney, and Dr. A. T. Myers had lately seen and shared in—conducted by Dr. Babinski, a physician of the Saltpêtrière, at Paris, and pointing to the transfer of hysterical affections from one patient to another, under the influence of a neighbouring magnet. If suggestion be excluded, the phenomenon seems clearly to be telepathic in nature; and the results which took place in the presence of the English observers, though not conclusive, were decidedly striking and suggestive. A full account of these appeared in the *Journal* for November, 1886.

PROCEEDINGS OF THE GENERAL MEETING ON

January 28, 1887.

The twenty-third General Meeting was held at the Rooms of the Society of British Artists, Suffolk-street, Pall Mall, on January 28, 1887.

PROFESSOR W. F. BARRETT IN THE CHAIR.

Part of the following paper was read:—

I.

AUTOMATIC WRITING.—III.

BY FREDERIC W. H. MYERS.

PHYSIOLOGICAL AND PATHOLOGICAL ANALOGIES.

I purpose here to continue a discussion which has already occupied two papers in these *Proceedings*,[1] and which I cannot hope to conclude in the present essay. The phenomena of *automatism*,—the indications

[1] See *Proceedings*, Vol. II., p. 217, and Vol. III., p. 1.

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given by unwilled or unconscious action of mental processes going on within us,—offer a field for investigation whose importance is gradually beginning to be recognised. *Graphic* automatism—the topic with which these papers have more especially dealt—had hardly, so far as I know, been alluded to previously; except, indeed, by Spiritualistic writers, to whom the merit of the first express recognition of the phenomenon undoubtedly belongs, whatever may be our opinion as to the explanation which they assign to it.

For my own part I have thus far dwelt mainly on three theses. In the first place, I tried to show that an automatic impulse, arising, so far as we can tell, wholly within the writer's own brain, may sometimes prompt him to write words or sentences whose meaning he does not discern while he is writing them,—nay, whose meaning he sometimes does not discern till after a tedious process of decipherment. In the second place, I showed that in some cases—in the case of Mr. and Mrs. Newnham especially,—the content of these automatically-written messages seemed to be derived, not from the writer's brain wholly, but, in part at least, telepathically from the unspoken and unhinted thoughts of another person. And thirdly, by a comparison of some peculiarities of automatic writing with some peculiarities of speech and script which we have some reason to suppose initiated by the *right* hemisphere of the brain, I tried to form some intelligible conception of a possible cerebral mechanism of automatic script in general. This last inquiry had a special bearing on the problems of telepathy; since we have seen cause not unfrequently to associate telepathic impulses—both in their inception and in their reception—with the unconscious rather than with the conscious operations of the brain. We seemed, as I thought, to be getting a hint as to such operations which might be of service in more than one branch of psychical inquiry.

The discussion of automatism, even as thus far pursued, has suggested so many problems that it is not easy to say in what direction the general argument should incite us to attempt our next forward step. From one point of view, indeed, the answer to this question would be easy. If, like previous writers on this topic, already mentioned, I were to treat automatic writing from the Spiritualistic point of view alone, as affording a greater or less degree of presumption of the communication with us of departed souls, it would be my business to pass at once to an analysis of the facts contained in messages which have been automatically written. Some of the facts thus found I should be able, as my already-cited instances show, to refer to *telepathy;* to the influence of minds still in the flesh. And I should have to discuss whether any items of the messages were *not* so referable; whether they pointed to the influence or communication of a "departed soul."

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All this will sooner or later have to be done in detail. But I am anxious rather to defer than to hasten the moment of attempting it. And I say this from no aversion from the Spiritualistic theory, a theory which, if it can be sustained, will obviously be more interesting, to say the least, than any other. Still less do I say it with any bias for any exclusive theory of my own. The surprise, indeed, would be if we were to discover that this great range of phenomena could wholly be comprised within the limits of any single hypothesis.

But in so complex a matter nothing but confusion can ensue if we attempt to decide on what I may call the advanced questions without some rather fuller knowledge of the preliminary questions than we have as yet gained. Let it be said at once that the extreme theory—the Spiritualist theory—of some of these communications is not to be dispelled with a breath. The evidence for it—though it is soon seen to be decidedly scantier than certain loose assertions would have us suppose—is, as we shall perceive, of a nature to perplex a candid inquirer. Stated nakedly, indeed, it might beget in the cautious mind nothing beyond perplexity. The canons by which it should be judged are as yet undetermined. If it is to be profitably approached, this must be after attempt shall have been made to frame such canons, or at least to turn some of the simpler cases over and over, and to try to bring them into some sort of relation with more familiar physiological or pathological facts.

In the present paper then, and in a paper with which I hope to follow it, I shall dwell mainly on two questions. The *first* of these will take us back, in one sense, to an earlier point than that which the previous papers reached. In those papers I was concerned to prove that automatic writing was really automatic,—that it was not in all cases the mere product of a half-conscious fancy,—of a hand idly wandering, and a dreamy caprice. Having now, as I trust, shown this sufficiently by an analysis of some of the messages thus received, I shall go back to a more general discussion of the significance and origin of automatic messages taken *per se*, as admitted facts, without special reference to their content.

And *secondly*, we shall find that, in order to understand the true meaning of graphic automatism, we shall have to consider other cognate automatic manifestations,—messages given by automatic speech, by other automatic movements, and even by sensory perceptions of various kinds. In this way we may perhaps get some sort of familiarity with the general type of these phenomena,—some sort of notion as to the way in which they stand related to hypnotism, to insanity, and, (if clairvoyance exists,) to clairvoyance,—which may serve as a guide when we come to deal with messages whose *content*, as well as their *mechanism*, offers matter of debate and perplexity.

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I start afresh, then, with what may be termed the simple, typical form of automatic writing. The case communicated by Professor Sidgwick (*Proceedings*, Vol. III., p. 25) may serve as an example. An ordinary man, woman, or child, of normal health and intelligence, finds, either suddenly or more often after several trials, that his hand will write sentences of which he is not cognisant till they are actually written. Let us omit from consideration all those specific points in the messages on which we have already dwelt,—anagrams, telepathic information, mirror-writing, &c. Let us simply suppose (what is in fact the commonest case) that the automatist can at any time, or at least can frequently, induce insignificant messages, mainly resembling each other in handwriting and signed with the same name. And note that so long as the messages are insignificant in content, (as moralising reflections, trivial comments on passing events, and the like,) we can hardly attach importance of any kind to the signature. Sometimes, as in the case of the Messrs. Schiller, presently to be given, the signatures are merely fantastic, and illustrate the tendency (already noted) of automatic script to a grotesque puerility, quite independent of the intellectual level of the automatist. Sometimes, following another tendency of automatic script, the signatures seem designed to *meet expectation;* and the name of some deceased friend is appended to matter which conveys no internal evidence of his authorship. Again, the secret inclination which many persons feel to suppose themselves favoured above other men, special receptacles of grace, &c., externalises itself in automatic signatures of a very lofty type,—reaching in some instances to the very highest conceivable names. And here I must frankly say that I think that communications thus signed should be at once discouraged, and the process of automatic writing discontinued for the time, in just the same way as in the occasional cases where "planchette begins to swear." I certainly do not suppose that there is a diabolic influence in the one case any more than a Divine influence in the other. But in either extreme there is some slight fear of injury to the writer. If oaths and rough expressions come persistently, this, (as was explained in my last paper,) may probably indicate nervous exhaustion. If "Divine revelations" come, there is a danger that the writer may flatter himself into the belief that he is singled out by heaven itself to convey a new message to men. Much moral teaching of a noble and suggestive kind has, indeed, been often conveyed through automatic messages. But where it has been in truth highest, it has at the same time kept clear of any irreverent assumptions.

These extravagances, however, are of rare occurrence. The general type of automatic message is entirely unobjectionable, I may even say entirely commonplace. But, nevertheless, a series of such messages will show qualities very hard to explain. There will be *persistence*, the

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influence seeming to be on the watch for opportunities of communication, sometimes calling the attention of the automatist by preliminary jerks of the hand, and thrusting in its comment, so to say, when least expected. There will be a kind of *individuality;* several influences maintaining each a definite character, each, perhaps, moving the arm in a special manner, so that the automatist knows what the signature will be, before he receives the actual communication. And there will be an apparent thread of memory through the messages of the same influence; that is to say, the so-called "guide" will sometimes refer to passages in his previous messages which the automatist does not consciously remember.

All this,—as those who have witnessed such cases can attest—forms a sufficiently curious *ensemble;* nor need we wonder that in nine cases out of ten the automatist attributes his writing to some influence external to himself.

With this, then, as the problem before us, I propose now to develop in a fresh direction a suggestion made, and partly acted upon, in my last paper. I there dwelt on my conviction that if we are to understand *supernormal* phenomena—phenomena transcending, apparently, the stage of evolution at which we have admittedly arrived,—we must first compare them, as fully as possible, both with *normal* and with *abnormal* phenomena;—meaning by abnormal phenomena those which, while diverging from the ordinary standard, fall below or, at least, do not transcend it. I insisted also that we must expect that supernormal phenomena, if they occur at all, will show many points of resemblance to abnormal—nay, to positively morbid—phenomena, without therefore themselves necessarily deserving to be classed as morbid in any degree. When unfamiliar impulses arise in the organism—whether those impulses be evolutive or dissolutive in character—their readiest *paths of externalisation* are likely to be somewhat similar;—just as (to repeat a previous illustration) the same kind of ache in the gums may indicate to our sensation either the formation of an abscess or the growth of a tooth.

I cannot find that this principle is set forth in any accredited textbook. Yet I must believe that it will come to be recognised as a guiding principle in psycho-physiological inquiry; nay, that this view will be seen to have been inevitable so soon as external signs of psychological facts were grasped with a certain degree of precision. Thus far the cerebral-psychical changes which go on after the frame has once been built up have been watched by the psychologist mainly in their evolutive, by the physiologist mainly in their dissolutive aspect. The psychologist feels an interest in the life-long development of the mind of a Shakespeare or a Goethe. The physiologist, when he has surveyed his subject's advance to maturity, finds little

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more to notice till senile degeneration sets in. He does not often care to note such external signs as may tell of processes of cerebral development which are still going on during adult life.

Yet such external signs there are; and it is important for us who are concerned with one special branch of automatism to recognize how large a part is played in civilized life by automatic movements,—movements which a man does not know that he is making, or cannot avoid making, and which give expression to cerebral action of which he is partly or wholly unconscious.

In the first place, there are the movements which are known as *secondarily automatic*:—such movements as walking, speech, piano-playing, which, having been acquired by voluntary effort, become by use gradually *instinctive*, and illustrate to us in our own persons both the advantages and the disadvantages of instinct as compared with reason. The girl can remember the sonata better with her fingers than with her head;—there is the *advantage* of an instinct which is "lapsed intelligence," but which is more rapid and more certain than conscious intelligence can be. On the other hand, if the girl has learnt a given passage in the sonata wrongly, and played it often in that way, she will find it far more difficult to correct the mistake than it would be were the passage new to her. There is the *disadvantage* of lapsed intelligence;—the comparative fixity of the nervous and muscular synergy, when once established, makes it hard for the organism to adapt itself to slightly-changed circumstances. I repeat that the parallelism between these personally-acquired instincts of our own and the mainly-inherited instincts of the animal kingdom is very close; and just as we find animal instincts becoming more complex and numerous as we ascend in the scale of living things, so do we find human secondary automatisms becoming more complex and numerous as we ascend in the scale of civilization.

But of course we inherit instincts as well as acquire them, and it is with inherited instincts—with *primarily* automatic acts, that I am here mainly concerned.

One important branch of this primary automatism consists of the movements which give *expression* to face and voice. And my point is that these automatic movements acquire a continually greater relative importance both in the race as it advances in culture and in the individual as he advances in cerebral development,—in middle and even in later life. The expression of benevolence, wisdom, command, is capable of being more intense and impressive in the old man's face than in the face of the youth; and the look and accent of great men forms no small part of their power. It matters little in comparison that the adult's power over his voluntary muscles gradually declines. He can no longer compel the muscles of his legs to adapt themselves to some

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new feat of gymnastic. But the muscles of his eyes and mouth—quite apart from his conscious volition—have learnt to express his central current of thought and feeling more delicately and more forcibly than in the flush of youth. This fact needs some insistence, for it is constantly obscured by a quite different phenomenon;—the power of youth to express the simpler emotions with pleasing openness. "The beautiful," it has been said, "by the unconscious look of a moment can utter all that is in them." What this means is that a fair young face can show love, pity, reverence, &c., in a way that stimulates the observer's imagination; but the girl's expression may nevertheless be in reality of a less developed, a less complex kind than the minute muscular shiftings round the eye, say, of an elderly stockbroker, as he glances down the share-list. The stockbroker's countenance is not interesting; but what I mean is that years and knowledge have effected in him the same evolution of automatic action which they effect in the sage or statesman, and which makes the expression of the sage or statesman, if we "sit down in a cool hour" and look at him, even more interesting than the girl's.

We see, then, that as the race, or the man, evolves, the primarily automatic actions, and the secondarily automatic actions, form a constantly more important portion of the motor outcome of his mentation.

And more than this. We see, also, that if any sudden call is made on the organism which evokes its maximum capacity, and as it were shows by a lightning-flash the next stage towards which the evolutionary process is striving, there is an immediate extension of the domain of automatic action. A man not only runs from a lion faster than he ever ran before, because the checks commonly imposed by pain and fatigue are unfelt, but also he goes on to climb up into a tree with a purposive complication of muscular movement which he would have needed to think out with conscious planning at a less excited moment. And still further; a great orator repelling extemporaneously a calumnious charge, or appealing to a deeply-moved multitude of men, will sometimes for a few moments perform with complete automatism intellectual feats which few men could rival with full time to prepare. He will be unconscious of his attitude, his gestures, his tones of voice—nay, of the words which he uses, the metaphors which he introduces, the oratorical effects of pause, reiteration, pathetic or majestic emphasis. He will be conscious of nothing beyond the torrent of indignation or patriotism which is surging within him. When automatism reaches this point, (as is said to have been sometimes the case, for instance, with M. Gambetta), it is felt to be far more impressive than conscious pains and choice. The orator is repaid for constant effort at self-expression by finding that on great occasions he can *get himself expressed*

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automatically;—that he can live wholly in the stream of thought and emotion which is his essential strength, and that, meantime, his organism will utter more of what is going on inside him than if he had weighed each word to the full.

This seeming digression is really, I think, important to my argument. For it is essential that the reader should understand, (and I know of little already written which will help to such understanding), that in studying these automatic manifestations of mentation otherwise unguessed, we are not necessarily studying something morbid, retrograde, hysterical; but that it would be quite in accordance with analogy if it should turn out that thoughts and feelings thus found issue which were in some respects deeper than the subject's ordinary consciousness could reach, or his ordinary effort exhibit.

In a word, there are *evolutive* as well as *degenerative* parallels to the strange phenomena which we shall presently encounter. We must not prejudge them in any way whatever; we must not ticket them as hysterical any more than we must ticket them as Spiritualistic.

And I may perhaps best resume my discussion of them by citing at length a typical case;—a case typical at least in its main features, and specially suitable for record on account of the care with which the phenomena were noted down as they occurred. The case was sent to us by Mr. F. C. S. Schiller, B.A., of Balliol College, Oxford, and I have myself been present at one of the experiments where Mr. F. C. S. Schiller and his brother, Mr. F. N. Schiller, of St. John's College, Cambridge, obtained some of the old French writing.

In the following account it must not be supposed that in speaking of the "spirits" of planchette under their *soi-disant* names, I intend to endorse the Spiritualist explanation, any more than I consider the reproductions of the "mediums'" latent knowledge to be conclusive in favour of any form of "unconscious-self" theory.

The experiments in question were conducted during a great part of the Long Vacation, with my brother, whom I will call F., and my sister L., as "mediums," writing conjointly at first, but afterwards separately. Of course, there could thus be no doubt as to the good faith of the "mediums," even if the course of the experiments had not afforded convincing proof that the phenomena were independent of their conscious mind. There appeared at different times no less than nine "spirits," of whom four wrote exclusively with F. and one mainly; another freely with either or both but chiefly with L., and three exclusively with L. or with F. and L. conjointly. They all wrote with a more or less distinctive style of their own, and, as far as I could judge, there was not any marked difference of style when the same spirit wrote with different mediums. Nor, on the other hand, was there sufficient evidence to justify the assertion that the style was so unmistakably similar that it must have proceeded from the same intelligence. But although the evidence was not conclusive in establishing the identity of the various "spirit" personages, there could be no doubt of their complete independence of the mediums' con-

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scious will. Both F. and L. were at first entirely ignorant of what planchette was writing, and F. remained so to the end, nor did the occupations of his conscious self appear in the least to affect the progress of the writing. I have seen planchette write in the same slow and deliberate way both while he was telling an amusing anecdote in an animated way and while he was absorbed in an interesting novel; and frequently whole series of questions would be asked and answered without his knowing what had been written or thinking that anything else than unmeaning scrawls had been produced.

In L.'s case it is true that after some time she came to know what letters were being formed and was able to interpret the movements of her hand. This, of course, made it difficult to avoid, at times, a certain half-conscious influence on the writing, and makes it necessary to allow for the personal equation. But it is clear that this influence must tend to harmonise the answers of planchette with the opinions and will of the medium, and as a matter of fact I observed frequent cases, especially with L., of a conflict between her will and opinions and those of planchette. Nothing, in fact, can be more striking than the entire independence of planchette in matters of Will and Thought, or more unexpected than the answers frequently obtained. This will be exemplified by one of our earliest results. Planchette had been unable to write plainly the name of the "spirit" communicating, and so we had asked whether it was man, woman, or child. The answer was at length deciphered as "triangle." For a whole day we tried in vain to make out this enigmatical response, and were in doubt whether we should ascribe it to the unconscious cerebration of my mathematical brother, or whether we had made the acquaintance of an intelligent two-dimensional being. Next day we discovered that the "triangle" called itself "Eudora," and we, of course, asked what it had meant. "Three in one." "How then can you be both male and female?" "By mere accident." After some other questions, a doubt was raised by L. whether "Eudora" and the name of the only other "spirit" that had communicated might not be "aliases," and she asked, "Are you and Johnson one?" "Yes, one, man and wife." Here we seemed to get a clue to two sides of the "triangle," and proceeded to ask whether there was a child still. "Coming," was the unexpected reply. Next day we were informed that the baby was "never" going to be born, "because it had not been born on earth." This surprising piece of information was then explained by the assertion that it was being "spiritually evolved," and not, therefore, "*born*." I have told this story at some length because it was the first thing that made us think we might be in the presence of something more than ordinary unconscious cerebration, and I think it well illustrates several of the most remarkable points about this automatic writing.

It exemplifies :—

1. The unexpectedness of the answers.

2. Its independent thought and disagreement with the conscious opinions of the mediums (for I suppose no one has ever held planchette's absurd doctrine).

3. Its independent memory.

4. On the moral side, its mendacity and sense of humour.

Altogether it seemed as if this silly riddle had been propounded expressly

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to pique our curiosity on the first day, with the intention of giving the solution on the next, though, of course, it is possible to maintain that "unconscious cerebration" first accidentally propounded it, and then, after working it out, produced the solution.

Of a conflict of will between planchette and the medium I will give a characteristic though trivial instance. I had agreed with L. to go for a walk after supper, and when supper was brought in we said good-bye. "Don't go." We said we must, but at length gave way and promised to return after supper. "Good." "Have you got anything to tell us?" "Yes, very important."

Of direct thought-transference such as that recorded by Mr. Newnham, we obtained but one instance, with the possible addition of a few of the card experiments.

One day when F. was reading a book and had not been attending in the least, I thought I might as well put the question mentally and wrote it down without asking it aloud. It was answered in a perfectly unequivocal manner, and this was the more striking as I had changed the subject in asking it, and reverted to a point in one of planchette's previous answers which I had before ignored. But for this and the great difficulty of supposing that this particular answer could have been an accidental shot,[1] one would, of course, have been inclined to ascribe it to chance, but under the circumstances it must be regarded as an instance of thought-transference at least, although I have never been able by any conscious effort to transfer impressions to F., who is a fairly good thought-reader.

It will, of course, be suggested that the question as to the nature of these phenomena could have been at once decided by obtaining information unknown to the medium and to the company.

But for several reasons this is more easily said than done. In the first place the "spirits" were extremely chary of giving information respecting their personal antecedents, and, in fact, generally made their appearance with obviously feigned names, such as "Heliod Ecblaza," "Irktomar," "Euphorbia," &c.

When pressed they used, after much ingenious fencing, either to refuse to tell anything or to utter obvious falsehoods. . . . . The spirit of a "careless rhymer," after writing verses in English, French, and German, professed its ability to do so in the classical languages. And as F. said he had never read the *Iliad*, we asked the rhymer for a quotation. This he was at first unable to do, but, some hours after, he, unasked, produced the following: "Eratimoi kekaloseiai" and "Kouridion potheoumenos posin." These extraordinary tags were found to be derived from the 5th book of the *Iliad* (421, 414), and to represent ἦ ῥα τί μοι κεχολώσεαι and κουρίδιον ποθέουσα πόσιν. F. then remembered that he had read this very book, and this alone, a long time ago. This was certainly the incident pointing most directly at unconscious cerebration, and may, perhaps,

[1] The communicating "spirit" was giving a long description of the house where it had lived, and a staircase up which somebody had run "when the police came." After about half-a-dozen questions I asked mentally, "What did the police come into the house for?" The answer was, "There was some crime."

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help to explain the occurrence of an entirely unknown language, namely Hindustani. A "spirit" gave his name as "Lokenadrath," and wrote in an extraordinary Oriental style, rather resembling some of Marion Crawford's rhapsodies. On introducing the words "Allah il Allah," he was asked whether he was a Mohammedan. "Hindi apkahai." I have since been informed[1] that these words mean "I am yours," "At your service," and that "Lokenadrath" should be "Lokendranath," and means "lord of princes"; and one or two other fragments of Hindustani were similarly inaccurate.[2] Now, as F. left India as a baby of eight months, and has never since, to the best of my belief, heard any Hindustani spoken, this is surely a most curious case of unconscious memory, if such it was.

As far as I can judge, the nearest approach to a verification of "spirit identity" was in the case of a French Positivist artist, who gave his address as "109 Wankhurst-road, Wandsworth." Of course this name was entirely unfamilar to us, but on a reference to a directory we found a Wakehurst-road in Wandsworth.

But all these attempts at getting unknown information are more or less unsatisfactory, and perhaps the most striking results were afforded by some experiments with cards, which it seems at first sight difficult to explain on any "unconscious self" hypothesis.

A card was drawn at random from a pack without being looked at, held out of sight, generally beneath the table, and planchette was then asked to name it. These experiments were carried on from the beginning with F. and L. conjointly or F. alone, but failed with L. alone; but it was difficult to multiply them, as planchette strongly disliked them, and frequently wrote nonsense (*e.g.*, "elest of fordes,") or refused to answer at all. Moreover, it never professed to be able to guess them, but "would try" at the most, and constantly complained that it was "too dark." Hence it cannot be doubted that many or most of the answers were guess-work, but do not the following totals of *all* the experiments made indicate that something other than mere chance was also at work? In some of the earlier experiments the card was known to some of those present, though not of course to the medium. The result of these experiments is as follows:

Experiments.	Quite right.	Number only right.	Suit only right.	Total Failure.
11	$4\frac{1}{2}^{3}$	0	2	$4\frac{1}{2}^{3}$

[1] On the authority of (1) an Anglo-Indian lady; (2) a Balliol Brahmin of Bombay. [The Oriental rhapsodies have now been found to be mainly centoes of *Mr. Isaacs*, worked together so as to make sense.]

[2] I have now found out (December, 1886) that Lokenadrath's description of his nationality is not as totally unintelligible as I had hitherto thought it. He called himself a "Jude poerano," and I have been told that "poerano" is Romany for *gipsy*.

[3] In one experiment two cards were chosen by different persons—the *five of hearts* and the *seven of clubs*. The seven of clubs was guessed. This is put down approximately as $\frac{1}{2}$. Chance alone might be expected to give the following results:—

Experiments.	Quite right.	Number only right.	Suit only right.	Total failure.
11	$1\frac{1}{52}$	$\frac{20}{52}$	$2\frac{7}{13}$	$7\frac{8}{13}$

—or rather, since the actual numbers could not be fractional, the last four results would be 0, 0, 2, 8.

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This result is decidedly more favourable than the results of the series where the card was unknown to any of the persons present, a fact possibly due to the action of telepathy. There is however a great difference between the conditions of these experiments and of ordinary experimental thought-transference. The latter requires great and exhausting concentration of the mind on the part both of the agent and of the percipient, while in the case of planchette-writing there is no conscious effort on the part of the agent to visualise or of the percipient to receive an impression of the card chosen. And moreover if telepathic impressions originate in the unconscious part of the mind, and if planchette be supposed to bring out the "thoughts" of this unconscious mind, it might be urged that the impressions of the medium, if he has any, should correspond with what is written by planchette. But we found that in one of these cases where the bystanders, and supposed agents, were cognisant of the card, the medium thought of the wrong card, while planchette gave it correctly; and on another occasion he thought of the right suit, while planchette got it wrong entirely. The results of the series where telepathy was excluded are as follow :—[1]

Experiments.	Quite right.	Number only right.	Suit only right.	Total Failure.
52	2	11	9	30
64	7	10	11	36
116	9	21	20	66

The series of 52 experiments were made at different times, but the series of 64 were made continuously in one afternoon, and at this time the planchette was very wild, and frequently wrote before any card had been drawn at all.

Also in one case the 7 of clubs was guessed instead of the 9, but when the card was examined it was found that the two lowest pips had been accidentally covered by a piece of paper, so that it appeared like a 7. This, too, is estimated as a partial failure.

In another case, the card having been drawn in the usual manner, planchette wrote first "Spad," broke off and wrote on the line below "Hearts Queen." The card turned out to be the queen of *spades*. This was the most striking instance of a confusion between hearts and spades, which occurred several times in these experiments, and which I have also noticed in ordinary thought-transference experiments with F.

On another occasion I drew a card, placed it on the top of the pack, and handed it to F. beneath the table. In so doing I could not help catching a glimpse of the card, and saw that it was black, and, I thought, clubs. After

[1] In several cases more than one guess was made, but only the first has been estimated. Chance alone might be expected to give the following results :

Experiments.	Quite right.	Number only right.	Suit only right.	Total failure.
52	1	3	12	36
64	$1\frac{3}{13}$	$3\frac{9}{13}$	$14\frac{10}{13}$	$44\frac{4}{13}$
116	$2\frac{3}{13}$	$6\frac{9}{13}$	$26\frac{10}{13}$	$80\frac{4}{13}$

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a time planchette wrote "No card turned up," and to our astonishment this turned out to be the case. I was of course as certain as possible that a card was turned up, and cannot understand to this day how it got turned down, and F. of course could have no suspicion that so vital a part of the experiment had been omitted.[1] This experiment has been excluded in making the estimate. In a few cases the suit was not written, but drawn.

Finally I must describe another kind of experiments, in which planchette had to spell out words on an alphabet while the "medium" was closely blindfolded. At first we used an alphabet which he had seen beforehand, and with the letters in the customary order, and on this "Heliod" succeeded in spelling out his name three times. After this another alphabet was used which had never been seen by him, and with the letters scattered at random about the paper. On this H E were spelt out correctly, but the next letter was Z, and after this planchette stopped and failed to spell any other words. A few hours afterwards, however, it spelt out its name correctly, and answered several questions, correcting slight errors on repetition. (F. had not seen the alphabet in the meantime.) Altogether we obtained intelligible combinations of nearly 60 letters. The movements of planchette on this occasion too were rather striking, as it seemed to move like a living creature, circling round the required letter, and finally concentrating itself upon it. We have never been able to get a repetition of these experiments, which, though telepathy is not, strictly speaking, excluded, for the others present were aware of the position of the letters on the alphabet, are perhaps as valuable as the card experiments. And if it be supposed that the thought of the bystanders unconsciously guided planchette, how are we to explain a correction of that thought in its answers? I had asked "Heliod" what he meant by saying he was in the "fluid *state*" of feeling on the day before. The answer was "Blind, Point," and on reference we saw that he had previously asserted he was at the fluid *point*.

Perhaps, in conclusion, I should make a note on the linguistic attainments of planchette. Of the nine "spirits," six wrote only in English, and several of them failed ignominiously with all other languages. The Hindustani of "Lokenadrath" I have already mentioned. "Irktomar," the French Positivist, gave us specimens of English, French, and Latin. Lastly, the poet "Closcar" rhymed in English, French and German, Latin and Greek, and even sometimes wrote the last of these with Greek letters. But with this exception, planchette never wrote any German, though both the mediums are perfectly familiar with it, and in their childhood probably knew it far better than English. If, then, these phenomena are a dream-like recrudescence of long-forgotten thoughts, this absence of German seems to require some explanation.[2] As regards the mode of writing, we were unable to distinguish any differences of handwriting between the various "spirits," except that one of F.'s wrote from right to left, mirror-writing, whether or no the left hand was used. I trust I have given an accurate account of the chief points in

[1] Possibly, as Mr. F. N. Schiller suggests, the sense of touch might unconsciously have informed him that the card was not turned up.

[2] Since this was written "Heliod" has shown a knowledge of German and Latin.

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these experiments, and can only hope that members of the Society may be able to throw some light on the problems which they raise.

(Signed) F. C. S. SCHILLER,
Associate S.P.R.

Balliol College, Oxford, 26th October, 1886.

APPENDIX.

Since writing the preceding paper the experiments have been continued with F., and I will give a short sketch of the results subsequently obtained. The first thing to be noted is that F.'s power of writing seems to have diminished sensibly, so that whereas he would formerly write on three out of every four occasions he can now only do so about once out of every three. Under these circumstances it has been impossible to repeat the card and alphabet experiments. But an interesting experiment was tried of writing with two planchettes, F. having one hand on each. I suggested this in order to elucidate the connection between left-hand writing and "mirror-writing," and fully expected that the two hands would write the same communications. To my astonishment, however, the communications, though written simultaneously, were different and proceeded from different "spirits." I regard this as conclusive proof that the phenomena have nothing to do with the medium's consciousness, for, as every one can easily experience for himself, it is quite impossible, at least without long practice, to write two *different* words at the same time.

Whenever F. wrote with two planchettes, the left hand wrote mirror-writing, which was often very hard to decipher, but we did not observe anything like a fixed rule in this respect on other occasions. For though planchette generally wrote in the ordinary way even when the left hand was used, it sometimes produced mirror-writing with the right hand also. We have also had some instructive experiments in what I may call conjoint writing. I must begin by saying that ordinarily I am quite unable to make planchette move at all. But one night I put my hand also on, after F. had failed, as on several preceding days, to make it write. Planchette soon began to move and to write intelligibly. I repeatedly took my hand off and the writing stopped at once. Similarly, whenever F. took his hand off, the writing also ceased, except that on one occasion, when he did so without my knowledge, it appears to have written two or three letters before stopping. I am inclined, therefore, to regard the phenomenon of conjoint writing, whatever may be its explanation, as genuine, *i.e.*, that the second operator really contributes to the result.

Passing from the method to the matter of the communications, I should note that "Heliod" has shown a knowledge of German and alluded to Goethe's *Ewig Weibliche*, but that the bulk of the communications were in French and produced by "Irktomar."

In addition to some dialectical variations which appear to be Provençal (*e.g.*, Irktomar n'a pas lou tems, Pour vous faire des coumplimens), he produced an extraordinary jargon which he called "Romaunce" and ascribed to the time of "Roland" and of "Charlemagne."

Afterwards it was found to be old Norman French, and mostly quoted

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from the *Chanson de Roland* of the 12th century, as will appear from the following comparison :—

"Chanson de Roland."	Planchette.
1. Carles li reis, nostre emperere magnes.	(1st time.) Car [l] es li reis magnes empere [re] set auz *ut plein* estet en Espaigne.
Set auz *tuz pleins* ad estet en Espaigne. (C. de R. 1-2.)	(2nd time.) Carles li reis magnes empere [re] set auz *lutans* estet en Espaigne.
2. Ne reverrunt lur *meres* ne lurs *femmes*.	2. Ne reverrunt ne *peres* ne *parenz* ne *Charlemagne*, ki as porz les *atent*.
Necels de France ki as porz les *atendent*. (C. de R. 1402-3.)	
3. Jo vus ai mult servit. (C. de R. 3492.)	3. Jo vous ai mult *bien* servit.
4. Passet li jurz si tarnet à la vesprée. (C. de R. 3560.)	4. *S'enfuit* li jourz de bleneut la vesprée.

F. does not know old French at all, and cannot remember to have ever read or heard any, but, being strongly inclined towards the unconscious self theory, suggests that the passages produced may have been quoted in some magazine article, and thus met his eye.[1] In any case, however, these quotations throw an interesting light on the mode of thinking of the intelligence that dictated them. It will be seen that they are evidently quoted from memory, and by no means accurate. And in No. I. the first version was nearer the original than the second ; but, as quoted, the words "ut plein" made no sense, and hence "lutans," a word which does not, I believe, occur in the *Roland*, was substituted for them to complete the sense. That is to say, the second version is no mere reproduction of an impression in the memory, but has been subjected to a process of emendation which by us would be held to imply the action of conscious thought. Yet during this time F.'s conscious mind was entirely void of any knowledge of the dialect, and *a fortiori* could not possibly have corrected what appeared to him quite meaningless. In No. 2 it is evident that only the general drift of the passage was remembered. But corresponding to the change of subject from "cels de France" to "Charlemagne," the verb "atendent" is changed from plural to singular, which seems to imply a knowledge of the grammar of the language.

Lastly, planchette volunteered the information that "Carles fu carles li caux" (Charles was Charles the Bald), which is certainly wrong, and as certainly could not be derived from the *Roland* or any similar poem, while it is nevertheless linguistically correct. It must, therefore, I think, be admitted that the intelligence which produced it must have possessed a considerable amount of what we should call conscious knowledge of old French, and such as F. certainly does not possess.

To sum up then I will only say that the matter of the various communications (*i.e.*, excluding the card and alphabet experiments, &c.) does not

[1] Neither had Mr. F. C. S. Schiller read any old French.

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seem to me to afford absolute proof that the knowledge displayed could not possibly have been latent in the writer's mind, while at the same time this is extremely *improbable* in a large number of cases. Moreover, both the matter and the manner of the communications display powers beyond any at present recognised as normal. (Signed), F. C. S. SCHILLER.

January 22nd, 1887.

This case will have to be afterwards considered from more than one point of view. The card experiments indicate thought-transference, and possibly something beyond this. The substance of the old French messages will need notice when we are dwelling on the curious deposits of memory which these psychical excavations, if I may so say, throw up to the surface. But for the present I treat the Schiller messages only in their first and superficial aspect, as writings apparently emanating from several personalities apart from the writer's own; personalities, moreover, which showed a kind of persistence; which seemed to lie in wait, and to be ready at any hour to emerge into characteristic activity. Each of these personalities had a distinctive character, and apparently a clear memory of its previous manifestations; that memory being, in one recorded instance at least, more accurate than was the automatist's conscious recollection. Each personality seems, too, to have a will of its own; they sometimes refuse to come when called for; and one *persona*—the so-called Johnson—disappears altogether in a huff.

All this, of course, would be to the last degree childish, if looked upon as a mere amusement; to the last degree lamentable, if looked upon as indicating the kind of occupations reserved for ourselves, after quitting the body. But as a psychological puzzle it is interesting from one end to the other; and the very puerility of the automatic jokes is not the least curious element in the problem.

And I would ask the reader to remember that messages more or less resembling these are no rarities; that perhaps one in every three or four families who have given the thing a trial have actually obtained them. And where were the recipients of such messages to go for any sort of discussion as to their true nature? What recognition, even, could they find of the bare fact that such messages were possible, except the recognition offered by Spiritualists, coupled, of course, with what seemed after all the most obvious explanation? Those who sneer at Spiritualists as the mere dupes of vulgar impostors can hardly have realised how much evidence that at least *seemed* to make for Spiritualism has actually been attained by many a family group of perfectly honest inquirers. Some attempt to *explain* automatic messages should surely have preceded the sneer at those who could hardly, without previous knowledge of a special kind, have judged these messages otherwise than as they did.

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For my own part, (while I would still avoid any general statement until many more cases have been discussed), I hold that the apparent uniqueness of such a phenomenon as the Schiller messages, —the apparent *externality* of the dictating intelligence, — do undoubtedly grow fainter and more questionable as we pass under review a number of more or less analogous cases which can be adduced ;—cases where two or more psychical currents have manifested themselves, alternately or coincidently, in the life-history of the same man. I believe that the tendency to a severance of this sort may be detected in more forms than is commonly supposed. I believe that whenever there is any habitual alteration, physiological or pathological, of the threshold of consciousness we shall find an incipient formation of a secondary chain of memories, linking together those periods of altered consciousness into a series of their own. And when once a second mnemonic chain is woven, the emergence of a second personality is only a matter of degree. For any difference in memory involves a certain difference in character, and in proportion as the two memories are *co-exclusive*, (which they may be in very differing degrees), the moral and intellectual habits founded on the differing memories will be likely themselves to diverge. The first analogy which I shall offer is derived from the phenomena of *dream*.

There are two main ways in which dreams afford a parallel to the automatisms which we are considering. In the first place—and this is the most important—there is the dramatisation of dream-characters ; their seeming independence of our own personality, from which yet they are undoubtedly derived. But this topic I shall defer until we come to deal with inward voices—"the dæmon of Socrates," and the like. In the second place—and this is what we must now consider—there is a tendency to the creation of a secondary dream-memory of our own, so that we recollect a first dream while we are dreaming a second more fully than during the waking interval. I do not mean to suggest that the great bulk of our dreams attach themselves in any discernible way to a secondary personality. Rather, I conceive that most of our dreams represent little more than that tumult of fragmentary images which I believe to be perpetually proceeding within us, beneath the level of anything which can be called an identity. If we doze for a moment, we feel this tumult going on ; and the dreams which emerge into waking memory are for the most part a mere jumble of this kind—the mere *disjecta membra* or raw material of a self.

Sometimes, however, there is a faint continuous current through this tossing whirlpool of dream. There are certain patterns into which the confusion tends to shape itself, and when one of these patterns recurs, we remember in our dream its previous presentation. The *flying* sensation, for instance, which most dreamers have experienced, often

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brings with it a vivid recollection of previous flights. And the case is similar with dreams not distinctly derived from the attitude or sensations of the sleeper. Many of us know a dream-house, a dream-landscape, which does not reproduce any scene familiar to our waking life, but which, each time that we revisit it in dream, appears familiar and seems to remind us of previous visits. Here, as it seems to me, is a first trace of that tendency which sometimes in hypnotised subjects revives spontaneously in a fresh trance the hallucination which has been suggested to them in a previous trance.[1] These dream-scenes are more or less remembered in waking hours; but, (in my own experience at least), it is difficult to retain any distinct image beyond the few minutes after awakening,—which are in some ways analogous to the period during which a post-hypnotic hallucination persists after the trance is removed.

By the nature of the case it is almost impossible definitely to prove that in a second dream we really have recollected something of a first dream which our waking thought could not recall. The following account from Mr. J. G. Keulemans (dated December 6th, 1886) comes perhaps as near as can be expected to such a demonstration.

Some six months ago, I dreamt I had travelled to New York, by sailing ship. On my arrival I found that the voyage had been made in just two hours time. I had five hours to spare for business and other occupations, (then I intended to return to London the same day) and I thought of going through a new part of the town. There I found everything new: houses in course of construction, and a newly laid-out park was at some distance. I found myself on a boulevard with rows of pyramid-shaped trees. I did many other things, but could not remember afterwards. In fact, I knew my dream from beginning to end when I woke up, but the remaining portion faded from my memory just at the moment I was relating the dream to my wife.

This happened about 10 minutes after waking from my dream. I think dream-consciousness had, by this time, made room for waking-consciousness —the latter supervening on account of my wife's interruption which caused me to reflect upon other matters.

But on Thursday—the night of 25-26 November—I was again dreaming of New York, and was at about the same place where I landed in my first dream. I knew the place. I was under the impression of having resided some time in that town. I recollected that I had been *dreaming* of it before. Although in my dream-consciousness it seemed that I enjoyed my *waking* state of reasoning, and even considered my dream as something very silly because there was no such thing as a new suburb near the landing-place; in fact, I dreamt *that I was not dreaming* but *had dreamt* of it previously, yet, after reconsidering my dream in my dream, it at once struck me that it might have been no dream after all, but a reality. I began to doubt whether I had not been there long ago. The locality which I had visited might have

[1] See for instance, Binet and Féré's *Le Magnétisme Animal*, p. 165; Gilles de la Tourette's *L'Hypnotisme*, p. 314.

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changed or grown older, or might be farther away. I began to force my memory to get hold of past times, and then, suddenly, I was again in that particular part where the houses were being built, where I saw the park and the boulevard—there they were, the trees, too. I looked at them carefully, and now discovered them to be young specimens of *Wellingtonia gigantea*—they had grown considerably since my previous visit.

When I had come thus far, all the incidents of my previous dream recurred, and there were many places I visited now for the second time which I remembered were there on my first visit. It would be tedious and unimportant to relate the whole of my nocturnal expeditions. The only remarkable fact is that I knew and remembered, in dream-life, what I had forgotten in my waking-state. I was certain I was not dreaming on the last occasion, and then came to the conviction that the dream I dreamt of was a reality also, but belonging to the forgotten past.

Of course when we get to developed accesses of *somnambulism*, this continuity of memory between one access and another is admitted, just as much as in hypnotism itself. I need not argue these points here. My object is rather to show that the sleep-waking state, natural or induced, does not stand *alone* in its tendency to generate a secondary memory, a secondary manifestation of the Self, but that this tendency shows itself wherever there is any habitual shaking-up of those elements. To look at life through the hypnotic trance, some persons might say, is like looking at it through a *prism*. Of course you get the same effects repeated each time that you do so. Well, I am here arguing that to look at life through dreams is like looking at it through a *kaleidoscope*,—a poor and broken one,—but that, nevertheless, random though the results may seem, there is a certain tendency here, too, to a repetition of the same effects. In fact, I may generalise and say, "Whatever mode of disturbance be applied to the psychical elements, there will be a certain congruity between the results of each application of each special disturbing agency, and every recurrence of such congruity will tend to the formation of a mnemonic chain."

Let us turn now to another form of psychical disturbance,—that caused by drugs. Here, too, we know that in such cases as De Quincey's the visionary scenes which opium summons up resemble each other,—and seem to the patient to be connected by a thread of memory. I do not, however, know of any definite case where a man who did some deed under the influence of opium remembered it when under opium again, and not in the intervening period.

More familiar to English experience is the case of alcoholic intoxication. And here the similarity of the stages through which any given man passes—of the remarks which he makes—in each successive fit of drunkenness—is obvious enough. Could we persuade some correspondent to write us a letter each time that he was in (say) the maudlin phase of drunkenness, the series of letters would resemble a

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series of planchette-messages in several ways. In the first place, they would express a character differing from his normal character, but congruous with itself. In the second place, the handwriting would be larger and laxer than his ordinary script. And in the third place, our correspondent, when sober, might very probably know nothing of the contents of the epistles, and might even contest their authenticity.

I do not doubt that, with more careful experimentation, we might go further than this, and find frequent cases where a drunken man recollects an act done in a previous drunken fit, but lost to memory during the sober interval. One such story—too trite to repeat here—has done duty in many a treatise since the days of Macnish and Abercrombie. I am glad that a communication which Mr. Keulemans has kindly sent me enables me to give another, and more detailed, example.

Whilst travelling in Africa, I had a negro who used to indulge in overdoses of brandy. One evening on coming into my tent, I found him busy moving my instruments. Some moments after I discovered he was drunk. After turning him out, I went to sleep. Next morning I missed a scalpel and a pair of pincers. Remembering that my negro had moved them the evening before, I interrogated him as to what he had done with the instruments. He swore he had never touched them. (Negroes as a rule swear to anything, but my man was an exception to this rule.) I made him look, and searched myself, but in vain. Two days later he was again slightly intoxicated, though sober enough to understand me. I mentioned the loss of the instruments. He began to reflect, but brandy was gaining on his mind, and he went away to his hut. Later in the evening another negro returned the instruments to me, saying he had taken them out of my servant's hands, fearing he would do harm to himself or to others whilst drunk. I then learnt that he had been watched taking them from a box belonging to a friend of mine. My friend told me that the negro went straight for the box and took the instruments away, without seeming to notice my friend or discovering that he was noticed going to the box, and that he was requested to state what he wanted. The next morning he knew nothing of what had occurred. All he did recollect was that he had been very drunk, and had gone to sleep. The distance from my rooms to those of my friend was about thirty yards. Although in the same house, my drunken negro had to go round several corners, descend two staircases and mount another—all this in pitch darkness. On his way to and fro he passed several servants, but did not appear to notice their presence.

I may briefly cite here a well-known case of Dr. Dufay's,[1] which affords a precise *somnambulic* parallel to this revival of drunken memory in a second intoxication:—

A respectable servant girl was accused by her mistress of having stolen certain objects of value, which were missed from their usual

[1] *Revue Scientifique*, December 1st, 1885, p. 703.

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place. She was committed for trial, protesting her innocence; but could make no suggestion whatever as to where the valuables could be. Fortunately for her, Dr. Dufay, who was then physician to the prison at Blois, recognised her as a girl who had previously been in the service of Dr. Sirault, who had frequently hypnotised her. He asked the girl whether she thought that she ever walked in her sleep? but she knew nothing of doing so. The nurse, however, told Dr. Dufay that the girl *did* in fact walk about every night in the dormitory.

Dr. Dufay took the hint and hypnotised her—and the girl then at once told him where the objects were. She had put them in a fresh place, during a somnambulic access, for greater safety. When she did so she had of course meant to tell her mistress; not knowing that when she next saw her mistress she would have awaked from her trance, and would know nothing of what she had done.

All was now put right. The objects were found; the girl was released; the mistress apologised;—and probably, though we are not told so, locked the young woman into her bedroom at night henceforth, to avoid suffering from her somnambulic zeal.[1]

I have suggested that whatever mode we may choose of modifying the arrangement of our psychical elements we shall find that each several disturbance tends to a certain congruity of result on each repetition. If in dreams we shuffle the mosaic of our psychical fabric as in a kaleidoscope, we may perhaps say that in drunkenness we look at it through a superincumbent layer of semi-transparent liquid. Well, the result of pouring this liquid will not be only to *dull* the original picture,—there will be phenomena of *refraction*, as we look at the picture through the liquid, which will be congruous among themselves. Such is the similarity of successive drunken fits, tending here also to the creation of a new mnemonic chain.

Now let us disturb our psychical mosaic in a still more violent way. Let us explode a mine under it; let us assume, that is, an attack of epilepsy. Now, as regards epilepsy, my contention will be readily admitted up to a certain point; but beyond that point the evidence will be found as yet very scanty.

Both as regards pre-epileptic and post-epileptic states, it will be admitted that on successive occasions these states are apt to be *congruous* in the same patient. The "psychical aura" or "dreamy state" will be much the same before each of his attacks. And where there are post-epileptic hallucinations involving more than mere confusion, the same type of hallucination generally recurs pretty regularly for any given patient. It is hard to say how far in one such access

[1] Observe in this case the homogeneity of the spontaneous and the induced somnambulism. It is probable that many spontaneous somnambulists would, if hypnotised, be able to tell what they had done in their nocturnal excursions.

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the patient remembers the feelings of the previous access; but I should conjecture that further inquiry might show traces of the gradual formation of a new chain of memory,—turbid, indeed, and confused,—but existing separately from, and parallel with, the memory of normal life.

On this view, for instance, I should rather expect that in cases of *definite cure* of epilepsy some of the features of the aura, as previously experienced and recollected, might altogether fade from recollection. I know not how far this has been noticed hitherto. But I observe a recent case where frequent attacks of epilepsy were preluded by the vision of a bright red light and followed by hallucinations "Singularly enough, since his recovery the patient has forgotten all about either the lights or the hallucinations, and is now unable to recall their nature, although formerly he described them with some accuracy." [1]

I should infer from a case like this that there was an incipient formation of a separate mnemonic chain;—that is to say, that the pre- and post-epileptic hallucinations, like hypnagogic and post-hypnotic hallucinations, tended to form a separate epileptic—like the separate hypnotic—memory; and consequently dropped out of normal memory when the latent possibility of their epileptic revival disappeared.

And I have one case—cataleptic, as it would seem, rather than epileptic in character,—which, distant and imperfectly reported though it is, illustrates this view with singular vividness.

The case was sent to Professor Barrett, in 1876, by a clergyman, then vicar of a London parish, and father of the subject. He did not choose to give further particulars or to allow his name to be published.

My son was, in his 17th year, attacked by what was said to be cataleptic hysteria. At their first commencement they were little more than prolonged fainting fits; afterwards, each attack began by his passing in an instant into a state of complete rigidity. Occasionally he would remain for five minutes to a quarter of an hour in that state, retaining the attitude in which he was when attacked, as if made of marble, with his eyes open and fixed and perfectly unconscious. After a time he would rise with a sigh, move about, and speak without the slightest hesitation or incoherency, and thence continue for hours or days, leading an entirely separate existence, not recognising friends or relations or even the way to his own bedroom, and taking no notice if addressed by his own name, writing letters with another signature, always imagining himself to have arrived at middle-age, and alluding to incidents of his imaginary youth which teemed with echoes of his past reading; he was most courteous and pleasant in his manner,

[1] Case of epilepsy of six years' duration: complete recovery after surgical operation on the skull and brain. Hughes-Bennett and Gould, *British Medical Journal*, January 1st, 1887.

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excepting when any doubt was implied as to the accuracy of any statement which he made.

At times all his faculties were in a most excited state. He would continue for hours playing games of skill with almost preternatural dexterity ; he would repeat to the air pages of poetry ; and he would play and sing in a wild and original manner, of which he was incapable at other times, quite unconscious of the presence of others and impervious to any interruptions. In this state he has continued for a week at a time, going out with us to dine with old friends, whom, however, he never recognised, but treated as new acquaintances. He always spoke of his parents as far off in some distant Eastern country, in which he himself had been born, and spoke to us (his father and mother) as kind hosts and friends whom he was soon to leave. Suddenly he would fall to the ground, roll about in convulsive agony with loud groans, and, a little water being poured into his lips, would get up and go on talking upon the subject of conversation on which he had been engaged at the time of his seizure, and without the slightest remembrance of anything that had passed meanwhile. These attacks continued every few days for more than two years, during which he was forbidden all kinds of study. At the age of 19 we were advised to send him on a voyage, and accordingly he paid a visit to an uncle, a military officer at Madras ; from thence he returned in six or seven months, quite cured, went up to the University of Cambridge, where he went out in honours, and is now at the bar. These attacks never came upon him whilst actually employed, but generally at church, in bed, or during quiet conversation ; they were often induced by anything that vexed or startled him. He has since told me that he might have resisted them, but that they came upon him with a sensation of pleasant drowsiness that fascinated him. Certainly he was the worse for any display of sympathy. I may add that he suffers now at times from some defect in the circulation which prevents great bodily exertion and which produces pain in his heart and head ; in all other respects he is hale and hearty.

This clergyman and his wife are now dead, and the publication of the name was not permitted. A lady, who also objected to the publication of her name, and who also is now dead, wrote at about the same date to Professor Barrett as to this case.

I have known from infancy the son of a respected clergyman in London (also known as an author and artist), who, being overworked some few years ago in competing for a scholarship at Cambridge, became subject to fits resembling epilepsy for a period of several months. After one of these he would apparently recover ; be perfectly quiet, kind, and courteous, and a thorough gentleman in every respect. But in this condition he did not recognise any of his friends, and on one occasion he explained to me "the extraordinary fact that the lady who had just left the room was under the delusion that she was his mother, and that excellent old clergyman called himself his father." At such times his habits and tastes were very different from his ordinary ones, and his father told me that his powers were heightened to an extraordinary degree, especially in the classics, of which (at 16) he seemed a master, and in music. In his normal condition he was a fair classic, good for his age, and he could play an easy accompani-

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ment by ear,—just a few chords,—but in this secondary state he played the most difficult music of Mendelssohn and Beethoven with perfect execution and extraordinary taste.[1] Another fit would restore him to his normal state, when he knew nothing of the other; and for several months he thus lived a life of double identity, taking up each unconsciously just where it was broken off.

It is much to be regretted that there is no medical report of this case; but the account given shows that it must have been in some ways intermediate between ordinary instances of post-epileptic hallucination and the alternating personalities on which Krishaber, Ribot, &c., have dwelt. The exaltation of faculty during the secondary state deserves especial notice in relation to some similar exaltations which we shall find accompanying automatic action.

An interesting connecting link, again, is afforded by the accounts of *possession* which have come down to us from the "Ages of Faith." I take as an example the recently-published autobiography of Sœur Jeanne des Anges.[2] Sœur Jeanne was the Superior of the Ursulines of Loudun, about 1630-1665, and was one of the most ardent admirers, afterwards one of the fiercest enemies, of the unfortunate Urbain Grandier, who was burnt alive in 1634, on the charge of having bewitched the Ursuline nuns. Her manuscript autobiography has fallen into the hands of editors of a type which she can hardly have foreseen, Drs. Gabriel Legué and Gilles de la Tourette. These physicians have carefully analysed the symptoms which she narrates, and have shown that her affliction may be classed as a well-developed case of hystero-epilepsy, of the kind now so often described by the Salpêtrière school.

Our present interest lies in the *personalities* which she gives to the demons whom she supposes to possess her,—who are in reality mere objectifications of different series of hysterical attacks.

Just as the automatic writer has a group of *soi-disant* guides or "controls," who take it in turns to direct his hand, and each of whom maintains a specific character of his own,—even so does Sœur Jeanne describe Asmodeus, Leviathan, Behemoth, Isacaaron, Balaam, Gresil, and Aman, whose diverse presence she apparently recognised mainly by the special train of undesirable emotion which each inspired, but partly also by their words and writings. A facsimile of a letter of Asmodeus is given by the learned editors, but the writing does not perceptibly differ from Sœur Jeanne's own script.

And Dr. Gilles de la Tourette informs me that there are letters,

[1] This seems to be only an exaggerated report of the father's more probable statement that "he would play in a wild and original manner."

[2] *Bibliothèque Diabolique* (Collection Bourneville). Paris: Aux Bureaux du *Progrès Médical*, 1886.

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also in Sœur Jeanne's own handwriting, which profess to come from the other demons too—such letters being habitually written by the Sister during the process of exorcism, which usually brought on a hystero-epileptic attack. The substance of the letters reflected, no doubt, the foulness and malignity of the Sister's own mind; but, nevertheless, the modern hysteriologists who have discussed the whole affair do not suppose that the Sister *consciously simulated* the writing or speech of devils through herself. Her diabolic script and utterance were probably (though not certainly) purely automatic.[1]

It must be remembered that Sœur Jeanne was perfectly sane during these years of possession, sane at least in the sense that she governed her community, plotted savagely against her enemies, and made religious capital out of her real or fictitious stigmata; but that, nevertheless there is no doubt whatever that she *believed* in these possessing demons —who, as I say, were in reality the incarnations of hystero-epileptic attacks.

Now, I certainly do not mean to trace any moral analogy between these distressing products of Sœur Jeanne's imagination and the "guides" of the planchette-writer—which, as I have said, so far as I have seen, are almost always harmless, generally even sermonising entities. So far as my experience goes I do not see that planchette-writing has any connection with disease of mind or body, or any tendency to evil of any kind, except in a few cases of great credulity on the writer's part, a credulity which such discussions as these may render—it is to be hoped —somewhat less common. Rather is Sœur Jeanne's case parallel in another way; as showing the tendency of the individuality to split itself up into various co-ordinate and alternating trains of personality, each of which may seem for a time to be dominant and obsessing, while yet the habitual sense of the ordinary self may persist through all these invasions.

We have briefly noted the incipient rearrangements of personality which follow on the kaleidoscopic shiftings of dream, the blurring refractions of narcotism, the explosive scatterings of epilepsy.

And we know, moreover, that there are a few instances where the change in the personality, perhaps suddenly induced, is profounder and more permanent than in any of the above-cited cases,—where it presents a readjustment apparently including nearly all the old elements, and shaping them, so to say, into a new person, in some ways, perhaps, superior to the old. Changes like those of Félida X. (so often already alluded to), of course *include* my present subject; for they involve a series of actions which, though conscious from the point of view

[1] See Dr. Legué's *Urbain Grandier et les Possédées de Loudun.* Paris: Baschet.

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of one of the two personalities, are automatic from the point of view of the other. But they involve so much *beyond* what I am here concerned with that it would only confuse my argument were I to treat of them here.

There is, however, one case of this kind to which I must briefly refer, since an actual experiment in automatic writing was made, which curiously illustrates some of those with which we shall have to deal.

Dr. Mesnet [1] records the case of a soldier, F——, who received a gunshot wound in the head at Sedan, and was afterwards subject to periodical attacks, lasting for about a day in each month, of a kind of somnambulism, during which he hears, tastes, and smells nothing; and hardly sees at all except when the sense of touch calls his attention to objects, which he can then, as it seems, see distinctly.

During these accesses his actions seem purely automatic,and are for the most part an exact repetition of his every-day mode of life at the hospital. But by tactile suggestion the memory can be made to go back to an earlier epoch.

Thus if a cane is put into his hand in a way which suggests a rifle, he goes through the movements, and utters the brief cries, of battle: "Henri!" "There they are! at least a score of them!" "We must try and settle this between us!" &c.

Now let us see in what way the act of writing revivified past experience. I abridge Dr. Mesnet's account (p. 18 *sqq.*) which contains several points to which we shall hereafter have to refer. "He passed his hands over the table; felt the handle of a drawer; opened it and took out a pen, which at once excited in him the idea of writing. He felt in the drawer, and took out some sheets of paper and an ink-bottle. These he placed on the table, sat down, and began a letter addressed to his general, urging his own good conduct and courage, and asking his general to endeavour to procure for him the military medal.

"The faults of spelling, &c., in the letter were neither more nor less numerous than was habitual with the subject in his normal state. The facility with which he wrote, keeping to the true lines, showed that he saw what he was doing. To test this, we repeatedly placed a sheet of iron between his eyes and hand. He continued to write a few words illegibly, then ceased to write, without showing impatience. When the obstacle was removed he finished the imperfect line, and began another. The sense of sight was therefore needful to the written expression of the subject's thought.

"The ink in his inkstand was then replaced by water. He perceived the faintness of the letters traced, wiped his pen again and again, but

[1] *De l'Automatisme de la Mémoire*, &c. Par le Dr. Ernest Mesnet. Paris, 1874.

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never looked at the ink-bottle. His field of vision, it seemed, was awakened by touch alone, and was limited to objects with which he was actually in contact.

"He was writing on a sheet of paper which lay on a pile of about ten similar sheets. We quickly drew this top sheet away, and his pen continued to write on the second sheet. When he had written about ten words on the second sheet we snatched this also away, and he continued his phrase at exactly the same point on the third sheet. This process was repeated, and on the fifth sheet there was nothing but his signature at the bottom. Nevertheless, he read over and corrected his letter on this blank fifth sheet, scattering stops and corrections over the empty page, each of which corresponded to mistakes made on the co-ordinate points of the pages which had been snatched away from him."

On a later occasion (p. 23) pens were put in his way again; and as soon as he touched them he sat down and began a letter to a friend, this time making an appointment for the evening, after a concert at the café of the Champs Elysées, at which (as he supposed) he had to sing. Some slight change in the surroundings had carried his automatic reminiscence back to this other phase of his past career.

Here, then, we have automatic writings appearing to proceed from the writer's known personality, but projected backwards to an earlier point of time. And I wished to cite them here for purposes of comparison with writings professing to emanate from a personality other than the writer's, but at the present moment of time. We shall find, I think, that this is not necessarily a deep-seated distinction; rather that the automatic writing, while representing some dislocation or rearrangement—some "allotropic form," as I have elsewhere suggested—of the writer's personality, yet may sometimes take its superficial colour from some almost accidental circumstance, some suggestion round which the flow of more or less incoherent mentation crystallises into definite shape.

In this strange case of Dr. Mesnet's we have noted an experimental analogy to the spontaneous automatic writing which forms our special topic. But that experiment was practically irreproducible; it depended on a cerebral lesion which may never again be observed in just the same form. Can we not find any easier, commoner form of experiment which may give graphic results comparable with our automatic cases? What of hypnotism? the reader may ask. Cannot hypnotic subjects, in an alert or somnambulic state, be made to write? and what is the nature of messages thus written?

This, indeed, will be a specially close analogy. For in cases of automatic writing, quite apart from hypnotism, we often see the writer fall spontaneously into a state resembling the hypnotic trance, during which state the writing is sometimes continued, sometimes interrupted

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by a profounder stage of apparent lethargy. I have repeatedly witnessed this phenomenon in automatists personally known to me; and it constitutes one of the points urged by Spiritualists as showing the possession of the writer by an influence from without. "He is mesmerised," they say, "by a spirit." It is plain, therefore, that, whatever may be the true explanation of this intermixture of trance-states with automatic writing, it at least recalls *primâ facie* the known effects of hypnotism.[1]

What experiments, then, have been made on the writing of hypnotised subjects? There have been MM. Binet and Féré's experiments as to the influence of a magnet in reversing the direction of the script—experiments which English observation, so far as I know, has not yet confirmed. And there have been the experiments of MM. Richet, Héricourt, Ferrari, de Rochas, &c., on the modifications of handwriting which ensue on a suggestion made to the subject that he is (say) Napoleon, or an aged man, or a young child. These experiments are easy to repeat, and they will be found of considerable importance when we come to consider the significance of changes in the character of our automatic script.

But beyond this, little notice has been taken of the writings of the hypnotised,—probably because communication with them can with less trouble be conducted verbally. Nevertheless, I have known of one or two subjects who could write, but not speak, in the trance; and I think that, whenever a hypnotised person refuses to speak, an effort should be made to induce him to write. It was reserved, however, for M. Pierre Janet to discover a method by which, in an exceptionally sensitive subject, hypnotic writing, prolonged by suggestion into the normal state, could be made a means of communication with the hypnotic self, coincidently with ordinary verbal intercourse with the waking self.

The case of which I must now give a summary may be said to mark the highest degree yet attained of proof of the origination of automatic writing in the recesses of the writer's own identity. It will be seen that in this case a secondary self was first created,—or rather, I should say, artificially detached from the complex of cerebration,—

[1] As this paper passes through the press, Mr. Hugh Wingfield, of Caius College, Cambridge, has described to me an experiment which additionally illustrates the kinship between automatic writing and hypnotic suggestion. Mr. Wingfield is a powerful hypnotiser, and can often impress commands on subjects in the waking state. He suddenly ordered a friend (whom he had never hypnotised) to look at him, and to *write*. The friend wrote coherent sentences in several languages,—especially in Servian, which he had at one time habitually spoken,—without having any notion as to what he had written. So soon as the hypnotiser's will and gaze were removed, the writing stopped.

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and that then automatic writing was found to be its best mode of manifesting itself,—a path of externalisation which could be maintained throughout the full apparent activity of the primary self.

The case is Professor Pierre Janet's ; and I abridge his account as given in the *Revue Philosophique* for December, 1886.

The subject was a girl of 19 (M. Janet calls her L.—say *Louise*, to avoid confusion from too frequent use of initials in these cases), who was highly hysterical, having attacks daily of several hours' duration. She was also devoid of the sense of pain, or the sense of contact, so that she " lost her legs in bed," as she put it. I may begin by saying that M. Janet and Dr. Powilewicz completely cured her, mainly by hypnotic suggestion, so that the phenomena which I am about to describe,—though morbid in the sense that they occurred in a morbid person,—were healthy in the sense that they were incidental to a process of cure. The physical *indicia* of the different stages of the hypnotic trance satisfied the observers of its reality.

In the first place, Louise offered the usual phenomena of a good hypnotic subject. Post-hypnotic suggestion succeeded easily ;—that is, the subject could be ordered, when in the trance, to perform some act after waking, or to fall asleep again at a given signal ; and after being awoke she would execute the act, or fall asleep at the signal,—without, of course, *remembering* in her waking state the hypnotic command. At first, however, it was necessary that Louise's own will should accept the command ; or, to speak more accurately, that the hypnotised subject should *assent* when she was told to do something on awakening. When the command was an unwelcome one she would say *no* instead of *yes*, and would not fulfil it on awaking.

On her fifth hypnotisation, however, Louise underwent a kind of brief catalepsy, after which she returned to the somnambulic state ; but that state was deeper than before. She no longer made any sign, whether of assent or refusal, when she received the hypnotic commands ; but she executed them infallibly, whether they were to take effect immediately, or after awaking. Moreover, there was a singular development of a phenomenon on whose importance I have often dwelt in these pages. The state of the awakened subject while he executes a deferred suggestion is never a perfectly normal one ; the suggested action is accomplished in an abstracted way, and seldom remains clearly in the normal memory, belonging rather to the secondary memory of the hypnotic state, of which state, indeed, the action is itself a fragmentary prolongation.[1] In Louise's case this went further, and the suggested actions became absolutely a portion of the trance-life. She executed them

[1] This applies to isolated suggestions. If a habitual course of action (as diligence in study) or a habitual physical desire or aversion, (as appetite for

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without, apparently, knowing what she was doing. If, for instance, in her waking state, she was told (in the tone which in her hypnotic state signified command) to get up and walk about, she walked about, but, to judge from her conversation, she supposed herself to be still sitting quiet. She would weep violently when commanded, but while she wept she continued to talk as gaily and unconcernedly as if the tears had been turned on by a stop-cock. One day M. Janet begged Louise, in her waking state, to *resist* his next command. She said that she was not aware that she had ever obeyed him, and would certainly resist now. The command was given, and she executed it unconsciously, while still protesting that she would certainly resist.

Here, then, was an indication of a new partition of the identity;—not merely that partition which is habitually established between the hypnotic trance and the waking state. For this new partition subsisted equally in both states, and the dividing boundary was no obvious gulf, but a line as imaginary as the Equator. For the line was merely this,—that any suggestion uttered by M. Janet in a brusque tone of command reached the unconscious self alone; any other remark reached the subject—awake or somnambulic—in the ordinary way.

The next step was to test the intelligence of this hidden "slave of the lamp," if I may so term it—this sub-conscious and indifferent executor of all that it was bidden. How far was its attention alert? How far was it capable of reasoning and judgment? M. Janet began with a simple experiment. "When I shall have clapped my hands together 12 times," he said to the entranced subject before awakening her, "you will go to sleep again" There was no sign that the sleeper heard or understood; and when she was awakened the events of the trance were blank to her, as usual. She began talking to other persons. M. Janet, at some little distance, clapped his hands feebly together five times. Seeing that she did not seem to be attending to him he went up to her and said, 'Did you hear what I did just now?" "No, what?" "Do you hear *this?*" and he clapped his hands once more. "Yes, you clapped your hands." "How often?" "Once." M. Janet again withdrew, and now clapped his hands six times gently, with pauses between the claps. Louise paid no apparent attention; but when the sixth clap of this second series—making the 12th altogether—was reached, she fell instantly into the trance again.

meat, distaste for spirits,) be hypnotically inspired, the habit may become a second nature, and the only trace, perhaps, of the extraneous origin of the impulse will be a tendency to sudden reversion to the earlier characters. The subject's state may then be compared to that of the negro child taken from his savage kin and reared in civilisation, who may still relapse into a barbarism impossible to his white schoolfellow. In other words, hypnotic moralisation is *par excellence* education, not heredity.

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It seemed, then, that the "slave of the lamp" had counted the claps through all, and had obeyed the order, much as a clock strikes after a certain number of swings of the pendulum, however often you stop it between hour and hour. M. Janet varied the conditions; ordering that the girl should fall asleep when he should mention the same letter of the alphabet twice in succession; or when the sum of the digits which he mentioned should reach 10. The result showed that the "slave of the lamp" could successfully attend and obey so long as the problem was a simple one, but that when the problem became too complex, confusion ensued.

These experiments, as M. Janet remarks, throw much light on the mechanism of "deferred suggestion." It seems plain that when a command is given which is to be executed at a distance of some months, we need not suppose that the impulsion thus given works itself out absolutely without further reinforcement. Rather it resembles a bill drawn on the unconscious self at a certain date, but the unconscious self, watching the efflux of time, prepares for its maturation.[1]

Thus far, however, the knowledge gained as to the unconscious element in Louise was not *direct* but inferential. The nature of the commands which it could execute showed it to be capable of attention and memory; but there was no way of learning its own conception of itself, if such existed, nor of determining its relation to other phenomena of Louise's trance. And here it is that automatic writing was successfully invoked; here we have, as I may say, the first-fruits in France of the new attention directed to this seldom-trodden field. M. Janet began by the following simple command: "When I clap my hands you will write *Bonjour*." This was done, in the usual loose and scrawling script of automatism, and Louise, though fully awake, was not aware that she had written anything at all.

This adit, then, was in the possession of the subterranean occupant of the psychical citadel. As yet this occupant was nameless. It was ordered to write a letter, which it did in a commonplace style, and signed "Louise." But Louise was unconscious of the letter-writing, and when the epistle was shown to her she pronounced it a forgery. The unconscious hand was again bidden to write a letter; it wrote word for word the same letter as before, as if it were a musical-box wound up to repeat a particular tune.

By means of a simple artifice, however, it was found possible to do more than this. M. Janet simply ordered the entranced girl to write answers to all questions of his after her awakening. The command thus given had a persistent effect, and while the awakened Louise continued to chatter as usual with other persons, her unconscious self wrote brief

[1] See on this and cognate points the instructive series of experiments independently undertaken by Mr. Gurney, and recorded below, pp. 290 and 309 *et seq.*

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and scrawling responses to M. Janet's questions. This was the moment at which in many cases a new and separate invading personality is assumed;—and if Louise had believed in possession by devils—as so many similarly-constituted subjects in old times believed—we can hardly doubt that the energy now writing through her hand would have assumed the style and title of a "familiar spirit." Or if, again, she had been a modern Spiritualist, it is probable that the signature of some deceased friend would have appeared at the foot of these communications. But here the "communicating intelligence" was of so obviously *artificial* a kind that it could scarcely venture to pretend to be either a devil or Louise's grandmother. A singular conversation gave to this limited creation, this *statutory intelligence*, an identity sufficient for practical convenience. "Do you hear me?" asked Professor Janet. Answer (by writing), "No." "But in order to answer one must hear?" "Certainly." "Then how do you manage?" "I don't know." "There must be somebody who hears me?" "Yes." "Who is it?" "Not Louise." "Oh, someone else? Shall we call her Blanche?" "Yes, Blanche." "Well then, Blanche, do you hear me?" "Yes." This name, however, had to be changed, for the following reason:—The name Blanche happened to have very disagreeable associations in Louise's mind; and when Louise was shown the paper with the name Blanche which she had unconsciously written she was angry, and wanted to tear it up. Another name had to be chosen. "What name will you have?" "No name." "You must—it will be more convenient." "Well, then, Adrienne." Never, perhaps, has a personality had less spontaneity about it.

Yet Adrienne was in some respects *deeper down* than Louise. She could get at the genesis of certain psychical manifestations of which Louise experienced only the results. A striking instance of this was afforded by the phenomena of the hystero-epileptic attacks to which this patient was subject.

In cases of this sort it often happens that the patient's imagination during the attack is excited by the reminiscence of some scene of terror which perhaps first set on foot this nervous disturbance. On a smaller scale this recurrence to a still dominant moment of past fear may be familiar to some of my readers. I know a lady who was much frightened in childhood by a large dog which sprang out on her; and who still, in moments of alarm or agitation, seems to see the creature spring at her again. Well, Louise's special terror, which recurred in wild exclamation in her hysterical fits, was somehow connected with *hidden men*. She could not, however, recollect the incident to which her cries referred; she only knew that she had had a severe fright at seven years old, and an illness in consequence. Now during these "*crises*" Louise (except, presumably, in the periods of unconsciousness which

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form a pretty constant element in such attacks) could hear what Professor Janet said to her. Adrienne, on the contrary, was hard to get at; could no longer obey orders, and if she wrote, wrote only, *J'ai peur, j'ai peur.*

M. Janet, however, waited till the attack was over, and then questioned Adrienne as to the true meaning of the agitated scene. Adrienne was able to describe to him the terrifying incident in her childish life which had originated the confused hallucinations which recurred during the attack. She could not explain the recrudescence of the hallucinations; but she knew what Louise saw and why she saw it: nay, indeed, it was Adrienne rather than Louise to whom the hallucinations were directly visible.

The situation is a complex one. I will try and explain it by citing a curious dream of my own; hoping that the petty personal details which will be unavoidable may be excused by the singular parallelism of the two cases.

I must first explain that I have long thought that we are too indolent in regard to our dreams; that we neglect precious occasions of experiment for want of a little resolute direction of the will. I do not only mean that we ought to try to remember our dreams, and to analyse them, and that we may get strange hints, from the dream's very grotesqueness, of subterranean processes going on within us. I mean much more than this; namely, that we ought to accustom ourselves to look on each dream, not only as a psychological *observation*, but as an observation which may be transformed into an *experiment*. We should constantly represent to ourselves what points we should like to notice and test in dream; and then when going to sleep we should impress upon our minds that we are going to try an experiment; —that we are going to carry into our dreams enough of our waking self to tell us that they *are* dreams, and to prompt us to psychological inquiry.

I need not say that, as dreamers, we are very unequally gifted by nature. My own endowments are very poor; but by mere painstaking effort I have succeeded three times—on three nights only out of nearly 3,000—in realising that I was dreaming, and in attempting some scanty and hurried experimentation. The dream which I shall cite was the most recent of these. As it was not written down immediately on waking, it would not be evidence for any phenomenon otherwise difficult to credit. But it will be seen that it is only a slight idiosyncratic development of a class of dream which many of my readers have probably shared; and its paltry commonplaceness may perhaps avert the suspicion that it has been touched up for recital.

I was, I thought, standing in my study; but I observed that the furniture had not its usual distinctness—that everything was blurred

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and somehow evaded a direct gaze. It struck me that this must be because I was *dreaming*. This was a great delight to me, as giving the opportunity of experimentation. I made a strong effort to keep calm, knowing the risk of waking. I wanted most of all to see and speak to somebody, to see whether they were like the real persons, and how they behaved. I remembered that my wife and children were away at the time (which was true), and I did not reason to the effect that they might be present in a dream, though absent from home in reality. I therefore wished to see one of the servants; but I was afraid to ring the bell, lest the shock should wake me. I very cautiously walked downstairs—after calculating that I should be more sure to find someone in pantry or kitchen than in a workroom, where I first thought of going. As I walked downstairs I looked carefully at the stair-carpet, to see whether I could visualise better in dream than in waking life. I found that this was *not* so; the dream-carpet was not like what I knew it in truth to be; rather, it was a thin, ragged carpet, apparently vaguely generalised from memories of seaside lodgings. I reached the pantry door, and here again I had to stop and calm myself. The door opened and a servant appeared,—quite unlike any of my own. This is all I can say, for the excitement of perceiving that I had created a new personage woke me with a shock. The dream was very clear in my mind; I was thoroughly awake; I perceived its great interest to me, and I stamped it on my mind—I venture to say—almost exactly as I tell it here.

It seems to me, then,—so far as any value can be attached to the memory,—that there were here three layers of my personality which present some analogy with three layers of Louise's personality, during (say) the apparently unconscious period of a hystero-epileptic attack. In the first place, in each case the habitual every-day personality was for the time in abeyance,—asleep, or hysterically distracted. In the second place, my dream-personality corresponded in a certain way to Adrienne. Each of these had a knowledge of the ordinary self, but apparently not a *complete* knowledge. Each was apparently behind, but not co-extensive with, the ordinary identity; was in one sense deeper than that identity, yet existed only with reference thereto, with no separate desires of its own. And in the third place, there was in each instance a kind of psychical phantasmagoria behind and beneath both identities; a background of scenery which seemed created by some organic necessity. In my case this consisted of a mere commonplace reproduction of every-day scenes; in Louise's case it was the appalling resurgence of an ancient terror.

It was neither my waking self nor my conscious dream-self which created the ragged stair-carpet, &c. And it was neither Louise's consciousness nor Adrienne's consciousness which evoked the horrifying

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picture of the men hidden in the garden. In each case the phantasmal images arise from depths below either of the alternating consciousnesses. Would it have been possible, one wonders, to have got deeper still? Could the girl's divided spirit have been raised into a state of lucidity in which she could have discerned, as from aloof and from afar, at once the phantasmagoric images gathering, and the helpless and hidden Adrienne scrawling, "*J'ai peur, j'ai peur,*" and Louise's body—πολλῶν ὀνομάτων μορφὴ μία—stretched in contortions on the ground? Conditions such as this have in fact been described by mystical writers. It is possible that there may be some reality in their accounts of successive transitions—of journeyings inwards which were journeyings upwards too. But such writers, instead of endeavouring to attach their own case to the ordinary lot, have too often tried to detach it thence. They have forgotten that a man who claims to have climbed a virgin peak must first explain to us the steps of his ascent before he can expect us to believe the extent of his prospect.

To return, however, to Louise and Adrienne. I have spoken of Adrienne as being in a sense more deeply involved than Louise in the hysterical attacks. But it must not be therefore supposed that Adrienne represented a necessarily *morbid* aspect of the complex identity. And the experiment showed that her plane of existence lay *beneath* some of the superficial evils from which Louise suffered.

Louise, it will be remembered, was a hysterical patient, very seriously amiss. One conspicuous symptom was an almost absolute defect of sensibility whether to pain, to heat, or to contact, which persisted both when she was awake and when entranced. There was, as already mentioned, an entire defect of the muscular sense also, so that when her eyes were shut she did not know the position of her limbs. Nevertheless, it was remarked as an anomaly that when she was thrown into the cataleptic state, not only did the movements impressed on her continue to be made, but the corresponding or complementary movements, the corresponding facial expression, followed just as they usually follow in such experiments. Thus, if M. Janet clenched her fist in the cataleptic stage, her arm began to deal blows, and her face assumed a look of anger. The suggestion given *through the so-called muscular sense* had operated on a subject in whom the muscular sense, as tested in other ways, had seemed to be wholly lacking. As soon as Adrienne could be communicated with it was possible to get somewhat nearer to a solution of this puzzle. Louise was thrown into catalepsy; then M. Janet clenched her left hand (she began at once to strike out), put a pencil in her right hand, and said, "Adrienne, what are you doing?" The left hand continued to strike, and the face to bear the look of rage, while the right hand wrote, "I am furious." "With whom?" "With F." "Why?" "I don't know, but I am very angry."

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M. Janet then unclenched the subject's left hand and put it gently to her lips. It began to "blow kisses," and the face smiled. "Adrienne, are you still angry?" "No, that's over." "And now?" "Oh! I am happy." "And Louise?" "She knows nothing, she is asleep."

Now, so far as I know, this is absolutely the first glimpse that has yet been obtained into the subjective being of the subject in the *cataleptic* state. We have thus far only been able to conjecture whether there was or was not any psychical concomitant of the cataleptic gestures of anger or satisfaction. "Il n'y a que le cataleptique," say MM. Binet and Féré,[1] "qui mérite le nom d'automate . . . On a dit avec raison que le cataleptique n'a point une personnalité à lui, qu'il n'existe pas de *moi cataleptique*." Yet the key of automatic writing has unlocked this closely-barred chamber, and has shown us that the clenched fist, which strikes out at our suggestion as if it were moved by a spring, does in fact imply a corresponding emotion of anger, which (in Louise's case at least) is definite enough to select its own *object*, although it cannot explain to us its own *origin*.

If even *these* actions prove to have been accompanied by a kind of consciousness,—to be capable of entering into a kind of memory;—of what actions can we ever venture to assert that they are absolutely unconscious, absolutely unrememberable? Dr. Richer has observed that the respiration of a cataleptized subject is not often strongly affected by suggestions of terror, &c.,—is much less affected than in the somnambulic state. (*La Grande Hystérie*, pp. 680 sqq.) *La réaction sur l'être intime*, he says, *est nulle ou presque nulle*;—but we have seen that the *être intime* and its feelings are by no means easy to come at.

The peculiar condition of Louise when awake adds a further interest to this experiment. When awake, she suffered, as I have explained, from a grave sensory disturbance,—an entire absence of the so-called muscular sense. But here we find this new personality possessed of that sense,—responding to muscular stimuli in a way which showed normal sensibility. Adrienne's intelligence, indeed, showed little *verve* or spontaneity; but she might claim that if she were beneath the level of Louise's waking intellect she was—in another sense—beneath the level of Louise's sensory disturbances as well:—somewhat as deep-sea denizens are beneath not the sunlight only but the storm. This was, in fact, a culminant example of the disappearance, in hypnotic trance, of functional nervous derangements. The inabilities which result from organic lesion subsist, of course, though they may lose their painful character; but the inabilities which, for want of a better name, we call hysterical may any of them, in any phase of hypnotism, change, diminish, or disappear.

[1] Binet et Féré, *Le Magnétisme Animal*, p. 105.

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And here I must repeat my protest,—a protest which the writings of the school of the Salpêtrière seem to me to render constantly needful,—against the assumption that hypnotism itself, and its attendant phenomena, have of necessity anything *morbid* about them. Hypnotism has grave incidental dangers of its own, and it is often witnessed in high perfection on morbid subjects ; but to call hypnotism a *névrose* seems to me about as reasonable as to call the act of dreaming a *névrose*, or the habit of hard study.

Phenomena whose psychical side is so important as here must not be considered from a clinical point of view alone,—as if their only upshot could be to take a man into hospital, or to get him out of it. In this case which we are at present studying,—as in Félida X.'s case, in Dr. Dufay's case, &c.,—the secondary or induced state was in some respects *less* morbid than the habitual state,—free from the nervous troubles which crippled the patient's waking life. Unless " morbid " is to become a word as question-begging as the word " natural " long has been, we must be as careful *not* to call these novel states morbid as we should be *not* to describe these operations of Nature as unnatural.

In Louise's case indeed these odd manifestations were—as the pure experimentalist might say—only too sanative, only too rapidly tending to normality. M. Janet accompanied his psychological inquiries with therapeutic suggestion ;—telling Adrienne not only to go to sleep when he clapped his hands, or to answer his questions in writing, but to cease having headaches, to cease having convulsive attacks, to recover normal sensibility, and so on. Adrienne obeyed ; and even as she obeyed the rational command, her own Undine-like identity vanished away. The day came when M. Janet called on Adrienne,—and Louise laughed and asked him whom he was talking to. Louise was now a healthy young woman ; but Adrienne, who had risen out of the Unconscious, had sunk into the Unconscious again,—must I say ?—for evermore.

Few lives so brief have taught so many lessons. For us who are busied with automatic writing the main lesson is very clear. We have here *demonstrably* what we can find in other cases only *inferentially ;* — an intelligence manifesting itself continuously by written answers, of purport quite outside the normal subject's conscious mind, while yet that intelligence was but a part, a fraction, an aspect, of the normal subject's own identity.

We must bear this ascertained fact—for it is as near to an ascertained fact as anything which this perplexing inquiry can bring us—steadily in mind while we deal with future cases. And we must remember that Adrienne,—while she was, if I may so say, the unconscious self reduced to its simplest expression,—did, nevertheless, manifest certain differences from Louise, which, if slightly exaggerated, might

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have been very perplexing. Her handwriting was slightly different,—though only in the loose and scrawling character so frequent in automatic script. Suppose the handwriting had been rather *more* different? and had vaguely resembled that of some deceased member of the family? It is easy to understand what inferences might have been based on such a fact. Again, Adrienne remembered certain incidents in Louise's childhood which Louise had wholly forgotten. These events occurred at a grandmother's house. Suppose that the sentence recording them had been signed with the *grandmother's* name, instead of with the merely arbitrary name selected for the convenience of a cool observer? Here too, it is easy to imagine the confidence—in one sense the well-grounded confidence—with which any knowledge on Louise's own part of those long past events would have been disclaimed.

Once more;—and this last suggestion points to positive, rather than to negative, conclusions:—Adrienne possessed a faculty—the muscular sense—of which Louise was devoid. I am anxious that this point especially should be firmly grasped; for I wish the reader's mind to be perfectly open as regards the relative faculties of the conscious and of the unconscious self. In Mr. Newnham's case we have had the unconscious self (as I interpret that story) superior to the conscious self in faculty of one kind; here we find it superior in faculty of another kind. It is plain that we must be on the watch for completion, for evolution, as well as for partition, for dissolution, of the corporate being.

Since the above words were written Professor Pierre Janet has been kind enough to send me a manuscript account, which he allows me here to translate and publish, of another series of experiments, analogous to the above, which he has tried upon Madame B., who has been already introduced to readers of these *Proceedings* in my paper on "Telepathic Hypnotism" in Part X. I will translate the account almost at full length; for the experiments seem to me extremely significant; and the very fact that the subject had never learnt to *write* renders the series a most fitting introduction to the discussion of automatic movement and gesture, which my next paper must contain.

"After concluding my experiments," says Professor Janet, "on the hypnotic sleep of the young woman whom I have called L., I resolved to try whether I could obtain analogous phenomena with a very different subject,—namely, with Madame B., the honest peasant-woman whom you saw at Havre. I did not try for mental suggestion; I sought only to discover whether ordinary suggestions worked themselves out for Madame B. in the same manner as for L.

"It must be remembered that Madame B.'s trance is very different from L.'s—far deeper and far more complex. With L. the trance was

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induced by a single gesture; it continued for the most part unchanged, and ended in a moment at my bidding. It was 'the lesser hypnotism,' if you choose so to call it. Madame B.'s trance, on the other hand, needed some minutes to become deep, and divided itself spontaneously into a certain number of phases, which seemed to represent different stages of profundity.[1] Her awakening was difficult and needed at least ten minutes to effect. This was 'the greater hypnotism,' or 'magnetism,' if you choose so to call it. This difference between the two forms of trance prevented me from repeating my experiments in precisely the same way. As you know, I made the suggestions to L. during the trance, and then woke her some time afterwards to see her execute them in the waking state. I would then put her to sleep again and make another suggestion,—sometimes entrancing and awakening her ten times at one sitting. This could not be done with Madame B., who when once asleep was unwilling to be awakened till some hours had elapsed. I was obliged to make my experiments with her, not in her waking but in her somnambulic state; and this fact led to some novel details which may have interest for you.

"Among the various phases, elsewhere described, of Madame B.'s trance, two alone were of importance for our present inquiry. The first of these was the state of *lethargic somnambulism*, as I have termed it, during which the sleep was profound, the muscles relaxed, the subject motionless, speechless, and apparently deaf to my questions. This state, however, was not a complete lethargy, for the characteristic contractures produced in that stage of hypnotism by deep-seated excitation of the muscles, could not be evoked. The second state here necessary to describe was that which I have termed 'lucid somnambulism'; attaching no occult sense to the epithet, but using it simply to signify that the subject's intelligence and freedom of action seemed almost intact. In this stage the subject looked, listened, talked, and acted with gay spontaneity, resembling a waking person in all respects except two, that her eyes were shut and could not be opened without inducing a change of state, and that the hypnotiser could easily provoke contractures by lightly touching the skin.

"Let us consider the degree of susceptibility to suggestion existing in each of these phases. If, during the second phase—that of lucid somnambulism—I interrupt a conversation with Madame B. by some sudden *order*, she hears me perfectly well, but does not obey. If I insist, she laughs, asks me why I want her to raise her arms, or the like, and simply refuses to do so. One may gradually persuade her to obey by argument, but there is no real hypnotic suggestion. Occasion-

[1] See "Les phases intermédiaires de l'hypnotisme," *Revue Scientifique*, May 8th, 1886.

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ally, indeed, by strong insistence for some minutes, one can provoke a simple movement or a hallucination,—but more commonly the subject's resistance is so strong that she will throw herself into a state of general contracture rather than obey.

"During the phase of lethargic somnambulism, on the other hand, suggestion was easy ; I had but to make the subject attend to me, by holding her hand, touching her forehead, and giving the order distinctly. The suggestion was not executed at once; for the trance continued without apparent modification ; but when the subject woke up into the second state—that of lucid somnambulism—she executed the order without making any resistance. It thus seemed that the somnambulic trance itself was composed of two phases—a phase of waking and a phase of sleep. During its waking phase suggestion was hardly possible; but suggestions made during its phase of sleep realised themselves during its waking phase; just as post-hypnotic suggestions realise themselves when the hypnotic trance is over.

"The acts thus executed possessed this striking characteristic,—that Madame B. was unaware of them at the moment when she was performing them. If during the lethargic somnambulism I had ordered her to walk, to move her arms or legs, &c., she did so in the lucid somnambulism automatically,—while she talked about something else. If one drew her attention to the movement—as by asking her where her arms were—she lowered the arms at once—as though to look at them—and the movement ceased; but she retained no recollection of having moved. Similarly if I had suggested a hallucination she saw it when she woke into the lucid state, felt the pleasure or the fear which it was calculated to inspire; and then, the hallucination over, recollected nothing of it.

"Was there not here a kind of duplication of psychological phenomena analogous to that which I had observed in L.? The following experiments seem to point in that direction. During the lucid state,—in which direct suggestion, as will be remembered, was impossible,—I asked a friend to talk to Madame B. in such a way as wholly to distract her attention from me. When her attention was completely held by my friend I suddenly said, 'Faites un pied de nez.' (Spread your thumb and fingers from your nose.) Her hands went up at once and the *pied de nez* was executed,—Madame B. continuing her conversation meantime with unbroken vivacity. Without interrupting her, or addressing myself to her directly, I added : 'When I have clapped my hands five times you will rise and walk round the room.' I clapped my hands twice and asked, 'Did you hear me?'—taking her hand and obliging her to listen. 'Why, you said nothing,' she replied, and turned away to talk to my friend. I clapped my hands again three times, and

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Madame B. got up automatically and walked round the room, without interrupting her conversation.[1]

"Madame B. has never learnt to write; which was unfortunate, as otherwise I might have repeated the experiments on automatic writing made with L. But I was able to procure something closely analogous. Speaking to Madame B. in the same manner,—that is, so that she should not *directly* listen to me,—I said, 'You will raise your hand to signify Yes; you will shake it to signify No.' I thus managed to hold a conversation with her—of course of a very simple kind—while she talked eagerly with another person, and was quite unaware of the second dialogue which her *hand* was carrying on all the time.

"Thus the suggestions which it was so difficult to effect during the lucid somnambulism, while Madame B. was listening attentively, became perfectly easy, and could be carried out in a complex manner, while she was talking to another person and not listening to me. In this case it was not her expectant attention, but the *distraction* of her attention, which effected her compliance with the command.

"I could never succeed in getting these automatic acts to enter the subject's consciousness in her lucid state. They seem quite separated from her personality. But, through a chain of circumstances which need not here be detailed, I succeeded in developing in the same subject a new somnambulic condition, which can be induced by a long series of passes made before her face. In this phase the face is pale, and the limbs paralysed and insensible; but it differs from the lethargic somnambulism already described, insomuch that in this new state the subject hears and answers my questions, though she only hears me when I actually touch her, and only answers in a low voice, after herself repeating the question.

"The state is a curious one, and I hope some day to describe it further. The point at present interesting is that I questioned her one day in this new state as to the acts which she had just been accomplishing automatically in the state of lucid somnambulism which had preceded—acts of which the subject had never before, in any phase, manifested the least recollection. Now, however, she recited these acts with ease: 'You made me rise; you made me take up an engraving,' &c. And to this she added, '*The other one* was talking while I got up from my seat; she is so stupid that she knew nothing about it.' In short, this new somnambulic phase had brought to light a new personality, which

[1] Observe that the point is that Madame B., in the lucid state, would obey no order unless she had previously been told in the lethargic state that she would obey it on waking into the lucid state. And, by a kind of parity of impression, these new orders, so uttered as not to reach the lucid consciousness, did in fact reach the specific personality of the lethargic state, underlying that of the lucid state.—[F. W. H. M.]

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assumed as its own all the acts unconsciously performed during the state of lucid somnambulism. Suggestions made in this new condition were either acted out at once and consciously, or were acted out in the state of lucid somnambulism, but automatically, and while Madame B. talked of other things.

"I may add that Madame B. is susceptible of catalepsy, and that the acts performed in the cataleptic condition have always remained unconscious,—not entering Madame B.'s memory at any stage. But in the new state the new personality retained recollection of the acts performed in catalepsy, along with the automatic acts of the lucid somnambulism. It seemed as though this newly-evoked personality consisted of the synthesis of all the psychological phenomena of which the primary personality was unconscious.

"It would seem, at any rate, that in Madame B., as in L., the psychological phenomena were synthetised into two groups, which groups produced two distinct conceptions of the self. One of these selves,—the completer,—say Madame B., talked with me in lucid somnambulism, and refused to obey my orders if she heard them with direct attention. The other self—let us call her Madame X.—obeyed my orders at once, if they were given during Madame B.'s sleep, or during her ludicity, if she was not attending to me. And by inducing one special phase of profound trance I could cause Madame B. to disappear altogether, and address myself to Madame X. alone, who then retained the memory of the acts previously performed by her, unknown to Madame B.

"Complicated though this description may seem, the reality was more complex still. Remember that all which I have related took place during various phases of somnambulism; and that outside all this lay the true state of waking, after the trance had been wholly dispelled. You know already that Madame B. when awake is by no means the same person as Madame B. even in the lucid phase of her somnambulism. You know that, when once awakened, she retains no recollection of any act performed during somnambulism—whether by Madame B. or Madame X. Her ordinary waking state is therefore practically a *third* personality. And when you reflect that it is possible to make either to Madame B. or to Madame X. post-hypnotic suggestions which will be worked out in the waking state, you will realise how strangely intermingled are the phenomena of the subject's psychical life.

"We have here that *dissociation of the phenomena of consciousness* which seems to me to be the essential fact of somnambulism, of suggestion, of automatic writing, of hysteria itself, and of many other nervous phenomena. But this purely psychical dissociation may be pushed to a greater or less degree, and may form two, three, or

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four groups according to circumstances,—or even many more in certain stages of dementia. In somnambulism this dissociation leads to the existence of several degrees of unconscious action, of several personalities encased, if I may so term it, the one in the other. The knowledge of this fact may throw much light on many of these apparently inexplicable phenomena."

I will conclude this series with a case which, though of a less unusual type than the last, shows in a clear and striking way how deeply post-hypnotic suggestion may modify the self-supposed personality and, incidentally, the handwriting of the subject. I shall abbreviate the case, but shall keep, as far as I can, the phraseology of the Commandant de Rochas, to whom it is due.[1]

"*Subject.* Benoît; 18 years old; clerk in an office; intelligent and healthy; trained for some months to post-hypnotic suggestion.

"*Suggestion.* 'Beginning with to-morrow, Thursday, you will come to my house for three days running at 5.30. When you enter my room you will believe that you are my son Henri; when you leave the house you will be Benoît again.'

"*Effect.* On Thursday at 5.30 Benoît arrives; he enters the house without ringing, runs upstairs and sits down in my study in Henri's place, saying, 'I have just had a good long walk,' which is not true, since he has just come from his office. 'With whom did you walk?' 'With M.'—a friend of my son's whom he barely knows—'he has lent me this book.' 'Have you seen Benoît?' 'No, not for three months.' 'Well, I shall try some experiments on *you* then.' 'It will be no use, papa, you know that you can't do anything with me.' I make him rigid, insensible to pain, &c., which surprises him greatly. I read him the notes of my experiments with Benoît; he remembers some of them (those at which Henri was present), is sorry to have missed others. I make him write a sentence, and his writing resembles my son's (which is not the case with his normal writing), and this, although he does not know my son's writing, or has only seen it long ago and by chance. I then impose upon him various personalities and make him write in each case; and thus obtain a series of handwritings differing one from the other."

This, it will be seen, is the important point for us. A handwriting supposed to be unknown, or at least unfamiliar, to the subject, is reproduced tolerably when the subject believes himself to *be* that Henri whose script he presumably could not have imitated in the normal state.[2] A few more details will be of interest, as showing the way in which the personality is kept up,—the evasive answers resorted to when puzzling questions are proposed. Note, also, Benoît's ready familiarity with the family circle of which he supposes himself to be a member, which may remind us of the affectionate manners of certain

[1] *Revue Philosophique*, March, 1887, p. 330.

[2] I have seen facsimiles of the writings, and have also, through M. de Rochas' kindness, myself witnessed similar experiments with Benoît at Blois.

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"communicating spirits," which, nevertheless, are liable to sad blunders as to their relations' names.

"We pass into the adjoining room, where my family are assembled. He sits down by the fire, talks with his 'mamma,' with his sister, with his little brother, *tutoyant* them all. Seeing that I am standing, he jumps up and offers me his seat with, 'I beg your pardon, papa.'

"As soon as we have crossed the threshold of the house he becomes Benoît again, calls me 'mon commandant,' and tells me that he has passed the day at his office desk.

"Next day Benoît comes in again without knocking, sits down by the fire, and begins to read. I question him on his studies of the day; he becomes confused, and answers that his head is stupid, and he cannot remember. . . . . On Saturday at 5.30 I see Benoît from the window, running bare-headed through the street; I go to meet him and find him in the vestibule, puzzling himself as to what he can have done with his hat. When he had come in, he says, and wanted to hang it up, he found it was not there.

"I take him out into the garden (where he becomes Benoît again) and ask him what he has done with his hat; he tells me that his chief at the office had tried to prevent him from leaving, and had hidden his hat to keep him, but that he felt that I wanted him, and ran off without his hat, so as not to be late. We re-enter the house, and at once he begins to puzzle himself again as to what on earth he has done with his hat.

"We enter my study, and I show him the sentences which he wrote the day before; he has no recollection of them, and is astonished to find that he has become as good a subject as Benoît. He is insensible to pinches or pricks, but feels heat and cold. I try to destroy the suggestion by placing my hand on his head, 'en hétéronome'; the only result which I obtain is to make him think of Benoît. I pass a voltaic current through his neck; the thought of Benoît recurs more strongly; I tell him that I was trying to make him think that he *was* Benoît. 'Oh, you won't get quite as far as that!' he replies with a laugh. We go to dinner; he had never sat at my table before. He sits down in an easy way; I remark that that is not his usual place. 'True! what was I thinking of?' He criticises the food and orders the servants about. Suddenly I put him to sleep again, and say, 'You are no longer Henri; you are Benoît; you will remember that you have been dining here.' I wake him; he shakes his head; opens his eyes wide; rises timidly and confusedly, thanks me and takes his leave."

This case, strange though it sounds, is but a well-developed specimen of the post-hypnotic suggestions which during these last few years have been inspired in so many subjects, in more and more complex forms. But it deserves to be remembered when we come to consider the relative value of the various items—similarity of style, demeanour, handwriting, knowledge, which go to make up the evidence that an apparent personality is really what it assumes to be.[1]

[1] I may add here another anecdote of Benoît, which M. de Rochas has not included in his book, but has sent to me, with permission to publish it in

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We have now made a survey—rapid, indeed, and imperfect—of a wide range of phenomena. Let us briefly realise what light they have thrown on our primary problem—the origin of such messages as those written by Mr. Schiller's hand. The first impression, as I have said, of an automatic writer of such messages is generally that they proceed from some intelligence external to himself. And apart from all discussion (which we are avowedly postponing) as to facts contained in the messages and unknown to the writer, he will be likely to base this presumption of externality on the following considerations.

1. He is in normal health, and there is no trace of morbid or hysterical disturbance in his psychical being.

English. It is much to our purpose—as showing hypnotic moralisation effected by the agency of recurrent dream. I slightly abridge M. de Rochas' account, dated March 25th, 1887.

"Benoît is a young fellow 18 years old, employed in the prefecture of Loir et Cher. He is the son of an honest artisan family; but has been somewhat led astray by foolish companions,—somewhat puffed up by the notice taken of him in connection with my hypnotic experiments. His parents complained to me that he had not been behaving well towards them, and asked me to use my influence to modify his conduct. This was not easy, for Benoît could tell very well, by pinching himself, whether he was under the influence of a suggestion,—and if he were so, he could dispel the suggestion by rubbing his forehead.

"I had recourse, therefore, to a subterfuge. I put him to sleep by surprise, in the middle of an ordinary conversation, and I then read to him the following suggestion, which I had written down in order to give it without hesitation.

"'You will dream for three nights running that you are married, that you have a grown-up son, that you and your wife have denied yourselves the necessaries of life in order to educate him. Now that this son—thanks to your sacrifices—has gained a certain little position, he thinks himself a great man, never enters your house except for meals, and spends all he earns with good-for-nothing friends. In your dream you will be greatly distressed at this; you will try to remonstrate with him, but he will run off whenever you begin to talk. When you wake you will remember your dream and will act accordingly. You will not remember that I gave you this suggestion, and you will not be able to remove it.' Having read this to Benoît, I woke him by the word 'Wake!' and continued the conversation as if nothing had happened. Benoît was not aware that he had been sent to sleep.

"Two days later he came to tell me that he was troubled by terrible nightmares, which he begged me to remove. I asked him for details, and he narrated to me part of the story which I had inspired, passing lightly over the points which most humiliated him. I pointed out to him that the story was somewhat like his own;—and that perhaps his nervous system, excited by hypnotism, was giving a striking embodiment to the secret voice of conscience. If he acted as the dream suggested, it would doubtless disappear;—and, moreover, I would now hypnotise him and suggest that his sleep should be tranquil. The dream vanished, and from that day onwards—it is now two months ago—his conduct has been entirely changed, and his parents are astounded at the improvement which has taken place in him."

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2. The messages are connected with one another in a continuous series.

3. They are written while he is conscious in the usual way,—perhaps talking on some quite different topic.

4. They are, themselves, entirely outside his consciousness. Neither at the time nor afterwards is he aware of their origination.

On all these points the analogous cases which have been cited in this paper may throw some illumination.

1. In the first place I have tried to show that automatism affords no real presumption of the existence of any *morbid* action whatever. My contention is that each case of apparent automatism should be considered simply on its own merits, without being supposed to imply either disease or inspiration.

2. Then again, the manifestation of a new *character*, kept up throughout a long series of these automatic writings, has been paralleled by the cases given of the origination of a new chain of memories—and character is in great measure a function of memory—under very varied circumstances of psychical commotion. The graphic automatist tells us of insurgent quasi-personalities,—not momentary, but of indefinite persistence ; not co-ordinate with his whole normal personality (as in Félida's case), but susceptible of considerable multiplication, as one new "guide" or "control" is added to another, without appreciably disturbing the ordinary current of life. But we have seen that this fissiparous multiplication of the self,—if I may so term it—is by no means so rare a phenomenon as has sometimes been supposed. We have seen that something of a subordinate personality tends to be created within us whenever any set of recurrent ideas and sensations are sufficiently isolated, by whatever cause, from the primary series with which we are accustomed to associate our personal identity.

It is impossible to find any simile which will give an adequate notion of the complexity which we must assume in processes like these. Yet the view which I wish to present stands in great need of such clearness as a concrete analogy, however imperfect, may give it. I wish to show, then, how we may conceive that subordinate personalities may manifest themselves from time to time, either coincidently with the primary personality, or in its temporary abeyance, and may appear to be (within certain limits) distinct from that primary personality, while yet they are mere modifications in the functioning of the same individual.

Let us compare the brain, then, to a musical-box, far more complex than any musical-box actually existing. It contains thousands of barrels, many of which are always going under any circumstances. The sound made by any of the barrels can be easily muffled. My ordinary waking life is represented by a tune played by barrel A. This tune is

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always proceeding: when I sleep it is muffled; when I wake I catch it up again. As life proceeds it becomes more and more elaborate. Each fresh experience introduces variations, subsidiary barrels A′, A″, &c. But the essential tune is so far the same that a competent ear can detect its persistence through all my life,—can see that at forty years of age my character is a development of my character at four. When I doze or dream confusedly, this means that the barrels A, A′, A″, &c., are all muffled, but that some of the pins are imperfectly muffled, and give out scattered musical phrases, not amounting to tunes. When my dreams are distinct, that means that there are enough of these imperfectly muffled pins to make a tune of their own. This tune will be poor and incorrect; but the pins are so disposed that certain harmonic combinations occur more readily than discords (this is the law of mental association), and that any musical phrase which has once occurred tends to repeat itself. Thus, in the slight link of memory between one dream and another dream, I have a new tune B, composed from the musical elements existing in A, A′, &c., but independent of them. As soon as the new tune B exists we must suppose that by some phonographic process a new barrel is so impressed as to repeat tune B under favourable circumstances, and this in its turn becomes subject to variations B′, B″, &c.

Next, suppose that I am hypnotised. The various degrees and states of hypnotisation correspond to all kinds of mufflings and slowings of the barrels A, A′, &c., and even of the minor barrels a, a′, a″, &c., which form the sub-conscious substratum of A, A′, (regulating vaso-motor and circulatory phenomena, &c.). But I take here the special case of a hypnotically-suggested personality. I am told (say) that I am a schoolboy. The effect of this is a selective evocation of sound from all the pins which are of a particular timbre,—many of them belonging, say, to the variation-barrel of A″, which I acquired at the schoolboy period of life.

These pins produce a tune, so to say, of schoolboy quality;—of more purely schoolboy quality than any tune which I could have produced without having the non-schoolboy pins muffled. But this schoolboy tune will not have much substance; its effects will tend to recur, for it has not at its disposal the complex mechanism of the great barrels A, A′, &c.

That is to say, if I write a schoolboy story in my normal state I have the advantage of my matured intelligence, which enables me to introduce plot and variety; but I have the disadvantage of an adult mode of looking at things which prevents me from really reproducing the schoolboy aroma. If I am turned into a schoolboy by hypnotic suggestion, I am more truly schoolboyish in talk and manner,—I perhaps even enjoy a revival of schoolboy memories otherwise lost,—but I have

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not the adult's resources of plot, &c., and soon begin to repeat my schoolboy jokes and gestures over and over again.

Each time, however, that I am hypnotised into a schoolboy I improve slightly in resource; for each tune when once set going within me tends, as already said, to imprint itself on a new barrel by some phonographic process, and then to acquire variations.

We have seen, moreover, that not only hypnotism, but also alcoholic and other narcotisms, epilepsy, and (we may of course add) some forms of insanity evoke similarly subordinate or adventitious personalities.

Now what reason is there for supposing that these are the only agents which thus detach a quasi-personality from the main current of our life? There is no such reason; on the contrary, analogy may naturally lead us to suppose that such disturbance may be idiopathic as well as incidental. It is at any rate antecedently more probable than not that there is a tendency during vigilance to all cerebral processes to which there is a tendency during sleep. And just as it seems to be what we call a *chance*— *i.e.*, a point determined by obscure and minor agencies—whether our dream-adventures persist into waking memory—so also it may be a *chance* whether our waking dreams—the subordinate quasi-personal operations which coincide with our waking hours—do or do not manifest themselves in a way perceptible to waking consciousness.

To write a thing down automatically and then to read it is much the same as to dream a thing and then to remember it.

There would be nothing that need much surprise us were we to learn that dreams of a considerable degree of consistence were habitually occurring within us,—and that the occasional power to write automatically, like the occasional power to recollect a dream, did but give us a glimpse into a constantly functioning complex of cerebration which is habitually excluded from our primary mnemonic chain.

Our simile has led us into some remarks appropriate to the third difficulty above mentioned;—the *co-existence*, namely, of the unconscious with the conscious waking life of the automatist, which seems to differentiate his case from any of those where there is *alternation* between normal vigilance and something like a recurrent dream. It was partly to meet this difficulty that I brought forward the hypothesis of the simultaneous, but separate, action of the two cerebral hemispheres in cases like these. But waiving, for the sake of argument, any such theory of dual cerebration, I think that the whole question of the relation of consciousness to personality may now be met in a distincter manner than was possible on metaphysical grounds alone.

We can no longer draw a broad line between the conscious and the unconscious, and say that what a man is conscious of is part of his true self, and that phenomena, however complex, which never enter into his

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consciousness, must be considered as lying outside his true identity. We cannot say this, because the cases here cited (amongst others) have shown us that it is quite impossible to predict what acts will ultimately enter into a man's consciousness, and what will not. I use the phrase "enter into his consciousness" in order to imply that the mere fact of being recollected—of entering into the "memory of evocation"—as M. Richet has happily termed it—constitutes the only test of consciousness which we can apply. The only way in which a man can prove to us that he was conscious of any act is by describing it afterwards. And what acts he may be able, at some date or other, and in some condition or other, to describe or to show recollection of, it is—as hypnotic experiments teach us—absolutely impossible to foretell.

We do not know how deep the "memory of fixation" goes; we cannot determine, that is to say, the inferior limit, below which an excitation is too feeble to leave an impress on our nervous system capable of subsequent revival. We may, of course, say that it does not seem likely that a man should ever be able to remember, for instance, so purely vegetative an operation as the growth of his hair. But observations during recovery from fainting,[1] and under narcotics, shows us that when the action of the hemispheres has been wholly or partially in abeyance, we may find ourselves able to recollect nervous operations lying—as it seems—beneath the threshold of anything that can be called a sense of personality.

And if the limits of the memory of fixation are thus uncertain, equally uncertain is the relation which the memory of evocation bears thereto in each individual case. No man has ever evoked into recollection all the evocable memories within him; no man can say what condition of life or death may suddenly open to him new chambers in his own past. If we are to hazard a conjecture, the safest supposition would seem to be that at least any cortical operation whatever which had taken place in a man's brain was potentially memorable, whatever its originating source; so that we might on this view expect that we should find scattered instances where these automatic messages—whose production must have involved cortical centres—have, though at first reckoned unconscious, ultimately become a part of the writer's conscious being.

I do not mean that he will then necessarily recognise them as emanating from himself. On the contrary, it is quite possible that he may then recognise, with strong subjective conviction at least, that they proceed from some intelligence other than his own. My point is that the fact that he cannot get behind the messages—cannot realise their inception to the same degree as he realises the

[1] See especially Herzen's *Les Conditions Physiques de la Conscience.* Geneva, 1886.

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inception of his own habitual thoughts—is absolutely no proof that they are *not* his own. If he *does* get behind them, if he realises their inception in what appears to him the same intuitive manner as when he realises the inception of his own characteristic ideas, then, indeed, I do not say that his view of them will be certainly the right one—but it will be an important element in their estimation. We shall be passing, in short, from the problems of automatism to the problems of clairvoyance and of ecstasy.

On discussions of this kind we cannot here enter. What has been said may be enough to show that instead of merely asking, with regard to a written message or any other manifestation, "Was it conscious or unconscious?" we must rather ask, with more precision: To what extent was this intellectual operation included within the series constituting normal memory? or to what extent did it form a part of any abnormal, or subsidiary, or intercurrent thread of memory? or to what extent, finally, did it remain outside all phases of memory which the subject at any time passed through?

The answer to this question will in each case be important, but will not, taken by itself, be decisive as to the character of the message;—which must be judged far more by its *content* than by the subjective aspect of its manifestation. Rather, as it seems to me, the varying circumstances, as regards immediate or postponed memory, under which messages closely analogous to each other are given, may help to teach us how much less radical a fact in our being our immediate consciousness forms than has often been supposed. Instead of treating our normal stream of consciousness as necessarily representing our true self, we shall rather be disposed to see in it a mere practical compromise, a mere prudential result of evolution. I am conscious of certain thoughts and not of other thoughts—not because the one set of thoughts is more essentially mine than the other, but because it has been helpful to my ancestors in the struggle for existence that consciousness should set that way. It has been convenient that I should come to suppose myself to be an intellectual agent of this particular kind, just as it has been convenient that I should identify the inscrutable objects around me by some staring distinction,—that I should recognise oranges as yellow and grass as green.

Now we all know that when we get a little deeper we realise the subjectivity of our sensations,—that the yellowness is in us rather than in the orange; and the subjectivity of our ideation—our thoughts being conditioned by certain categories or limitations (as time and space) which they cannot transcend. But I am here contending that we still are accustomed to take ourselves too much for granted; that we have no warrant for assuming that the "testimony of consciousness"—after all our corrections and emendations—does really cover the most

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important part of the psychical operations which are going on within us.

How can we possibly tell whether it does so or not? To what confirmation can we appeal? All that we can say is, that we are conscious of most of the thoughts which conspicuously influence our voluntary movements. These movements are definitely known; they may be watched and registered by others; and we can then say what train of ideas seemed to us to prompt each movement. And this is all that is needful to make us rational agents, capable of taking part in the struggle for existence.

But we know that a great deal more than this is in fact going on within us. Multitudes of involuntary movements, both peripheral and internal—multitudes of spontaneously arising images, during both sleep and waking—testify to cerebral activities of which we are never consciously the originators.

All that we can say of these cerebral activities is that if it had been of much practical use to our ancestors to be conscious of them, they, and consequently we, would probably have become conscious of them. In this respect we may compare them to certain forms of sensibility which we perceive, in some rare examples, to be possible to the human organism, but which have not, apparently, been valuable enough to our ancestors to get themselves established among recognised human faculties. Such sensibilities may sometimes correspond to phenomena that are very important, sometimes to phenomena that are very trivial. One man feels the approach of a thunderstorm, another is sure that there is a cat under the sofa. The mere fact that neither kind of susceptibility has risen into habitual generic faculty tells us nothing whatever as to the abstract dignity or paltriness of its special subject-matter. And similarly with these centrally-initiated activities which we are now discussing. The cerebral-psychical operations of which we are unconscious may be as trifling as the fact of the presence or absence of a cat. Or they may be as important as the whole theory of electricity. We cannot tell beforehand; and we need experiments of the kind which I have been describing and advocating in order to enable us to find out. We need, in short, to apply to the very central fact of our self-consciousness the same analysis which we have applied with more or less success to almost every other "dictum of consciousness." To find out what we are we must not trust to what we seem to ourselves to be; we must resort to scientific artifice, to mechanical registration, to tortuous experiment.

And if, as I believe, *telepathy* is one of the facts within us which it has been left for artifice and experiment—rather than for common experience—to establish as truly existent, then assuredly the harvest is already a rich one.

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And here, in conclusion, I may fitly call attention to what seems to me a prevalent fallacy connected with this class of observations. It has been assumed—by some with indifference, by others with horror—that this view of our personality as a complex, a shifting thing,—a unity upbuilt from multiplicity,—an empire aggregated from the fusion of disparate nationalities,—must bring with it also a presumption that there is nothing in us *beyond* this ever-changing identity, whose continuance depends but on links of perishable memory, on organic syntheses which an accident may distort or decompose.

I do not myself think that this analysis of our terrene personality —pushed even as I am pushing it now—does in reality introduce any additional difficulty whatever into the hypothesis of a transcendental Self behind the phenomena;—of what we call a human soul. The difficulties are now made more glaringly visible; but they existed for any reasonable mind already. No one, surely, supposed that the soul was *coincident* with the psychical manifestation known to us? No one doubted that it was expressed more fully at some moments than at others, in manhood rather than in infancy, in waking rather than in sleep, in sane life rather than in dementia or in delirium? On any hypothesis the soul is conceived as working *through* the body; and therefore as necessarily finding in the body an instrument of constantly varying responsiveness and power. All that is offered here is but a *development* of this admitted thesis—a further analysis of the machinery which must in any case be needed to bring transcendental operations within the purview of sense. If an immortal soul there be within us, she must be able to dispense with part of the brain's help while the brain is living, as with the whole of its help when it is dead. If the soul exist, she must exist (if I may so say) *ipsa suis pollens opibus, nihil indiga nostri;* not needing that our dim consciousness should place her unbrokenly in evidence, or demonstrate by any terrene continuity an existence more abiding than that of earth.

The true lesson, as it seems to me, which these new speculations teach us, is of a more hopeful though of a vaguer kind. It is simply that we are still groping among the rudiments of a true knowledge of our psychical being. From whence it follows that at least no great question as to our nature or our destiny has as yet been even approximately decided in a sense contrary to the highest hopes of men. So far from our living, as some would tell us, in an age which has had to relinquish all hope of deeper knowledge, further light, upon the chief concerns of man, we are living in an age when fruitful methods of experiment are just becoming possible; when we have just learnt enough of easier problems to begin to interpret the faint indications which throw light on the highest problems of all.

I do not wish to exaggerate the importance of the special class of

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experiment which I am advocating here. Automatic writing is not a key to all the recesses of our being. But it is a key to *something*, and it is a key that will actually turn in the lock. Automatic messages will come, if persistently tried for; they can be analysed; the result of the analysis must in any case be instructive, and *may* point towards conclusions of even startling magnitude. Again I must appeal for fresh experiment, for fresh observation. I do not, of course, venture to demand that experimenters, who may think me a mistaken interpreter, should send their results to me personally; though I can promise to study with the utmost care any records that may reach me. But if there are those who believe that these messages do demonstrably come from some intelligence exterior to themselves, and especially from the intelligence of some departed friend, then I would urge them to give, in some fashion or other, their reason for the faith that is in them—to set before the world, if they can, some further well-attested instances which point towards so momentous a conclusion. Let them not spare their utmost pains in such a cause as this. *καλὸν γὰρ τὸ ἆθλον καὶ ἡ ἐλπὶς μεγάλη.* Worthy is that effort and great would be that hope.

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PROCEEDINGS OF THE GENERAL MEETING ON

April 23, 1887.

The twenty-fourth General Meeting was held at the rooms of the Society of British Artists, Suffolk-street, Pall Mall, on April 23, 1887.

THE PRESIDENT, PROFESSOR BALFOUR STEWART, F.R.S., IN THE CHAIR.

The President delivered the following address:—

II.

Let me begin my few remarks by congratulating the Society on the recent publication, under its auspices, of *Phantasms of the Living*, in two goodly volumes. I esteem this to be a great work; and if, in a sense, it may be regarded as a preliminary discussion, it is not because the materials are so meagre, but because the subject is so large. For my own part, I conceive that the evidence for spontaneous telepathy is extremely strong—that it forms, perhaps, the strongest class of evidence that our Society has yet dealt with. A praiseworthy attempt has been made in these volumes to put part of this evidence into a numerical form, and to demonstrate the very great improbability of the recorded coincidences being due to chance. In view of the fact, never before precisely established, that purely subjective hallucinations of sane persons are by no means extraordinary or extremely rare occurrences, this calculation was a necessary part of the argument. My belief is, however, that the strongest evidence is of such a nature that it cannot easily be clothed in numerical garments. Between a recorded vision and the death, let us say, of a distant friend, there are other points of coincidence than that of time; frequently, for instance, there are curious circumstantial similarities, such as have been described in these volumes, but of which the evidential strength cannot well be expressed in numbers, although we know that this must be very great.

I may here be allowed, with reference to our Society and its prospects, shortly to review the present position of those departments of science with which we are most familiar, as well as the attitude assumed by the various scientific workers. First of all, we see the youthful acolyte driven to science by the operation of an uncontrollable instinct that selects for him not only the spot where he shall begin his mental labours, but the tools and the materials which he shall employ. Here he works indefatigably, adding with sure but cautious hand stone upon stone to his corner of the great temple of knowledge. Casting

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his eyes around him, he sees fellow workers not far distant doing the same thing, each equally busy in his own little corner.

Now each of these workers may have only a very dim conception of the shape and features which the completed building will ultimately assume. But yet there is no doubt in the mind of each that these various little works will so fit in with one another as to form one grand and harmonious whole. Were we to clothe this belief in Theistic language it would imply, amid great darkness, a trust nevertheless in the unity of design of the Great Architect from whom each worker has received his commission. It would imply, moreover, a trust of each in his fellow workers, a species of faith without which it would be impossible to rear any great and glorious temple, or indeed, for that matter, to do anything else worth mentioning in the world.

What I have now described is the state of mind towards his fellows and towards his work of each individual in a group of builders engaged in some particular corner of the great work-field. We have seen that there is belief in his work and belief in his fellow-workers. But there are many such groups, some of them very remote from others, and the feelings entertained by the members of one group for those of a distant group are not always so satisfactory. It may be that the microscopical intentness with which the man of science has to regard his near environment tends to disqualify him from properly appreciating distant objects. Be this as it may, the members of one group are too apt to disregard the labours of another and distant group, and to imagine either that they are not building at all or that they are not building anything that will last. There is, in fine, a comparative inability to see that the distant group are engaged equally with themselves in advancing the same great work.

If I have made myself clear, it would seem that there is a strong practical faith amongst the neighbouring workmen in each department of science, and an equally strong assurance that their united labours will ultimately have an issue larger than any one of them can realise. There is not, however, the same assurance that the various groups of workers are equally trustworthy, and that all are striving with earnestness and success to yield their contributions to the same great cause. Philosophy has, if I mistake not, her part to play amongst these workers. I do not, I must confess, think that the union between philosophy and science has hitherto, as a rule, been sufficiently intimate. Philosophers have, as I think, too exclusively concerned themselves with successfully deepening and enriching our conception of the universe as a whole, and hence have not taken sufficient pains to see that scientific workers have been duly permeated with the spirit and doctrines of a true philosophy. One feels almost tempted to apply to

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some of them the lines of the poet, who, after describing the huge works erected by the fallen angels and the great projects entertained by them, proceeds thus to describe the philosophers of the party :—

> Others apart sat on a hill retired,
> In thoughts more elevate, and reason'd high
> Of providence, foreknowledge, will, and fate,
> Fix'd fate, free will, foreknowledge absolute,
> And found no end, in wandering mazes lost.

But I would not have you suppose that I mean to make a sweeping charge against all philosophers. There are some who have come down from those elevated regions on which they have obtained a clear insight into the great temple of knowledge, to enforce their views upon the individual scientific workers, amongst whom they have played the part of generals and directors of labour. Indeed, I believe that our Society owes its success in a great measure to this action of our first President, who, while much distinguished as a philosopher, has not only successfully enforced the claims of psychical research upon the regard of men of science, but has likewise taken a personal part in the scientific labours of our Society.

You will perceive by these few remarks that while, as I think, there is not yet a complete unity of purpose or action between the scientific workers in distant fields, yet the time is rapidly approaching when this union will be more complete, and when (to use a technical term) the diminution of internal friction will set so much more energy free towards the completion of the one great and glorious work. To vary the metaphor, we see before us at present a number of separate rivulets of knowledge each rushing along impetuously within well defined granite walls. Let us, however, pursue the course of these rivulets sufficiently far and we shall find that they will ultimately merge into one great and mighty river of knowledge, bearing on its bosom the means of intercommunion between distant regions, with fulness in all its borders. I anticipate, therefore, at no distant period the full recognition of our labours by men of science in general; but here I pause to notice a friendly objection that has been raised to the work of our Society.

It has been urged that we have not succeeded in formulating in precise language laws which might embrace the various facts that we have brought to light. This objection was raised before the publication of *Phantasms of the Living;* but I cannot think that it will be maintained by anyone who has read this work. The shadowy form of a great reality is looming through the darkness, and at least two speculators are busy, each from his own point of view, endeavouring to render the outlines clearer. Can we expect such a work to be definitely completed in a day or a year? It ought not to be forgotten that there are several possible explanations of the facts recorded, and of these some

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are less likely than others to yield us laws capable of definite expression, or at least of definite numerical expression. For what is the phenomenon before us? Adopting the well-known, and not, I think, unscientific terms, mind, body, and medium, we find in these volumes that an affection of the mind and body of A produces an affection of the mind and body of B by some unknown means, and often at a great distance. Now there are at least three conceivable hypotheses by which this action may be explained :—(1) The mind of A may act directly upon the mind, and through it upon the body, of B ; or, (2) the mind of A may act directly upon the body, and through it upon the mind, of B; or, (3) the body of A may act in a peculiar manner upon the medium, and the medium may act upon the body, and through it upon the mind, of B. If the last hypothesis be correct, we may confidently hope to obtain something approaching numerical laws ; but if the first hypothesis be true, it is more difficult to entertain this hope.

At present we should have three simultaneous objects in view. First of all, we must accumulate evidence ; secondly, we must sift it ; while in the third place we should discuss and speculate upon the confirmed evidence in the freest possible manner. I cannot doubt that the truth will ultimately emerge from such a discussion, pursued with sufficient energy and perseverance.

Before concluding, I should wish to say a few words about another branch of our programme of inquiry which has assumed considerable prominence in the *Journal* and *Proceedings* during the past year —I mean the phenomena of so-called Spiritualism. Those who are known as Spiritualists maintain two things. They assert in the first place the existence of certain phenomena, while in the second place they maintain that the simplest and most natural, if not, indeed, the only legitimate explanation of these involves the existence of spirits which are permitted on certain occasions to hold intercourse with man

I need not say that many of us believe in the existence of other intelligent beings besides man, unseen by us as a rule, and in all probability superior to us in mental rank. Many, too, believe that the denizens of the spiritual world are not indifferent to our welfare, and that we frequently receive aid from them in important crises of our mortal life, while others are not unwilling to solicit such aid. But probably all are agreed that, assuming the existence of spirits, there is, at least, as great a variety of character amongst the inhabitants of the unseen world as amongst ourselves, if, indeed, the range of character be not much greater, extending upwards to heights of goodness which we cannot reach, and downwards to depths of guilt and ignominy which we cannot fathom.

Many will argue that under these circumstances we must so guard ourselves in our intercourse with the spiritual world as to be certain

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that our advances will only be responded to by the good. And unquestionably a bad man who appeals to evil spirits to help him in his wickedness deserves the reprobation of humanity, even although his advances may not meet with any response. The attempts of the modern Spiritualists to hold communion with the denizens of the unseen belong to neither of the categories now mentioned. They are not the appeals of poor humanity for spiritual help from good angels, and unquestionably they are not the endeavours of the wicked to procure assistance from the powerful and the bad. There is, as a rule, hardly any moral colouring about them; and the Spiritualists may be regarded as a society endeavouring to obtain conclusive proof of the existence of spirits, rather than a confederacy to elicit spiritual aid in the affairs of life. Now I have tried to show in these remarks that an indispensable condition of progress in any branch of science is mutual co-operation and confidence between the various members of that branch. A man must trust his fellow-workers, otherwise he will not be able to advance the department of knowledge to which he has devoted himself. And if our object be to receive scientific evidence of the existence of spirits, this assumes co-operation between ourselves and these intelligences. But here we have no guarantee for character such as we have a right to demand from our fellow-workers in science. We know very well that our comrades, in any ordinary branch of science or knowledge, are perfectly honest, and that their object is to advance that branch. But assuming for the sake of argument that we can communicate with spirits, what proof have we of their honesty, or how do we know that their object, as well as ours, is to obtain for us good evidence of their existence? Some of us may be disposed to question the likelihood of man being permitted in his present state to obtain at will scientific evidence of the existence of spiritual beings. The spirits with whom I assume, for the sake of argument, that we are brought into contact, may neither have the power nor the will to prove their existence as a scientific fact, and yet they may have the power of leaving the door of evidence partly open. We may in truth be dealing, not so much with willing coadjutors that will assist us in throwing this door completely open, as with versatile opponents who will equally oppose all attempts either to throw it completely open or to keep it definitely shut. In fine, we are not sure that this research will ever be decisive or that we shall be able to prove either an affirmative or a negative.

It is not necessary to discuss the question whether one who has satisfied himself that he is in communion with spirits is acting wisely in continuing the intercourse. We have not, I imagine, as yet progressed sufficiently far to entertain this question. The problem at present before us is, to determine whether certain alleged phenomena

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do or do not occur, and then, presuming, for the sake of argument, that this question is decided in the affirmative, to give an opinion whether it is not the simplest explanation of these to suppose them due to spiritual agency. Unquestionably, certain members of our Society are in a good position to afford help in settling these questions, for they are skilled and well practised in examining evidence, and they are likewise capable of deciding whether telepathy or some extension of it may not account for the phenomena without the necessity of resorting to the hypothesis of spiritual agency; and our friends the Spiritualists are, I think, perfectly justified in challenging us to undertake this business of investigation. There are, however, reasons why the Committee who undertake the task should rather be one requested by the President to act than a formal committee of our Society. Under these circumstances I have requested the following gentlemen to take part, with myself, in a Committee of this nature, with the view of investigating the reality of such alleged Spiritualistic phenomena as may be brought before them :—Mr. W. Crookes, F.R.S., Professor O. J. Lodge, Professor Barrett, Mr. Angelo J. Lewis, Mr. E. Gurney, and Mr. F. W. H. Myers. These have all agreed to serve; and surely the composition of the Committee is such that they may be trusted to examine in a receptive and impartial manner any evidence submitted to them, as well as to detect any attempt at imposture that may be practised upon them. Such attempts are greatly to be regretted; but we must perhaps expect them to cling more closely to a subject of this nature than to the ordinary branches of human knowledge.

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III.

PECULIARITIES OF CERTAIN POST-HYPNOTIC STATES.

By Edmund Gurney.

I.

Execution of Hypnotic Commands in a Waking and in a Trance-waking State.

To students of hypnotism it is one of the most familiar of truths that a person on whom a command has been impressed during the trance will often perform it afterwards, however out of place or ridiculous it may be. The fact at once suggests two important questions, one practical and the other psychological. (1) What limits, if any, can be assigned to the operator's influence in this respect? Could the awakened "subject" be made to do things completely alien to his natural character—*e.g.*, to commit a crime which would never have spontaneously occurred to him? (2) In what state is his mind during the time that the command is being executed?

This second question, it is plain, has practical bearings of its own; not only because on the state of the "subject's" mind will depend the degree of his responsibility for his actions; but because by the state of his mind we must decide whether or not it is justifiable, even for experimental purposes, and with no risk of serious external consequences, to suggest the performance of any action which is morally objectionable. If his state is as remote from normality as that of dream, it might reasonably be held that acts performed in it left no more trace on the character than those dream-scenes in which the most magnanimous man is often mean, and the bravest man a coward; but in proportion as the state approximated in its general character to that of waking life, would the risk increase of mischievous results from an actual though artificial ascendency of lower impulses? I do not purpose to pursue this ethical question in the present paper: I have brought it forward merely for the sake of a word of caution, which seems at this moment to be peculiarly needed. I seriously fear that the continuance, in the French schools, of experiments of the sham-criminal type may greatly prejudice the general investigation of hypnotism. A certain amount of not very reasonable prejudice has already been excited by the proof that, with exceptionally sensitive "subjects," a hypnotic order *will* produce the subsequent commission of a crime. That is to

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say, hypnotism, like strychnine and arsenic, is an instrument that may be abused; and people sometimes fail to see that this is not a reason for neglecting to study it, any more than for exacting ignorance of the properties of strychnine and arsenic from medical practitioners. But a much more valid objection might be raised if the study itself were misconducted; if the proof, already complete, degenerated into exhibition; and if persons with no evil intent, merely by the inconsiderate repetition of sensational experiments, gave ground for suspecting a possible perversion or weakening of their "subject's" *moral*. I believe myself that the danger of producing unconscious injury in this way is very slight. The "subject's" frequent oblivion of his action is a strong guarantee that it has not left any appreciable trace on his character; and experimentation with healthy "subjects"—which I hope to see more and more made the specially *English* branch of the investigation—seems to show that they are not likely to act in opposition to their real character, except in cases when their real character is so completely off the stage as to run no chance of taint. But as it is certain that the danger, when once it is rumoured abroad, will cause exaggerated alarm, and as it is one that can be perfectly easily avoided, I think the scientific rule should be to avoid it.

To pass now to the purely psychological question—it has generally been assumed that the mind of the "subject," during the post-hypnotic performance of a hypnotic command, is in its ordinary waking state, and that the idea of performing the action presents itself just as scores of ideas whose immediate origin is not obvious present themselves every day, and is carried out just as any spontaneous whim might be carried out. On this view the abnormality would lie merely in the mode whereby the appropriate state of mind (including the idea and the impulse to carry it out) is evoked with certainty at the moment fore-ordained by the operator; not in the state of mind itself. Another view is that at the moment when the action is about to be performed, the hypnotic trance again supervenes, and lasts during its performance. And a third hypothesis has been that the action is performed in a state distinct both from hypnotic trance and from normal waking, to which the name of *veille somnambulique* has been appropriated. Each of these views can claim facts in its support. But my contention will be that each view in turn has been maintained in a far too sweeping fashion; that there has been here, as elsewhere in the hypnotic field, too much haste to generalise; and that the psychological condition of the "subject" during the post-hypnotic performance of hypnotic commands, and also during the intermediate period after waking and prior to the performance, really admits of great variety. This will be clear, I hope, when we have considered some actual cases.

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To begin with, then, there are some cases in which no reason whatever appears for regarding the state in which the action is performed as other than normal. The "subject's" account of it afterwards is as of something which it just occurred to him that he would like to do, and which he did because he chose. While he does it, he is in his usual relation to the external world, and can converse naturally and rationally; and both the performance itself and the surrounding circumstances are completely remembered afterwards. He is so much himself that, if the act is an odd one, he is conscious of its oddity, and will make excuses or apologies for it. Thus, one of my recent "subjects," who was told that at a certain time after waking he was to poke the fire—which would, of course, be an odd thing for him to do unasked in my room—when the time arrived, turned to me and asked politely if I should object to his poking the fire. Another "subject" was told during his trance that, when I rose from my seat for the fourth time, he was to blow out a particular candle close to which my wife was sitting at work. He was woke, and conversed with me in a perfectly natural manner. I rose from my seat at intervals, took a few paces through the room or stood at the fire for a few seconds, and sat down again. On the fourth occurrence of this, the lad got up, saying, "There is too much light here"; but instead of at once fulfilling the order, he had sufficient forethought and courtesy to take another candle from another table, and to place it where the one that he was to blow out stood; after which he blew out the right one. Questioned some minutes afterwards, he perfectly remembered what he had done. Similarly, Miss S., a "subject" of Mr. Myers, who had been told that she was to pluck off a large withered leaf from a plant in the drawing-room, on waking, went up to the plant, handled it, and asked her hostess's permission to pluck off the leaf, as she thought it would be an improvement. She had no sense at all of anything exceptional in her impulse.

As one might expect, cases where this amount of recollectedness is maintained shade into others where the reasonable instinct triumphs over the impulse. For example, Miss S. was told in the trance that she was to change her dress for dinner, in a house where on ordinary days this was not the custom. She and her hostess were sitting together in the drawing-room, the latter writing, when the dinner-hour approached. Miss S. suggested that it was time to dress, and meeting with no response, went up to her room. She afterwards reported that she had actually begun to take off her gown, but at the last moment changed her mind. On another occasion, she was told to bring the spoons out of the dining-room into the drawing-room, which was properly the parlour-maid's duty. She was left to wake in the dining-room, and presently followed the rest of the party into the drawing-room, saying, "I know what you want me to do, but I don't

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mean to do it—it is too absurd." So here not only was the impulse truly criticised, but its origin thence inferred.

Cases of this sort are chiefly interesting in their contrast to those where abnormalities appear—to which therefore we may at once pass. It was in relation to memory that the first suggestion was found of some peculiarity in the mental condition which accompanied the action. There are cases where the action, though performed with every appearance of naturalness, and without any impairment of the normal consciousness, proves to be completely forgotten within a few seconds of its performance. This happens even in cases where the action has not been of a simple sort, which could be almost mechanically carried out, but has involved care and attention. For instance, one of my "subjects" named P——ll (a sturdy young fellow of 22, a light porter by trade,) had been told, in the trance, that he was afterwards to take up a pack of cards and pick out all the diamonds. He did so, talking rationally the while, but still in the tone of a person who does not want to be disturbed, and bestowing obvious pains on his task. When it was completed, he handed me the separate diamond suit, and replaced the rest of the pack on the mantelpiece. In a few seconds he spontaneously took up the pack again, and went through it to make sure that no diamonds remained; and then asked me for the diamonds and went through them, to make sure that they were all there. Yet within half-a-minute he was unaware that there was a card in the room; when I told him to look for some, his eyes roamed about for some little time before they lit on the pack, which was lying in the same place as before; and on examining it he expressed surprise at finding that all the diamonds (which I had replaced at the top) were together.

But the failure of subsequent memory is, after all, only an indirect symptom of abnormality during the performance of the act. Moreover, it is not a constant sign: we shall have to notice later, on the one hand, that there is a condition of far more decided abnormality than was involved in the instance just given, where yet memory of the action may survive intact; and, on the other hand, that memory sometimes fails where the condition has shown no abnormality whatever. Thus one is led at once to the idea of applying some test during the actual performance of the action. What test will be suitable? None, surely, can be more so than the imposition of a *new command*, of a sort that the "subject" would regard as a joke and would never carry out, if he received it when in a normal state, but which would be fulfilled as a matter of course if impressed on him in a state of hypnotic sensibility. I will describe some experiments in which this test proved completely satisfactory. The hypnotist in all the cases hereafter described was Mr. G. A. Smith, to whom I am greatly indebted for his skilful and patient co-operation. I will call him S.

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On February 26th, W——s (a healthy and thriving young baker in Brighton, and an excellent hypnotic "subject") was told, when hypnotised, that when next he came he was to take up some loose string and wind it up. As soon as he arrived, on February 28th, he took up some loose string which was lying in view, and began making it into a ball. There were already some signs of abnormality, as, though usually most courteous in manner, he resented my interference with him with some rudeness. While he was busy with the string, S. came in and said to him: "Before you go, you are to blow out one of the candles at the piano." W——s took no notice, but went on winding the string, and when he had finished, handed it to S., saying, "You can have that." In a minute or two I asked him what he had been doing since he came in? He replied, "Only standing here, talking to you." Questioned about string, he seemed completely puzzled, felt in his pockets, and declared that he had not got any; nor did the actual sight and touch of the ball which he had just wound up awaken any memory. Experiments of a different kind followed; and, just as he was leaving, he looked once or twice towards the piano, remarked, "How that wax smells; I'll put it out," and then crossed the room and blew out one of the candles, after which he turned to me and said, "You don't mind, do you, sir?"

The same experiment, tried with an intelligent young mechanic named S——t, who is in some ways a less impressionable "subject," failed; and it is interesting to observe that in his case there was no oblivion of the action during the performance of which the fresh command was given; so that to a certain extent we may suppose that the failure of memory and the responsiveness to commands vary together. S——t's state of mind during the performance was, however, certainly not normal. The order, given two days before, was to pull up a particular window-blind when next he came. On his arrival he showed restlessness and uneasiness, and in a minute jumped up, stripped off his coat, and pulled up the blind—explaining, when I expostulated with him, that someone, he did not know who, had told him to do it, and offering politely to pull it down again. But the command to blow out the candle, which he received while pulling, remained unexecuted.

A second way of testing the state in which the command is executed is by imposing, while the execution is in progress, not the command of a future action, but the suggestion of a future hallucination. Here is a case in which something of this kind was done. On March 1st, W——s was told that, as soon as he came next day, he was to take an umbrella from a corner of the room, open it, and walk about the room with it. He arrives, and at once fulfils the order; and while he is examining the umbrella, S. tells him that when he (S.) asks him after his wife, I shall disappear. Immediately

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after this a change came over W——s's face, and he ceased fumbling with the umbrella, and asked in surprise how he came by it. Some other experiments ensue; and then, while he is talking quite naturally to me, S. says to him, "How's your wife, Fred?" He instantly looks up and around, asks where Mr. Gurney has gone to, and shows much astonishment. In this state he proves easily susceptible to yet a further impression—a command, this time, to put his hat on backwards before leaving, which he punctually fulfils. He at first doubts if the hat is his own, but then corrects its position, and explains, "It didn't seem quite to fit, but I had it on backwards."

The following case is still more interesting, as in it the two tests of command and hallucination were combined, and the hallucination was of a more positive sort. On March 2nd, W——s is told, as on a previous occasion, to wind up some loose string when next he comes. While he is executing this command on March 3rd, S. tells him that he is to take the glass shade off the centre ornament on the mantelpiece; and that when I cough for the fifth time, the room will become dark. As soon as the string was wound, he looked up suddenly, and asked how he came by it. He then walked to the mantelpiece, removed the shade, and gave it to S. Being told to take it back, he absolutely denied having brought it—said he never would have dared to touch such a thing, for fear of breaking it; and he remembered no more about the string than that he had found it in his hands. During the conversation which followed, he was perfectly himself. I coughed at intervals, five times, without any result. But either one of the coughs was not heard, or there was a mistake in counting, which never happened on any other occasion; for at my sixth cough he instantly began to behave as if the room were in darkness, called for matches, fell against the furniture, groped for the candles, and tried to light those which were already lighted. The abnormal condition was in this case so advanced that he had to be woke from it by a clap and call. I need not say that no memory of it remained.

Yet another test was suggested by the fact that things heard in the hypnotic state, though forgotten on waking, are remembered when the hypnotic state again supervenes. If the "subject," while post-hypnotically executing an order, showed remembrance of some quite different topic which had been suggested to him while entranced, it would be the strongest proof that the state of trance was to some extent renewed. On March 22nd, P——ll was told in the trance that when I looked out of the window, he was to pick out the diamonds from a pack of cards; he was also told that there was going to be an exhibition of some performing fleas in a tent in the New Steine. He was roused, and at the appointed signal he took up the cards, and began sorting them; and while so doing, he was questioned as to the fleas, and showed

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complete remembrance of that topic. The memory both of the cards and the fleas proved to survive, even after the fulfilment of the order; but on his being hypnotised for a moment and then suddenly woke, both ideas had completely vanished, and no reminders could recall them. As on a former occasion, he had to look for the pack before he found it, and was surprised that all the diamonds were together.

But the experiment was more interesting and conclusive when the idea which was thus revivable during the fulfilment of the command was one that had been suggested on some quite different occasion, and so could not have been in any way associated with the command. Now in previous experiments on the stages of hypnotic memory (see the paper on the subject later in this Number) a number of different ideas had been impressed on the "subjects," either in the lighter state of trance, A, or in the deeper state, B. Of these ideas, three were as follows—that the head of the Brighton pier had been washed away; that a balloon had been seen floating over the King's-road; and that two large dogs had been having a fight in the Western-road. These, then, supplied the test required. On February 28th W——s was told that, when next he came, he was to play with an air-ball which was lying about in the room. Next day, while he is thus engaged, S. says to him, "Fred, what was that about the pier?" He replies, "What, about its being partly washed away?"—which was one of the things that he had been told in state A, on February 25th. S. then tells him that, before he goes, he is to strike some notes on the piano; and that in four minutes he will see his wife in the room. Very soon after this he puts down the ball, and talks quite naturally. He is then questioned about the pier, but says that he has not heard of any accidents or of anything relating to the pier. He then begins to look thoughtful, and soon says, "Wasn't I to see someone here to-night, Mr. S.?" He could not explain, further than by saying that he had an idea he was to see someone. I now began patting the air-ball about, and left it in his hands. He squeezed it with his thumbs, looked into it, and said, "There is a face in it! Do you see that face?" (The surface of the ball was shiny, but not enough so to reflect his own face, or anything in the room except the fire and candles.) S. said, "Whose face? Do you recognise it?" He replied, "No; it's fading away now." It was impossible not to notice the change which came over his own face as this hallucination presented itself.[1] He has very noticeable eyes, and the sort of filmy, dreamy expression which is often seen during the process of hypnotisation, just before the eyes close, was on this occasion quite unmistakeable. It was

[1] *Cf.* Delbœuf, "De la prétendue Veille Somnambulique," in the *Revue Philosophique* for February, 1887, p. 127.

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remarked by two visitors, who were certainly not on the look-out for it. W——s was now immediately asked if he had heard of "that thing floating over the King's-road." "Oh, yes, that balloon," he at once replied—another of the state-A suggestions. He was then told that he would see his wife in three minutes, and I took the ball from him; whereupon he rubbed his eyes, looked himself again, and talked as usual. S. now went on to talk about the balloon; but it awakened no memory in his mind, and he seemed to think we were poking fun at him. Then the hazy look again appeared, and he said, "I can see a lot of faces floating before my eyes to-night"; but again he did not recognise any of them, and said, "They're going now." He rubbed his eyes, and S. said, "Can you see them now?" "What?" "The faces"—upon which he gave a look of comical reproof, and said, "You're trying to make something of me to-night—talking about faces and balloons." I tossed him the air-ball again, and he began to pat it up and down. And now a singular thing happened. He failed to remember the balloon over the King's-road, but he clearly remembered something about the dog-fight in the Western-road, which was an idea connected with the deeper state B. It seems possible that, owing to our persistence, the stage of trance which supervened this time was really deeper than that of a few minutes before. It is in favour of this view that, after rubbing his eyes, and rousing himself a little, he proved not to have arrived at normal wakefulness, but only at stage A; for as S. went on talking about the fight, he exclaimed, "A balloon fight!"—and when asked what he meant, said that S. had been talking of a balloon over the King's-road. S. said, "I was talking about dogs"; but he could not now be got to remember the dog-fight; and when the balloon was mentioned a few seconds later, he had forgotten that too, and had come back to normality. The final incident of this long experiment took place about half-an-hour later. W——s was in a hypnotic state, from which S. was just about to awake him, as it was time for him to go—when he suddenly rose, walked to the piano, and stumblingly played a tune; thus fulfilling the order about striking some notes, though in a manner which had not been contemplated.

As regards these experiments with W——s, I may mention that I did not expect the suggestion of seeing his wife in the room to take effect; I was surprised, indeed, at its going so far as to produce even dimly the hallucination of faces. The production, at some future time, of so definite an hallucination as that of the visible presence of an absent person is a very extreme result of hypnotic suggestion which—though I have come near it[1]—I have never actually obtained with any of

[1] One evening, three of my "subjects," when entranced, were impressed with the idea that they were to see me enter their respective places of employment at an early hour next morning. On no single occasion had I ever actually

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these "subjects"; and where a result is not produced when the suggestion has been made in an undoubted and completely established state of trance, one would not expect to produce it by a suggestion made in the less abnormal condition which I have been describing.

And now what name are we to give to that abnormal condition? There are strong objections to multiplying classes and names of abnormal states unnecessarily; and in such a subject as hypnotism, the habit of doing this may be quite as misleading as the opposite tendency to generalise the facts too rapidly. Recent French treatises, especially, have abounded in long lists of states and sub-states, of which a good many, at any rate, represent no general or radical distinctions, but merely unimportant and quasi-accidental peculiarities. One writer makes his classification largely depend on the detail whether the eyes are open or shut—though the eyes may remain shut during the liveliest somnambulic conversation, and may remain open during rigid and speechless trance. Another discovers and describes a peculiar state which he calls "fascination"; ignoring the fact that in a well-known work a state which is practically the same has already been classified under the head of "charm," and that no real distinction has been shown between either and the less picturesquely named state of somnambulism with open eyes. And so on. The fact is that it is impossible to arrange the phenomena in tabular series, without ignoring a number of possible combinations, exceptions, and cross-divisions; and the fancy-arrangements of stages and transitions might easily come to rival in number and variety those of the German declensions, without leaving a much clearer impression on the student's mind. More especially does it need recognition that not only have hypnotic "subjects" their own little personal ways, bodily habits, and mental characteristics; but that every operator, and every hypnotic *milieu*, is likely to develop in a particular group of "subjects" habits which in other conditions are

been to see them there at any hour. Two of them told me afterwards that for some time in the morning they had had an odd feeling that I was coming, and were on the look-out for me. The third had had no such experience. On another occasion, I found that the impression which refused to develop itself in sensory form during waking moments would do so in sleep. On March 1st, W——s was told, in the trance, that on that night he would have a vivid dream, in which an unusual high tide would wash away the Parade, and would come up almost to his shop. On March 3rd, he spontaneously told us that, on the night before last, he had had a very troubled dream, which woke him suddenly; but he could not remember what it was about. Asked if there was anything about water in it, he said that he believed there was, but had no precise recollection. He was then entranced, and tentatively questioned, when he said that he had had a dream of a high tide washing the Parade away, and coming up almost to his shop. His memory in the waking state of having had an exceptional dream makes it reasonable to infer that this hypnotic memory was of the actual dream, and not merely of the hypnotic suggestion that he was to have it.

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not met with, or not met with in the same developed form; and which are thus liable to be unduly emphasised by those who have observed them, and unduly suspected by those who have not. The real interest of these differences is in the wider general fact to which they point—the delicate and far-reaching susceptibility of hypnotic "subjects" to unconscious education. This is a theme on which I hope to say more on a future occasion; my immediate object is merely to keep the moral in view, and to inquire how far it applies to the present case. Is the state in which the described fulfilment of hypnotically-impressed orders took place really a distinct state, deserving of a separate name? The question has lately been raised in a somewhat aggressive way by the eminent Belgian professor, M. Delbœuf, and answered by him decidedly in the negative.[1] My own answer—which can be supported by equally high authority—would be as decidedly in the affirmative. On the one hand, no one probably will dispute that the various points above passed in review suffice very clearly to distinguish the condition from that of normal waking; and, on the other hand, the extent to which the "subject" retains his natural relation to other people and to the external world, and the fact that his loss of memory is confined to the single point to which the command or suggestion related, are surely points of sufficient importance to constitute a specific difference from the ordinary state of hypnotic sleep. It is to Professor Beaunis, I believe, that the credit belongs of having first clearly recognised this double distinction,[2] and its importance for purposes of classification; though I cannot hold that the name which he has applied to the state distinguished—*veille somnambulique*—is a very happy one. For "somnambulism" surely suggests an *absence* of that very awakeness, that natural relation to external conditions, which the performers in these post-hypnotic cases are characterised by retaining. I am not prepared with a convenient French substitute; but in English I think that *trance-waking* might serve fairly well.

I have referred to the view of M. Delbœuf—which he carries to the length of considering that "all the states represented as intermediate between waking and hypnotic sleep are simply hypnotic sleep, and nothing else." An observer of his calibre would, of course, not make so forcible a statement without having some grounds for it; and these grounds consist in certain experiments made on his own domestics, which are of such peculiar interest that I make no apology for briefly describing a few of them. I conclude from them that M. Delbœuf, so far from showing that there is no true intermediate state of trance-waking, has shown, if anything, that there are *two* instead of one;

[1] *Revue Philosophique* for February, 1887.
[2] *Revue Philosophique* for July, 1885.

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to which conclusion I would venture to add, as a rider, that in so new and complicated a branch of psychology, two maid-servants, of however eminent a psychologist, hardly afford sufficient material for the formulation of quite sweeping general laws.

The following specimens will fairly illustrate the performances of this remarkable pair of sisters. On March 13th, 1886, M. Delbœuf gave M——, for the first time, an order to execute after waking. The order was to remove some dirty water, and then to return to the arm-chair and go to sleep. She executed the first part of the order, and when her master asked her what she had been doing, she told him, and said that she had felt she ought to do it, as he had commanded her; but instead of returning to the arm-chair, she said, "I have woke up, sir." Asked when she woke, she said, "When I emptied the pail." "You were asleep before that, then?" "I don't know." "Then why do you say that you woke at that moment?" "Because at that moment I felt that I was doing something unusual."

On March 21st, a friend of M. Delbœuf's told J——, who was hypnotised, that when she brought in the second course at supper, she was to throw the contents of the dish over one of the guests, M. Masius. M. Delbœuf interfered, and told her to kiss his wife instead, as less inconvenient. To this she agreed. When supper began, he repeated his caution, and she again reassured him. On entering with the second course, J—— went up to her mistress, asked leave to kiss her, and did so, and then held the dish for her to help herself. She then stood undecided. There was not a moment to lose, and M. Delbœuf darted towards her, saying, "Give me the dish." She resisted, and he had to take it by force, and handed it to M——. He then blew in J——'s face,—when she shook herself, and seemed to wake; but as she still had retained a look of determination, and attempted to take the dish from her sister's hands, she was prudently kept apart for the remainder of the course. Next day J—— remembered that she had not been able to help kissing her mistress, and that she had had an impulse to drop the dish, not on the floor, but over M. Masius or between him and Madame Delbœuf; but she was not sure whether she would actually have done so.

On April 1st, J—— was told that, when a particular guest put his glass to his lips, she would see his hair suddenly grow to an inordinate length, and that she would fetch a comb and comb it till it resumed its former length; and then she was to wake. The first part of the order was carried out precisely, and she answered a number of questions correctly while the combing was going on; but then, instead of at once waking, she settled herself in the arm-chair and slept for some minutes, after which she woke spontaneously, and the sight of the comb brought back the whole scene. She described the details of the

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hallucination and of her own proceedings, and remembered the questions that she had answered, and the act of waking. The only point which she did not recall was returning to the arm-chair and falling asleeep; and this lacuna in her memory puzzled her. But as M. Delbœuf justly remarks, unconsciousness of the moment of becoming unconscious is a species of forgetfulness with which we are all familiar.

The next case is more elaborate. On April 2nd M. Delbœuf said to M——, who had been entranced while she was knitting, "After I wake you, you will knit for five minutes, and then you will write to your father. You will tell him that you are happy at Liège, and that order is re-established there. And you will tell me what you have done." M—— is woke, and takes up her work; after eight minutes, her eyes close. M. Delbœuf waited five minutes and then woke her. She was surprised to find that she had been asleep, and disowned any desire to do anything particular. M. Delbœuf re-hypnotised her, and asked her what it was that she had been told to do. "I do not recollect." "I told you to write to your father." "It is done." "What do you mean? What have you written to him?" "That I was happy at Liège," &c. "You have not written anything; you have been dreaming. Now you *are* to write to him, in three minutes." She is woke, and resumes her knitting. In six minutes, she rises with an air of resolution, and says, "I have got to write." "Sit down at the table; there are the materials." "No, I shall go downstairs." "Why?" "I don't want to write here; I want to write in the kitchen." She goes downstairs, and demands writing materials in a peremptory tone which surprises her fellow-servants. M. Delbœuf follows her, and she asks him whether she is not entranced, and receives an evasive answer. She is supplied, not with note-paper, but with a piece of an old bill, and shows no surprise at this, but will not write while her master is present; he therefore tells her to come up-stairs and show him her letter, when it is finished. After a time she appears without the letter, and begins to knit; and on being questioned, she says that she has hidden the letter, because her sister wanted to take it from her. M. Delbœuf goes on talking to her, but she appears discontented and gives short answers. "Are you asleep, M——?" he asks. "I don't think so, sir," she replies. He blows in her face, and she comes to herself with a start, and smiles. She then describes every detail of what had passed. On getting possession of the hidden letter, M. Delbœuf finds that it runs, "My dear father, I hasten to inform you that everything is quiet at Liège, and that we are getting on very happily."

M. Delbœuf draws attention to the two chief points of interest in this case; the independence and initiative which the "subject" showed in the details of her conduct, while still never transgressing the lines of the

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order; and the first fulfilment of the order in a dream, which may be regarded as closely analogous to its real fulfilment in the state of trance-waking. Another more striking instance of this novel sort of dream-fulfilment was given on a later occasion when an order was given the actual fulfilment of which would have involved violent outrage to a long-established habit. M. Delbœuf told her to straighten a crooked knitting-needle at a future moment when he foresaw that to do so would necessitate drawing the needle out of the stocking, and spoiling the work. When the moment arrived, she solved the difficulty by going to sleep, and *dreaming* that she straightened the needle; and on waking she was only with difficulty convinced that her fulfilment of the order had been imaginary.

Another noticeable point which occurred in some cases was the limitation of the "subject's" consciousness to the one idea suggested. M—— was told that in a quarter of an hour she was to go and console a statuette of a weeping monk on the mantel-piece, and was then woke. She rose at the appointed time, with the customary change of physiognomy, and executed the order in dramatic fashion; and when afterwards asked what she experienced she said, "I was not here, I was transported somewhere else; I saw no one, I was all alone." So after being told to take off her garter and put it round her mistress's neck—an order the literal fulfilment of which was accidentally prevented—she said, when asked, that she should have carried it out, even in M. Delbœuf's presence, as she "saw no one but Madame."

Further experiments showed that the "subjects" could afterwards describe ridiculous scenes which they enacted, in the midst of normal life, in obedience to previous hypnotic commands—as where M—— was a petroleum lamp, and struck a match to light herself; where M—— was a pig, which J—— was selling to a customer; where M—— was a wheel-barrow full of potatoes, which J——was wheeling about; and where each which she afterwards recovered. The interest of these observations, for in turn was taken to a mirror, and persuaded that she had lost her head, M. Delbœuf, is that the sort of credulity involved—the conscious but at the same time wholly uncritical acceptance of these absurd *rôles*—was entirely similar to what was displayed by the same "subjects" in respect of delusions that took effect in their ordinary hypnotic condition.

The first point to notice in these results of M. Delbœuf's is their very exceptional character as regards memory. They show that even Professor Beaunis—one of the most careful as well as one of the ablest of the authorities—has gone too far in making subsequent oblivion the crucial test of his *veille somnambulique*. I know of no cases where the memory of the post-hypnotic performances has proved so clear, while at the same time the state in which they took place was so obviously

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abnormal. But a no less exceptional point was that these "subjects" equally remembered what took place during a state of trance induced by ordinary means—that is to say, during the deepest hypnotic state to which it was possible to bring them. And furthermore, M. Delbœuf tells us that, when entranced, they were always in *rapport* with every one alike; thus we have seen that the command as to spilling the contents of the dish was suddenly given to one of them by a stranger. Now, to begin with, I must maintain that the combined features of breach of memory and special *rapport* with the hypnotiser are such common and such important characteristics of hypnotic trance, that cases which present them and cases which do not had better not be confounded under a single general name. M. Delbœuf seems to have some consciousness of this objection; for he tries to get round it, as regards memory at any rate, by treating the question as merely one of education. But in the first place this is certainly far less so than he supposes;[1] and in the second place, the fact that an abnormality can be removed by particular treatment does not make it insignificant. To avoid a new term, M. Delbœuf might still think it enough to say that his "subjects," alike when hypnotised by ordinary means and when subsequently carrying out hypnotic commands, were in a *lighter state* of trance than mine. I prefer the term *trance-waking*

[1] We have seen, for instance, that M—— perfectly remembered the first post-hypnotic fulfilment that she was ever engaged in. In an interesting series of experiments (*Revue Philosophique* for May, 1886), M. Delbœuf found that if he woke his "subjects" while they were actually occupied in following out some hypnotic command or hallucination, they recalled what had passed, as a dream; and here again he at once assumes that he has established a universal law. I have frequently seen English "subjects" woke in the same way, in the midst of a performance or a hallucination, and I have never found memory to survive, except in the case of simple imitative actions where no delusion was involved, and very dimly in the case of new "subjects"—that is to say, exactly those who had *not* had hypnotic education. On the very day that I first read M. Delbœuf's account, I exactly repeated on two "subjects" an experiment of his in which the hallucination communicated was of something catching fire, and having to be extinguished by being plunged into (real) water. The "subjects" were suddenly woke with the dripping article in their hands; but neither of them had the slightest memory how it came there, nor of the previous train of ideas. I offered each of them a sovereign to recall his "dream"; but it had left not a wrack behind. Moreover, in many of the cases which M. Delbœuf describes, he had *given the command* that the things done or experienced were to be afterwards remembered and described. No one familiar with hypnotism would be surprised that *this* means should prove effective; and it would be interesting to know whether such a command was given in the other cases where it is not expressly mentioned. I may add that M. Delbœuf seems to press the resemblance of even the remembered hypnotic hallucinations to ordinary dreams much too far; for he practically treats the latter as if they were never remembered in waking hours unless some special sensation or experience recalled them.

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for this lighter state, simply because it emphasises the fact that the deeper state, into which his "subjects" were apparently incapable of being brought, is also the ordinary, or, as we may say, the *normal* one, in cases where any decided hypnotic peculiarities appear.

But the further point which I want more especially to bring out is this—that even his "subjects" exhibited varieties of state during their performances of commands. Sometimes they spontaneously resumed normal life at the conclusion of the performance; but even these cases were not quite parallel to most of mine; as these girls' consciousness of a change—of "waking," as they described it—has never been described by my "subjects," though with them the frequent breach of memory might have been expected specially to favour it. But more often the Belgian sisters required to be woke by external means, which hardly ever happened in my experiments, and never unless some delusion which had been imposed had been encouraged for an unusual time;[1] while on occasions, as we have seen, they actually went so far as to compose themselves in an arm-chair, close their eyes, and take a nap, before emerging into waking life. Further, there are the occasions on which they wholly lost *rapport* with the external world—a very marked feature, and conspicuously absent in my "subjects." In a word, apart from the memory-test (which M. Delbœuf himself regards as inconclusive), the Belgian "subjects" were not in a lighter but in a *deeper*, a more abnormal, state than the English ones. So decidedly was this the case that, even if M. Delbœuf refuses to recognise his own variety of the *veille somnambulique*, I do not see how, on the symptoms, he could refuse to recognise mine. It seems, in fact, to be separated by an even wider gap from the complete trance on the one hand than, on the other, from the performances carried out without any apparent deviation from normality (p. 270)—a class, by the way, of which M. Delbœuf seems to be equally unaware.

II.

Automatic Execution of Slight Physical Movements.

We have now considered three classes of cases;—(1) those where the ordained action is consciously performed in a normal state, and remembered; (2) those where it is consciously performed in a trance-waking state, and forgotten; and (3) those where it is consciously

[1] See p. 273; and compare the case which M. Delbœuf witnessed in the Salpêtrière (*Revue Philosophique* for February, 1887, p. 115), where a hallucination, suddenly imposed on a waking but highly sensitive "subject," developed a condition from which apparently only the operator could release her. It is not surprising that hallucinations, from their absorbing character, should have an exceptional tendency to induce an advanced form of trance. Another instance will be found below, p. 299.

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performed in a trance-waking state, and remembered.[1] It naturally occurs to one to ask if the list can be extended—if there is any fourth class of cases when the action is performed in a *normal* state, and *forgotten*. For, on reflection, it is evident that the mere fact of an action being at once or almost at once forgotten is no sufficient proof of its having been performed in an abnormal state. There is nothing unusual in the immediate oblivion of things which have been done in a perfectly normal waking condition. A large number of actions—those which we commonly call *automatic*—are performed in such a condition; many of these are performed without consciousness, and *à fortiori* many of them leave no trace in the memory. It would not, therefore, be at all surprising to find that certain actions induced by previous hypnotic suggestion were of this kind—truly automatic, and involving no more consciousness or memory than things which we often do with our hands while our minds are engrossed in thought or conversation. Nor would it be surprising if the scope of such unconscious and unremembered actions proved to be rather larger when they are the result of previous hypnotic suggestion, than when they are the result of habit. It may be said, I think, of many of our simpler and habitual actions, that we attend to them much more than is necessary for the performing of them; and the fact of their remaining to some extent in our memory is usually due to one of two things. Either the object for which we performed them had some interest and importance for us, and the actions that we went through to attain this object are remembered through their association with it; thus we remember opening an envelope five minutes after doing so, because we had some interest in getting at the letter inside, and the greater memory draws, as it were, the lesser one into its wake. Or else quite unimportant details of custom engage our attention, and so are afterwards remembered, merely because the attention is not solicited in any other direction; thus in the course of an ordinary day we may remember the process of dressing in the morning, though we quite forget it on some exceptional day when we had to go through it after a sudden awaking, and while listening to some agitating news. Now in the post-hypnotic execution of commands, both these conditions of attention and memory are often absent. The act is performed without any

[1] It should be remarked that—apart from the exceptional cases last described where there is an approximation to complete trance—the third class really shades into the first; since normality is not separated from trance-waking by any definable line. Subsequent memory seems to be the rule in cases where abnormality has only reached the point that the "subject" feels unable to refrain from the action, though sensible of its uselessness or absurdity, and surprised by the strength of his impulse to perform it.

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purpose that could give it interest, since the "subject" did not conceive of it as a means to the fulfilment of any end of his own. If he pokes the fire because he is beginning to feel cold, he may very naturally remember doing so; but if he pokes it in blind obedience to a forgotten suggestion, the act lacks one chief ground for continuance in memory. And again, the moment for the post-hypnotic performances often falls, as it has been expressly arranged hy the operator to fall, at a time when the "subject's" attention is being claimed in some other direction—for instance, when he is engaged in animated talk; so that the actions have a fair chance, so to speak, of being performed automatically, if they are performed at all. On these grounds, it would certainly seem reasonable to expect that simple actions, commanded during trance, but performed in a conscious waking state and without any relapse into a state of temporary trance or trance-waking, might sometimes be purely automatic and unconscious.

Experiment confirms this view up to a certain point. There are transitional cases where the memory seems to have vanished, but can with pains be evoked. Thus, W——s was told in the trance that, when I coughed for the third time, he was to put his hand to his head for a moment; and was then awoke. He obeyed at the third cough, and then folded his arms. In a few seconds I asked him whether he had moved; he said "No," and looked astonished. I then said that I fancied I had seen him put his hand to his head, and he then considered and said, "Oh, yes, I believe I did put it up a moment ago; I believe I often do so." He was re-hypnotised, and told that when I coughed for the second time he was to nod his head at S. He said, "What, to make game of him?" (*i.e.*, of me)—and is amused with the notion. He was woke, and at my second cough, while in the act of conversing with S., he gave a distinct nod, at the same time giving a sort of knowing wink in my direction, and joining in S.'s laugh. He apologised "for laughing at Mr. Gurney's cough;" but the nod itself, which seems by association to have revived the sense of amusement, proved to be completely forgotten. In the same way P——ll obeyed a command to nod his head at my third cough, and on my asking him immediately afterwards what he had done, looked puzzled and said, "Nothing." I said I thought he had nodded, but he was certain he had not. Shortly afterwards, he obeyed the command to put his hand to his head when I poked the fire for the second time; but on my questioning him and imitating the gesture, he again denied having made it.

Here, then, we certainly seem to find our fourth class—actions performed in a normal state, and forgotten or unremembered immediately afterwards. Are we, then, justified in calling these actions automatic and unconscious? Only in a strictly qualified sense, as further examination will show.

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In the first place, the actions, however easy, transient, and insignificant, are *remembered on re-hypnotisation*. I cannot, of course, assert that this rule is invariable; but I have never myself observed an exception. For instance, two days after the incident of the forgotten nod, above recounted, W——s was asked in the trance whether he remembered "doing anything on Saturday when Mr. Gurney coughed." He replied in a confidential tone, "When I nodded my head at him? He didn't see me, did he?" But even if we had no such direct proofs of a certain awareness accompanying the performance, we can obtain an indirect proof of a peculiarly interesting kind. We can so arrange that the action, though in itself of the slightest, shall imply intelligence—shall constitute the intelligent reply to a question or remark then and there addressed to the "subject." In a case quoted by Mr. Myers (p. 249) Professor Janet's "subject" maintained a sort of conversation with him by "automatic" movements of the hand, while to all appearance fully engaged in an ordinary conversation with someone else. This occurred during hypnotic trance; but I have lately obtained some similar results with "subjects" in a normal waking state. Now if there be a consciousness —beneath or apart from the "subject's" normal consciousness—which knows *that* he is answering and *what* he is answering, we should expect the same consciousness to know *how* he is answering; and in my cases this expectation was confirmed by subsequent hypnotic memory of the whole proceeding.

S——t was told, in the trance, that he was to answer my questions by slightly raising his right-hand for "yes," and his left-hand for "no." He was then woke, and chatted naturally with S. for some minutes. At intervals I addressed some question to him which admitted of a direct *yes or no* reply, and the true answer to which I knew;—such as, "Has it been raining this afternoon?"—"Have you ever been to London?" —and so on. In every case, about ten times in all, the correct answer was given in the way prescribed, the conversation with S. proceeding freely meanwhile. Two or three minutes afterwards, I offered S——t a sovereign to tell me what questions I had asked him, and what he had been doing with his hands—with the usual impunity to my purse. A fortnight afterwards, he was asked, in the trance, whether he remembered having ever carried on a conversation with me by means of signals. At first he did not realise what was referred to; but when hands were mentioned, the memory recurred; and when asked whether the signal with the right-hand had not meant *No*, he replied decidedly, "No, it meant *yes*."

On another occasion the same experiment was made with P——ll, who, however, was more distinctly impressed with the idea that he could not answer me in the usual manner. The result was slightly different—

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the answers were given correctly by the movements of the hands; but more of what I may call the normal attention seemed to be bestowed on me. Thus if I asked a question immediately after S. had made a remark there would be a moment's pause, and then the signal of response to my question, before S. received his answer; and if I asked a question while P——ll was in the act of speaking, his words would become slightly incoherent, as though a conscious effort were being made to listen at the same time. I was not surprised, therefore, to find that he had a normal consciousness of my addressing him. When asked by S. if he heard me speaking, he said, "Yes, but I cannot answer him." Asked why, he could not say. The inhibition was now removed, and he talked to me as usual; but it was curious that when his answers were of the *yes or no* type, his hands *continued* to move as directed, the one or the other being slightly raised as the answer was spoken. Noticing this, I directed him to say "yes, yes, yes," several times over; the right hand punctually kept pace with the lips, and—what was still odder—it was impossible to make him aware of the movement. Though perfectly himself in every other respect, he obstinately asserted that his hand did not move, and I think it probable that he actually was under the influence of a special form of "negative hallucination"; so that here the case recalls those of § I above, when some further abnormality of the *trance-waking* species supervened during the fulfilment of a hypnotic order. On being hypnotised, he remembered all about moving his hands, though he still declared that he had not *seen* them move.

III.

Post-hypnotic Reckoning of Time and Counting of Signals.

So far we have been considering the condition of the "subject" at the time during which the command is performed. But questions of even greater interest, and also, it must be confessed, of greater difficulty, present themselves when we consider the intervening period, between the waking which follows the imposition of the command and the subsequent fulfilment. This period even M. Delbœuf does not venture to represent as anything but a piece of normal waking life;[1] and ostensibly of course that is what it is. Yet it is scarcely necessary to look below the surface to divine that it has peculiarities; and the deeper we look, the more remarkable will they appear.

If no mention of time is made when the command is given, it will be executed on waking. If this is not desired, some particular time must be fixed. Thus the command is that the thing is to be done in half-an-hour, or in so many minutes after waking. Here, then, the

[1] *Revue Philosophique* for February, 1887, p. 127.

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"subject" has in some way to reckon duration; and he often does so with remarkable accuracy.

Now in cases of this sort, it does not at first sight seem unreasonable to conceive that the reckoning is of a simply *physiological* sort; that at the time of receiving the command, the "subject," as it were, *sets* his organism, as he might set an alarum, for a given time ahead, and that when the time arrives the action takes place, just as the alarum runs down. This is what is generally assumed to occur in the common case of determining to wake, and waking, at some unaccustomed hour; and as long as the hypnotic command extends to only a short time ahead, that analogy seems plausible enough. M. Delbœuf considers the matter so plain that he dismisses it in a sentence. The explanation is "des plus simples," and is this:—Every command given to a "subject" to perform a certain act at a future time, is at once formulated by him in these terms, "*You will fall into a trance at such and such a moment*, and then you will perform the act." The "subject's" *mind* is then relieved of responsibility, and goes off duty; and his bodily machine goes to sleep, as the sleeper's bodily machine wakes, by its own automatic machinery. The explanation is certainly simple enough; but it has the defect of being a pure guess, unsupported by a single fact: no hypnotic "subject" has ever confessed to formulating his orders in any such fashion as M. Delbœuf represents.

But even if we could accept the assumption of the purely physiological hypothesis for cases of short duration—where the idea of the period can be distinctly realised and the setter of the alarum sees exactly what he is about—it would be a far cry to extend it to the well-known commands *à longue échéance*, as where the thing is to be done after 6 months' or a year's interval. I do not think that the peculiarities of the time-reckoning over long periods have ever received quite just treatment; they have either been too much extenuated, or magnified into something incredibly marvellous.

A distinction must first be made between cases where a *date* is named—especially if the date be a marked one, such as January 1st, or the anniversary of the day of the command[1]—and cases where simply a *length of time* is named, not immediately suggestive of a particular date, as in the direction to do such and such a thing "on the 69th day from this." In the former case the impression of the date might be immediately registered in the brain, in association with that of the order, and the mere arrival of the date might thus suffice to revive the order. But how is a length of time to be so

[1] It is unfortunate that in some of the best known cases of commands *à longue échéance*, such dates have been selected; but the proof of the phenomenon does not depend on these cases.

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registered? Its further end, till reckoned out by the aid of the calendar, is perfectly indefinite; and there is nothing in the mere arrival of the day calculated to revive the terms of the order—it carries no more *sixty-ninthness* about it than any other day. M. Paul Janet has described such a length of time as in fact an abstraction—meaning that the mention of it awakens no distinct image or series of images; and he refuses to believe that abstract time can be accurately measured, since this would imply some totally unknown faculty.[1] I cannot think that Professor Beaunis fairly meets this objection by pointing out that "a day" represents a series of conscious impressions and unconscious organic reactions, and that there are periodic organic changes which extend over weeks, months, and seasons—that animals know their feeding-time, and that attacks of fever recur at regular intervals. His conclusion from these facts is that "the measurement of time is not an abstraction, but has its roots and conditions in the very life of the organism."[2] But, in the first place, though "a day" may be a sufficiently familiar and definite unit to present a concrete character, it does not follow that this is the case with "69 days." And, in the second place, the organic conditions which are just what the measurement of established physiological periods *ipso facto* has, are just what the measurement of periods suddenly and arbitrarily fixed by human volition has not. The vital processes will no more work out such a measurement as this than a school-boy's digestion will work out a proposition of Euclid. However carried through, it is at least not a function of animal life. It issues in a perfectly needless act, not in an inevitable bodily state; and it depends, not on progressive changes in the stomach or the blood, but on a quite original course of cerebration, proceeding, we cannot doubt, in the higher tracts of the brain, having been initiated by an impression—that of the command—which had a distinct psychical side. Now looking at the brain-side alone, we should conclude, I think, that the passage of time must be registered, not by any general gradual change, but by a series of specific changes, corresponding probably to the days or *units of measurement*.[3] We should conclude, that is, that cerebral events of the sort normally correlated with the ideas "sixty," "sixty-one," "sixty-two," &c., really take place; for how otherwise could the gulf be spanned with precision? how would any other sort of change know when to stop, or

[1] *Revue Politique et Littéraire*, for August 16th, 1884.

[2] *Le Somnambulisme Provoqué*, pp. 139-141.

[3] *Cf.* the reckoning and registration of units in a later case (p. 313). The units there were minutes, not days; but I do not see that this much impairs the force of the analogy.

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associate some point that it had reached with the order given weeks before? Such a cerebral process alone would wholly differentiate the case from that of ordinary physiological time-reckoning. But if the specific brain-changes take place, does it not seem at least a reasonable surmise that their mental correlate may exist, though hidden from our view—that there may further be an actual watching of the course of time?[1] Such a hypothesis would in great part remove M. Paul Janet's difficulty; for the "unknown faculty" would simply be a known faculty, working in a normal way, but below the surface of normal consciousness.

Most of the evidence bearing on this subject will find its appropriate place in the next section; but a few facts may be given here. M. Delbœuf's record contains two cases which are very much in point. M—— was told, when entranced, that in 10 minutes (*dix* was very likely understood as *six*) she was to take Mlle. Delbœuf's slipper from her foot, remove a nail from its heel, and put it back on the owner's foot. On being woke, she looked at the clock, and kept glancing at the clock and at Mlle. Delbœuf during six minutes, when she executed the order. In this case there was doubtless consciousness (in the ordinary sense) of consulting the clock, and probably a waking memory of it, as M. Delbœuf seems to say that the memory of the incident was complete.

In the next example we have probably a similiar consciousness of watching the time, without the waking memory. A chemist had been told, when entranced, that five minutes after waking he was to fetch a bottle of ammonia from a neighbouring shop. He was woke, and talked naturally to those present; but he looked at the clock immediately on waking, and kept looking at it at intervals. At the end of five minutes, he put on his hat and went out, re-appeared with the ammonia, and took his place again among the bystanders, remarking, "Why, have I not just been out?" He was then informed what he had done, to his great astonishment. This case seems intermediate between the former one and those where the watching is of a wholly interior kind, and is not only forgotten afterwards, but is accompanied by no consciousness of which the normal waking "subject" can render any account; but which still, I believe, involves mental action of a sort.

[1] It is worth remarking that, if there be such a mental watching, then we have a fresh argument for the view of "automatic" actions maintained in the preceding section. For there would at least be a strong presumption that the action up to which the watching leads, and which puts an end to it, however slight and insignificant it may be, has itself some sort of mental existence.

I find that the same idea of a continued reckoning has occurred to Professor Pierre Janet and Mr. Myers, *à propos* of some experiments of the former (p. 239). The general view, in this and in the following section, as to evidence of secondary intelligence, is I think identical with that of Mr. Myers.

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Here are a couple of instances of this extremer kind. My "subject," W——s, was one day told that on the 39th day from then, at 9.30 p.m., he was to come and call on a gentleman resident in the house where I was lodging, with whom he had no acquaintance. He of course had no memory of this direction, when awake. No reference was made to the command till March 19th, when he was suddenly asked, in the trance, how many days had elapsed since it was given. He *instantly* said, 16; and added that there were 23 more to run, and that the day when he was due was Easter Monday.[1] All these statements were correct. But the odd thing was that, on further questioning, he misdated both the day of the order and the day of fulfilment, calling the former March 1st, and the latter April 12th, whereas they were respectively March 3rd and April 11th. This makes it tolerably clear that he did not originally arrive at the date of fulfilment by immediate reckoning from the date of command, and then fix it in his mind simply as a date. (Easter Monday, when so near as 23 days, might be arrived at in a moment by remarking the day of the week.) Moreover if he made March 1st his *terminus a quo*, he ought to have said 18 instead of 16, and would probably have had to pause to reckon. The reasonable interpretation of the result is surely that he was in some way actually counting the days as they passed.

In the next case, which occurred after the above remarks were written, I got an actual account of the process, which singularly confirms them. P——ll was told, on March 26, that on the 123rd day from then he was to put a blank sheet of paper in an envelope, and send it to a friend of mine whose name and residence he knew, but whom he had never seen. The subject was not referred to again till April 18, when he was hypnotised, and asked if he remembered anything in connection with this gentleman. He at once repeated the order, and said, "This is the 23rd day; a hundred more."

S. "How do you know? Have you noted each day?"

P——ll. "No; it seemed natural."

S. "Have you thought of it often?"

P——ll. "It generally strikes me in the morning, early. Something seems to say to me, 'You've got to count.'"

S. "Does that happen every day?"

P——ll. "No, not every day—perhaps more like every other day. It goes from my mind; I never think of it during the day. I only know it's got to be done."

Questioned further, he made it clear that the interval between these impressions was never long enough to be doubtful. He "may

[1] Unfortunately the accident of the *échéance* on Easter Monday prevented the execution of the order, as W——s went off on a holiday excursion for the whole day.

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not think of it for 2 or 3 days; then something seems to tell him." He was questioned again on April 20, and at once said, "That's going on all right; twenty-five days"; and on April 22, when in the trance, he spontaneously recalled the subject, and added, "Twenty-seven days." After he was woke on April 18, I asked him if he knew the gentleman in question, or had been thinking about him. He was clearly surprised at the question, said he fancied he had once seen him in my room (which, however, was not the case), and that the idea of him had never since crossed his mind.

But there is another way in which the moment for the performance of the action can be fixed. The "subject" can be told to perform it when some signal is given—as when someone gives a cough, or pokes the fire. Now here again we might perhaps conceive that the organism sets itself for the receipt of the signal, just as it has been supposed to set itself for the expiration of a certain period of time; and that the signal touches the trigger, so to speak, and lets off the associated action, without any psychical expectancy being involved, and, it may be, without any consciousness of what is done. But we can arrange the conditions in such a way as again to involve reckoning of a certain kind, and of a kind which it is hard to conceive as having no mentation of any sort associated with it. For instance, the direction may be to perform the act when someone coughs for the third time, or pokes the fire for the fourth time. The first cough comes; it does not release the trigger, but its occurrence is somehow marked. The second cough in like manner does not release the trigger; but it is not only marked, but is somehow related to the former one. And when the third cough comes, the trigger is released not merely by the sound of it, but by that sound as related to the two previous ones. I would not venture to assert *à priori* that all this reckoning *cannot* be of a purely physiological kind, though I think that the presumption would be the other way. But again experiment comes to our aid. If the "subject" be re-hypnotised before the final cough—say the fourth—has been given, and questioned as to what has passed, he shows clearly that he remembers being in the attitude of expectancy for the coming signal. Sometimes the hidden mental condition during the time of waiting, has been a very curious one. Thus W——s, who had been told that at my fifth cough the candles would go out, then woke, and then hypnotised again before the final cough had been given, disowned all memory of the four coughs which had been actually given, but knew that the next would be the fifth, "because then the candles would go out." At other times the signals have been clearly and correctly counted; and the memory of them on re-hypnotisation is certainly not the mere memory of observations made by the normal waking consciousness; since sounds or movements of which the "subject's"

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normal consciousness takes no heed as they occur, and of which his waking self, when interrogated, can give no account, equally serve the purpose of signals, and are shown by the answers given in trance to have been duly reckoned. Thus when the signal has been one of a series of usual and unimpressive actions, such as coughs or pokings of the fire in winter, I have several times, while the series was in progress but before the critical point was reached, asked the "subject" if he had noticed that I had a cough, or if he could tell me how often I have poked the fire, and have been answered in the negative.

It is easy to superpose one series of signals on another. Thus, W——s was hypnotised, and told to wind up a ball of string when I coughed for the third time. Another experiment followed, and then he was told that, when I poked the fire, he was to sort a pack of cards, and put all the diamonds together. Again an experiment of a different kind followed, after which he was woke. I gave two coughs, and then, completely forgetting the command relating to the fire, I poked that element. W——s seized the cards, and in a few moments I perceived how matters stood. I therefore gave my third cough, when he at once put down the cards, and asked for some string. I said I had none; whereupon he got up to look, found the string, and began winding it, having first repossessed himself of the cards. When the winding was completed, he took the cards and sorted out the diamonds.[1] Another time, P——ll was given 6 orders, each of which was to be fulfilled at an assigned point in one of 6 different series of signals. This however proved rather beyond his capacity; all the things were done, but only two immediately on the right signal, three others following their signals by a considerable interval, and one being done at S.'s eighth cough instead of at his sixth. It would be interesting to discover with a well-educated "subject" to what extent parallel series of signals of this sort could be multiplied, without confusion ensuing. If it proved to equal or exceed the extent of his normal capacity, his subsequent hypnotic memory might afford even stronger demonstration as to the psychical nature of the reckoning; as he might be able to describe the relations between the series, and his mode of keeping them distinct.

IV.

Various Exhibitions of Secondary Intelligence.

The experiments which follow are of a more novel kind. Though tame and rudimentary enough, compared with the only hitherto-

[1] In this case it proved impossible to recall to his memory, during the fulfilment of the commands, even quite recent impressions belonging to the time of trance; and there was none of that change of physiognomy which was so marked in the case where that experiment succeeded (p. 274).

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recorded case to which they seem at all akin—the dramatic self-duplication of Prof. Janet's patient (pp. 237-45)—they present at any rate this advantage, that they had no connection with hysterical conditions, but were conducted with normal healthy "subjects"; and can therefore be repeated and extended without fear of a disappearance like Adrienne's. Their results form a yet further stage in the history of the post-hypnotic development of hypnotic impressions. They present once more the phenomena of intelligent automatism, like the hand-conversations of § II.; and they illustrate the latent reckoning of time, and observation of signals, like the cases of § III.; but they exhibit in a more direct and conspicuous way than either a secondary memory and secondary play of mind in the post-hypnotic state, and the severance of the normal or primary from the latent or secondary consciousness. In the hand-conversations, we have no reason to suppose this severance to have been complete. In P——ll's mind my questions and S.'s remarks were certainly present together, on the same plane of consciousness; and as regards S——t, though the point needs further trials, my belief is that, if asked by S. what I had said immediately after one of my questions, he also would have been able to reply. In the cases which follow, the secondary "self" took its own course, in such complete independence of what passed during its latent period, while the primary "self" was ostensibly in possession of the field, that external impressions then received passed unregarded, and there was no moment at which the doings of the two selves were juxtaposed or associated in normal consciousness. Again, as regards the hidden processes of mentation during the period preceding the fulfilment of a command, our evidence so far has been derived from the statements made by the "subject" when once more in a state of trance. But we shall now be able to ascertain the workings of this secondary consciousness in the reckoning of time and signals, without any previous calling of it to the front by re-hypnotisation; its work is not only done, but tested, while the normal self remains uninterruptedly in the ascendent, and shows absolutely no sign of change. And yet again, we shall now find manifestations of other sorts of reflection and calculation, which go considerably beyond mere temporal measurements in the degree of hidden psychical activity which they involve. The medium of all these further results is no other than our old friend, *planchette*—that delicate little recorder of which it will soon, I believe, be said, with even more truth and point than of the astrologer's charts or the alchemist's crucibles and re-agents, that Time's revenges have turned the blindly-handled tool of superstition into the indispensable instrument of science.

I will begin with the simpler cases, which involved memory, but not independent thought. On March 16th I showed P——ll a planchette

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—he had never seen or touched one before—and got him to write his name with it. He was then hypnotised, and told that it had been as dark as night in London on the previous day, and that he would be able to write what he had heard. He was woke, and as usual was offered a sovereign to say what it was that he had been told. He was then placed with his hand on the planchette, a large screen being held in front of his face, so that it was impossible for him to see the paper or instrument. In less than a minute the writing began. The words were,

It was a dark day in London yesterday.

He professed, as did all the "subjects" on every occasion, complete ignorance as to what he had written; and I believe with perfect truth. I repeatedly expressed a desire to know, and offered the sovereign if they would tell me; but their account was always that the instrument took their hand with it, and that they could not detect what letters it formed. They showed no curiosity in the matter, and I did not urge them to *try* to interpret the movements, which, no doubt, could be done with practice.

In the next experiment the statement impressed on the "subject" was, "There were six inches of snow in London this morning"; but nothing was said to him as to subsequently writing it. The writing, however, appeared as before, "There was 6 inches of snow." and then an illegible jumble of lines caused by the pencil going over the same spot again and again, instead of progressing from left to right. I observed this, but up to this point I did not watch the process of writing—a rule which I observed in nearly all cases. P——ll was then re-hypnotised, and S. said to him several times, emphatically, "P——ll, John Jones is coming." He was so deeply entranced that he showed no sign of even hearing. The planchette reproduced the whole remark,

P——ll, John Jones is coming.

The next statement was "Robert Brown has gone." Being roused a little, P——ll remarked, "He must go, then; he needn't wait for me." When completely woke, he was, as usual, offered the sovereign to repeat what he had been told. The planchette at once produced the words.

Then followed a curious example of the reality of hypnotic *rapport*. In the trance P——ll is sometimes able to hear me, as well as S.; I therefore made the next statement myself—"There is a high tide to-night"—to which he replied, "I thought it was a low one," proving that he had heard and understood. He is now placed before the planchette as before, but no writing occurs, and he says his hand feels no impulse to move. The same process is repeated with the same result. Thinking that the failure might be due to my having disturbed his condition by

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making passes with a view to waking him, before S. did so, I repeated the experiment without this ineffectual interference; still no writing. S. now made the statements, "There will be a very high tide to-night," and, "In one minute from now you will wake"—adding that he would be able to write; and then left the room. In about a minute P——ll emerged into an odd state in which he would not answer me, or take any notice of me when I touched him. He got up spontaneously, walked to the planchette, put his hand on it, and wrote as in a kind of dream,

There his a going to be a High tide.

He returned to the sofa, and sat without moving, with open eyes. When S. returned, and roused him a little, he denied writing, and seemed unaware of having done anything. Re-hypnotised and questioned, he remembered writing about a high tide, and said that he did it to remind himself of it.

S. now told him that I was going to tell him something, and that he was to wake in a minute and write it; and then left the room. I told him, "It is a good year for salmon." In about a minute P——ll woke after a fashion, and sat with open eyes, and his hands on his knees, using gestures as if trying to recollect something. I recalled S., who woke him thoroughly, and he laid his hand on the planchette. I failed at first sight to decipher the writing, and asked that it should be repeated. But the instrument did not move, and P——ll said that he felt no tendency towards movement. Here, we may observe, is an indication that the secondary (writing) self[1] had a purely transient existence. A "subject" who is in any state in which he can *verbally* tell one something that he has heard in the trance, could always be made to repeat his words. But here the "subject," whose hand wrote he knew not what, was completely himself; he had not suffered the very slightest relapse towards a trance-waking state; and there was no way of getting, through his ears, at his secondary intelligence, which, having performed its task, had probably lapsed beyond recall. Fortunately its aid could be dispensed with, as on examining the writing again, I had no difficulty in making out,

Write Mr. Gurney something—

a crowning instance of the special *rapport* with the operator, since the reproduction was of S.'s preliminary direction, and not of the remark of mine which it was the precise object of that direction to get reproduced.

[1] The word "self" is too convenient to be dispensed with, but must not be misunderstood. In such cases as these, the "secondary self" is a mere rudiment of a personality: it is no more than a short connected train of intelligence of whose activities and products the normal self is unaware.

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Throughout these and subsequent trials, P——ll described the sensation in his hand and arm, which accompanied the writing, as very peculiar and disagreeable—as like "pins and needles," and "galvanic shocks." He certainly suffered considerably, and conceived a strong aversion to the instrument.

The experiments with W——s began in a very similar way; but the first results were more striking, as no direction as to writing was given him in the trance. He was emphatically told, "George Robinson is dead," was woke, offered a sovereign if he could repeat what he had been told, and then placed with his hand on planchette, the screen being held as usual between his eyes and the paper. Almost at once the words *George Robinson* were written. W——s, like P——ll, described a curious sensation in the right arm (which, however, in his case was less distressing), and also the way in which the instrument seemed to take his hand with it. Re-hypnotised, he was told "Timothy Stokes has died." He was amused at this, and said that if he had such a name he would change it. He was woke, to the usual oblivion; but the planchette under his hand soon produced the complete sentence. He was then re-hypnotised, and asked what he had written. He said, "W——s." That was a reminiscence of his having been made to write his name when he came in, to teach him how to hold his hand on the instrument. He remembered having subsequently had his hand on it, and that it had moved; but that was all. This result was exceptional; on re-hypnotisation, the "subject" could as a rule repeat, either perfectly or approximately, what he had written.

In other results, which were failures in relation to what was intended, the reproduction was of just the same type. Thus P——ll, after being told in the trance to count the number of letters in "A rolling stone gathers no moss," and then instantly woke, simply wrote,

A rolling stone never gathers no moss.

Told that he was to poke the fire in 6 minutes, and that I should want to know how the time was going, without any directions as to writing, he wrote, soon after waking,

P——ll will you poke the fire in 6 minuetts.

As a rule, the writing was legible, uninterrupted, and correct, or contained only such mistakes as the "subject's" normal writing might show; and his manner and conversation meanwhile were wholly free and unconcerned. It is important to observe how distinct the difference is here from the cases above described of post-hypnotic fulfilment of commands—even from those when the deviation from normality was the slightest. Not only does the "subject" show none of that absorption with his work, or im-

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patience of interference, which we observed in many of the cases when he was fully conscious of his proceedings—*e.g.*, when he was sorting cards or winding up a ball of string; but he equally lacked the sense of impulse or desire which prompted and accompanied the performance of normal-seeming acts (p. 270). When his hand was actually laid on the planchette, there was a sort of physical impulsion, which he described as seeming to come rather from the instrument than from himself; but if his hand was removed, there was no desire to replace it, or to get the writing produced. Each of the "subjects," P——ll especially, would have gladly been excused the process. This is just what we might expect, on the view of that more complete segregation of states of which I have spoken. The normal self has here been from the first, so to speak, relieved of all responsibility; no attention and no volition on its part had to come into play, the secondary consciousness being wholly adequate to what was required. No doubt a definite command, impressed on the hypnotic state, to write something with the planchette at a given time or signal, might be obeyed in the same way, and under the same mental conditions, as the sorting of the cards or the winding of the string—as in the case above given, in which P——ll wrote about the high tide. But the rule was that the hypnotic impression should be given in a different way from this. Either no direction to write was given at all, or the direction was put hypothetically—as, *if* I required to know something afterwards, it was to be written for me. The consequence was that the "subject" never went to the planchette of his own accord; it had no interest for him. In the former cases, when he did not see the cards or the string or whatever he was to manipulate, he would ask for them, or look for them till he found them. With the planchette, on the contrary, there was no manifestation of anything in his mind, or of any impulse that needed a vent, till his hand was actually placed on the instrument at my desire; after which the secondary consciousness took undivided charge of the results.

I will give a few more instances where no suggestion of any sort was made about writing, and where the only difference between the statement made to the "subject," and any other that might be made to him during trance, consisted in some amount of repetition of it. On March 18th, W——s (who is a baker) was told, with considerable insistance, "The baking trade is failing." He was then woke, and departed. As soon as he arrived next day, he was set down to the planchette. Several minutes elapsed, and then the instrument slowly produced the words,

The baking trade is failing.

There seems to have been some very slight emergence of the idea into his normal consciousness; as, while the writing was proceed-

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ing, he said that someone seemed to be "holloaing" in his ear something—he could not make out what—about the baking trade. But he was quite unaware of what his hand had produced, and even when re-hypnotised, he could not at first be sure whether he had written the words, or whether S. had "holloaed" them at him. After a time, however, he remembered, and described the writing, which had been very irregular as to the arrangement of lines,[1] exactly as if he had it before him. He said, "Yes, I see *the;* but it ain't like my writing, it looks like a little youngster's. Look where's he got to." (This was accompanied by appropriate movements of his finger on the table at his side.) "*The baking t* in a line, then *r a d e*" (pointing far to the left on a lower level). "And what's that scribbly thing? Then he jumps from here right up to the top—*is failing*" (pointing above the level which he had indicated as that of the first line). As he had not had the slightest glimpse of the actual writing, this seemed a good instance of that remarkable delicacy of muscular perception which is so characteristic of hypnotic "subjects" and somnambulists. *Clairvoyance* was out of the question, as I proved by testing him in other cases where he professed (as hypnotised persons so often do) to *see* things which were out of the range of his normal vision.

Once more, in the course of an experiment on the stages of memory (see my subsequent paper) P——ll had got a confusion into his head about a whale in a green tank at the Aquarium, and a swimming entertainment given by Miss Webb on the pier. Another experiment intervened, and he was then put down to the planchette. I did not expect him to write anything, and had no idea what memory, if any, would be in the ascendant. In a few moments the words appeared,

P——ll did you see that whale and Miss Webb his a-going to give entertainment on the pier and that green tank.

On the same day he wrote, equally unexpectedly,

P——ll did you hear of that dog fight along the King's-road the other day it was a alful sight I can tell you.

This last writing, it is true, was produced while he was in the hypnotic state; but it still deserves attention. For since my "subjects" had throughout conformed to the usual rule in never volunteering *spoken* remarks relating to anything that had previously been impressed on them, the planchette seemed here once more to open up to us more withdrawn mental processes than any which other means could

[1] This was due to the fact that the sheet of paper used was inconveniently small, and had to be shifted several times to prevent the pencil from getting off it.

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reveal.[1] This appears still more clearly in the next case, which is of special interest.

I was experimenting with W——s on the abnormality of state produced during the fulfilment of a previous hypnotic command (pp. 273-4). At the right signal, he seized a pack of cards and began his task, which was to arrange them in suits. I found that he could now remember a number of things of which he was ignorant in his normal state; and I therefore thought it a good opportunity to try whether a hallucination could be suddenly imposed on him. At my request, S. tells him that S——t has entered the room. He looks up and says, "Ah, S——t, sit down," and addresses S——t several times, while continuing to sort the cards. He is now taken to the planchette. He calls the imaginary S——t to come and sit beside him, places a chair for him, patronises him, and says he will write his name. He then writes, very rapidly,

Cards are all sorted.

He was repeatedly asked what he had written, as at first I could not make it out, and he answered repeatedly, "Sort W." The word "sorted" on the last piece of paper used closely resembled this. Still questioned, he said he had written S——t's name, and pointing to the word "Cards," he spelt out S——t.[2] He was now roused into normality, and at once hypnotised again. Asked what he had written, he instantly replied, "Cards are all sorted." Here, then, we have the spontaneous action of the secondary consciousness, giving information as to the execution of the order, while the self which was connected with the superimposed hallucination had a quite separate idea. Without the aid of the planchette, we should never have been able to get a glimpse beyond the hallucinated state, which had itself carried the deviation from normality to the point of completely developed trance.

Throughout this section I have been speaking of the secondary processes as *intelligent*—as involving mentation. Let us now examine for a moment how far this view of them is justified. How far might the results be attributed to a purely physiological or unconscious

[1] On two subsequent occasions, however, P——ll did spontaneously speak of some of these previous hypnotic impressions—carrying his confusion further, and remarking on the oddity of a *green whale*. The connection of the dog-fight with the *King's* Road (the locality which properly belonged to the balloon incident) was an instance of the fusion of the two stages of memory after a considerable time.

[2] There is nothing very extraordinary in this; compare the case described by MM. Binet and Féré (*Le Magnétisme Animal*, p. 178), where the hallucination of a portrait was imposed on what was really a photograph of a view in the Pyrenees, and where it was impossible to make the "subject" perceive that the contours were really those of mountain scenery; for her, there was simply the portrait and nothing else. The only difference in W——s's case was that the special hallucination of the writing had not been suggested to him by someone else, but was his own development of the suggested hallucination.

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memory? In the cases where the idea of a future writing was conveyed to the "subject" at the same time that the statement was made, one might recur to the old hypothesis of a "setting of the organism," and an exclusively automatic performance. The hypothesis presents more difficulty, perhaps, in respect of the cases where no mention of writing had been made, and where consequently there could have been no registration in the "subject's" organism of the idea of future manifestation in connection with the special idea impressed on him. The impression, for instance, of the whale and Miss Webb was made without a hint as to the future—without the slightest suggestion that it either must or could or would work out any ostensible result to the end of time. Yet a manifest result emerges, in the midst of quite irrelevant surroundings and experiences, as soon as the opportunity of "automatic" representation is given. Here the organism cannot have been specially set for the effect. If the action was completely automatic, we should at any rate have to attribute to hypnotic impressions a very singular peculiarity—that of storing up energy in the brain which will mechanically work outwards along the motor nerves, as soon as the means are presented whereby the act of writing is made sufficiently easy for the muscles. But the really strong argument for mentation of a sort is the old fact, the memory on re-hypnotisation. The "subject" then remembers what he has written, and remembers the writing of those particular words—not merely the general act of writing, and not merely the impressed formula. This is surely a strong indication that the writing was accompanied by intelligent apprehension of the words.

Now at this point the question cannot but occur, what light do such results throw on the nature of "intelligent automatism" in general? In the well-known cases where planchette-writers have produced words and sentences which were at first a puzzle to themselves, but which, when deciphered, proved to have a meaning,[1] it has never been possible to ascertain how far the process was purely physiological and unconscious, and how far it might have a truly psychical character. Now the above experiments at any rate afford strong support to the view that a great deal of planchette-writing, and of other forms of intelligent automatism, however much severed from normal consciousness, is nevertheless accompanied by true psychosis. It would be extremely interesting, if the opportunity ever offered, to try the effect of hypnotisation on some "automatic" writer before he had deciphered or realised what his hand had produced; and we might be quite prepared to find that in the trance he would be able to inform us what the writing was.

There is, no doubt, a difference between such an experiment and

[1] See, *e.g.*, the cases cited by Mr. Myers, *Proceedings*, Vol. III., pp. 26, 37.

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the post-hypnotic cases above described, which prevents us from predicting with certainty that the results would be similar. For the memory of the post-hypnotic writing may have been stimulated and aided by the memory, which would naturally recur on re-hypnotisation, of the previous hypnotic impression ; and, moreover, it may quite well be that hypnotisation, though it brings to the front the memory belonging to a train of secondary intelligence which *was itself set going* in hypnotic trance, might not have the same effect in other cases. But the general fact remains that it is possible for writing to be discerned and understood, in spite of the normal self's complete unawareness of it ; and there seems no ground whatever for confining this possibility to cases where the content of the writing has first entered the mind during the hypnotic trance. The hypnotic remembrance supplies the subsequent test, but the writing is not produced in the hypnotic state ; and the probability therefore is that the conditions of the writing are general, and have no special peculiarities connected with hypnotism. So far as discernment of the writing is concerned, we are justified in surmising that post-hypnotic and ordinary "automatic" scripts are on a par.

But there is a further point. There are cases where the words and sentences produced by planchette-writers have proved to be revivals of latent or forgotten knowledge, connected perhaps with some far-distant period of life ; that is to say, the result distinctly implies *memory*.[1]

[1] The records of such cases are tolerably numerous ; but the subject has probably not yet got beyond the stage when every piece of authentic evidence has a certain value. I venture, therefore, to record the following experience, which made a very deep impression on me, being in fact my introduction to "psychical research." In 1870, I watched and took part in a good deal of planchette-writing, but not with results or under conditions that afforded proof of any separate intelligence. However, I was sufficiently struck by what occurred to broach the subject to a hard-headed mathematical friend, who expressed complete incredulity as to the possibility of obtaining rational writing, except through the conscious operation of some person in contact with the instrument. After a long argument, he at last agreed to make a trial. I had not really the faintest hope of success, and he was committed to the position that success was impossible. We sat for some minutes with a hand of each on the planchette, and asked that it should write some line of Shakespeare. It began by see-sawing and producing a great deal of formless scribble ; but then there seemed to be more method in the movements, and a line of hieroglyphics appeared. It took us some time to make it out, the writing being illegible to just that degree which at first baffles the reader, but which afterwards leaves no more doubt as to its having been correctly deciphered than if it were print. And there the line indubitably stood—*A little more than kin and less than kind.* Now, as neither of us had been thinking of this line, or of any line (for we had been wholly occupied with the straggling movements of the instrument,) the result, though not demonstrative, is at any rate strongly suggestive of a true underground psychosis. For it would be hard to believe that we got what we asked for through mere cerebral association of

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Now, what is the nature of this memory? *It* might be of a purely physiological and unconscious kind, even though the content of the writing was shown by subsequent remembrance in trance to have been intelligently discerned; for the intelligent discernment of the content does not in itself imply more than what occurs when we look over some one else's shoulder, and follow the words that he is writing; that is to say, the words might be intelligently *read*, though wholly mechanically *written*.[1] What one wants to know is whether something beyond this is involved—whether the idea which the writing conveys presented itself to the secondary self as a mental experience, prior to and apart from the writing, just as memories, often long-buried memories, are liable to present themselves on the ordinary mental stage. Do our post-hypnotic results suggest any answer to this question? The majority of those so far recounted must be allowed, I think, to be compatible with the hypothesis of a purely organic or non-psychical memory. P——ll's reproductions of statements in the exact form in which they had been made to him, commencing with his own name in the vocative, have every appearance of mere unintelligent echoes; and it is difficult to see how any scripts which simply reproduced statements previously heard, could be decisive as to anything beyond this. One or two of my cases do, however, indicate something beyond. Thus P——ll was told, in the trance, to count the number of letters in the lines, "When the day is over, And the night is drawing nigh," and was then immediately woke. The planchette produced, under his hand, not the number of the letters, but the line

When[2] *the day over.*

This was a failure, then, as regards the result sought, and at first sight

ideas. The association of this verse with the idea of Shakespeare is comparatively a loose one—decidedly looser, for instance, than its association with the idea of Hamlet, though closer than its association with the idea of English literature. That is to say, a search and a selection were made, in conformity with an intelligent requirement. If anyone would confidently assign such operations to the domain of "unconscious cerebration," it would be interesting to know where he would draw the line. Is there *any* intelligent result of which he would regard psychosis as a condition? It is worth adding that, if the psychical character of "intelligent automatism" is ever made clear, there will be ground for suspecting a psychical side to all the supposed feats of "unconscious cerebration"—*e.g.*, where the correct solution of a problem has seemed suddenly to occur in dream.

[1] It is worth noting, however, that in a case where I had guided W——s's hand to write some words with the planchette, with the screen as usual between his eyes and the paper, he said, when afterwards hypnotised, that *I* had written something which *he could not read*, though he had *seen* it (p. 298). That is, the muscular sight did not involve comprehension when the writing was indisputably mechanical.

[2] The only clear points in this word are the *w* and the tall stroke of the *h*.

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looked like a merely mechanical reproduction; but it was observable that, when re-hypnotised and asked what he had been doing, he did not simply quote the words he had written, but said, "Trying to make a little hymn—a little verse," which looks like memory of a real psychical operation. Again, the case of *Cards are all sorted* strongly suggests intelligent memory, if it does not actually prove it; for no such phrase had been used in the "subject's" hearing, nor had any suggestion of writing been made in connection with the cards—the experiment having been undertaken for another purpose. It may be hoped that repeated trials may yield further instances of these self-originated remarks. There would be some advantage in their exclusively referring—as I think would prove to be the rule—to things connected with previous times of hypnotic trance. For it is just the unlimited range of topics open to the ordinary non-hypnotic "automatist" which often make his scripts uninstructive as to the degree of reminiscence and representation that may be going on in those mental strata which, it seems, we must unlearn the habit of calling unconscious. His secondary intelligence is prone, as Mr. Myers has said, to be a "sermonising entity"; and we want not sermons, but autobiography. Now the post-hypnotic intelligence evoked during hypnotic trance, if akin to that exhibited in the trance itself, will rarely have spontaneity enough to sermonise; where it takes its own line, its tendency will be to run in old grooves; and this fact, combined with the fact that the grooves of previous hypnotic experiences are comparatively few and narrow, might, as time went on, afford exceptional opportunities for testing the coherence of secondary memory during normal life.

Meanwhile I have some further results, superior in interest to any of the preceding, as tending to show that the activities of these hidden strata may include higher psychical functions than mere random spurts of memory—processes of deliberate reckoning and reflection which it is almost impossible to conceive as having only a physiological existence. Advantage was taken of the fact that the hypnotised "subject" could be woke in an instant, by a clap on the shoulders and a loud call. Thus questions could be put and problems suggested to him, while in trance, and all of a sudden there he was in his normal waking state, without a second's interval having been allowed for his hypnotic consciousness to work out the answer. The questions and problems varied in difficulty. One of the simplest was, "What puts out fire?" This was addressed by S. to W——s, who was then instantly woke. Set to the planchette, his hand at once wrote, *Water*. We may, perhaps, suppose that so obvious and direct an answer as this might have formed itself in his mind even in the fraction of a second; so that the writing might be explained as the mere letting off of the spring that had been wound up

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before his condition was changed. The same could hardly be said of the results which follow.

W——s was told in the trance to add together all the digits from 1 to 9, and was immediately woke. Set to planchette, his hand after some seconds produced the number 32. This is of course quite wrong, and implies no calculation; but the guess is not a worse one than I find many people give, if requested to give their impression—after a few seconds of reflection—of what the sum amounts to. The experiment was now repeated, the direction to sum the digits being given, and the "subject" awakened on the instant. He was set to the planchette, which at once began to move. As usual, I was careful not to attempt to read while the writing was going on; but I became aware that it was proceeding downwards on the paper, instead of from left to right; and thinking that the result of this would be an illegible scribble, I requested W——s to keep the movement, if he could, in a left-to-right line. A certain difficulty seemed to ensue, and on looking at the paper, I found that it contained the digits arranged thus :—

1
2
3
4
5 6

the position of the 5 and 6 being due to W——s's conscious interference with the downward tendency of his hand. There had been the customary screen between his eyes and the paper, and he had no idea what had occurred. I now placed the instrument, with his hand upon it, on a fresh sheet of paper of more convenient shape, expecting the sum to be recommenced; but the writing continued,

7
8
9
—
44

The actual sum of the nine digits is 45; but a person would not be likely to arrive at so close an approximation who had not, in part at any rate, gone through the calculation. This was one of the few cases where the "subject," on re-hypnotisation, had no recollection of what he had written, or even of having written at all; so that that important test of psychical, as distinct from purely automatic, activity was here lacking. I regret that it did not occur to me to act on my knowledge of the different stages of hypnotic memory, and to try whether the memory did not recur in the deeper stage (see my subsequent paper). But it must be observed that the memory-test has

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positive, but not negative validity; its success may amount to a proof that psychical activity was present, but its failure is no sufficient proof of the contrary.

W——s was now told to multiply 324 by 12, and at once awakened. The planchette produced the sum as follows:—

$$\begin{array}{r} 324 \\ 12 \\ \hline 4008 \end{array}$$

This result, though incorrect, would be correct if the first number was 334. Anyone is liable to such a mistake as this; so that here again there is reason to suppose a genuine process of reckoning; but unfortunately time failed us to apply the memory-test after this experiment. Another day, W——s was told to add together 5, 6, 8, 9, and had just had time to say 5, as though he were going to repeat the figures, when he was woke in the fraction of a second with the word on his lips. The planchette immediately produced 28 (right). He was told to add together 1, 2, 5, 7, 8, and instantly awakened. The planchette wrote 23 (right).

The experiment in the summation of the nine digits being repeated with P——ll, the first result was 39; the second 45 (right). Re-hypnotised and asked by S. what he had been writing, he said, "You told me to add the figures 1-9,—45." "Did you write it?" "Yes, I wrote it down." "When did you add them?" "When you told me. I think that's right." He added the figures up again, half audibly, and ended by saying, "45; right." This addition occupied many more seconds than the interval between the original order and the waking previous to writing. He was told to add together 3, 4, 6, 7, and was woke without a second's pause. The writing that appeared was 20 (right). Re-hypnotised and questioned, he said he had written 20.

Similar experiments with S——t succeeded equally. The first result obtained was exceptional. He was told to add together 3, 4, 7, 8, 9, and was instantly roused with a clap and call. The correct answer, 31, was *spoken*, immediately after the rousing, and within three seconds of the conclusion of the order; but he clearly had not been brought to a normal waking state. In the subsequent trials complete waking, the instant after the order, was ensured by more vigorous means. He was told to add together 4, 7, 8, 11, 12, and was woke on the instant; the written result was 42 (right). He was told to add together 2, 7, 9, 12, 13, and was woke on the instant; the written result was 43 (right). He was told to multiply 683 by 7, and was woke on the instant. He was kept talking, while his hand wrote 4681. On re-hypnotisation, he remembered writing this, but said he believed it was wrong—the 6 should be 7. He was told to multiply 534 by 3, and was woke on the instant; the result, written with extraordinary rapidity, and

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concluded within three seconds of the conclusion of the order, was 1602 (right). These results are the more noticeable in that S——t is not by any means a ready reckoner. I found, for instance, that in the normal state it took him about ten seconds to do each of the two last addition sums. On S——t, alone of the "subjects," the writing had sometimes the effect of re-inducing a trance condition; and in one of the sum-cases the mere sense of having the sum to do seemed to have the same effect. He was told to multiply 358 by 9, and was instantly woke and made to read aloud, whieh he did excellently for some time; but on my taking the book away, he fell into trance and in that state wrote 3222 (right).

The following trials were of a somewhat similar type. P——ll was told to write the alphabet, beginning at the 16th letter. Awakened on the instant, he wrote S T U V W X Y Z. Here was a failure; but the interest of the experiment appeared on re-hypnotisation of the "subject," when he seemed clearly to remember the *mental effort* to discover the right letter, and excused his mistake by saying that "that image was there again" (see p. 319). He was told to add up the letters in the two lines, "How doth the little busy bee Improve each shining hour," and was woke in about five seconds. The writing produced was 43, which is approximately correct, the real total being 45. Another day, S——t was asked how many times the letter e occurs in the same two lines, and was woke on the instant. The figure 6 (right) was produced; and on re-hypnotisation he remembered having written it. Most people, I think, would require as many as 10 seconds to arrive at the correct answer; so that it seems almost certain that the calculation was performed after the waking.

Another form of trial was the writing of the letters of words and phrases in reverse order—a process which, for an unpractised person, undoubtedly requires some amount of conscious reflection. W——s having been told to write "elephant" backwards, and instantly woke, the planchette produced *Tneplie*. This is a nearer approximation than at first sight appears, since his hypnotic idea of the real spelling of the word proved to be "eliphent"; so that the planchette's only mistakes were the l and i unreversed, and the h omitted. He was told to write backwards "I bake good fancy bread," and was instantly woke. The planchette moved to the right of the paper, and wrote

I bake god fantcy[1] *bred*

from right to left, beginning with the last letter. Told to write "Brighton" backwards, and instantly woke, he produced *nothgirB* (right). P——ll was told to write "millinery" backwards, and was

[1] The letter y is uncertain.

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instantly woke: the result was *gnirellim*. Re-hypnotised and asked what he had written, he said "millering," but added, "gni is wrong —ing is wrong." He was told to write "To-morrow is Sunday" backwards, and was instantly woke; the result was the phrase correctly written from right to left, beginning with the last letter. Similar trials were made with S——t, with the word "Brighton," and the sentence "It has just been raining." Each was correctly produced by the planchette, from left to right, and beginning with the last letter.

Such trials might be indefinitely extended with "subjects" who, in the normal state, were more capable than mine of complex mental operations. I found myself limited to very simple tests, and could not, for instance, ask any questions relating to matters of historical or scientific information. I did, however, make some attempts to obtain answers to questions of a more general kind, admitting of a choice, with results which as far as they went were completely successful. Thus, P——ll was told to write the names of three places beginning with L, and was instantly woke; the planchette wrote

Lewes, Lanscalion, Lewisham,

the second name being interpreted as Lancaster when he was re-hypnotised. A similar trial with the letter H produced *Hastings, Hamsted, Hanover;* trial with the letter T, *Torque, Torrington, Tottingham Cort.* During the first of these experiments he was engrossed, during the writing, with the hallucination of a wild cat,[1] which, on re-hypnotisation, he said he "hadn't liked the looks of — it looked half-starved." While writing the T names, he was roaring with laughter the whole time at the hallucinatory spectacle of a pantomime, and describing the doings of the clown. On April 18th, a wider field of choice was given him, in the direction to write down anything that had happened in Brighton during the past year, after which he was instantly woke. Set to the planchette, he read aloud a description of a play from a newspaper; and meanwhile his hand wrote

A Horse Rum away last Easter Monday along the King Road.

This was a fact, and had caused considerable excitement. Again, he was told to write down the earliest thing he could remember, and was instantly woke. He was made to count backwards from a hundred, which he did slowly and with stumbles; meanwhile his hand wrote,

One day when I whas going to school I whas going up the street I pick up a shilling and I gave it to mother and she was please with it.

[1] With these "subjects," a hallucination can always be imposed for a short period after waking, though otherwise they are to all appearance in a completely normal state.

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It turned out that this was a real event which had happened when he was about five years old. Still earlier memories were similarly evoked.

When I had the scarlet fever some woman brought me in some bulls-eyes on a piece of paper.

One day when I whas rocking the cradle with my little brother Charley I turn the cradle over.

This last occurrence took place when he was about three; he overturned the cradle in a passion at the baby's peevishness. Such experiments cannot be too often repeated, with a view to obtaining the record of something unremembered in the normal state—as in the case of Adrienne (p. 241).

The direction to "draw what he liked" produced rough sketches which, on re-hypnotisation, he interpreted as a rifleman, a box, an egg-cup, a rifle, another rifleman, a pigeon—and which were quite recognisable; his left hand meanwhile was slowly sorting a pack of cards into suits. The direction to "write what he liked" elicited a common-place note to his sweetheart.

Having regard to the subsequent hypnotic memory, I think that even the above simple and often imperfect writings afford an extremely strong presumption of an intelligent and not merely mechanical origin. But the next set of results are perhaps still more conclusive, as they definitely exclude the hypothesis of a cerebral registration of the correct answer, arrived at by a preternaturally quick calculation or reminiscence in the instant between the comprehension of the order and the awakening to normal consciousness. The experiments, like some of those in § III., involved the reckoning of time; but their point lay in the fact that the reckoning was shown, not merely, as before, by the execution of an order at approximately the right moment, but by writing produced during the period of waiting, *at some suddenly-selected moment*, which the "subject" could not foresee when the process began —so that there could be no question of the "setting of the organism" for a certain time ahead. And a further novel point was the proof afforded, in some cases, that the order itself was remembered and realised by the secondary consciousness during the period throughout which the dominant primary consciousness was wholly without knowledge of it.

W——s was hypnotised, and told that in 6 minutes he was to blow a candle out, and that he would be required, at some time before then, to write the number of minutes that had passed, and the number that had still to elapse. He was woke, laughed and talked as usual, and of course knew nothing of the order. In about 3½ minutes, he was set down to the planchette, which wrote

4½—1 *more.*

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About a minute passed, and then I requested S. to re-hypnotise him; but just as his eyes were beginning to close, he raised himself, and blew out the candle, saying, "It's beginning to smell." Hypnotised and questioned, he remembered all that he had done; and when it was pointed out to him that 4½ and 1 do not make 6, he explained the discrepancy by saying, "It took half a minute for you to tell me; I reckoned from the end of your telling me." This, of course, does not explain his reckoning the time before he wrote as a minute longer than it was; but that is not a larger error than any one of us might commit in computing such a period.

On March 19th, he was told in the trance that, when he came next, he was to poke the fire 6 minutes after his arrival, and that when he wrote he was to record the number of minutes that had run, and that remained to run. On March 21st he arrived at 6-57½, and I set him down to the planchette in about a minute. The writing, which it took about a minute to produce, was

2—3½ *more.*

At 7.3 he said he wanted to poke the fire, and got up and did so, in spite of my dissuasion. In the course of re-hypnotisation, he was asked what he had been doing, and replied, "I had my hand on that thing," but he could not say what had been written. From former experience I knew that he was not yet completely entranced, as he was able to hear and answer me, as well as S. After a few more passes, when he was deaf to my voice, the question was repeated, and he at once replied, "Two—three and a-half more." "What did that mean?" "Two minutes—three and a-half more, poke the fire."

On March 21st, he was told that on the morrow, a quarter of an hour after his arrival, he was to pull up the blind and look out of the window. He arrived next evening at 7.10, and was soon set to the planchette; but as the instrument did not move he was hypnotised, told that I wanted to know how the time was going, and immediately awakened. The writing

7 *minutes* and 8 *more*

was now produced. The process began at just 7.17, so that at that moment the reckoning was exactly right; but, owing to a wheel coming off the instrument and having to be replaced, the writing itself was spread over four minutes.

The same "subject" was told on March 23rd that, a quarter of an hour after his next arrival, he was to open and shut the door of the room, and to note the course of time, as usual. The next evening he arrived at 7.6½. He was set to the planchette at 7.19. The writing, produced at once, was 13 *min. and* 2 *more.* At 7.22 he rose, walked

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across the room, opened and shut the door, and returned to his seat. Here the reckoning was not more than half a minute out.

On March 25th, the order was to put his hat on and take it off again 20 mintues after his next arrival, and to write as usual. Next day he arrived at 7.13. After some experiments of a different sort, he was set to the planchette, and as it did not move, he was hypnotised, told rapidly to "write as he had been directed," and instantly awakened, with the words "What last night?" on his lips. This was at 7.31. The instrument at once wrote,

18 *minutes gone* 1½ *more.*

At 7.35, he walked to where his hat lay, put it on, and took it off again. Re-hypnotised, and reminded that 18 and 1½ do not make 20, he said that he had allowed half a minute for the writing. It had occupied, I think, less than a minute; so that the reckoning was remarkably correct.

Another time, W——s was told at 7.49 p.m., that he was to put on his hat in 10 minutes, and that I might want to know, meanwhile, how the time was passing. He was then woke, and was set to the planchette at 7.50. The writing produced was,

1 *min*—7½ *more.*

The process was exceptionally slow and difficult, and occupied 2½ minutes. Had it been produced rather more quickly, the second part of this statement, as well as the first, might have been exactly right; and on several occasions it was observable that the "subject" did not seem properly to realise the length of the time occupied in the actual writing. At 8 o'clock W——s was obliged to go; but before leaving the room, he took up his hat, looked at it a little oddly, put it on, and then quickly took it off again, saying, "Needn't put that on up here, need I?"

There was a point in this case which has a special bearing on that segregation of consciousness which all the experiments illustrate; namely, the difficulty which the "subject" found, when re-hypnotised, in describing what he had written (*cf.* p. 298). In no case was the writing shown to him, but he always spoke as if he actually saw it; and in this instance, on being asked what it was, he said at first that he could not make it out. Urged to try, he went on, with breaks and just as a puzzled person would, "One min— don't understand what the next letter is. Oh, seven! Why two has got on the other line—Seven and a-half more." No words could have agreed better with the true aspect of the script. Now this leads one to observe how the perception of the actual writing, the ground which in a way is common to both *selves*—as for brevity they may be called—is meted out between the two. Each seems to regard exactly what the other does not. The normal self perceives that his hand is moving up and down, and hears

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the pencil's course over the paper, but would see the straggling marks, if the screen were not interposed, without any real recognition of his own handiwork. This self is alive simply to the mechanical part of the writing-process, and is conscious of distinct and sometimes very disagreeable physical sensations accompanying it. The secondary self, on the other hand, never showed that the *process* of writing as such, had had for it any interest, or roused in it any special sensations; and, as I have said, it seemed unaware of the time that the process occupied. Its whole interest was in the content—the sense of what was written and in the appearance of the writing (conjured up by it with such singular distinctness) so far as that affected legibility. In other words, the relation of the primary self to the writing was that of a child whose hand a teacher guides painfully over pot-hooks and hangers; that of the secondary self was that of an author who sometimes has to regret his own clumsy penmanship.

The next experiment, though partially unsuccessful, is not devoid of interest. P——ll was told that in 10 minutes he was to draw aside the blind and look out of the window, and that he was to record how the time was going, as usual; and was then woke. He was set to the planchette in about 3 minutes, but nothing followed; he remarked, "My right hand feels just like my left." (It will be remembered that this "subject" suffered greatly in the hand and arm during the process of writing.) He was re-hypnotised, and S. said, "Why did you not write just now?"

P——LL. "Somebody disturbed me. They looked over my shoulder and made me angry. I don't want everybody to know what I write." (This may very probably have been a reminiscence of an imaginary terror on a previous occasion; see p. 319.)

S. "What were you going to write?"

P——LL. "I was going to write 3 minutes had passed since you told me to look out of the window, and I was going to write '7 minutes' afterwards."

The time-reckoning, it will be seen, was correct. But the principal point to note is the sense of disturbance, with the complete unawareness of it of the normal self. We may regard such immunity as the converse of those painful sensations which used not only to accompany but to precede the writing on other occasions when the secondary self appears to have worked with comfort and freedom.

The value of P——ll for these experiments was diminished by the fact that he is by nature a bad reckoner of time. For instance, one day when he had arrived about five minutes before I entered the room, he said he thought he had been waiting a quarter of an hour. Still, considering how much scope there was for going wrong if the secondary intelligence were merely guessing without reckoning, I think that the

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following instances are significant. On April 20th he was told that half-an-hour after his next arrival he was to wind up a ball of string, and to let me know how the time was going. He arrived next evening at 8.30, and was set to the planchette at 8.43. He wrote,

13 *minett has passed and* 17 *more minetts to pass.*

Some more experiments followed, and it so happened that at 9, the exact time when the fulfilment was due, he was in the trance. He suddenly said, "Oh!" as if recollecting something, but did not move;[1] he was then woke, and at 9.2 he walked across the room to where some string was lying, and wound it up. On April 18th an exactly similar order was given, except that the thing to be done was to take off his coat. He arrived at 9.10 on April 20th, and was set to the planchette at 9.15, and while reading a newspaper aloud with intelligence and complete comprehension, he wrote,

5 *minett has passed* 25 *minuett hass got passed and then I shas take of my coat.*

The order, however, was fulfilled at 9.21, almost immediately after the conclusion of the writing. Again, he was told at 9.8½ p.m., to poke the fire in 10 minutes. He was woke, and at 9.12 was set to the planchette. The writing began at once, and ran,

Three minuetts has passed and now [?] *there is 7 more minuetts has got to passed and then I shall poke the fire.*

The writing was unusually slow, occupying five minutes, so that though it began by being nearly correct, it became less so as it went on. He was then re-hypnotised, and other experiments were made. When woke he went to his former seat, and after looking uncomfortably at the fire for some time, said to me, "You don't mind my poking the fire, do you, sir?"—and poked it. This was some time after the expiration of the 10 minutes; but possibly the intermediate hypnotisation had had a confusing effect. On March 21st the same "subject" was told, in the trance, that he was to put on his hat a quarter of an hour after his next arrival. He was set to the planchette about 7 minutes after his arrival next day, but the writing did not begin till he had been hypnotised, and the idea of writing suggested to him. The instrument then beginning to move, he was at once woke, and the writing continued steadily. It ran,

5 minuetts has passed and 10 minuetts has as got to passed and then I shall put on my Hat.

This computation was certainly as much as 3 minutes out, perhaps

[1] It looks as if the idea of fulfilling an order for which sight is necessary were not enough to wake a "subject" who is in the trance-condition with closed eyes.

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a little more; and again the fulfilment of the order followed considerably too soon. The act (as usual with P——ll) was completely forgotten within two minutes of its performance.

The following result, obtained with my third "subject," S——t, afforded a remarkably clear proof of the continuity of the reckoning. He was told, in the trance, that he was to look out of the window 7 minutes after waking; and that he was to write how the time was going. He was then woke. This was at 7.34½ p.m. I set him to the planchette, and the writing began at 7.36½. I did not watch the process; but where I stood, holding the screen in front of his eyes, I was so close to his arm and hand that I could not help becoming aware that writing was being produced at distinct intervals. I remarked aloud that he was going by fits and starts, and seemed to have to pause to get up steam. Immediately on the conclusion of the writing, which was at 7.40, he got up, drew aside the blind, and looked out. Examining the paper, I found

25 34 43 52 61 7.

Clearly he had aimed at recording, at each minute from the time when he began, the number that had passed and the number that remained. His first estimate was only 10 seconds wrong; but he somewhat abbreviated his subsequent minutes, so that the 5 were condensed into 3½.

Again, he was told on March 27th that he was to do a particular thing half-an-hour after his next arrival, and to let me know as to the time. He came next on April 7th, at 8.45, and before long was put to the instrument; but as no writing occurred, he was hypnotised and asked if there was not something he was to do. He at once repeated the order—wrongly as regards the act commanded; but on being woke, at 8.59, his hand at once produced 14-16, which was an exact statement of the number of minutes elapsed and still to elapse. Another day he was told at 5.40½ p.m. to poke the fire in 20 minutes, and to let me know how the time was going, and was then woke. He was set to the planchette at 5.59. Unfortunately I cannot quote the writing in this instance, as the paper on which it was produced is missing; but I have my note that the experiment was successful, and my remembrance is that the reckoning was correct to at any rate within a minute. At 6.2 he got up and poked the fire.[1]

[1] In connection with these time-reckonings, it is worth noting that the secondary intelligence retains knowledge of the passage of both hypnotic and non-hypnotic time—as we might have expected from the fact that a hypnotised person is conscious of the lapse of both hypnotic and non-hypnotic time, though in his normal state hypnotic time is a blank to him. Here is an instance in point. W——s arrived one day at a few minutes before 7, and was hypnotised after about 6 minutes. Various experiments were made, and in about 20 minutes he was told that he would soon have to let me know how the time was

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V.

To What Extent can the Segregation of the Secondary from the Primary Intelligence be Carried?

Finally, I must invite the reader's attention for a few pages to some more complicated cases, which will require us to examine the idea of "segregation of states" a little more in detail. How far have the above experiments carried us? We have noted in them the division of interest, and of the broader currents of attention, and how the normal self was throughout unaware of the written exhibitions of secondary intelligence. But we have had no proof that the secondary intelligence was to the same extent excluded from normal perception—in other words, that it would have been unable to exhibit knowledge of something that struck the "subject's" senses, or occupied his mind, while the writing was going on. The contrary, I think, is what we should expect: we should expect to find that the topics which the *writing* self could write about coalesced in part with the topics which the *talking* self could talk about. I have elsewhere suggested, *à propos* of the now well-known Newnham case, that segregated conscious states, when *simultaneous*, may be strictly comparable to the *successive* states in cases of so-called "double-consciousness."[1] And since in double consciousness the abnormal self remembers what the normal self has known and felt, but not *vice versâ*; and since in hypnotism, which really exhibits "double consciousness" on a small scale, the hypnotised "subject" remembers normal life, but on waking forgets hypnotic life; so in these post-hypnotic trials it would not seem surprising if the secondary self had access to normal experiences—in the sense that intelligent perception of these was evinced behind the back, so to speak, of the normal self—though the normal self has no access to the special

going. After two more minutes he was woke; and the planchette then produced,

Twenty-five minutes past seven.

It was really two or three minutes later. This approximation formed a striking contrast to the normal blankness; for on waking he never had the slightest idea how long his trance had lasted, and at the end of an hour's experiments was always surprised at being told that it was time for him to go—often remarking that he seemed to have been only two or three minutes in the room. I may add that he had no watch, and that there was no clock in the room, or within hearing; but this is unimportant, as he showed the usual ignorance both of what had been said to him and of what he had written. Similarly P——ll, though not to be relied on, would sometimes prove to have reckoned with nearly complete correctness periods of half an hour or three-quarters of an hour, which had been cut into bits by interludes of trance.

[1] *Phantasms of the Living*, Vol. I., p. 69, 70; and see Mr. Myers' remarks above, p. 256-7.

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secondary experiences. And that such is indeed the case there is experimental evidence to show.[1]

The simplest cases are those where the reckoning of auditory signals is recorded by the planchette. Thus P——ll was told, in the trance, that, when I coughed for the third time, it would begin to rain. He was woke, his hand was placed on the planchette, and I gave three coughs at intervals. There was no movement till the third cough, when the words

When Mr. Gurney cough for third tim

were at once produced. At this point the writing seemed to labour, and then ceased. I found that the "subject's" arm had become quite rigid, and that he could not raise it—an effect which soon passed off. This concluded his first day's experience of the planchette, which greatly impressed him. He said earnestly, "That is a wonderful thing! Why, it takes my hand along without my being able to stop it! What will they get up next?"

Another day the same "subject" was told that when I coughed for the sixth time he was to look out of the window. He was woke, and I gave at intervals 5 coughs—one of which, however, was a failure, owing to its obvious artificiality. He was set to the planchette, and the words produced were,

When Mr. Gurney cough 6 *times I am to look out.*

At this point I read the writing, and stopped it. I asked if he had noticed my coughing, and he said, "No, sir;" but this, of course showed no more than he had heard without attending. He was now hypnotised, told that I wanted to know how often I had coughed, and at once woke. The writing recommenced,

4 *times he has cough and* 2 *times more he has to cough.*

I coughed twice more, and he went to the window, drew aside the blind, and looked out. Two minutes afterwards I asked him what sort of a night it was. He said, "Fine when I came in." I said I thought I had seen him looking out just now, but he absolutely denied it.

A precisely similar experiment followed, the order being to poke the fire when I rose from my seat the sixth time. The writing, produced on my third rising, was

[1] I need hardly point out that the proof could not be found in the mere memory, on re-hypnotisation, of some marked event which had occurred in the course of the writing—as when W——s, on one occasion, in describing what he had written, said that a leg had come off the instrument during the process. The hypnotised "subject" naturally remembers a recent event of waking life; but the fact that the probably transient existence of the secondary intelligence had its origin during the hypnotic trance affords no ground whatever for identifying its scope with that of hypnotic memory.

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3 times Mr. Gurney got up from his chair, and three more times he has got to get up from his chair.

The fulfilment of the order was punctual, and the oblivion of it complete, till re-hypnotisation, when the memory recurred.

Later, P——ll was told that when I spoke the 30th word, he was to walk to the door and come back again; and was then woke. I made natural remarks at intervals, taking care to count the words I used. The 30th produced no result. I added one, and then told him to come and write. The writing was,

Mr. Gurney spoke 30 *words Mr. Smith I think I am right don't you think so?*

He then returned to his former seat, and sat down for a second; then got up, walked to the door, looked at it, and came back again. Re-hypnotised, and questioned as to the words I had used, he remembered most of them but not all. As he is not a ready counter or reckoner I gave him a simpler task, but again he was one out. He was told to poke the fire at my 10th word, and woke. I spoke eight words, and then set him to planchette. The writing was,

Mr. Gurney spoke 9 *word and when he speak the* 10*th word I am to poke the fire.*

I made one more remark, and the order was at once obeyed. I offered him the usual sovereign to tell me anything that he had written —with the usual result.

Again, he was told to add together 1 and 2, 2 and 3, &c., up to 8 and 9, and also to write down anything startling that happened in the room. He was woke, set to the planchette, and read a newspaper aloud. Soon after his hand began to write, I knocked the poker down in the fender. The writing was,

3 5 7 9 11 13 15 17 *the Poker Fell down in Fender.*

He was told to write down the alphabet, omitting every other letter, and also anything startling that occurred. He was at once woke, and was impressed with the hallucination of a drunken soldier, which much excited and alarmed him, and he made gestures as though preparing to fight. The writing none the less continued, and meanwhile I blew the candle out. The script ran,

a c e g I K Mr. Gurney blew the candle out I see him.

The same openness to external impressions was shown by the writing of answers to questions put to the "subject" after he had been woke, the general direction to answer them having been given to him during trance. Thus, while P——ll's hand was on the planchette, and he was counting aloud the number of times I clapped my hands, S. asked him successively: "What day of the week is it?"

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"How many sisters have you?" "How many brothers have you?" "When did you begin work this morning?" The writing produced was,

Thursday 3 5 7 *o'clock.*

Asked immediately afterwards, he said he did not think that S. had been speaking, unless perhaps he had spoken to *me* (see p. 320). Similarly, having been told to write the numbers from 100 backwards, with omission of every other number, then woke, and impressed with the hallucination of the soldier, he was asked, "What day is to-morrow?" "What is the opposite of black?" "What is a large pistol called?" "What does he put in his pistol to make it go off?"—and wrote,

100 98 6 4 *Friday White Rifle Powder.*

More interesting, though much rarer of attainment, are the cases where the percept which enters into the secondary self's reckonings and writings is not one that has been in any way foreordained for that purpose. For example, S——t was told, in the trance, to add together 3, 5, 8, 13, 14, and was instantaneously woke, and his hand laid on the planchette. I then at once told him to add together 2, 7, 9, 10, 13. After a little reflection, he *said* 41, which was right; and his hand *wrote* 45, which was wrong, the right answer to the first sum being 43. He was re-hypnotised, and asked what he had written; he said 45. Asked what that meant, he said it was the sum of *2*, *7*, *9*, 13, 14. This sum is correct; and it is difficult to avoid the conclusion that the three first digits which I mentioned to him after his awaking got incorporated into his calculation, displacing the first three of the previous list. The next experiment contained a fainter indication to the same effect. He was told, in the trance, to add together 4, 7, 11, 12, 13, and was instantly woke. His hand wrote 49—again 2 out. But when re-hypnotised, and asked what numbers he had added, he said *2*, *9*, 11, 13, 14—which would make his result correct; again introducing the 2, 9, which he had never heard except in the normal state.

Again, a hallucination which was occupying the "subject's" attention occasionally forced its way quite irrelevantly into the writing. P——ll was told to write the numbers backwards from 100, was woke, and was once more impressed with the idea of the soldier, who was about to fire at him. He was extremely agitated, and wrote with great speed and fury; and while he was doing so, I at intervals let down a Venetian blind with a clatter, knocked the poker down, and blew the candle out. The writing ran,

100 99 Mr. Gurney let the Blind fall down I will let the Soldier have it when I can get at him give the Fender fell down did you hear it the candle blew out.[1]

[1] Here was an instance, on a small scale, of hypnotic education. No direction had been given as to writing down startling events; but in this case the former direction to that effect clearly retained its force.

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He was told to write the names of three places beginning with S, was instantly woke, and was impressed with the delusion that his master was standing there, and wanted to know what he had been doing in the afternoon. He wrote,

Sir I am verry sorry Sutton I whas out Southampton I could not help being Salsbury but I hope by the next I go to Suton Southampton Salisbury Southampton Salisbury Sutton.

The repetition of the names was due to S., at my desire, repeating the words, "We want those places," alternately with "Your master wants that letter." On re-hypnotisation, P——ll perfectly realised the muddled nature of the document, and said that his master "would stand on his head when he got it."

These cases leave no doubt that the secondary intelligence can show an apprehension of things which are at that moment engaging the primary consciousness. The question then occurs, is it possible to go further than we have yet gone, and to obtain evidence of an absolutely complete or mutually exclusive segregation of two simultaneous states or streams of consciousness in the same individual? Can we ever so far shut off the intelligence whose workings are unknown to the primary self that it is impossible for it to obtain or betray knowledge of what is impressing or occupying that self? It seems possible that this may be done (though it could never, perhaps, be completely proved to have been done) by adjusting the things proposed for simultaneous performance to the total amount of attention which the particular "subject" can bring to bear. A couple of cases which, though in a way failures, were, I believe, true examples of the mutual exclusion in question, will make my meaning clear.

S——t was told to multiply 697 by 8, was instantly woke, and in another moment was given a book to read aloud. The passage was the chapter about Humpty-Dumpty in *Through the Looking-glass*, of which he read several pages with great spirit and enjoyment. But the planchette on which his hand was lying remained motionless. He was re-hypnotised, and S. said, "Why did you not do that sum?"

S——T. "You didn't give me time to. I lost it all at once—could make nothing of it afterwards."

S. "What else have you been doing?"

S——T. "What else?"

S. "Yes—what else?"

S——T. "I don't know—leave that in your hands."

S. "Have you been reading?"

S——T. "No."

S. "Nothing about Humpty Dumpty?"

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S——T. "Humpty *who?*"
S. "Humpty Dumpty."
S——T. "I read about him when I was a kid."
S. "Hasn't Mr. Gurney been holding a book for you to read?"
S——T. "No."
S. "What have you been doing?"
S——T. "Been sleepy or something."

Now this oblivion, on hypnotisation, of what has just before been occupying attention in the waking state, is extremely exceptional. It would alone strongly suggest that the mind had been in some degree engaged with something else, and that there had been a sort of struggle between the two; and this is exactly what we can readily suppose that the presence of the unsolved problem in the secondary consciousness may have caused. But it is also a strong indication that the forgotten things remained outside the scope of the secondary intelligence. For the oblivion which the segregation of the two streams of consciousness partially explains, would seem wholly unaccountable if the forgotten things had had a place in *both* streams.

The next case is still more significant in this sense. P——ll was told several times, "It has left off snowing"; and then, when woke and set to the planchette, he was made to read aloud. The writing which appeared was,

It has lfeft sn—

and while this was proceeding, the reading was bad and stumbling. When the writing stopped, the reading became appreciably more correct and fluent. Re-hypnotisation afforded a glimpse of the condition in which the secondary intelligence had found itself. Asked what he had been doing, the "subject" replied, "*Trying to write* 'It has left off snowing.'" Asked if he had been reading, he said, "Reading! No, I haven't been reading," and added, "Something seemed to disturb me." "How was that?" "Something seemed to keep moving about in front of me, so I got back into bed again." "Didn't Mr. Gurney hold a book and make you read aloud?" "No, somebody kept moving about. I didn't like the looks of them. Kept wandering to and fro. Horrible, awful! I thought to myself, 'I'll get into bed.' It looked so savage—quite unnerved me," &c., &c. The experiment was repeated. The "subject" was told, "It has begun snowing again." The writing was now an almost illegible scrawl of

It begun snowing.

Meanwhile he was reading about Humpty-Dumpty, slowly and with omission of words, but with clear comprehension and decided amusement. On being re-hypnotised, he was again completely unaware of the reading, and gave the same description as before of the

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way that he was disturbed in writing; as to which I can only suppose that the sense of strain, involved in the ineffectual attempt to concentrate attention on the writing, developed into a sort of hallucination, just as in sleep discomfort of various sorts develops into dream. Here, then, was a remarkable result. Not only was the normal self, as usual, quite alert, and its interest in Humpty Dumpty quite unalloyed by the dark fancies of its hidden fellow; and not only on re-hypnotisation was there no memory of the manner in which the normal self had been employed; but there was a distinct memory of something else. An experience which must have belonged to the secondary self (since the primary had no knowledge of it) is shown to have had a very substantive reality, and actually prevails over a decidedly vivid piece of normal life on the plane of subsequent memory. The result seems a pretty clear proof that the states were mutually exclusive in *this* instance; and renders it probable that they may be so in *any* instance where the available stock of attention (which there is no reason to believe to be increased by the segregation of states) is completely used, and where the subjects which engage the two lines of attention are themselves sufficiently distinguished. This was clearly not the case in the previous examples where the secondary consciousness was set to mark certain sounds which were to meet the normal ear, and where an effort was made to get two similar bits of arithmetic done at the same time. As it happens, in the case just described the available stock of attention fell short; the double drain was too much, and neither the primary nor the secondary intelligence was able to perform its task perfectly when the other was in activity; while the strain and disturbance introduced a new and confusing element. In other cases, the one or the other more or less broke down; apart from actual mistakes in writing or in reading,[1] we have seen the secondary self producing incoherent phrases; and on several occasions when *it* was well to the fore, and gave the correct answers to spoken questions in correct form, the primary self, interrogated immediately afterwards, appeared not to have heard these questions, even as sound, and certainly had not understood them. But if my surmise be

[1] It was curious to observe how the act of writing sometimes seemed to affect P——ll's power of articulation; the difficulty seemed to be of a distinctly physical sort, and he himself several times remarked that it seemed to "draw" the right side of his mouth, without affecting his comprehension of what he read. It seems just possible that this may be connected with the proximity of the cerebral centres of speech and of movement of the right arm (see *Le Magnétisme Animal*, by MM. Binet and Féré, p. 250). At the same time the difficulty undoubtedly seemed to be less when the acts accomplished were of a semi-mechanical kind; as when he had to write the numbers from 100 backwards, and simultaneously count the numbers from 1 forwards, and *vice versâ*.

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right, we might expect, by varying the trials, to hit at last on cases where two mental tasks, both of them requiring *some* but neither of them very *much* attention, were simultaneously carried out, without either of them interfering with the performance of the other, and leaving memories which should be mutually exclusive, and ascertainable only in the normal and the hypnotic states respectively.[1]

The following seem to be examples of the kind. P——ll was told to count the number of times the letter *o* occurs in the lines, "Jenny, my own true loved one, Wait till the clouds roll by," and was instantly woke. His hand being laid on the planchette, he was made to read a newspaper aloud, which he did excellently. Meanwhile 5 O was written. On re-hypnotisation, he said that he had written the answer to what he had been asked, but he totally denied having been reading, could not recall anything about a newspaper, and did not even remember that anything had been held in front of him, though admitting that he was unable to see what he was writing. Similarly in the case described above (p. 307), where he wrote about the horse running away on Easter Monday, he was reading with tolerable fluency from a newspaper during the whole time of the writing, and stood examination on the passage; but on re-hypnotisation he did not remember to have been reading, though he did recall "that his mouth went to and fro as if he was eating." It is worth adding that on occasions where no hypnotic suggestion had been made about giving written answers to S.'s remarks, and where the appointed task, whatever it was, was not performed by the writing self, S.'s spoken appeals—as, "Now what does that come to?" or "Now we want you to tell us—you know what"—never produced any effect; which looked as if the secondary intelligence was unaware of them.

There is one other experiment, of special interest as I think, to which I must again refer in this connection—the one with W——s (p. 299),

[1] I must again point out that the mutual exclusiveness of memory, though highly demonstrative, when it occurs, of the mutual exclusiveness of the remembered states, would not be necessarily involved therein; for we have no right to expect the subsequent hypnotic memory to confine itself to "secondary" experiences. At the same time the cases which follow in the text do seem to reveal a *closer* connection of the subsequent hypnotic memory with the secondary than with the primary experiences. It is worth noting here that the failure on re-hypnotisation to remember the primary experiences was never observed in cases where the secondary task had been easy, involving no reckoning or reflection. Thus in the case (p. 312) where P——ll wrote about the time, *5 minett has passed*, &c., he was reading aloud from a newspaper about a shipwreck, and on re-hypnotisation remembered both the act of reading, and the contents of the passage. In the case of the note to his sweetheart, he was also reading aloud, and perfectly remembered the passage when re-hypnotised. This would accord with the rule, if we were cynical enough to suppose that the composition of such missives had become to some extent mechanical.

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where the words *Cards are all sorted* were produced by the planchette. The conditions of attention were here exceptional; for the primary or ostensible self, instead of being normal as in most of the planchette experiments, was here under the influence of *hypnotic hallucination*. Now, a hypnotic hallucination is peculiar in combining two characteristics—it is extremely absorbing, in the sense that it carries the "subject's" mind along a very distinct and narrow channel; while at the same time it involves no reflection nor reckoning, and so does not demand any large amount of mental activity. It seems, then, exactly adapted to allow scope for a parallel but wholly dissociated piece of mentation, if mutually exclusive mental states be a possibility in nature; and such a piece of mentation I concluded that it was which produced the spontaneous written statement about the cards. But it will be remembered that the "subject's" expressed intention was to write *something else*, and he believed afterwards—even while the actual word *Cards* was before his eyes—that he *had* written something else. It surely, then, seems a reasonable conclusion that, had the writing intelligence embraced the experience of this impulse to produce a different script, *that* is what it would have produced, instead of originating an unsolicited remark of its own. The following case with P——ll points in the same direction. He was told to write down the names of three places beginning with H, and then was instantly woke, and told that he was to write a letter to me, and that the messenger was standing there, waiting for it and bothering him. The hallucination took complete effect, and he talked to the messenger all the time he was writing; but the words produced were not a letter, but simply

Hastings Hamsted Hanover.[1]

With these results it is instructive to compare the somewhat similar case of Madame B. (p. 249). That experiment also took place during hypnotic trance; but a *less extreme means* than hallucination being employed to engross the primary intelligence, and keep it, so to speak, out of view of the secondary, the segregation seems to have been less complete. For in the subsequent hypnotic condition, the "subject," recalling her secondary experiences, remembered that "the other one was talking"; and one can hardly help regarding this as a true "secondary" memory: the memory of the "primary" experience—of

[1] In other cases, however, as we have seen, P——ll's writing did show knowledge of a hallucinatory idea impressed after his waking. I think it possible that the difference between these cases and W——s's was due to the greater time spent over the latter; the idea of the cards had engrossed W——s during several minutes, and this may have given it a more separate and independent place in his mind. But it is also likely enough that "subjects" differ as to the degree of absorption and separateness that the secondary intelligence can attain.

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the actual conversation—would neither have included such a sense of dividedness and duality, nor have spoken in the name of the secondary self. I suspect, therefore, that if appealed to in the course of the experiment, Madame B. would have been able "automatically" to show knowledge of what her conversing self was doing.

The hint in W——s's case is, at any rate, one that is worth following up. We have for some time been familiar with hypnotism, in general, as a means of loosening the connections of the mental machinery, and giving independent play to this and that part of it. On that ground what we examine is the hypnotic state itself; we study its phenomena directly for what they are and what they teach. Hypnotism assumes a wholly new significance when it leads (as in this paper and the preceding one by Mr. Myers we have seen it do) to results *beyond itself*—when it appears as the ready means for establishing a secondary train of consciousness, to which when established (as was pointed out above) there is no ground for attributing any special hypnotic character. And it would be a yet further development if in a particular hypnotic phenomenon, such as induced hallucination, we found the means for straining such secondary consciousness free from any association with the ostensible "self," and assuring to it a perfectly independent flow. It would be a short-sighted view which should see in such refinements as this the mere curiosities of psychical chemistry. In the new psychology, the line between the normal and abnormal has become so shadowy that not the smallest or rarest abnormal phenomenon can be safely neglected, by those who aim at the fullest possible realisation of human nature and development. But our last experiment may further contain some consolation for those who view the accumulating proofs of the instability and divisibility of consciousness with perplexity and alarm. For here, at any rate, the secondary intelligence was the sane, or, as we may, the *normal* self. If we find it humiliating to our sense of human dignity to see a fellow-creature the helpless puppet of suggested delusions, it is at least something to discover that reason still reigns in a part of his being—that he is still capable of evolving sense and truth, even though from a consciousness so "inner" that special appliances are needed to bring it to the surface.

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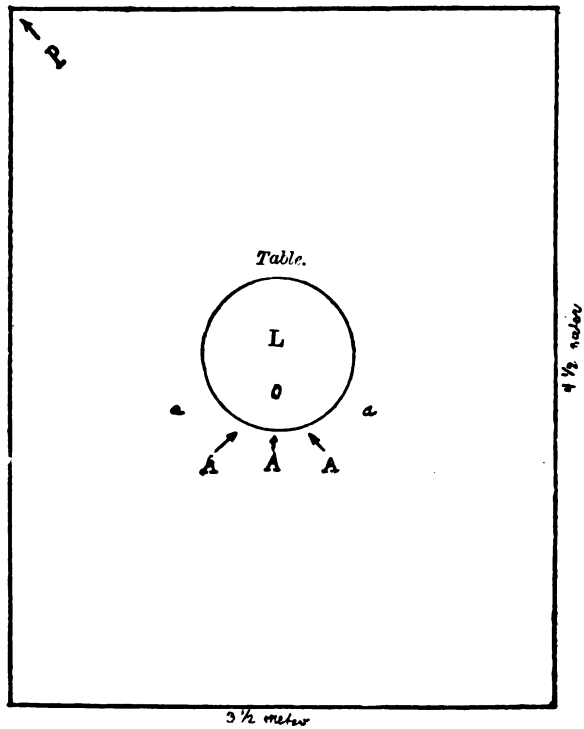
IV.

EXPERIMENTS IN THOUGHT-TRANSFERENCE.

By Anton Schmoll.

(*Translated from the original German.*)

These experiments were made in the evening, in a lighted room in my house, 111, Avenue de Villiers, Paris, with the assistance of M. Etienne Mabire [of 65, Rue Blanche, Paris], retired marine officer, Mlle. Louise M., and my wife. A young officer, M. D., assisted at No. 1. We worked in the dining-room, the positions being shown in the accompanying plan.



We experimented in the following manner. The person appointed to reproduce the objects (drawings or real things) sat with his back to the others, in the corner of the room P, his eyes being covered. I call this person the percipient because his part is confined to the passive

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reception of psychical impressions; while the business of the other persons, the agents, consists in producing the impression through concentration of their attention and through energetic volition. In the above plan, P represents the percipient, A the agents (only in the first 10 experiments the two outside agents sat at *a*), O is the spot where the object to be guessed was laid or placed. The light, L, came from a hanging lamp. The arrows show the direction of the eyes.

After the percipient was comfortably settled in the corner P, about three metres distant from the object, and had been blindfolded, a figure in thick lines was drawn on a sheet of white paper by one of the agents, and the drawing was laid down flat upon the table at O. This procedure seeming to be unfavourable to the success of the experiment in six trials, we set the drawing upright. In the later trials, as already mentioned, the agents, whose line of vision had at first almost crossed each other at right angles, sat in a line, side by side, in order to avoid the slightest divergence in the direction of their looks.

In binding the eyes, the bandage should not be drawn too tight, as the pressure them causes a continuous flickering of the eyelids, which interferes with good results. All that is required is to cover the eyes, so that all direct vision is impossible, and for this end great pressure is not necessary. The percipient is recommended to close the eyes lightly, and thus to avoid all muscular exertion.

In the seven last trials we chose a real object, which we laid down or set up at O. It has appeared advisable that, with the exception of the object to be guessed, there should be nothing to be seen on the table which could influence or distract the thoughts of the agents. (See trial 22.) During the experiments, complete quiet was maintained. The agents gazed uninterruptedly at the object, and concentrated their whole will on the desire to make a mental impression on the percipient. The latter was recommended to give himself up to a completely passive condition, and carefully to avoid straining his mind in search of the idea.

The object was of course always hidden before the handkerchief was taken from the eyes of the percipient, except in cases where the attempt had failed, and when there was no question of transference.

The object was placed quite quietly on the table, which was covered with a thick table-cover, so that the percipient could not hear the slightest noise on its being laid down. Precise notes were at once taken of the results and details of each trial.

As to the experimenters, the following may be said :—Mlle. Louise M., aged 25, is lively and cheerful; my wife, aged 39, of a calm temperament ; M. Mabire, aged 59, earnest, thoughtful, and of sober judgments. As to myself, I am 45 years, exceptionally sensitive, otherwise very well in health.

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From the beginning it was arranged amongst us that we should most carefully guard against self-deception, and especially against exaggeration of the impressions that we received. We simply wanted to find out what there was in the matter, and it would have little profited us to embellish the results.

Whether any of us is hypnotically or somnambulistically disposed is not yet ascertained. Several sittings which we lately held for the purpose of obtaining "raps" were completely without result. If any mediumistic power exists among us, it has certainly not as yet been developed.

We were none of us sceptical with respect to psychical events in general; but if we did not feel ourselves justified in denying *à priori* things which competent authorities assert to have been established, still we were more or less inclined to the view that the majority of these phenomena were of a subjective nature.

According to our experience, the following are the mental processes that took place before the closed eyes of the percipient. For many minutes, sometimes quite a quarter of an hour, he sees nothing. Soon, however, it appears as though a white shimmer of a certain form was periodically moving in the field of vision. Little by little this vague, inconstant picture appears in a manner to condense itself, and to make its appearance at shorter intervals. He begins to seize certain outlines, which become clearer from minute to minute, till he at last says, "Now I believe I see what it is."

If an attempt appeared about to fail, the percipient, still blindfolded, approached us, and gave his hands to two of the agents, while the third closed the chain. But it does not appear that this proceeding, with us, at any rate, has any special efficacy. The intensity of the mental pictures was not essentially increased by it, and if previously there had been no picture, none usually appeared after we had formed the chain. With us there can be no question of muscle-reading.

Lastly, be it remarked that among those who took part in the trials there existed no real difference in the faculty for thought-reading. Neither did this faculty make any progress during the course of the experiments.

1.—*July 20th*, 1886.

Agents.—M. Mabire, M. Lieutenant D., Frau Schmoll.

Percipient.—A. Schmoll.

Object.—A pair of gold spectacles were laid on the table.

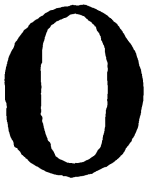
Result.—Followed after 8—10 minutes: "I see something like showering sparks, or the short flashes of lightning."

Remark.—The agents were unanimously of opinion that this vision was to be ascribed to the reflection of light from the spectacles, which, in consequence of the oblique lighting up, really fell on their eyes.

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2.—*July 31st*, 1886.

Agents.—M. Mabire, Mlle. Louise, Frau Schmoll.
Percipient.—A. Schmoll.
Object (drawn).[1]—



Result.—After 10 minutes: "I see something round, a circle, the circumference of which seems to contract on the inner side." (Pause.) "The contraction ceases. It is a round or elliptical form."

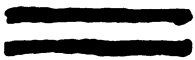
Remark.—M. Mabire had in the first place drawn the outline of the figure, and then thickened it inwards with firm strokes of the pen.

3.—*The same evening.*

Agents.—Mlle. Louise, Frau Schmoll, Schmoll.
Percipient. –M. Mabire.
Object.—A penknife was laid on the table.
Result.—*Failed.* After the lapse of a quarter of an hour, M. Mabire took the bandage off, and *after* he had seen the object explained that he certainly had *seen* nothing, but still involuntarily had *thought* of a penknife. He regrets not having said this before taking off the bandage.

4.—*The same evening.*

Agents.—Mlle. Louise, M. Mabire, Frau Schmoll.
Percipient.—Schmoll.
Object (drawn).—



Result.—Failed. Nothing at all seen.

5.—*The same evening.*

Agents.
Percipient. } As in No. 4.
Object (drawn).—



[1] The drawings and reproductions are reproduced from the MS. of Herr Schmoll's record. He writes, "Je n'ai malheureusement pas conservé les originaux des expériences. Quand je les eu fidèlement copiés, en les réduisant, je crus que ces feuilles volantes n'avaient plus d'intérêt, et je les jetai ; je m'en repens aujourd'hui."

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Result.—After 15 minutes: "It almost looks like a Chinese bamboo fan; or also like a heart, with its point stretched downwards in the form of a stalk." Then I drew (without having seen the original):—



Remark.—I clearly saw the object doubled symmetrically.

6.—*The same evening.*

Agents.—M. Mabire, Frau Schmoll, Schmoll.
Percipient.—Mlle. Louise.
Object (drawn).—



Result.—After 22 minutes: "I am not clear about this figure; now I see a ladder, now it looks like a flight of steps, now like a foot-stool. It is quite vague, but it must be something of the sort."
Remark.—A certain approximation is unmistakable.[1]

7.—*August 4th*, 1886.

Agents.—Mlle. Louise, Frau Schmoll, Schmoll.
Percipient.—M. Mabire.
Object (drawn).—



Result.—M. Mabire sees "a row of right angles, disposed one within another," and drew, after the picture had been hidden:—



8.—*The same evening.*

Agents. } As in No. 7.
Percipient. }
Object (drawn).—



[1] This may perhaps be questioned.—ED.

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Result.—"I see very clearly a figure of parabolic form, something like the track of a comet. At the perihelion of this track I see two little lines like rays standing out from one other." Then M. Mabire drew :—



Remark.—If one divides the original in two by a vertical cut, and places one of them upright, the figure approximates to what was perceived.

9.—*The same evening.*

Agents.—Mlle. Louise, M. Mabire, Schmoll.
Percipient.—Frau Schmoll.
Object (drawn).—



Result.—After 5 minutes : "It appears to be a flower-pot ; but it is very indistinct. What projects above does not look like flowers. I cannot say what it is."

10.—*August 4th*, 1886.

Agents.—Mlle. Louise, M. Mabire, Frau Schmoll.
Percipient.—Schmoll.
Object (drawn).—



Result.—"I see four circles touching each other." (Pause.) "No, it is two 8's, which cross at right angles." (After another pause of some minutes' duration, the chain closed.) "Now I only see the half of the figure that I saw last." Then I drew both the perceived figures :—



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11.— *August 12th*, 1886.

Agents.—Mlle. Louise, M. Mabire, Frau Schmoll.
Percipient.—Schmoll.
Object (drawn).—



Result.—Unsatisfactory: "I see confused, misty figures, out of which the following alone stand out clearly":—





12.—*The same evening.*

Agents.—Mlle. Louise, Frau Schmoll, Schmoll.
Percipient.—M. Mabire.
Object (drawn).—



Result.—"What I see reminds me somewhat of a spiral nebula; I cannot well describe it, but will try to draw it." Then M. Mabire drew:—



13.—*August 20th*, 1886.

Agents.—M. Mabire, Frau Schmoll, Schmoll.
Percipient.—Mlle. Louise.
Object (drawn).—



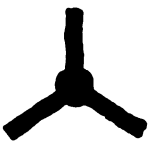
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Result.—"I see two straight lines, which form an angle, now turned downwards like an A; now upwards like a V." (Pause for some minutes.) "Strange! now I see both figures united by the point." Then Mlle. Louise quickly took the bandage off and drew :—



14.—*The same evening.*

Agents.—Mlle. Louise, Frau Schmoll, Schmoll.
Percipient.—M. Mabire.
Object (drawn).—



Result.—"It is not very clear, and difficult to describe. I see a row of obtuse angles, gradually diminishing in size, and pressed one within another; the figure reminds me of a mountain chain, as such are drawn on geographical maps." M. Mabire then drew the following :—



15.—*The same evening.*

Agents.—Mlle. Louise, M. Mabire, Frau Schmoll.
Percipient.—Schmoll.
Object (drawn).—



Result.—After a quarter of an-hour: "I see two divergent bright lines, quite like those which one sees to the east of the double crater, Messier, in the moon." (Three minutes' pause.) "Now there are two points, one within the other, but almost right angles." I then drew both perceived figures:—



Remark.—The vertical line of the original, therefore, was not seen.

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16.—*The same evening.*

Agents.—Mlle. Louise, M. Mabire, Schmoll.
Percipient.—Frau Schmoll.
Object (drawn by M. Mabire).—



Result.—"I see an egg-shaped object, very small, with a point in the middle." (Mlle. Louise and I protested, laughing aloud; M. Mabire remained serious.) Frau Schmoll corrected herself at once, and said, "You may be right; for now I see very clearly something quite different, namely, two right angles, one within the other." Then she took the bandage off and drew both the figures seen as follow :—





Remark.—Now for the first time M. Mabire explained that he had been much astonished by the first perception: his first intention had been, not to draw a zigzag figure, but the rudimentary form of an *eye*.

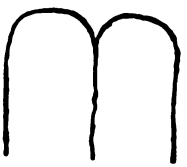
It will be seen that in No. 2 the angles are right angles, as in the original—side by side instead of one within another. The number and form of the angles are the same.

17.—*August 21st*, 1886. (*Contributed.*)

Agents.—Mme. Renet, Mlle. Paine, M. Renet.
Percipient.—M. Mabire.
Object (drawn).—



Result.—"I see a great number of right angles one within another." (Pause.) "Now I see two curves in contact with each other with their convexities upwards, rather like a figure 3 placed horizontally and with its terminal points downwards. But the two ends are prolonged downwards in straight vertical lines." M. Mabire drew :—



Remark.—Among several trials made by the above-mentioned persons, this was the only one which gave a satisfactory result.

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18.—*August 24th*, 1886.

Agents.—Mlle. Louise, Frau Schmoll, Schmoll.
Percipient.—M. Mabire.
Object (drawn).—



Result.—M. Mabire saw "a sort of semicircle like the tail of a comet, but of spiral construction, like some of the nebulæ." What he saw he reproduced in the following manner :—



19.—*The same evening.*

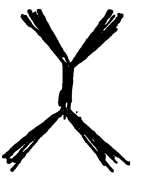
Agents.—Mlle. Louise, M. Mabire, Frau Schmoll.
Percipient.—Schmoll.
Object (drawn).—



Result.—"I see two double lines, that cross each other at about right angles." (Pause.) "The two double lines now appear single, but like rays of light, and in the form of an X." (Another pause.) "Now I see the upper part of the X separated from the lower by a vertical line." I draw :—

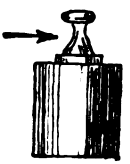






20.—*The same evening.*

Agents.—Mlle. Louise, M. Mabire, Schmoll.
Percipient.—Frau Schmoll.
Object.—A brass weight of 500grms. was placed on the table.



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Result.—"What I see looks like a short piece of candle, without a candlestick. It must be burning, for at the upper part I see it glitter."

Remark.—At the upper part of the object indicated by the arrow, bright reflections, caused by the oblique lighting, were seen by all the agents (the weight was rubbed bright). The form seen decidedly resembles the original, especially the outline.

21.—*The same evening.*

Agents.—M. Mabire, Frau Schmoll, Schmoll.

Percipient.—Mlle. Louise.

Object.—My gold watch (without the chain) was noiselessly placed before us, the back turned towards; on the face are Roman numbers.

Result.—After five minutes: "I see a round object, but I cannot describe it more particularly." (During the pause that followed, without causing the slightest noise, I turned the watch round, so that we saw the face.) Soon Mlle. Louise called out: "You are certainly looking at the clock over the piano, for now I quite clearly see a clock face with Roman numbers."

Remark.—Of all the results so far obtained, this is decidedly the most noteworthy. The ticking of the watch could not have served as an indication. Owing to the constant noise of carriages in the street, it was impossible for the agents who were sitting near to hear the ticking, and Mlle. Louise who sat three metres away from it, was still less likely to hear it.

22.—*September 10th*, 1886.

Agents.—Mlle. Louise, M. Mabire, Frau Schmoll.

Percipient.—Schmoll.

Object.—A pamphlet (in 8vo.) was slantingly placed on the table.

Result.—Completely failed. I saw nothing whatever.

Remark.—At the beginning of our trials to-day, we had neglected to clear the table. The book was surrounded by other objects, and also badly lighted.

23.—*The same evening.*

Agents.—Mlle. Louise, M. Mabire, Schmoll.

Percipient.—Frau Schmoll.

Object.—A piece of candle, 20 centimetres long, was placed on the table.

Result.—After eight minutes: "I see it well, but not clearly enough to say what it is. It is a thin, long object."

"How long?" asked M. Mabire.

Frau Schmoll tried by separating her hands to give a measurement, but could not do it with certainty, and said, "A full hand's length, about 20 centimetres." Begged for a further description, she said, "I see nothing like a walking-stick, but at one end there must be gold, for something shines there." (The candle was *not* burning.)

24.—*The same evening.*

Agents.—M. Mabire, Frau Schmoll, Schmoll.

Percipient.—Mlle. Louise.

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Object.—A Faïence tea-pot was placed on the table :—



Result.—After five minutes : "It is not a drawing, but a real object. I see very clearly a little vase, a little pot or pan."

25.—*The same evening.*

Agents.—Mlle. Louise, Frau Schmoll, Schmoll.
Percipient.—M. Mabire.
Object.—The stamp of the firm was placed on the table :—



Result.—After 20 minutes : "The picture appears to be rather confused. But I believe that I see the lower part of a drinking glass." (Pause.) "Now it has gone again." (A pause of five minutes.) "Now I see another form, like two symmetrical S shaped double curves, placed side by side." Then M. Mabire drew :—



Remark.—Apparently the lower part was seen first, and then the upper.

26.—*The same evening.*

Agents.—M. Mabire, Frau Schmoll, Schmoll.
Percipient.—Mlle. Louise.
Object.—The double eye-glasses (pince-nez) belonging to M. Mabire were laid on the table.



Result.—After five minutes : "I see two curves, open above, that do not touch each other." Then Mlle. Louise drew :—



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The results of the preceding trials clearly leave much to be desired; nevertheless, it is not to be denied that in many cases the reproduction possesses the fundamental character of the original, and, indeed, in many (as, for example, Nos. 2, 8, 12, 13, 18, 21, 24, 25) very strongly approaches precision. In no single case, strictly speaking, did there appear absolute discrepancy between the form of the reproduction and that of the original. We have therefore been able to convince ourselves that the agents, concentrating their looks on the given object, projected on the mental eye of the percipient a picture more or less resembling it, and we take it as incontrovertible that the above results could not have been achieved by conscious or unconscious guessing. We shall continue these psychical experiments, and should be glad to see similar ones instituted in other family circles; for before science can advance to the synthesis of these mental phenomena, so little known and yet so important, as large a supply as possible of empirical data must be obtained. No doubt there may be a difficulty in finding people in one's neighbourhood who are competent to aid in the development of such experiments, and who would bring to them the necessary earnestness and patience. But one should not let oneself be discouraged by a little trouble, when there is a chance of throwing light on events which, correctly apprehended, may lead us to the psychological proof of our transcendental, imperishable Ego.

NOTE BY F. W. H. MYERS.

The greater part of the above series of figures were given in *Sphinx* for February, 1887. On seeing them, I wrote to Herr Schmoll, who kindly offered to allow me to join his group in the Avenue de Villiers. This I accordingly did on April 2, 5, and 8. I thus made the acquaintance of Herr and Frau Schmoll, of M. Mabire, of Mlle. Louise, and of some newer members of the group; and I saw experiments conducted, with good faith and care, precisely in the manner above described. The only point which struck me as needing further attention was the need of complete abstinence from exclamations until the percipient has finished drawing the figure. (See Exp. 21.) I suggested also that the percipient had better be called into the room, already blindfolded, when the pictures had been drawn and concealed from view. I do not, however, think that any indication can have been gathered from the sound of the drawing; as this was done with the end of a lucifer-match, dipped in ink, and daubed noiselessly on the paper. There is a slight inaccuracy in the account of Exp. 21, which we have thought it better to leave as it stands. The watch was not, in fact,

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going at the time—a point overlooked by Herr Schmoll, but noticed and proved by Frau Schmoll afterwards. I will add that Mlle. Louise was the only percipient who attained real success when I was present; and I suspect that she will be found the most gifted of the group. I saw her only on April 8.

Between March 4th and 25th, Herr Schmoll continued the series of drawings, &c., Nos. 27-47, with mingled success and failure. Nos. 48-55 were tried in my presence, but were on the whole unsuccessful. Nos. 56-65, performed without me, included several successes. Nos. 66-69 were again performed in my presence, under excellent conditions, and of these, 66 and 69, where the percipient was Mlle. Louise, are among the most interesting of the series. We hope to give a reproduction of some of these on a future occasion. Herr Schmoll has since, at my suggestion, tried the transmission of *numbers*, *tastes*, and *pains*, but as yet without success.

We hope before long again to take some personal part in this interesting series; and we trust that other groups may be encouraged by Herr Schmoll's success to undertake similar experiments with patience and care.

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V.

ACCOUNTS OF SOME SO-CALLED "SPIRITUALISTIC" SEANCES.

By Professor H. Carvill Lewis, M.A., F.G.S., and Others.

Some editorial explanation is perhaps needed, for those who are not familiar with Spiritualistic literature, of the prominence given in the following pages to a single medium. Eglinton is undoubtedly considered by Spiritualists in England, and throughout a great part of Europe, to be the most powerful professional "psychic' at present giving séances, and the one through whom conclusive evidence of the spiritual origin of the phenomena can best be obtained. He even carries the palm over the once famous D.D. Home, in the opinion of some who have known both. His phenomena may therefore be fairly taken as typical, so far as professional mediumship is concerned, of the evidence on which the Spiritualistic belief rests; and an examination of his claims is therefore an important step in the investigation of the subject. Eglinton has now been acting as a medium for some 12 years or so, and his séances are of various kinds. There are the dark séances at which lights appear, and objects are moved about while the medium's hands are supposed to be held; materialisation séances—also held in darkness or semi-darkness—at which living beings purporting to be "materialised" spirits, are seen, felt, and talked with by the sitters; and séances for slate-writing or "psychography," at which writing appears on slates under circumstances which, in the opinion of most of the sitters, render it impossible for Eglinton to have produced it himself.

It is with this last class of phenomena that we are here concerned. Slate-writing is supposed to be a phenomenon specially easy to investigate satisfactorily, and specially adapted to convince the sceptic. Reports on the subject had been sent from time to time to the headquarters of the Society; and in accordance with a rather generally expressed wish, the whole body of them* were printed in the Society's *Journal* for June and October, 1886. But since many readers of the *Proceedings* do not see the *Journal* (which is issued for private circulation among our own members), it may be well to give here one or two fresh specimens of the class of cases on which Spiritualists

* One report, sent by the Rev. A. J. Rogers, was accidentally omitted; it afterwards appeared in *Light* for October 16, 1886.

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have relied. We will take examples which have been represented by leading Spiritualists as test-cases—as conclusive evidence, for any unprejudiced mind, that the results were due to some occult agency. In the footnotes appended, which have been supplied by Mrs. Sidgwick, an endeavour is made to show, with the aid of the narratives that follow in this paper and in Mr. Davey's, the reasons why we regard these accounts as inconclusive.

The following case was contributed by "M.A. (Oxon.)"—a *nom de plume* well known to Spiritualists as that of a leading representative of English Spiritualism, to *Light* for November 13, 1886.

On November 3rd I had a sitting with Mr. Eglinton at his house, 6, Nottingham-place. The observers present, beside myself, were Dr. Stanhope Speer (13, Alexandra-road, N.W.), and Mr. W. G. Johnson (68, High-street, Bedford). We met at 3.30 p.m. in a room which was amply lighted, at first by natural light and afterwards by gas, for every purpose of exact observation. The room is that inaccurately described by Professor Hoffmann as "a ground-floor back shut in by adjacent buildings." Mr. Eglinton's room is not shut in by anything that impedes the free entry of light. At no time during the sitting was there any question as to the possibility of seeing what was being done, nor, I may add, of keeping the slates "under continuous observation."

I took with me two ordinary school-slates, purchased by myself. In order to guard against the possibility of these slates being changed or the surfaces being reversed, I had marked one of the two slates on the frame of one of its sides with a blue cross, and on the other with a blue circle. The other slate was similarly marked with green. It thus became a matter of very simple observation to see that the writing was not produced by trick on the under surface of the slate when held beneath the table, a change in the slate being (as has been suggested) effected while the attention of the observers was purposely distracted. There was no possibility of any such trick throughout the sitting.[1]

[1] It is unnecessary to suppose any change of slates in order to explain the events of this séance, and it is most probable that they were not changed. The precautions, as described, however, would not afford complete security against such change, since, so far as appears from the description, the marks might have been imitated.

As to turning over, there is not enough precision in the accounts to enable us to judge whether, on the hypothesis of conjuring, we must suppose the slates to have been either turned over, or turned in their own plane. But I do not see that any mark would prevent this which was not (*a*) visible all the time the slate was under the table and (*b*) observed during all that time. From what is said, I should infer that condition (*a*) and therefore necessarily condition (*b*) was absent; for it is Mr. Eglinton's thumb, and not the frame of the slate, or any mark on it, that is mentioned as continuously visible. (Compare Professor Carvill Lewis's description of the position at the beginning of his first séance, p. 353.) Under these circumstances, the utmost the marks could do was to make it easier for the sitters to see whether the side which was uppermost just

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Mr. Eglinton sat at one side of a square table, which was not covered by any cloth. At his right hand, close to the slate when held in position, at the corner of the table, sat Mr. Johnson, keenly scrutinising every movement of Mr. Eglinton. Opposite to the medium was Dr. Speer with his eyes fixed on the slate without, as I can testify assuredly,[2] any lack of "continuous observation." (In a letter to me Dr. Speer remarks after reading my narrative, "I have no alteration whatever to suggest. I may assert, however, that upon each occasion that the slate was placed under the table I never once lost sight of Eglinton's thumb until the slate was again placed on the table.")* Next to Mr. Eglinton I sat, using, to the best of my ability, such powers of observation as I am endowed with. I will be so bold as to say that it would not be easy to find three persons who, by long experience of psychical phenomena and careful thought about them in two of us, and in the third case by trained habits of accurate scientific observation and thought, were more competent to express an opinion as to what occurred. I will say further that any sane man, with eyes in his head and the power of using them, would be fully competent to testify to that which we observed. The only slates used during the sitting were my two school-slates, and the folding slate with lock, familiar to the public as being in regular use at Mr. Eglinton's sittings: nor were there any other slates on or near the table at which we sat.

Mr. Johnson, as an investigator new to Mr. Eglinton, was requested to commence the first experiment by writing a question on one of my slates. I suggested that the question should be one not involving special knowledge, but one that could be readily answered. While Mr. Johnson wrote his question we all turned away from the table. It is certain that none of us could see or know what was written.[3] The slate was held by Mr. Eglinton under the corner of the table, between him and Mr. Johnson. The thumb of the hand which supported the slate was continuously visible above the surface of the table. The query was, What is the sum of 50 × 60? The answer was written after considerable waiting: 3,000. The figures were straggling and ill-made.[4]

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before the slate was put under the table, was also uppermost just after it was drawn out.

[2] If "M. A. (Oxon)" can assuredly testify to the continuous observation of Dr. Speer, he must have been continuously observing him; in which case he cannot have been also efficiently observing Mr. Eglinton.

[3] No reason is given for certainty that Mr. Eglinton could not see or know what was written. Probably he did not know, however, and hence, perhaps, the necessity for the subsequent "considerable waiting" while he ascertained.

[4] This first experiment consisted of two parts; the reading of a question assumed to be unknown to the medium and presumably written on one or other side of the slate which he held under the table; and the writing of an answer on the slate under the table. Compare Professor Carvill Lewis's experiences, pp. 354, 355. For accounts of writing by an avowed conjurer on a slate held under the corner of the table, with the thumb of the hand continually visible, see Mr. Davey's paper, Sitting II, Reports 1 and 2 [*a*] pp. 426, 429. For questions inaccessible to a conjurer, read and answered by him, see Mr. Davey's Sitting VI [*a*] p. 448, and elsewhere.

* These bracketed sentences appeared as a foot-note in the original.

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The next experiment was this. I took out of my pocket-book five blank cheques. These cheques had been placed by me in my pocket-book at the end of last July. I had not looked at the numbers as I tore them from my cheque-book, nor when I put them into my pocket-book, nor had I ever removed them or any of them since they were so placed. They were folded into four parts, and the selected cheque was not unfolded before being placed in the slate. I requested Mr. Johnson to select one of them. He did so, and without looking at its number, I took it from him and placed it within the folding-slate which Mr. Eglinton uses. Mr. Johnson locked the slate, and placed the key on the table before him. We first endeavoured to get a message on one of my slates as to the possibility of getting the number of the cheque written on the locked slate. The experiment was difficult, and we did not wish to waste time. The answer came, "We will try." The locked slate, which had been all the time in full view, and which no amount of spare keys would have made it possible for Mr. Eglinton to unlock, was then taken by Mr. Eglinton and held under the corner of the table next to Mr. Johnson. *At once*, without appreciable interval, there came the perfectly audible sound of writing. The slate on being withdrawn and unlocked by Mr. Johnson was found to have upon it

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That was the number of my cheque as verified by all of us at once. It was wholly impossible for Mr. Eglinton to have seen my cheque, or to write on the slate, for the reason that the locked slate was held in position under the corner of the table in such a way that the thumb of the hand holding it was continuously visible.[5]

At this point in our experiments I suggested that the two doctors should test Mr. Eglinton's pulse. I had noticed that he was very considerably convulsed before our ears attested that writing was being done. I myself was

[5] I think it probable that a lapse of memory—a complete omission—has occurred in respect to this experiment, and that, though the fact has been forgotten, the locked slate was held under the table for a short time directly after the cheque was enclosed. It was then, I suspect, that Mr. Eglinton read the cheque, and wrote the number, after which it was probably he who led up to the suggestion that, as they did not seem to be succeeding, they should try to get a message on another slate as to the possibility of obtaining the phenomenon they desired. This proceeding would naturally make any previous dealing with the locked slate seem unimportant, and make it likely to fade quickly from the memory. I am confirmed in this view by Professor Carvill Lewis's experience in the course of a similar experiment, see pp. 356, 357. If no such previous process be supposed, there seems to be a certain inconsequence in the behaviour of the sitters; for why, if there was *à priori* reason to think the experiment likely to waste time, did they go through the process of selecting and locking up the cheque before inquiring of the spirits on the subject? Complete forgetfulness of really important incidents undoubtedly occurs; see for example the Appendix to Mr. Davey's article, Notes 1 and 17 to Sitting II pp. 488, 489, and Notes 1 and 6 to Sitting III p. 490.

For reading questions and writing answers in locked slates by a conjurer, see Mr. Davey's article, Sittings VI [*a*] p. 448, XI [*a*] p. 469, XII [*b*] p. 471, and XIII [*b*] p. 472.

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similarly affected, and I felt able to tell by my own sensations when the writing was about to be executed. My own sensations were of a convulsive character, with occasional spasmodic jerks when (as I conceive) psychic force was being thrown off. Mr. Eglinton's pulse, on being tried by the two medical men, was found to be calm, steady, healthy, and normal, but rather feeble for a person of his excellent physique. My own pulse was not tested; but I fancy it would have been found, on trial, to be accelerated in speed.

Dr. Speer now wished to ask a verbal question. *The slate having been placed in position*, he inquired whether any relation of his were present. The slate (my own) was held by Mr. Eglinton as before, and the writing came *at once*—I say, and I mean, *immediately*—"There are several present, but we have no power to tell of them."[6]

I then asked, not audibly, but writing my question on one of my own slates, "Do you see any friend of mine? Give one name." Nine minutes elapsed before the writing came. On withdrawing the slate we found in quite distinct writing from that obtained before,

\+ Imperator.

The writing was very clear and decided; the letters carefully and prettily formed; and it was similar to that which characterises his signature in my books of automatic writing. The name was quite unexpected by me, and came as a surprise, for I had recently inquired for him without success.[7]

It was then suggested by Mr. Eglinton that we should endeavour to obtain writing under an inverted tumbler placed on one of my slates and pressed against the under surface of the table. I, on the spur of the moment, asked Mr. Johnson to select a number under ten. He picked five. Dr. Speer, similarly asked, selected nine. I chose four. The combined numbers made 594. I asked that that combination of numbers should be written under the inverted tumbler. It was done *at once*; with no appreciable interval of writing after the slate was in position; the sound of writing was quite audible; the figures were bold and decided—very different from those that were made in the first experiment.[8] Then "Good-bye," and the sitting was ended.

Now it seems to me that only the most perverse ingenuity can distort evidence of this quality into a mere record of conjuring tricks; or suggest

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[6] For an answer to a verbal question coming *immediately* on the sitter's own slate under the table, see Mr. Davey's article, Sitting I, Report 1 [*c*] p. 421.

[7] The remarks in note [4] apply here. I need only add that we cannot assume the signature of "Imperator" to have been unknown to Mr. Eglinton. The superiority of the writing to that in the first experiment may probably have been due to an accidentally better opportunity for executing it. I suspect that sitters are often more watchful during the first experiment than during later ones. Compare, for handwriting varying in excellence with opportunity, Professor Carvill Lewis's experience, pp. 365, 366.

[8] Compare Professor Carvill Lewis's account of a similar phenomenon and its mode of performance, p. 362. I suspect, however, that in the present case Mr. Eglinton found the opportunity of writing the figures *before* the slate was in position. He may have written each number as it was chosen. For a performance by an avowed conjurer resembling this, so far as the tumbler is concerned, but perhaps more striking, see Mr. Davey's article, Sitting II, Report 1 [*e*] p. 428, and Sitting XVI [*h*] p. 482.

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that the experiments were vitiated by lack of "continuous observation"; or that we, the observers, were not competent to observe and record what occurred under the most careful scrutiny by our three pairs of watchful eyes.[9] For my part it seems necessary only to mention such criticism in order to brand it as the outcome of ineradicable prejudice. It is mere waste of time to argue with it. It is, I fear, hopeless to expect that it would be modified or reversed by any amount of testimony even of the highest quality and value. I will not, therefore, take up space by showing how ludicrously inapplicable is the conjuring explanation to what we witnessed.

It is, I think, greatly to be desired that the attention of physiologists should be drawn to the state of the psychic during the time when these phenomena are in process. For example, before writing is heard on the slate, Mr. Eglinton is nervous, anxious, and his body is usually much contorted. His face sometimes wears an expression of pained anxiety and almost of nervous apprehension. When the slate is withdrawn this gives way to an expression of relief. His fingers are cold, as though from the withdrawal of energy. Sometimes he shivers as though chilled. The presence of a qualified surgeon, who might be able to make a series of careful observations at sittings for psychography, and especially for materialisation, is greatly to be desired. I may add, by way of fixing attention on the quality of this evidence :—

1. That most of the writing occurred on my own slates ; and that there were no other slates on the table or within Mr. Eglinton's reach, so that suggestions of change are excluded.[10]
2. That no one in the room had ever seen the number of my cheque, so that suggestions of thought-transference are excluded.
3. That in two cases the writing was immediate on the request being made. It was done on my slate, and therefore the suggestions of previous preparations and of writing under the table by the medium are excluded.[11]
4. That the fragment of pencil or chalk placed on the slate, and previously marked for identification, was found in all cases to have its facet slightly worn away by use, and that it rested on the spot where the writing terminated.[12]

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[9] We have no means of knowing that the witnesses on this occasion were better observers or more careful than the recorders of similar marvels at Mr. Davey's séances, and the lack of precise statement about the position of the slates under the table, the position of the writing—both questions and answers—and about the watching of the marks made for identification on the slates, suggests a lack of careful observation; while there are other indications—to some of which I have called attention—that the recorder of this séance was unaware of the difficulties of observation.

[10] As before stated there is no reason to suppose any change of slates, but the sitters cannot have known that Mr. Eglinton had none concealed, *e.g.* about his person, or his chair.

[11] See notes [6] and [8]; and for a case, with a conjurer, of a long message on the sitters' own slates *on* the table beginning "almost instantaneously," which of course is more than was obtained at the séance under consideration, see Mr. Davey's article, Sitting I, Reports 1 and 2 [*g*] pp. 421, 424.

[12] Compare Mr. Davey's article, Sitting I, Report 1, preliminary

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5. That the thumb of the hand that supported the slate was continuously visible to all the observers; and that they severally noticed that it was so.[13]
6. That Mr. Eglinton voluntarily presented his right hand to Mr. Johnson in order that he might see that he had no trick-thimble or conjuring apparatus concealed in his sleeve.[14] Nor would the presence there of any apparatus whatever have enabled him to do by trick what, in our opinion, proved conclusively the presence among us of an intelligence external to our own, acting on matter in a way that no hypothesis of conjuring will explain. "M.A. (Oxon.)."

This account has been submitted to us. We agree that the phenomena, witnessed by us, are accurately described in it, without exaggeration, and without omission of any important detail.

W. G. Johnson.
Stanhope T. Speer.

The next case was printed in *Light* for January 15, 1887, as "from a correspondent who has had large and long experience in the observation of abnormal phenomena," and who also is a graduate of the University of Oxford.

Sir,—I venture to send you an account of a séance which I had with Mr. Eglinton on Monday, December 13th, 1886, as it seems to me to present some points of special interest which deserve to be placed on record. The séance was held at 6, Nottingham-place, and I was accompanied by my wife and her sister, Miss Phillipps. We met at 12.30 p.m. in a small room at the back of the house, which was well lighted by one large window. Mr. Eglinton sat on one side of a square table, which was not covered by any cloth, and was carefully examined by all of us. At his right hand, close to the slate when it was held in position at the corner of the table, sat my wife, who has unusually good eyesight, and keenly watched all his movements. I was opposite to the medium, and next to me sat Miss Phillipps at the corner of the table opposite to my wife. Mr. Eglinton placed on the table his folding-slate with a lock, so often described in your columns, and two school-slates, which were under our observation throughout the séance, and could not by any possibility have been changed. At the commencement of the proceedings the two ladies each wrote a question on Mr. Eglinton's school-slates, which we had carefully cleaned, holding them so that no one but themselves could see what was written. Mr. Eglinton first took the slate my wife had used, and placed it in position under the corner of the table. We then joined hands: Miss Phillipps laid both her hands on my right hand: my left was in my wife's right hand: and Mr. Eglinton's

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observation 5, p. 420. Sitting VII, Report 2, postscript, p. 457. Sitting IX, Reports 1 and 2 [*f*] pp. 462, 464. Sitting XI [*c*] p. 469. Sitting XIII [*b*] p. 472. Compare also Professor Carvill Lewis's remarks, pp. 355, 356, 367, 368.

[13] Compare Mr. Davey's article, Sitting I, Report 1, preliminary observation 3, p. 420, and Sitting II, Reports 1 and 2 [*a*] pp. 426, 429. Also Professor Carvill Lewis's experience, pp. 360, 361, 365.

[14] Probably most of us have seen conjurers turn up their sleeves to prove that there is no deception.

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left hand was placed on her left: while his right hand supported the slate when it was placed in position between him and my wife. His thumb was continuously visible above the surface of the table whenever he held a slate under it.[15] Nearly an hour passed without manifestations, and at length Mr. Eglinton suggested that the slates should be changed.[16] He then placed in position the slate on which Miss Phillipps had written her question, and laid on the table near my wife the slate which he had first taken, keeping the writing downwards, so that it could not possibly be seen. Very soon after this change had been made, writing was heard by all of us; when it ceased, the slate was withdrawn, and an answer was found to my wife's question, consisting of two words, and the initials of the friend to whom the question had been addressed.[17] On examining the piece of pencil placed on the slate, and previously marked for identification, we found that on this, as on several subsequent occasions, the facet had been worn by use.[18] My wife then wrote another question underneath the same slate, and requested that the answer might be written with a piece of blue chalk which was laid upon the top of it. The slate was placed in position, and in less than three minutes an answer was written in six words with blue chalk.[19] It was then suggested by Mr. Eglinton that each of us should name a number and the colour of the chalk in which we wished it written. Miss Phillipps asked for 8 in red, I chose 49 in blue, and my wife 72 in green. Taking one of the school-slates, Mr. Eglinton placed it in position with three pieces of coloured chalk upon it, and almost immediately the numbers were written in the colours asked for.[20]

I had brought with me a small box carefully closed, the contents of which were unknown to all of us, and Miss Phillipps a sealed envelope, in which she had placed a bank-note. This note had been sent to her by post, and she had not looked at its number. The box and envelope were then laid on a slate which Mr. Eglinton held as usual, and we requested that the contents of the box and the number of the note might be given. Writing was heard at once, and the slate on being withdrawn was found to have the following sentence upon it: "A key is in the box: if you put the bank-note in the locked slate we will write the number." Miss Phillipps accordingly opened the envelope, and took out the bank-note, which was folded with the number inside, and, without unfolding it or allowing any one present to see

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[15] See references in note [13].

[16] It is not unlikely that this change gave him the sought for opportunity of reading the question.

[17] See Professor Carvill Lewis's account, pp. 355, 365. And for an answer to a known question written by a conjurer on a slate under the table, see Mr. Davey's article, Sitting I, Report 1 [*c*] and [*lmn*] pp. 421, 423. Sitting V [*b*] p. 446, XIII [*a*] p. 472.

[18] See references in note [12].

[19] The comparative rapidity with which this answer seems to have been given suggests, if the account be correct, that Mr. Eglinton may have seen the question before putting the slate under the table.

[20] I conjecture that Mr. Eglinton wrote these numbers as they were selected, and before placing the slate under the table; but there is no insuperable difficulty in supposing that he did it afterwards under the table. Compare Professor Carvill Lewis's experience, p. 362.

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it, she put it in Mr. Eglinton's folding-slate after marking it with red chalk. She then locked the slate, and keeping the key on the table near her, and in full view the whole time, she handed it to Mr. Eglinton. He and my wife then laid their left hands upon it, while with his right he placed a school-slate in position. Writing was heard at once, and on looking at it we found that the number given was 97656. Miss Phillipps then unlocked the folding-slate, and looked at the bank-note : the number was given quite correctly, and the mark in red chalk was on the note.[21]

At this point the gas was lighted, as the day was gloomy, and it was kept alight during the remainder of the séance. Besides the box above mentioned I had brought with me a folding-slate carefully fastened by gummed paper on the side opposite to the hinges : the frame of the slate fitted very closely, and the hinges were perfectly secure. I had placed in it a marked florin, and a small piece of slate pencil, and it had been lying on the table in full view during the whole of the séance. Placing his left hand on this slate Mr. Eglinton put a school-slate in position, and we asked that the number (*i.e.*, date) of the florin might be written in the folding-slate. The following sentence was then written on the school-slate :—

"We regret that, though our power is strong to-day, we have not the ability to write in the closed slate. We do not see the number of the florin clearly because there are no numerals, but we *think* it is 1876."[22]

Now the florin bore the date mdccclxxiii., and was somewhat worn, so that the number "iii" might easily be confounded with that of "vi." We then asked that the florin might be taken out of the folding-slate, which Mr. Eglinton now placed in position under the table : he soon became very much convulsed, his wrist, which was in full view, showing the strain put upon him by the veins and sinews standing out in bold relief : his breath came spasmodically, and we all felt a strong influence, when suddenly the florin was thrown out with considerable force and struck the wall three yards distant, rebounding from it and falling on the ground about two yards from the medium's chair. My wife saw the florin as it passed under Mr. Eglinton's left arm, and she made an exclamation as it flashed under the gaslight : owing to the position in which she sat she was able to see it before myself and Miss Phillipps. The florin had been marked with a P in ink, and a P scratched on the metal, and these marks were distinctly visible. On examining the slate, we could not detect the smallest aperture, and the gummed paper was intact. Before this manifestation occurred, the table was violently agitated, and was entirely raised from the ground six or eight inches.[23] I then requested that a

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[21] See references in note [5].

[22] Mr. Eglinton was doubtless aware that florins are dated in Roman numerals, and hazarded a guess at the date.

[23] We are not told whether the folding-slate in question was varnished or not, nor its size, nor the size and mode of application of the gummed paper, and therefore cannot judge of the security of the fastening. Gummed paper generally adheres very insecurely to varnished or polished wooden surfaces, and can easily be removed and replaced without injury. After reading this account I enclosed a half-crown piece in a hinged slate of my own, and fastened it along the middle of the side opposite the hinges with a piece of gummed paper two or three inches long. I then with some little trouble got out the

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number which I gave, namely, 5420, might be written in my folding-slate. Mr. Eglinton placed it on the table with his left hand upon it, and held a school-slate in position. We were not aware at the time whether my request had been complied with, but a long communication was received from the medium's guide, Ernest, which was written very rapidly, and quite filled one side of the school-slate.[24] Whilst this was being written, my wife, at Mr. Eglinton's request, placed her hand under the slate, supporting it, as he generally does;[25] and she informed us that she distinctly felt the vibration caused by the movement of the pencil. The last communication was, "We cannot do more. Good-bye." On our return home, we opened my folding-slate, and found clearly written within it the four figures 5420 which I had asked for.[26] There was no key in the box, but a small metal knife and two or three other things. The séance was in many respects of unusual interest, and there are several points on which comment might be made; but I must not trespass further on your space. I will only add that Mr. Eglinton never left the table, that he was perfectly willing to try any experiment which we suggested, and that, so far as the sitters were concerned, there was no lack of "continuous observation."

36, Bryanston-street, W. F. W. PERCIVAL.

P.S.—I have omitted to state that before placing the closed slate in position, Mr. Eglinton shook it, and *we all heard a solid object moving within it, which made a sound such as would have been* made by my marked florin.—F. W. P.

After reading the above account we are of opinion that the phenomena witnessed by us are accurately described in it, and that no important detail has been omitted.

L. M. PHILLIPPS.
ISABELLA PERCIVAL.

The Editor of *Light* adds:—

There are in this careful and precise record some points which receive an added interest and importance from recent discussions.

Mr. Percival carried with him a folding-slate secured by gummed paper. We have had opportunity of seeing how that slate was secured, and we have no hesitation in asserting that it was beyond the reach of human ingenuity

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half-crown. In doing so I somewhat disturbed one end of the gummed paper, but was able to replace it without any difficulty, so as to give it the appearance of being intact. Perhaps I could have avoided disturbing the paper had it adhered better.

[24] Probably a previously-written communication. A convenient opportunity for placing the slate containing it on the table may have occurred while the florin was being picked up and discussed. For a similar phenomenon compare Mr. Davey's article, Sitting XI [*b*] p. 469.

[25] Thus possibly setting free Mr. Eglinton's right hand, so that he could manipulate the closed slate. It would, however, be quite in accordance with the experience of other sitters to suppose that Mr. Percival had named his number earlier than is stated, in which case it may have been written under the table at the time of the removal of the florin. Compare Mr. Davey's article, Appendix, Note 8 to Sitting I, p. 487. And for a similar transposition of an important act, Notes 1 and 3 to Sitting XV, p. 494.

[26] Compare Mr. Davey's article, Sitting XIII [*c*] p. 472.

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to get at its inner surfaces without disturbing the fastening in a way that must at once have been obvious. Yet from that folding-slate a marked florin was unquestionably removed, and the gummed paper, carefully inspected by three witnesses, was found to be intact.

Moreover, within this slate, so secured, a dictated number, 5420, was written; and this fact was not verified until the slate was opened in Mr. Percival's own house. We have then these clear facts in evidence:—

1. That a slate containing a marked florin and a fragment of slate-pencil was so securely fastened by Mr. Percival before leaving home that it was physically impossible for any one by ordinary means to get at its inner surfaces.[27]
2. That Mr. Percival himself carried that slate to Mr. Eglinton's house, placed it on the table, and kept it under continuous observation throughout the whole time that he was there.[28]
3. That during the séance his marked florin was violently thrown from under the table, was picked up from the floor, examined on the spot, and identified: the fastenings of the slate remaining quite intact.
4. That a particular number, consisting of four figures, was, in obedience to Mr. Percival's request, written within this folding-slate, as verified by himself on his return home.
5. That the fastenings of the slate were intact when it was taken by Mr. Percival from Mr. Eglinton's house, and that these fastenings were not broken in his presence.

There has been much demand of late for "continuous observation" to be exercised by observers of these psychical phenomena; and there has been also much talk of the powers of conjurers to simulate these phenomena. We suggest that the narrative of Mr. Percival supplies material eminently deserving of the careful attention of those who think that professed mediumship is a variety of conjuring. Will the Society for Psychical Research offer a sufficient inducement to any conjurer who will undertake to duplicate some half-dozen of the phenomena that have been recorded in our columns;[29] who will further demonstrate that he has no abnormal psychica gifts to aid him; and, lastly, who will clearly show in every case the methods employed by him?

There are many interesting and suggestive points in Mr. Percival's narrative. It would seem that the agent, in spite of the presence of abundant

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[27] I have explained above (note [23]) my reasons for doubting this.

[28] This statement, so far as it relates to Mr. Percival's continuous observation of the hinged slate, would, if strictly true, seem inconsistent with his account of this slate being held under the table. Moreover it would scarcely be consistent with careful observation of the earlier events of the séance, some of which must in that case apparently have been described by Mr. Percival from the observation of the other sitters—*e.g.* the examining of the fragments of pencil.

[29] What is, in effect, an answer by Mr. Hodgson to this and similar suggestions, will be found in the next article, pp. 389, 390. I ought, however, to remind the reader that the Society, as a body, is not committed to the views expressed by Mr. Hodgson and myself, or by any other contributor to its *Proceedings* or *Journal*.

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"power," had difficulty in perceiving, with any exactitude, objects that were not enclosed in Mr. Eglinton's slate. This is in accordance with our own experience, and is reasonable and intelligible. The contents of the closed box, not known (be it observed) to any person present, were wrongly given, but in such a way as to suggest that the real object had been imperfectly seen.[30] The date of the florin was written in a way that suggests the same conclusion. The number of the bank-note could not be seen at all until it was transferred to the closed slate always used by the medium, when its number was at once correctly given, though the note was folded with the number inside, and was placed in the slate without being unfolded, and was marked for purpose of identification.

We confess we see no room for the exercise of the conjurer's art under circumstances such as those detailed by Mr. Percival. It will be for those who rely on that explanation to show that these phenomena can be reproduced by conjurers who demonstrably have not abnormal psychic powers to aid them.

These are favourable specimens of the results which have given Eglinton his exceptional position in the Spiritualistic world, and on the strength of which he was selected to read a paper as an accredited exponent of Spiritualistic doctrine, at a recent meeting of the London Spiritualist Alliance. And probably most persons who approach the phenomena of modern Spiritualism in a serious spirit would think that such evidence as has been quoted constitutes a certain *primâ facie* case for the conclusion which Spiritualists draw from it. It seems scarcely less rash to deny than to affirm, as a mere matter of general impression and "common-sense," that the conditions of observation were adequate. The question is one that needs most careful examination by special methods. The results of such an examination will be found in Mr. Davey's paper a little further on; but it may assist the reader if he comes to that paper with a realisation of some preliminary facts.

In the first place, then, even those who regard the conditions of observation which obtained in the above cases as adequate, must admit that they are broadly the same *in kind* as those which obtain in conjuring performances, where the opportunity for the trick is found in a temporary distraction or skilful misdirection of the observer's attention. There may be a difference of *degree*; that is to say, the points to be observed may have been easier to observe, inasmuch as they were obvious beforehand; and the attention may have been proportionately harder to distract. But however much allowance be made for this, it is impossible to regard the conditions in question as *equally* perfect with others involving no

[30] If the word "heard" were substituted for the word "seen" in this sentence, the true explanation would perhaps be suggested.

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strain of attention, and no opportunity for distraction. Such conditions would be supplied, for instance, by a hermetically-closed vessel, whose weight and volume had been accurately determined before the séance began. If writing appeared on a slip of paper enclosed in such a vessel, it would probably be admitted, by even the most convinced Spiritualist, that security had been made doubly secure. *Humanum est errare ;* and the fact that nothing at all had depended on the exercise of the experimenter's human and therefore fallible faculties during the critical time when the mysterious occurrence took place must, so far, be an improvement of the evidence. It is at least noteworthy, then, that no such feat as this has ever been recorded. So far as I know, there is no good evidence that results claimed for mediumship have ever been unmistakeably produced in a space shut off, wholly without apertures, from the external world ; or in any circumstances whatever where there would have been a difficulty in producing them by obvious natural means, apart from the question whether or not the medium was under adequate observation at the time. This is a general fact, which clearly makes the determination of the question as to adequacy of observation all-important.

In the second place, it must be remembered that the presumption, in Eglinton's case, is in favour of fraud, since he has been undoubtedly detected in the production of fraudulent phenomena. Some evidence of this has been given in the *Journal* of the Society. In one case, which occurred in 1876, the muslin and beard worn by the so-called materialised spirit, and from which pieces were cut, were subsequently found in Eglinton's portmanteau. The details are given in the *Journal* for June and November, 1886, as gathered from the *Medium and Daybreak* for November 1 and 15, 1878, and the *Spiritualist* for February 14 and March 21, 1879. In another case, in 1882, Eglinton co-operated with the notorious Madame Blavatsky in producing the appearance of the occult transmission of a letter from the ship *Vega* in mid ocean to Calcutta. The details will be found in *Hints on Esoteric Theosophy*, and in the *Report on Phenomena connected with Theosophy* in the *Proceedings* of the S.P.R., Vol. III., pp. 254-256 ; and an abstract of the case appeared in the *Journal* for June, 1886, pp. 283-287. In 1880, Mr. Eglinton was again detected—as the evidence to be found in *Psychische Studien* for June and July, 1880, seems clearly to show—in himself producing the movements of objects, &c., at a dark séance at Munich ; though Spiritualists allege certain special reasons, which will be found in the numbers of *Psychische Studien* referred to, for doubting the validity of this "exposure."

The above facts seem conclusive as to Eglinton's character during a considerable period of his career ; but they have been objected to as

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irrelevant to the more recent phenomena of slate-writing, on the ground that in respect of these no accounts of detected fraud have hitherto been published. It might be replied that people who detect fraud of the kind are not, as a rule, disposed instantly to rush into print. They gain nothing by doing so; while they are likely to encounter a certain amount of ridicule for having even given the alleged phenomena a trial, to say nothing of the risk of an action for libel. It is within our knowledge that more than one case has occurred of the same kind as that of which the following account has been placed in our hands by a lady who prefers that her name should not appear.

"*February 5th*, 1887.

"I will give, as far as I can remember, an account of our séance with Mr. Eglinton. My friend, Mr. Godfrey Webb, made an appointment with him, giving his name, but not my name. When we arrived at Mr. Eglinton's house he made us sit round a table, which had no cover, and was close to a looking-glass, which reflected everything that was done. He placed me between himself and Mr. Webb, and we held each other's hands while he placed a slate under the table with his left hand. After a little while we heard a scratching from the slate, and when he produced it there were one or two words written on it. This process was repeated several times, but we all thought it very unsatisfactory. Mr. Eglinton remarked the spirit was not very willing, and that we had better talk, as it would help it to manifest itself. I must add that while he was holding the slate under the table, and we heard the scratching, he seemed suffering from a kind of convulsion. His face was livid and contorted, and the perspiration was running down it; his breathing was also hard. He asked me to think of somebody from whom I should wish to get a message, which I did; and then a few words were again scratched on the slate, but with no particular meaning—which I told him. He then said, 'This is not at all satisfactory; let us change places.' I moved to where Mr. Webb was, and he took my place. At the same time Mr. Eglinton said, 'We must also change the slates'; and while he was doing so I distinctly saw him run his hand over a slate; his hand was clenched. I asked him to let me see the writing on the slate, to which he said, 'Oh, there is nothing.' I said, 'Yes, there is; please let me see it.' He showed it to me, and I saw the beginning of a sentence. He then said, 'I was only scribbling.' But as he had no pencil in his hand, it must have been with a small pencil lead, which he placed in his closed hand (not his fingers), and which I could not see, as it was too small. He used the same kind of small lead for the slates (which he placed between the two slates before he locked them up). After this incident he became angry, and said, 'It is of no use to try, as you are incredulous and suspicious the spirit will not come,' and we then left him."

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Mr. Godfrey's Webb's general view is that mediums are ready to "supplement any genuine power they may possess by quite ordinary tricks"; and while unable to attribute to trickery some of the phenomena which he has witnessed in Eglinton's presence, he says, "I do not wish to deny that —— detected Mr. Eglinton, on the occasion you refer to, writing words on a slate; and I rejoiced at her astuteness at the time."

It is impossible in this case to doubt the conviction of both sitters at the time that they had detected trickery, though owing to the long interval (nearly 3 years) between the sitting and the recording of it, stress ought not to be laid on the details. This objection does not apply to the careful record of Professor Carvill Lewis, to which it is now high time that the reader should be introduced.

ACCOUNT FROM PROFESSOR H. CARVILL LEWIS.

Numerous and marvellous statements have recently appeared in various publications concerning the manifestations produced at the séances of the famous medium Mr. W. Eglinton; and in the Spiritualist paper, *Light*, for October 16th, 1886, an immense mass of testimony, by about one hundred different observers, many of them of high intellectual ability and social position, is given to show that the slate-writing and accompanying phenomena occurring at his séances are not due to any deliberate action on the part of the medium, but to some unknown force, or, as one writer puts it, "conclusively establish the existence of some objective, intelligent force, capable of acting externally to the medium, and in contravention of the recognised laws of matter."* These various statements,† suggesting a new field of

* *Light*, No. 302, p. 488.

† Professors N. Wagner, A. Boutlerof, and A. Dobroslavin, of the University of St. Petersburg, concluded an account of a séance with Mr. Eglinton as follows:—"After witnessing the experiments above described we have come to the conclusion: (1) That the mediumistic autographic-writing is genuine, and cannot be referred to the domain of prestidigitation, or explained by the help only of generally-recognised mechanical, physical, or chemical laws. (2) That it can manifest an intelligence of its own not depending to a certain degree upon that of those who assist at the séances; and (3) This phenomenon, by its objectivity, especially affords facility for observation, and deserves full attention and investigation from competent persons and institutions." (*Journal* of the S.P.R., Vol. II., p. 331.) The President of the London Spiritualist Alliance says:—"It is to me wholly inconceivable that anyone can entertain doubt as to the genuineness of those phenomena."

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scientific interest, induced me to visit Mr. Eglinton for purposes of investigation. I have endeavoured to make the following account as accurate as possible, having written it immediately afterwards from full notes taken during the séances.

First Séance.

Having called upon Mr. Eglinton the previous evening and made an appointment, I visited him at noon on November 16th, and was ushered into his study. A common wooden table, which had apparently seen rough usage and was covered by a tablecloth, stood in the middle of the room, which was well lighted. Mr. Eglinton expressed disappointment that I had not brought a second person with me, as he had requested. He said that it might be difficult to get results with only one. I had, however, purposely come alone, prepared to observe carefully and without prejudice.

Mr. Eglinton asked me to write one question on the slate which I had brought with me, and another question on one of his own slates. He left the room while I wrote the questions, at my request, and afforded me an opportunity to satisfy myself that the slate and table were ordinary ones, and in no way prepared, as I was convinced after careful examination. He entered when I called, and seated himself near one corner of the table, placing me on the other side of the same corner, the cloth having been removed and a short leaf put up. He took his own slate, on the under side of which was my question, and putting upon it a minute fragment of slate-pencil, placed it *under the table*, holding it against the under side of the table-leaf with the four fingers of his right hand, his thumb alone being visible. With his left hand he stretched across the corner and held my two hands. The conditions were such that there was no possibility of my seeing the slate or his four fingers. I could see his wrist, however, above, and his knees and feet below the table, and could detect, I think, any motion of his fingers by the movement of the tendons of the wrist.

We sat in this position for three-quarters of an hour, I paying strict attention. Nothing whatever was done. As a result of the constrained position in which I was placed, leaning on my right arm, my hand and arm then began to tremble slightly. Mr. Eglinton, perceiving this, asked if I did not feel a peculiar current in my arm. I assented, but in order to determine whether this was due to any "magnetic" or other force proceeding either to or from the medium, or was simply a natural tremor, I let go of his hand and leaned in the same position, when I again felt the same tremor, and on finding that it ceased so soon as I changed my position, even when I held Mr. Eglinton's hand, I was convinced that it was merely nervous and subjective.

We went on with the séance, Mr. Eglinton encouraging conversa-

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tion. He said that as the manifestations were entirely beyond his own control, it was best to think of other matters. He favoured me with an extraordinary explanation of hypnotism, and recounted some of his exploits in Spiritualism.* He repeatedly asserted that his own mind and will had no effect whatever upon matter, and that the phenomena came from without. He was quite correct in denying that "Thought-transference" had any part in the results, as one of our experiments afterwards proved. So long as I kept my eye on his hand and the edge of the slate nothing occurred. He attempted several times now, unsuccessfully, to divert my attention.

It now occurred to me that unless I purposely diverted my attention from him, the séance might be a failure. I therefore looked away from him toward the window on my left, hoping that now the spirits would appear. They immediately did so, as I both felt through Mr. Eglinton's hand held in mine, and also partially saw. The slate, or one end of it, seemed to be lowered beneath the table, and I saw the medium *look down intently* toward his knees and in the direction of the slate. I now quickly turned back my head, when the slate was brought up against the table with a sharp rap. Mr. Eglinton seemed confused, and, complaining of the weight of the slate and the heat of the room, put the slate on top of the table and diverted the conversation.

I suggested that we try the other slate—a small, light, American slate of my own. He put this under the table in the same way, and again I paid strict attention. There was no result. Having asked me as to the nature of my questions, stating that the unknown powers whose coming we awaited were not omniscient, I answered that I had prepared three questions. The first (on his large slate) was one which a spirit would know, but he could not possibly know; the second (on my small slate) was one which a spirit would not know, but he might know; and the third (in a sealed envelope) was one which both he and the spirits knew perfectly well. The questions were as follows:—The first, "Where is my wife?" Mr. Eglinton could not know, as I came under an assumed name, but a spirit who knew me, or could read my thoughts, or could see as far as Wales would have known. The second, "Define Idocrase," a spirit would not know unless he be a mineralogist, but Mr. Eglinton could readily know by consulting a dictionary. The third, "Multiply two by two," would be evident to both spirit and medium provided they could get at the question in the sealed envelope.

We went on with the séance, and again I found that I must divert my attention if results were to be had. I suggested trying the large

* One of these was the conversion of Mr. Kellar, the conjurer, to Spiritualism. So far is this from being the case, that Mr. Kellar, whom I know personally, is nightly offering in America £20 to anyone who will produce Spiritualistic phenomena that he cannot imitate by conjuring.

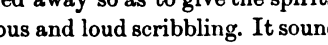
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slate once more, and now, before he could get tired holding it, I deliberately looked away. This time, as I turned back quickly, he dropped the slate upon the floor, question side uppermost and nearest to him, as if the slate had been revolved. He excused himself as before, complaining of the weight of the slate. Again we tried the small slate, and again no result so long as I watched closely.

I now tried a different method. Agreeing with him that it was best to divert my attention, I proposed reading a book while he held the slate.* He brought me a book, which I placed on the table to my right, and, turning my head partly away from him, began reading. Under these conditions the "spirits" immediately and without a moment's hesitation set to work. Mr. Eglinton began to breathe loudly, and to move uneasily, and in such a way that I judged he was altering the position of the slate. About this time Mr. Eglinton *left the room* for several minutes.

Continuing the séance under the conditions just described, I soon heard, notwithstanding his heavy breathing, sighing, and jerking, that writing was being done with a pencil on the slate. Unnoticed by him, I now slightly turned my head, so that I could see his wrist. I distinctly saw the *movement of the e ntral tendon in his wrist*, corresponding to that made by his middle finger in the act of writing. Each movement of the tendon was simultaneously accompanied by the sound of a scratch on the slate.

He now pulled out the slate and showed me on its upper side the answer to my question, "Define Idocrase." There in hasty, yet distinct characters was written, "*It consists of Silica, Albumina, and Lime.*" The true answer should have been "It consists of Silica, *Alumina*, and Lime." As will be stated more fully at the close of this account, the answer is precisely such as might be obtained by a hasty glance at the definition in a dictionary. Mr. Eglinton was careful to draw my attention to the fact that one corner of the slate-pencil was worn down.

We now tried the large slate, on which was the question, "Where is my wife?" under the same conditions, *i.e.*, that of *non-attention*. I again read a book, turning my head away from him, though not so far but that I could see by a side glance. Again the spirits promptly returned, and again I was conscious by indicative motions that the slate was being manipulated. He then said aloud as if to a spirit, "Shall we have an answer?" I looked away so as to give the spirits a chance, and immediately heard a vigorous and loud scribbling. It sounded like a series of sharp zigzags,—thus, "." I was sur-

* It was the small slate with the question which only a mineralogical spirit could answer.

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prised to find only the short word "No," written in a round hand, when the slate, immediately afterwards, was shown me, since the scribbling I heard certainly lasted much longer than it would have taken to write this word. Again he asked me to examine the fragment of chalk; but I found it more worn down than necessary for the short answer. In order to test this, I took another sharp corner of the same pencil and wrote the word "No"; but found that in order to wear down the corner to an equal degree it was necessary to write the word twice, or to make a zigzag figure of the same length as the sound had indicated. It occurred to me that the wearing down of the pencil fragment was a non-essential portion of the manifestation, and that the real writing was done with another pencil.

It appearing that neither Mr. Eglinton nor the spirits were able to answer a question which the former did not know, I proposed trying the question in the closed envelope, the answer to which should be easy to both powers. Mr. Eglinton declined to attempt this, giving as his reason that as I knew the question, it might be set down as "thought-reading" if an answer was obtained. He proposed that I should write in his own folding-slate,—a handsome affair in hard wood frame, and with a brass lock, being the same, as he informed me, which Mr. Gladstone had used. I had no great fancy for working with specially prepared apparatus, and suggested dispensing with all slates, and asking the unknown powers to write upon a piece of paper in my pocket. This was declined on the ground that just as a chemical reaction can be obtained only by special methods and apparatus, so a manifestation of these unknown powers requires special conditions which are learned by experience.

I then followed his suggestion and agreed to simply write a number on a piece of paper and put it inside of his folding-slate. In order to preclude the possibility of "thought-transference," I wrote a large series of numbers on different slips of paper, and then throwing them into a hat chose one of them, and, without looking at what was written, folded it in four, and, after pressing it tightly, put it in his slate together with a fragment of red chalk. The slate was closed with a spring lock, and after the key was handed to me, the slate was held under the table as before. In order to obtain the necessary condition of non-attention, I busied myself in writing notes for this account, my left hand being held in his left. I listened intently, however, and also felt for any indications. Although I could see nothing, I was again conscious by varied and delicate motions and sounds that some power was opening the slate, lifting up the paper, unfolding it, refolding it, and replacing it. I distinctly heard the rustling sound of the paper being unfolded and refolded. Meanwhile, Mr. Eglinton breathed heavily, and jerked to and from the table as before. As the slate had a spring

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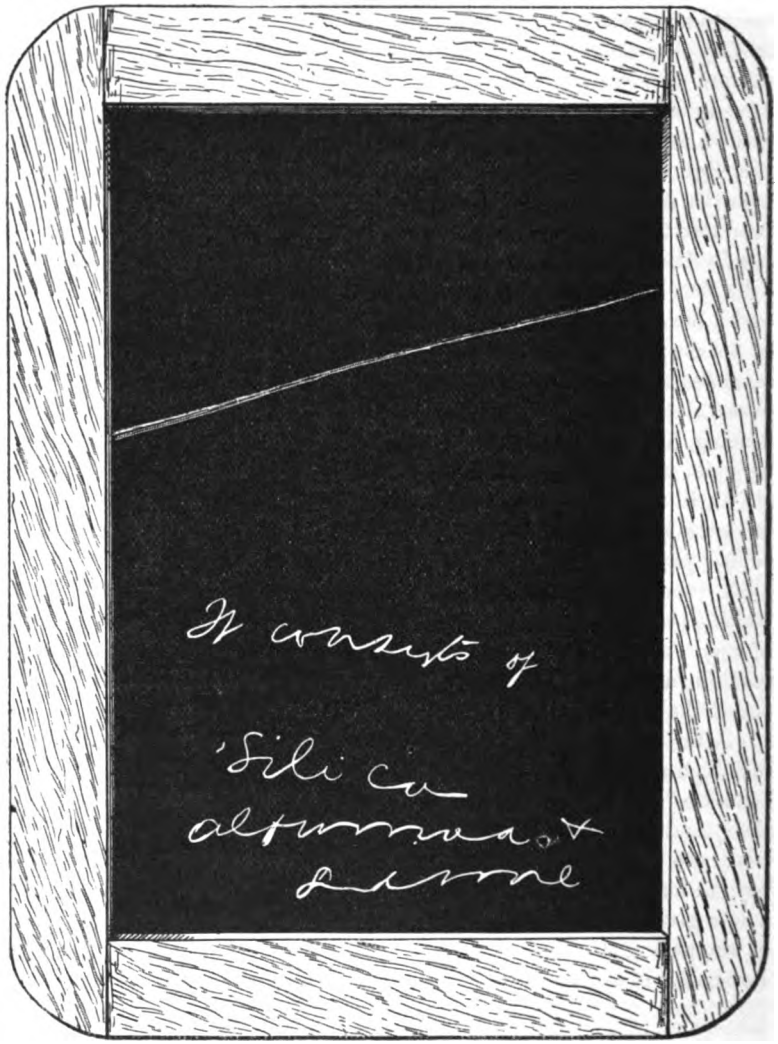
lock and shut with a snap, I wondered if this could be accomplished without my hearing the sharp sound. Mr. Eglinton now gave a sudden and strong sneeze, and at the same moment the slate was clapped against the under side of the table. Mr. Eglinton had showed no signs of a cold until this moment.

He now said to me, "I feel the influence strongly," and placing his folding-slate on the top of the table continued, "Will you ask if we can get an answer?" As the answer had, as I was convinced, been already written, this request seemed to me superfluous, but nevertheless, in as grave a voice as the occasion seemed to require, I did so. Mr. Eglinton having put an ordinary slate with a bit of chalk upon it beneath the table, and I having looked away, in a few moments he produced it again with the words, "We will try," written in the same handwriting I had already seen. *Both slates now being on top of the table*, but his right hand being beneath it, Mr. Eglinton said "Listen," and I heard the sound of writing beneath the table, as of the scratching of a slate-pencil against its under side. This procedure may have been intended to make me think that the spirits were now writing in the closed slate lying on top of the table. It would have been more convincing, however, had the hand of the medium been in sight. I hardly thought, moreover, that the soft red chalk in the slate would make the shrill sound that I heard. Having been asked to open the slate with the key I had kept, I found the figure 8, the same as that on the folded paper, written on the slate in red chalk. It was thus proved that "thought-transference" was not the agent which produced the writing; and as yet the evidence was not convincing as to the agency of any "objective, intelligent force capable of acting externally to the medium, and in contravention of the recognised laws of matter." This ended the séance, and, having paid my guinea, I departed.

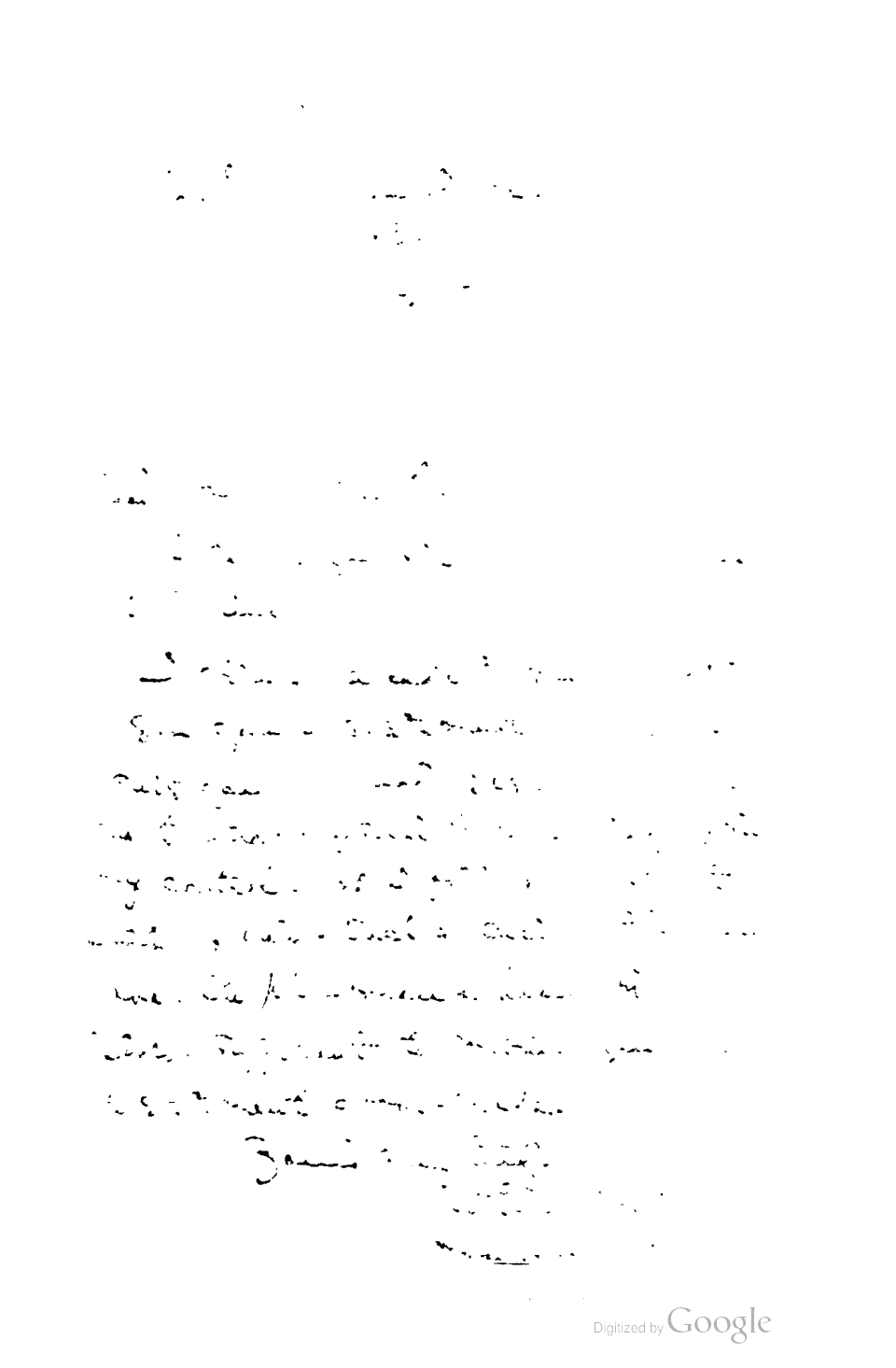
After reaching home, I found that I had inadvertently left with Mr. Eglinton my small American slate, with the question "Define Idocrase," and its answer. I therefore sent him a note asking for the slate, and also for a statement that the phenomena I had witnessed were not executed by himself, but were due to extra-physical forces beyond his control. The next day the slate was returned, and with it a note giving me the statement requested. This gave me an opportunity of comparing the handwriting on the slate with that of the note. Facsimiles of the two are here appended (Figs. 1 and 2).

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FIG. 1.

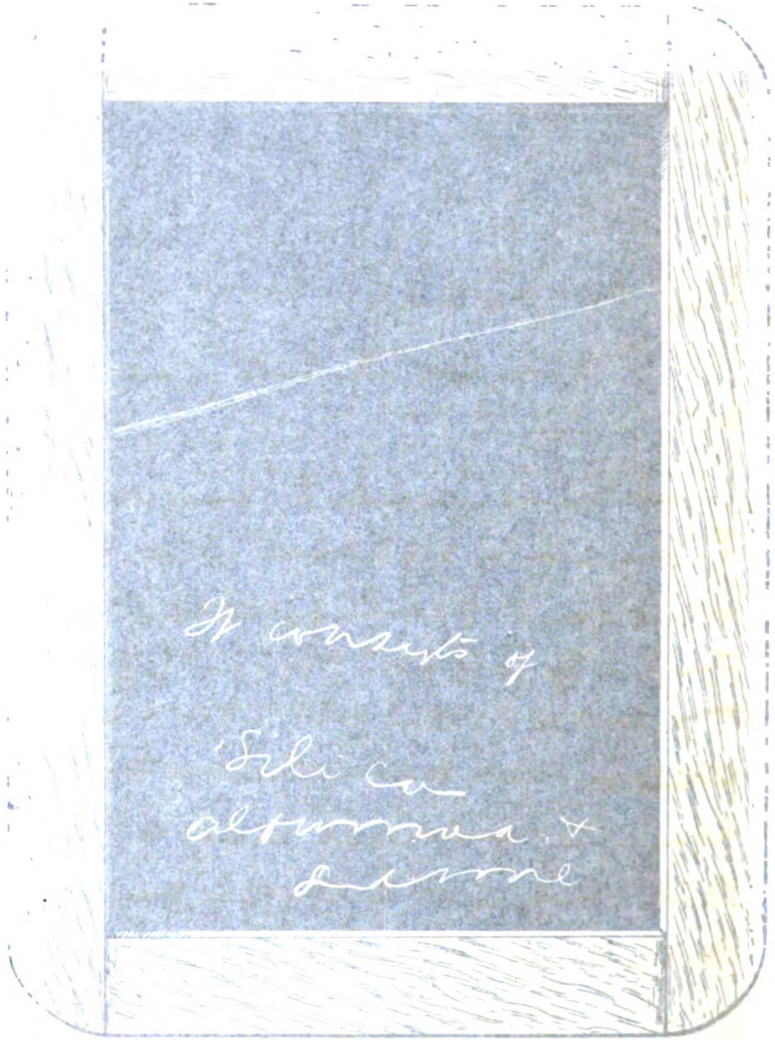


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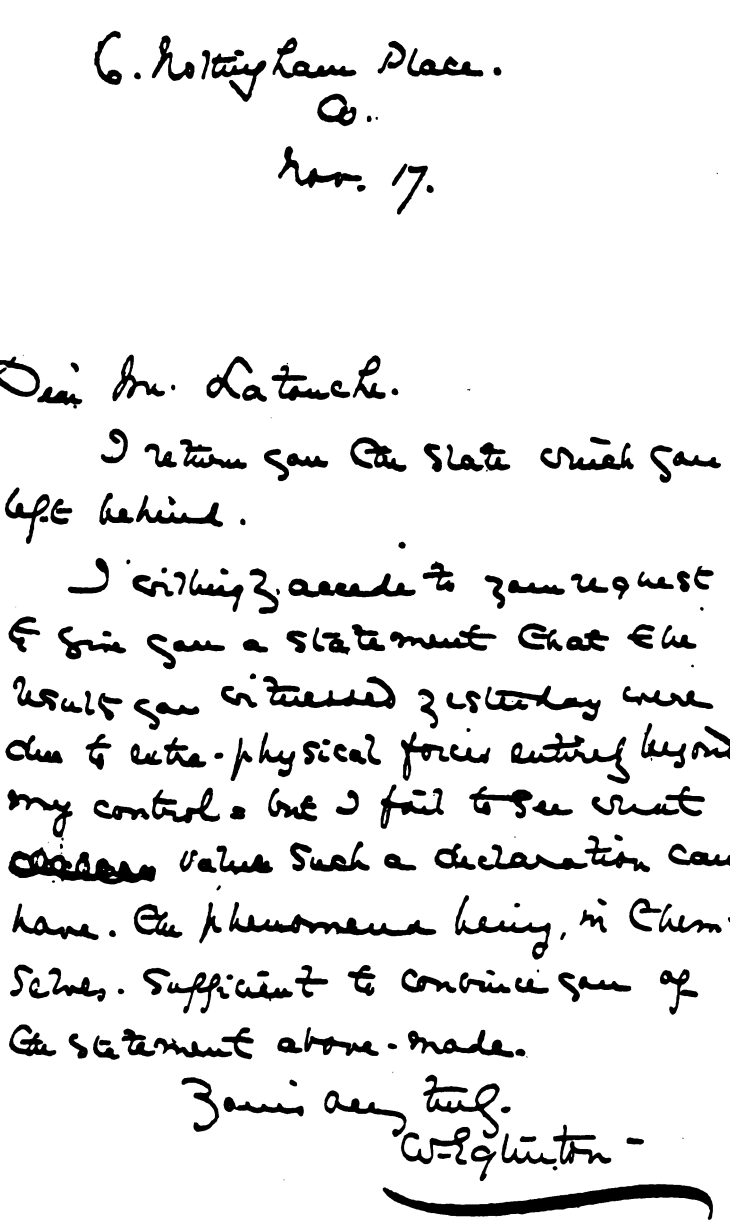
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Fig. 1.



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FIG. 2.


6. Notting Ham Place.
W.
Nov. 17.

Dear Mr. Latouche.

I return you the slate which you left behind.

I willingly accede to your request & give you a statement that the result you witnessed yesterday were due to extra-physical forces entirely beyond my control: but I fail to see what value such a declaration can have. The phenomena being, in themselves, sufficient to convince you of the statement above-made.

Yours very truly.
W. Eglinton.

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Although at first sight no great similarity is apparent, a careful examination shows many striking points of coincidence.* A difference of style was to be expected; but when we find the same round free hand, the same characteristic backhand curl at the end of the words, and the same peculiarities in the shaping of the letters, both capitals and small, it is difficult to escape from the conclusion that the writing on the slate and in the letter were both made by the same hand. The irregular spacing on the slate indicates that it was done without being looked at. It is a suggestive fact that the first line of the answer was at a distance from the lower edge of the slate equal to that to which the middle finger could reach without shifting the slate, while the thumb remained visible above the table. The other answers produced during the séance were similarly spaced. Careful examination of the slate also showed finger marks extending around it in a manner to indicate that it had been horizontally revolved.

Finally, as to the answer itself, "It consists of Silica Albumina and Lime," we find on reference to Webster's Dictionary, in the definition of the word idocrase the words, "It consists of Silica, Alumina and Lime." Mr. Eglinton had ample opportunity to consult the dictionary, since he left the room twice during the séance, one of the times being just previous to the production of the above answer. Either he had taken too hasty a glance at the dictionary, or his memory had failed him in substituting *albumina* for alumina. We can hardly suppose a "spirit" to have made this error, or to have imitated the dictionary definition so closely.

Although I am aware of some seven methods of mediumistic slate-writing, the so-called "psychography," only two of them, so far as I could judge, were employed at this séance; and the main condition necessary for success was that of non-attention on the part of the visitor.

Second Séance.

A second visit was made to Mr. Eglinton on the morning of December 16th, and, observing now the condition necessary for success, I had a very satisfactory séance. I took with me two ordinary school-slates, purchased on the way. We sat down at the same table, the cloth having been removed, and proceeded at once to business.

We began with the experiment of the book and the slate, which I had seen several times described.† Mr. Eglinton having left the room,

* Note the initial "*S*" and final "*s*," the capital "*L*," the final "*a*'s" and "*e*'s," the "*of*," the "*i*'s," the "*c*'s," &c.

† See the *Journal* of the S.P.R., Vol. II., pp. 295, 301, 303, 307, 308, 317, 318, 325, 330, and 331. It is also described in *Light*, October 16th, 1886, by Mr. Wedgwood (p. 463), Mr. Farmer and Mr. Keulemans (p. 465), Miss Symons (p. 467), "G. J. R." (p. 470), Mr. Wilson (p. 473), Professors Wagner,

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I took down a book (*The Occult World*) at random from his bookcase, and, without opening it, wrote on one of my slates as follows :— "Page 27, line 13. Word 2 red, 3 white, 4 blue." I intended by this that the second word of line 13, page 27, should be written on the slate in red chalk, the third word of the same line in white chalk, and the fourth word in blue. Having turned the slate upside down, I called to Mr. Eglinton to come in. He entered, and having put three bits of chalk, red, white, and blue, with the book, on the slate, he put the whole under the table, and, taking my left hand in his left, began the séance. My right hand being free I wrote the following notes as the séance proceeded :—

Mr. Eglinton places the book on the slate with the *open side toward him.** His thumb is not visible, his *whole hand being under the table.* I purposely do not look directly at him, but busy myself with these notes. The moment I begin writing, the manifestations begin. He breathes heavily, sighs, moves and rattles the slate, puts his right arm *far below the table*, withdraws his body slightly backward, and then *looks downward intently*, in the direction of the slate. I suddenly look up, and immediately he also looks up with a very distressed expression of countenance. I look down at my notes, and again he looks down intently and for some time, apparently at what he is holding beneath the table. From the position of his arm, I judge that by this time he has lowered the slate to perhaps eight inches below the table, even his elbow being sunk out of sight. He now jerks the slate several times, breathing loudly. I look up again, when he says that he is tired, and brings up the book and slate, laying them on the table. The pencils having been partly jerked off the slate, fresh bits are put alongside the book, and the whole is again placed beneath the table.

I continue my note-taking, and immediately loud breathing and shuddering begin on the part of Mr. Eglinton, who also assumes a most woe-begone expression. He pushes his arm with the slate far under the table, and then bringing it back towards him again *looks down* (as if to read the book). He asks me if I am not conscious of a force going out of me, and a feeling as if his hand was a battery. I am conscious of nothing of the kind. Now he brings the slate up against the under-side of the table, and puts his thumb above, being the same position assumed at the first séance, when writing was being produced on the slate. I now hear the sound of

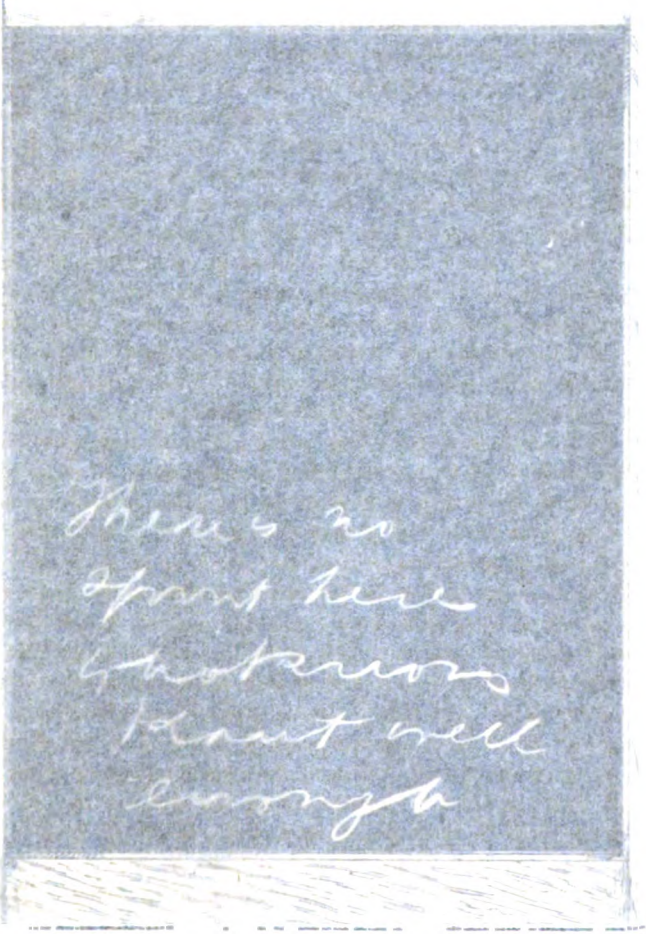
Boutlerof, and Dobroslavin of St. Petersburg (p. 474), "M.A. (Oxon.)" (p. 475), Mr. I'Anson (p. 500), all of whom regard it as conclusive evidence of the genuineness of "psychography."

* This appears to have been also the position of the book in the experiments described in *Light.* (l.c.)

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* *Journal of the Society for Psychical Research*, June, 1886, p. 324, and *Light*, No. 302, p. 482.

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* Compare *here* on slate with *were* in letter ; *there* on slate with *the* in letter ; *who* on slate with *which* and *what* in letter, &c.

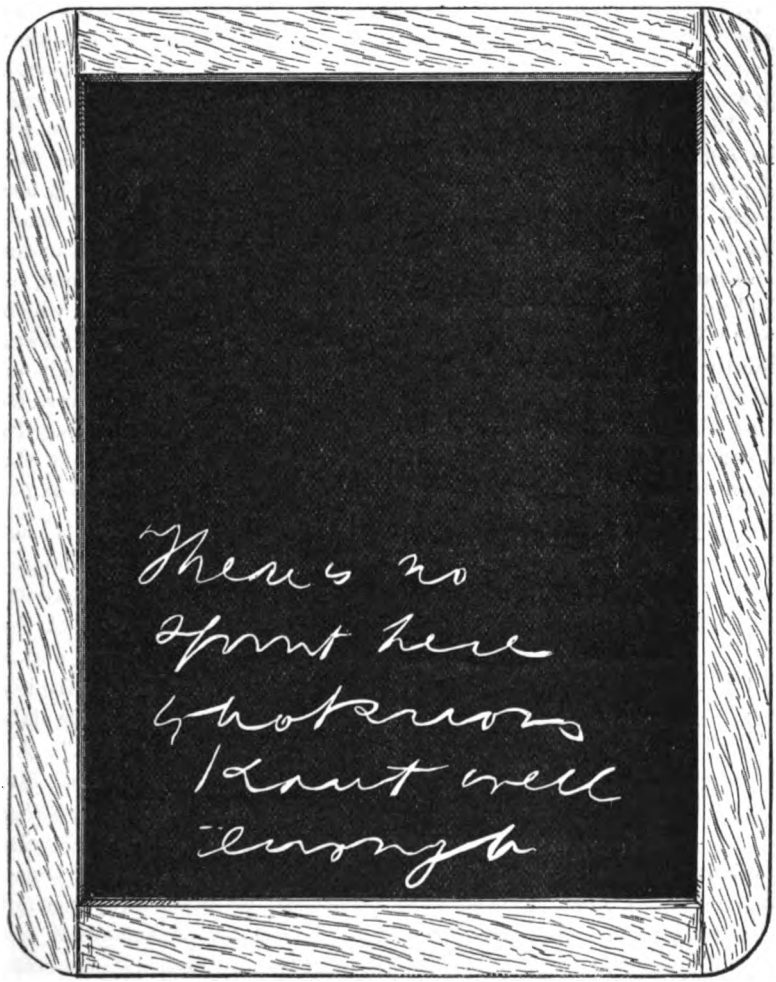
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* *Journal of the Society for Psychical Research*, June, 1886, p. 324, and *Light*, No. 302, p. 482.

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enough." This was written in the characteristic handwriting, in the usual position on the upper side of the slate at the end furthest from him. It began at about the distance from the end of the slate to which his fingers could reach—some four inches from the edge. A facsimile of this answer is appended (Fig. 3), by which it will appear that the handwriting has many characteristics identical with those of former slate-writing, and not essentially disguised from the handwriting in his letter to me.*

FIG. 3.

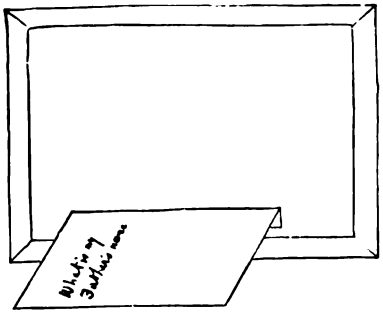


* Compare *here* on slate with *were* in letter; *there* on slate with *the* in letter; *who* on slate with *which* and *what* in letter, &c.

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Mr. Eglinton now intimated that the séance was at an end. I begged that it might be continued, as I was leaving London for the Continent the next day. He said that it was quite impossible to get further manifestations since the "power was exhausted," and explained that this exhaustion of power was quite independent of his volition, and occurred at various times, sometimes at the very beginning of a séance. The thought occurred to me that, notwithstanding this "exhaustion of power," the spirits would perhaps continue to work if some further inducement was offered to them. I therefore proposed to Mr. Eglinton a double fee if the séance was prolonged. The medium yielded without hesitation, and the spirits continued to give excellent manifestations. It was interesting to learn that these "unknown powers" are not removed from the influence of pecuniary inducements.

We proceeded to the fourth experiment. It was one which would be difficult to perform without detection, and, moreover, since Mr. Eglinton was ignorant of the answer to the question, a direct one could not be given (unless by the agency of "spirits" or other "intelligent forces"). As I had come to Mr. Eglinton at first under an assumed name, and at the present séance under my proper one, he had no means of knowing the correct answer to the question, which was "What is my father's name?" I wrote this question somewhat faintly with a lead pencil on a sheet of note-paper, the left side of which was gummed to the left edge of a slate and then folded down so that the question should be on the under side next to the slate. In order to see the question, Mr. Eglinton would have to lower the slate sufficiently to turn over the sheet of note-paper, thus :—



an operation which I could not fail to observe. It was arranged that the answer should be written in pencil on the other side of the same sheet of note-paper, and a minute bit of lead pencil, freshly sharpened, was laid on the slate for the use of the "spirits." All being thus arranged, and Mr. Eglinton having sharpened *another pencil*, he put the slate under the table in the usual position, held my left hand in his left, and I began again writing these notes, my head being partly turned away, yet not so far but that I could see his motions. I also moved somewhat out from the table so that I could watch his legs.

The conditions being, as he supposes, favourable, he proceeds to lower the slate so that his whole hand and arm up to the elbow dis-

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appear from view. I now distinctly hear the rustling of the paper as it is being folded back. This being done, Mr. Eglinton looks down intently towards his knees, apparently endeavouring to read my question, which I had purposely written in a small, light hand. Here he drops the slate upon the floor. Having restored it to its original position, the same operation is repeated, and again he *stoops to look at the question*, this time *bringing his head within a few inches of the table.* His *left leg now slowly begins to rise* and soon entirely disappears from my view, as though to support the slate upon his knee. His arm and whole hand are at the same time under the table. I now hear writing going on at some length. On my turning to look at him the sound of writing ceases and the leg is let down. Again I look away, when writing recommences, his thumb now being visible and resting on the table. I watch his wrist and distinctly see the tendons move as he is in the act of writing.

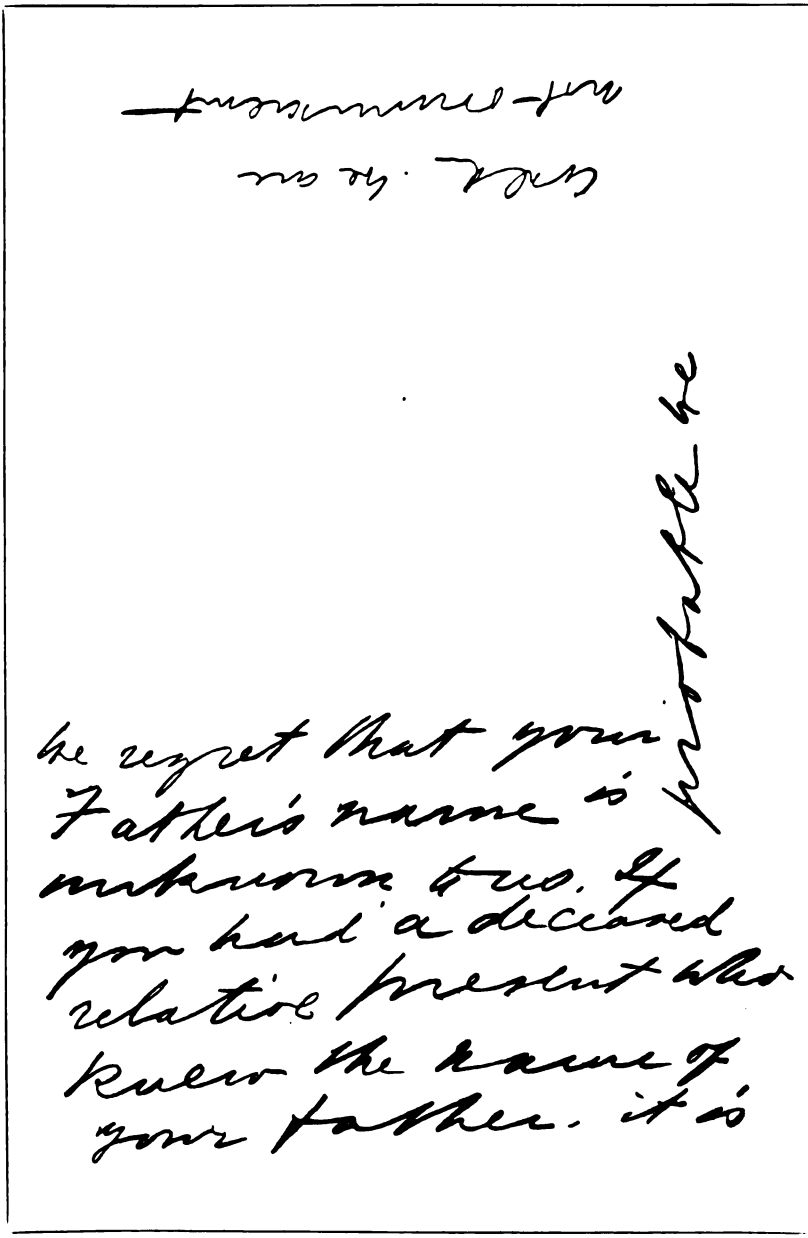
Mr. Eglinton seemed, therefore, to have written the last part of the message while the slate was pressed against the under side of the table, in the usual way; but before I interrupted him he had apparently been writing upon the slate while it lay upon his knee. As will be shown presently, the character of the writing leads to the same conclusion. The following answer now appeared, written as requested on the paper :—"We regret that your father's name is unknown to us. If you had a deceased relative present who knew the name of your father it is probable we could. We are not omniscient."

As in every other experiment in both séances the answer indicated *no superior intelligence to that of Eglinton.* It was interesting to find two distinct styles of handwriting upon the paper, a facsimile of which is here given [see Fig. 4, p. 366], corresponding to the two positions in which he wrote.

From the beginning of the answer to the word "could," the writing is angular, the words and lines well spaced, the i's properly dotted, and there is every indication that it was written with the aid of the eye. The words "probable we," written at right angles to the preceding portion of the answer after the slate had been turned, fill a vacant space at the end of the first two lines in a manner that clearly proves the use of eyesight. But the last part of the answer, on the other end of the slate, is in quite a different hand and was written with a fresh pencil point. It is irregular, the lines are no longer straight, the i's are not dotted, m's are twice used instead of n's, and it was evidently written without the aid of the eye. A freshly pointed pencil, or at least a new corner, must have been used to make the thin lines here, which differ markedly from the dull heavy lines of the preceding portion. This last portion shows more clearly the characteristic handwriting produced in former experiments, and it is suggested by

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FIG. 4.



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the writing alone that the last five words were written while the slate was held against the under side of the table, and the preceding portion while it rested on his knee in sight. The handwriting of the whole answer is clearly identical with that produced in the last experiment, as a direct comparison of Figs. 3 and 4 renders evident.

As Mr. Eglinton on this occasion did *not* ask me to examine the pencil point, placed on the slate for the use of the spirits, but on the other hand was about to throw it away, I thought this an advantageous opportunity to examine it. I therefore quickly seized and pocketed it. It proved to be perfectly sharp and unworn, and identical in size and condition with what it was when placed on the slate before the experiment. It had certainly not been used for the production of the answer. The other short pencil which I had seen Mr. Eglinton sharpen just before the experiment was not shown to me, but it is not difficult to imagine its purpose. He assured me, however, that the writing was produced by some external agency.

Mr. Eglinton now suggested telling me the number of matches in a matchbox that he held in his hand. Having seen a description of this operation, I declined participating in it. I also declined having him tell me the number of a bank-note that I was to put in his famous folding-slate, divining his method. I asked, however, for one more trial with his folding-slate, on condition that he left the room for a few minutes, to which he assented.

While he was out of the room, I wrote a question upon a piece of paper and put it in the closed slate, which I not only locked, putting the key in my pocket, but fastened together by glueing a postage-stamp across the end, so that it would be impossible to open it without considerable force, and probably the use of two hands. Having called in Mr. Eglinton and got the slate under the table without his noticing the stamp, which was on the edge of the slate farthest from him, I went on with my writing, leaving him and the spirits to open the slate if they could. I heard a slight tinkling sound as if he were using a duplicate key. After several minutes (in which Mr. Eglinton had probably been vainly endeavouring to open the slate), he brought it up, still with the stamp upon it, and laid it upon the table. Then putting a common slate below in the usual way, his whole hand being beneath the table, he asked the spirits, "Can we get an answer?" After putting the slate for a moment on top of the table, and then again placing it below, the sound of writing was heard and immediately afterwards an answer appeared upon the simple slate in his hand, in the usual position, reading "No. We have done all that we can for you."*

* Had Mr. Eglinton been aware that the slate had been fastened with a postage stamp, he might have removed it—to remove adhesive paper from a

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The question that I had placed in the folding-slate remained unanswered and untouched, and I was forced to conclude that a sealed slate as well as a sealed envelope, was proof against the skill of both Mr. Eglinton and the "spirits." Thus ended the second séance.

Altogether nine distinct experiments were performed or attempted. In reviewing these, it is possible to summarize the principal facts observed as follows:—

1. Writing was never obtained on any of the slates unless they had been held for some time under the table.
2. In every case where answers were obtained, Mr. Eglinton looked down at the slate containing the question long enough to read it.
3. Direct answers were given only in cases where Mr. Eglinton, after seeing the question, either knew the answer already or obtained it by consulting a dictionary. In the last case he left the room for several minutes before an answer was given.
4. Whenever the question was unseen by Mr. Eglinton it was unseen by the "spirits," and when the answer was unknown to him it was unknown to the "spirits," as the written answers in each case proved. In no case was any intelligence other than that of Mr. Eglinton indicated in the answers.
5. The movement of the tendons in Mr. Eglinton's wrist when the sound of writing was heard, the rustling of the paper as it was being unfolded and refolded, and the motion of the slate felt as it was tilted beneath a tumbler, are phenomena perceived by the senses to be in accord with the ordinary laws of nature as applied to the action of Mr. Eglinton's right hand.
6. The fragments of chalk or pencil placed on the slate do not appear to be necessary for the production of an answer. As in one case the chalk was worn down too much, and in another case the pencil was not worn down at all, notwithstanding a long answer, it appears that the abrasion on them often exhibited was purposely made for other reasons.
7. The scratching sound often heard beneath the table like the sound of writing, was certainly made by Mr. Eglinton, as the corre-

polished wooden surface being perfectly easy—and, after opening the slate, replaced the stamp as before. But being entirely unaware of the cause of the failure of the slate to fall open as usual by its own weight, he was unable to do anything with it. I secretly removed the stamp before returning the slate to Mr. Eglinton, who perhaps imagined that I had tampered with the lock. It is needless to remark that genuine "spirits" would hardly have been deterred by a postage stamp, nor would they afterwards have given a totally irrelevant answer. The question "By whose hand is the answer to this question written?" can hardly be answered by the sentence, "No. We have done all that we can for you."

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sponding motion of the tendons of his wrist proved. This scratching sound usually immediately preceded the exhibition of the answer, but there is no reason to suppose that it always had any connection with the actual writing upon the slate. On the contrary, in one case the scratching lasted too long for the short answer, and in another case the scratching was done under the table when no slate was there, the slates being on top of the table and Mr. Eglinton's hand alone being below. Like the wearing down of the pencil, the sound of scratching appears to have been in many cases intended only for effect.

8. The answers produced on each of the slates and on the paper have similar characteristic points, and although more or less disguised from the ordinary handwriting of Mr. Eglinton, a careful comparison leads me to the conclusion that all were the work of one hand.

9. The position of the writing on the slates corresponded to the distance to which Mr. Eglinton's fingers could reach from the edge of the table, and sometimes suggested that the slate had been horizontally revolved.

10. During almost every experiment the slate was either dropped on the floor or brought up at least once to the top of the table, ostensibly to rest the medium, but at the same time affording him opportunities for revolving the slate or otherwise manipulating it.

11. In a case which required it, Mr. Eglinton appeared to support the slate upon his knee, and put both hand and arm beneath the table, and in this case the character of the writing differs from that produced when the slate is in the usual position supported against the table.

12. In the experiment with the book and slate, the facts of his hand being completely under the table, his sight directed towards it, and the marks of a thumb-nail being afterwards found opposite the line chosen, afford evidence that the book was opened while under the table.

13. No results were obtained when the question was enclosed either in a sealed envelope or a sealed slate.

14. Nothing was done so long as a strict watch was kept upon Mr. Eglinton, but non-attention was in each case immediately followed by manifestations. [1]

[1] Mrs. Henry Sidgwick (*Proceedings*, Part X., p. 70) has come to a very similar conclusion after séances with many mediums, and has shown that an absence of evidence of continuous observation on the part of the witnesses, and of phenomena dispensing with the necessity for such observation, characterises spiritualistic manifestations in general.

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15. Pecuniary inducements were found to be capable of reviving an asserted "exhaustion of power."

It is not for me here to discuss what Mr. Eglinton's motives may be in exhibiting these manifestations and in assigning them to the operation of forces external to himself. It is enough to have proved that the phenomena witnessed were all capable of being produced by his own right hand while hidden beneath the table; that no superior intelligence or external force was at any time indicated; and that the one condition necessary for success was non-attention on the part of the visitor.

H. Carvill Lewis.

The following is Mr. F. G. Netherclift's Report on the above facsimiles:—

10, Bedford-row, W.C.
8th March, 1887.

I have very minutely compared the writings contained in the four several documents submitted to me for an opinion, namely: A facsimile of writing on a slate, commencing, "There is no spirit here," &c., which I have marked 1. (Fig. 3.)

Another facsimile of writing on a slate, commencing, "It consists of Silica," &c., which I haved marked 2. (Fig. 1.)

Some other facsimile writing not written on a slate, commencing, "We regret that your father's name," &c., which I have marked 3. (Fig. 4.)

Also the handwriting in facsimile of a gentleman signing himself W. Eglinton, and which I have marked A; the said writing commencing, "I return you the slate," &c. (Fig. 2.)

I entertain a strong opinion that the whole of the writings above described are by one and the same hand; those marked 1, 2, and 3 being the disguised hand of the writer of A.

I am induced to this belief by the following peculiar resemblances, which, notwithstanding the clever attempt to feign another distinct hand, the writer has betrayed.

Supposing the letter A to be the habitual style of Mr. Eglinton's writing, then it appears to me that he has taught himself an eccentric mode of forming his letters, more especially the capitals D, P, W, T, and the small "y," a departure from which, combined with writing in a more sloping running hand fashion, would render his writing at all times difficult, except to an expert, to recognise.

The following agreements, in my judgment, are of sufficient importance to identify the writer of A as the writer also of 1, 2, and 3.

1. Compare the printed style of the letter S as in "Silica," 2nd line of slate-writing marked 2, with the same in "selves," 14th line A.

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2. Observe that three several formations of the letter "r" are employed; a round one at the top in commencing a word, thus, "ɾ." Refer to the same in "regret" and "relative," 1st and 5th lines facsimile writing marked 3, and compare same with the "r" in "return" and "result," 5th and 9th lines A. A second formation is a square-headed r like that in the word "your," 7th line facsimile writing marked 3, a counterpart to which will be found in the word "control," 11th line A. And the third formation presents the appearance of a letter "i," thus, "ɾ." Compare the same in the word "father," 7th line facsimile writing marked 3, with the "r" in "yesterday," 9th line, and "yours" "very truly," 16th line A.

3. The letter "w" is a most remarkable and important agreement, almost sufficient in itself to identify the writer. Compare the "w" in the word "well," 4th line slate-writing marked 1. Also in the word "we" head of facsimile writing marked 3, with the "w" in the word "were," 9th line A. The second or final portion of the letter is singularly alike.

4. Observe that the letter "a" is occasionally made open at the top so as to resemble the letter "u." See the word "that," 1st line facsimile writing 3, compared with the word "what," 11th line A.

5. Notice the round "c" in the word "Silica," 2nd line slate-writing 2, with same in "convince," 14th line A.

6. Compare the capital L in the word "Lime," 4th line slate-writing 2, with same in the name "Latouche," 4th line A.

7. Particularly compare the word "to" in 3rd line facsimile writing 3, with the same in the 8th line A. Notice that the letter "o" is only a half letter, simply an "i." Were the writing of the facsimile 3 less sloping this word would be identical.

8. Compare the letter "a" in the word "deceased," 4th line facsimile writing 3, with the same in the word "made," 15th line A. The remarkable point is, the letter resembles an "o."

9. Compare the round "l" in the word "Silica," 2nd line slate-writing 2, with same in the word "control," 11th line A.

10. Remark the final "e" in the word "name," 2nd line facsimile writing 3, and the final "e" in the word "were," 9th line A.

11. Compare the commencing letter "h" in the word "had," 4th line facsimile writing 3, with the same in the word "have," 13th line A. It is a straight downstroke, without leading upstroke or loop.

12. Compare the letter "p" commencing the word "probable," facsimile writing 3, with same in the word "physical," 10th line A. Also a straight downstroke without a leading upstroke.

13. Compare the letters "en" in the word "enough," 5th line slate

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writing 1, with the same in the word "entirely," 10th line A. Notice that the "n" is less bold than the "e."

14. Compare the letter "b" with the diminutive downstroke in the word "albumen," 3rd line slate-writing 2, with the same in the word "above," 15th line A.

If the characteristics I have referred to are carefully examined, I feel confident that the same conclusions as I have formed will be arrived at.

FREDERICK GEORGE NETHERCLIFT.

Mr. Hodgson gives the following opinion on the writings :—

1, Furnival's Inn, Holborn, E.C.

March 9th, 1887.

I was unable to make any prolonged examination myself of the facsimiles of the writings you wished to be submitted to Mr. Netherclift. There was of course no doubt that all the writings *might* have been by the hand of Eglinton, and I observed, during the short comparison which I made, several peculiar indications that they actually were written by him,—indications which would probably escape the notice of the ordinary reader. And though the conclusion that Eglinton wrote them all would not be obvious at first sight, I think few would hesitate to agree with Mr. Netherclift after noting the points of resemblance which he has enumerated, and of which additional examples may be found. There are other minor instances of resemblance which Mr. Netherclift thought needless to mention, and I entirely agree with his opinion that all four writings are by the hand of Eglinton. Concerning Mr. Netherclift's remark about Eglinton's habitual style of writing, it may be worth mentioning that I have in my possession a long letter written by Eglinton in 1882, and that it seems clear that he has intentionally changed some of the characters of his ordinary handwriting; and further significant resemblances might be pointed out between his undoubted writing of 1882, and the "psychographic" specimens under examination.

RICHARD HODGSON.

While this paper is passing through the press, Professor Carvill Lewis sends the following Postscript to his account :—

Since the above was in print, two articles have appeared in Germany describing séances with Mr. Eglinton, in both of which the inquirers express themselves as convinced of the "supersensual" character of the manifestations.

One of the séances, held at St. Petersburg, is described by Herr Julius Gillis in an article entitled "Sechs Experimente mit Eglinton" (*Sphinx*, III., 16., p. 253, April, 1887). The "six experiments" were very similar to those performed for me and already described; consist-

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ing of answers to questions on a slate, writing on a slate a name previously written upon a piece of paper and placed in the folding-slate, telling the number of a banknote also put in his folding slate,[1] performing the experiment of the book and the slate, &c. In all of these the slate and accessories were held beneath the table, and since none of the answers evinced an intelligence beyond that of Mr. Eglinton, the proceedings seem to have been practically a repetition of those done for me, the same methods being used, and the same conditions being required.

Herr Gillis has fortunately published a photographic reproduction of one of the answers (see Fig. 5) which is valuable as evidence. The "spirit" had been asked to perform the experiment of tying a knot in a stretched cord, which Slade had done for Professor Zöllner, and afterwards for Herr Gillis and others. Whereupon the following writing was produced on the slate.

The reader may find it convenient to have the contents in print :—

Mein lieber Herr,

Vor Jahrhunderten wussten unsere Vorfahren diese Phenomene und hatten auch die Kraft, dieselben hervorzubringen. Jedoch durch den Fortschritt der Welt in anderen Dingen Kümmerte sich man weniger mehr über das menschliche Schicksal; jedoch jetzt sollte man es mehr denn jeh. Wir hoffen dass durch die Thatsachen, welche wir Ihnen vorführten, Sie sich mehr and mehr mit diesem Gegenstand befassen werden.

Ihr ergebener

ERNEST.

The experiments which you demand would take a very long series of séances to accomplish, and we could under no circumstances promise them.

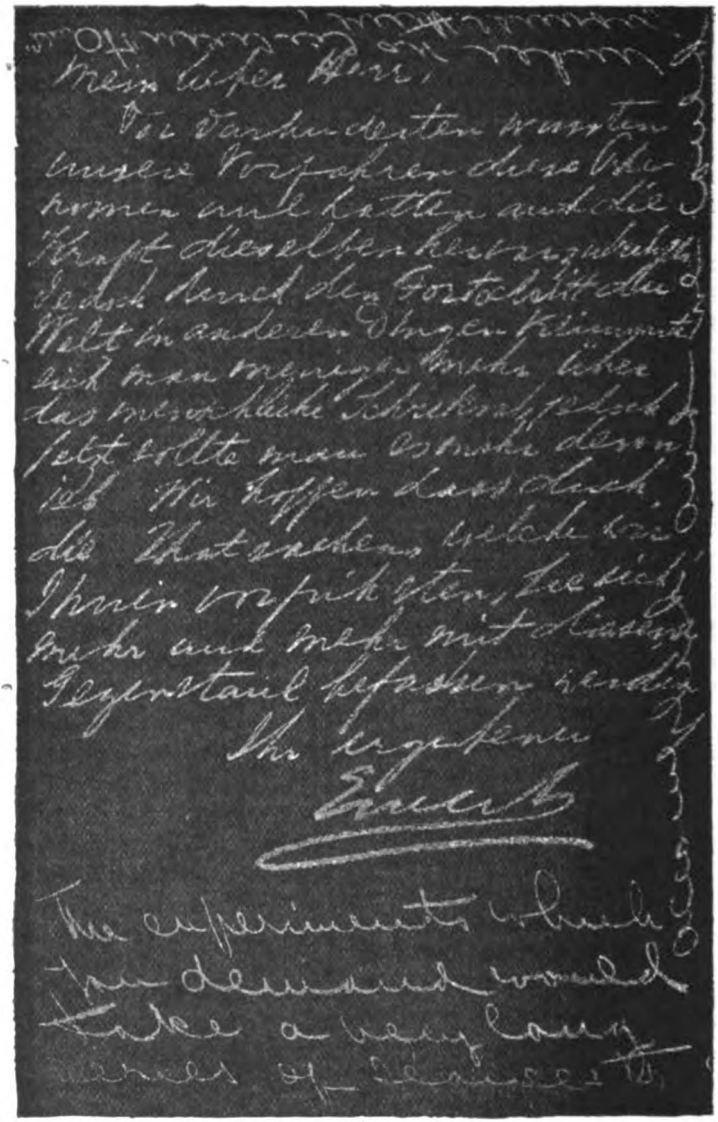
It will be observed (1) That the German portion of the answer is totally irrelevant to the question, and had clearly been at least composed before the séance. (2) That the German itself is such bad German as an Englishman might write. "Ernest," whoever he may be, is clearly not an adept at German, else he would not have written "*wussten*" for *kannten*, "*sich man*" for *man sich*, "*über*" for *um*, "*jeh*" for *je*, "*durch die*" for *in Veranlassung der*, "*and*" for *und*. (3) That the two entirely different styles of writing, while exhibiting Mr. Eglinton's skill at disguising and varying his handwriting, still bear the characteristic marks of his personality. The report [see p. 376] from Mr. Netherclift, the well-known expert, to whom this facsimile was submitted, bears testimony to the truth of this conclusion.

The other article, also founded upon a séance with Mr. Eglinton, is a very well-written one entitled, "Ein Wort über den Spiritismus"

[1] I have already stated that Eglinton proposed to perform this "experiment" with me, but that I had declined it, suspecting his process.

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FIG. 5.



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(*Vom Fels zum Meer*, VI., Hept 8, p. 264), by Baron Dr. Carl du Prel, of Munich, one of the ablest writers upon the subject, himself an earnest but liberal-minded Spiritualist. He describes how, after two unsuccessful séances, at the third séance, seven persons besides the medium being present, all of whom were now sympathetic and "well-wishing" toward him, the favourite experiment of the book and slate, at Mr. Eglinton's suggestion, was performed. As the performance was slightly varied from his usual manner, it may be well here briefly to describe it.

All being seated around the table, with joined hands, and a book having been brought in, a page, line, and number were privately written on a slate by one of the company, the book placed upon the slate, and all put beneath the table, one of the ladies assisting the medium in supporting the slate at one end against the under side of the table. After being held beneath the table for a long time it was finally brought up, and a second slate was laid on top of the book, when all was tied together and again held under the table. Soon the sound of writing was heard, and, three knocks being given, the slates were separated and this writing found: "*Page 175, line 18, word 5, Grabhügel*," which last, on opening the book, was found to be the correct word.

Baron du Prel regards this production as due to the action of an intelligent, invisible, clairvoyant spirit, which, as indicated by its degree of intelligence, was neither an angel nor a demon, but the spirit of a deceased human being. He seems to consider that it is phenomena of this nature which form the true *scientific basis* of Spiritualism. I quite agree with Baron du Prel, when, near the close of his article, he says, "Unless there is in the first place a scientific foundation for Spiritualism, any Spiritualistic code of morals 'floats in the air.' Before we can pin our faith upon the sayings of spirits, we must know beyond a doubt who these spirits are who declare them."

If the scientific basis of Spiritualism consists of the so-called manifestations produced by such men as Mr. Eglinton, or in any facts of a similar nature, it is no wonder that most men of science refuse to have anything to do with it. The experiment just described in no way invalidates the presumption that Mr. Eglinton opened the book and wrote upon the slate while they were under the table. The statement of the lady who held one end of the slate that it had not been moved, while said with perfect sincerity, is without value, for as I have proved by repeated experiments, it is almost impossible to detect the gradual lowering of the other end of the slate for a few inches when held in this position. Anyone can readily verify this point for himself.

H. Carvill Lewis.

April, 1887.

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Mr. Netherclift's report is as follows :—

I have attentively examined the reduced lithographed copy of slate-writing, and have compared the same with the admitted habitual handwritings of Mr. Eglinton, with which I am now becoming quite familiar.

I am enabled to give you the following very decided opinion as to the genuineness of the slate-writing in question.

I do not understand German as a language, but I am acquainted with the manner of writing it, having had, in the course of forty years' experience as an expert, to give evidence as to the formation of the letters so as to identify them with other hands submitted to me.

The slate-writing now before me is not written by a foreigner. It is undoubtedly an English handwriting, not German.

The whole of the writing, German and English, is by one and the same hand, being undoubtedly the disguised hand of Mr. Eglinton.

The English writing is disguised in a more upright style than the German, so as to give a greater contrast, and to convey the notion of a distinct hand ; but the characteristics are similar throughout, and when compared with Eglinton's natural hand the same writer is at once identified.

Thus, for instance, compare the letter "w," which in Eglinton's natural handwriting is peculiar, and I have called attention to it in a former report [p. 371]. This is the shape of it, "." The first portion of the letter is made full, and round at the bottom, but the final portion is like the letter "v," coming to a point, thus, "." Notice the word "were" in the 9th line of his letter of November 17th [p. 359], and see how the "w" agrees with that in "welche," 12th line German writing. Also in "wir" and "werden." In the English writing you will see it in "which," 1st line, and "would," 2nd line. In fact, Eglinton cannot guard against this formation, and betrays it in every disguised hand, whatever the style.

Then, again, his writing is recognised by the final "d" with looped downstroke, thus "." See "and" in the German writing, 14th line, and "would" and "and" in the English writing, and compare them with the "d" in the word "behind," 6th line, letter of November 17th [p. 359]. This habit also runs through all Eglinton's disguised handwritings.

The word "to" may always be recognised. There is no word "to" in the German writing, but that in the 4th line of the English writing resembles precisely Eglinton's formation. A peculiarity shown occasionally in the formation of the word "to" will be alluded to in my next report, when, in connection with the disguised writings on the

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three slates, Eglinton's eccentricities in writing will more fully be entered into.[1] I will now mention only the three ways in which Eglinton forms the letter "r." These three formations will be found throughout the disguised writings.

FREDERICK GEORGE NETHERCLIFT.

In the following case the evidence for trickery is of a different kind.

ACCOUNT FROM MR. B. J. PADSHAH,
Of Sind College, Kurrachee, India.

September 14*th*, 1886.

As Mr. Eglinton is very aggressive in dealing with Mrs. Sidgwick's report on his phenomena, I feel bound to entrust to Mr. Hodgson for publication whenever he thinks it necessary, the following facts, which can be easily confirmed by referring to the individuals named.

Mr. Khareghat, of the Indian Civil Service (address, Treasury, Ahmedabad, India,) and myself were having sittings with Mr. Eglinton in the last quarter of 1884, when, to see how far he can degrade himself in trickery, I resorted to a dodge at the suggestion of a third friend. The point of our previous sittings with Mr. Eglinton was this: that while the reverse of incredulous of his powers, we wished for some confirmation of them by getting some Gujaráti writing; and if something concerning our family affairs, so much the better, as we felt assured that Mr. Eglinton was ignorant of our language probably, and certainly of our domestic affairs. Mr. Eglinton had favoured us with three or four phenomena but none satisfied our conditions. Once, indeed, we had two lines of Sanskrit written in Bengali characters in the course of a somewhat trashy dissertation in English; but as Mr. Eglinton had been for six months in Bengal, and as he had contrived, very much against our wish, and I may say, to my disgust, to get one whole hour's preparation previous to our séance, the significance of the writing was minimised. At the instance of a third friend, therefore, and improving, as I thought, and as it turned out, upon such suggestions as were made to me by that friend and others, I wrote out in Gujaráti a common song of Bombay and translated it into English; the translation and the superscription of the envelope being written by Mr. Mohini M. Chatterji, (77, Elgin Crescent, Notting Hill,)

[1] This refers to three other slates-full of writing—the result of sittings with Eglinton—which were lent to us by a friend. In framing the present report and the one referred to, Mr. Netherclift had before him, as specimens of Eglinton's admitted handwriting, two short notes and two envelopes, in addition to Figure 2.—E.G.

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and forwarded it to Mr. Eglinton. The original suggestion was that I should write only a line or two of Gujaráti and send that to Mr. Eglinton without comment or translation. One advantage of that is obvious. It gives the trickster less trouble to imitate or trace, and therefore less chances of detection, and therefore greater temptation. But I feared lest Mr. Eglinton should think what reason any anonymous correspondent could have to send him Gujaráti lines without telling him what he was to do with them, and, lest he should suspect a trap was laid for him (which, I am afraid, he must have done in any case,) I sent it, therefore, as a "Spiritual Song by an Indian (Guj) Bard," and translated it line by line, literally, to allow him to make use of as much of it as he liked. I, therefore, had some chance of giving him the impression that an anonymous Gujaráti, finding from the papers that he (Mr. Eglinton) was the pillar of Western Spiritualism, had sent him an Eastern effusion for his use on a subject of such interest to him. I also took the opportunity of absenting myself from the sitting which Mr. Khareghat alone had on a Saturday (I think November 3rd, 1884), by going to Liverpool with Madame Blavatsky, to see her off to India. My friend Mr. Khareghat was not admitted to the knowledge of what we had done, and as I was not present there was nothing in the sitting to encourage Mr. Eglinton to believe in the trap. When I returned what was my surprise when I saw my own handwriting on the slate, and every line of Gujaráti as I had written it on the paper. I confess I became uneasy lest my friend should believe I had wished him to be deluded for my own purposes, and thus terminate the lifelong friendship and confidence between us. But that honourable soul only was surprised at the formed hand betrayed in the writing, and as he was not familiar with my Gujaráti writing (we in India correspond mostly in English,) he, I hope, took my word that the thing was not genuine. I am *certain* that the writing was mine, and it must have been traced on the slate. The slate, I believe, is preserved by Mr. Khareghat in India, and it would be possible, perhaps, to ascertain whether the writing there bears marks of having been traced or not. My mother, (198, Main Road, Khetvadi, Bombay,) can furnish samples of my Gujaráti writing in the shape of recent letters to her, and thus my statement about the identity of the writing can be verified. I do not append a sample of my writing now for the reason that it will not be quite natural, while my mother can furnish letters contemporaneous with the séance. Every item of this can be verified by reference to the people mentioned, and also to Miss Arundale, (77, Elgin Crescent, Notting Hill,) who was in knowledge of the whole thing.

Lastly, I may say that I sometimes have an uneasy consciousness

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that Mr. Eglinton may have known all along that we wished him to trick Mr. Khareghat, and may have misunderstood my object. If so he is at least guilty of complicity in a plot whose fruit he was very ready to make use of, for he has since begged Mr. Khareghat to give him an account of his impressions of the séances with a view to make a public use of it. What is the reliance, then, to be placed on the Eglinton-Blavatsky phenomenon on the *Vega*, if he convicts himself of such complicity?

A theory was once suggested to me that Mr. Eglinton's astral body, or double, or any other concoction, might have precipitated the identical writing on the slate with or without the assistance of spooks.

It was supposed a confirmation rather than the reverse, that the matter and the hand were identical with the copy I had sent to Mr. Eglinton. Mr. Eglinton, along with his double, it was pointed out, must have intensely studied that writing, and hence floating in his "astral aura," the double could not help reading and precipitating it. If any one can make anything of and accept such a hypothesis, it is his affair. My point is that we had got no test previously; that when a deliberate trap had been laid, Mr. Eglinton seemed to have fallen into it; that Gujaráti writing came only once, and that was after we had sent him a specimen; and in substance, and style, and handwriting it was to all appearance identical with our specimen. It is worthy of note that during that séance, lasting over more than thirty minutes, Mr. Khareghat received no other message, except perhaps the final and very convenient "good-bye."

B. J. Padshah.

November 27th, 1886.

I believe Mr. Hodgson will be able to testify to these facts himself from some independent evidence he obtained of the facts from the principal parties within six months of the event.—B. J. P.

Mr. Hodgson writes:—

I can corroborate the essential points of the above account, having heard of the incident originally from Madame Blavatsky, whose narrative to me was confirmed by the statements afterwards made to me by Miss Arundale. Madame Blavatsky imposed secrecy upon myself, but she apparently thought it would be necessary to make use of my testimony at some time or other; and I have now no hesitation in confirming Mr. Padshah's account. Richard Hodgson.

With such evidence before us, supplementing that to which I briefly referred, we must clearly regard Eglinton as a person who, being professionally interested in making it appear that certain phenomena occur in his presence without his physical agency, has no

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scruples as to the means by which that appearance may be produced. But to say that the medium is capable of trickery is, of course, quite a different thing from saying that all his performances are tricks. If the phenomena which occurred in his presence were far and away beyond any conjurer's power of repetition, it might be possible to accept them as genuine, irrespective of his character. Here, then, we come to the final and critical question—Are any of the phenomena recorded beyond the ascertained resources of conjuring? Has the observation and attention exercised by the sitters been of a sort which conjurers are unable to distract or elude? Practical answers to such questions as these have been attempted, but have generally consisted in imitations, given at public entertainments, of Spiritualistic phenomena—imitations often very imperfect and which at the best leave it open to Spiritualists to say that things occurring in a prepared place, with any amount of opportunity for mechanical contrivances, bear no real resemblance to things occurring in private houses which the medium had never before entered, and in which he had had no opportunities for preparation. The dispute on such ground as this might have been interminable. Nor is it enough that certain conjurers should testify that they have not been able to detect the *modus operandi* of mediums. For conjurers would scarcely profess to an infallible intuition of one another's processes and inventions; and in some ways, perhaps, technical knowledge, with the confidence that it begets, may be a condition not wholly conducive to sound conclusions. Expertness in conjuring is of course no guarantee whatever of scientific habits of thought; and the expert who comes to a *séance* with his preconceived ideas, and who finds that the solution of the puzzle does not lie in the direction which he had pictured as the probable one, may jump more quickly than another to the certainty that no natural solution is possible. Something more, then, and something different is needed. We must seek to ascertain by definite experiment, *what sort of reports* honest and intelligent persons will make of conjuring performances carried out in private, without any advantage of conditions, and directed to obtaining results as closely as possible resembling those on which Spiritualists rely. If such reports of a conjurer's slate-writing prove to agree, both in general character and in special details, with the reports by which the hypothesis of occult powers in Eglinton's case has been supported, that hypothesis falls to the ground; for no one probably will maintain the occult character of events which occur in a detected trickster's presence, when unable to name any point by which they can be distinguished from tricks. The reader will find this subject amply argued and illustrated in the following paper, which I may perhaps be excused for describing as an original and valuable chapter in the Natural History of Error. E. G.

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VI.

THE POSSIBILITIES OF MAL-OBSERVATION AND LAPSE OF MEMORY FROM A PRACTICAL POINT OF VIEW.[1]

INTRODUCTION.

By Richard Hodgson.

Concerning the physical phenomena[2] of Spiritualism, Mr. A. R. Wallace has said :—

> They have all, or nearly all, been before the world for 20 years; the theories and explanations of reviewers and critics do not touch them, or in any way satisfy any sane man who has repeatedly witnessed them; they have been tested and examined by sceptics of every grade of incredulity, men in every way qualified to detect imposture or to discover natural causes—trained physicists, medical men, lawyers, and men of business—but in every case the investigators have either retired baffled, or become converts. (*Miracles and Modern Spiritualism*, pp. 202, 203.)

It has indeed been considered by perhaps the majority of Spiritualists, not only that the recorded testimony to these physical phenomena is enough to establish their genuineness, but that any honest investigator might establish their genuineness to his own satisfaction by personal experience. I agreed in a great measure with this opinion when, some ten years ago, I attended my first séance; but hitherto my personal experiences, though not by any means extensive, have been almost precisely of the same nature as Mrs. Sidgwick's (*Proceedings*, Part X., pp. 45, 46); the physical phenomena which I have witnessed were either clearly ascertained by my friends and myself to be fraudulent, or they were inconclusive and accompanied by circumstances which strongly suggested trickery. I regarded this result merely as negative, since I had learnt early in my investigation that spurious manifestations were undoubtedly often produced by professed mediums; and three years ago I was still under the impression that a large mass of reliable testimony existed, adequate to establish the genuineness of at least some of the commoner forms of physical phenomena, and especially of "psychography,"—that is writing without any operation of the medium's muscles. This was also quite recently

[1] Parts both of Mr. Davey's article and of Mr. Hodgson's introduction have appeared in the *Journal* of the S.P.R.

[2] See *Proceedings*, Part X., p. 45.

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the opinion of Mr. C. C. Massey, who says (*Proceedings*, Part X., p. 98):—

> But original research is not necessary in the first instance. Many, of whom I am one, are of an opinion that the case for these phenomena generally, and for "autography"[1] in particular, is already complete.

I have long since concluded that I estimated this testimony much too highly. When, in June, 1884, after reading some accounts of "psychography," I had a sitting with Eglinton for "slate-writing," I fully expected to witness phenomena that should be as indubitably beyond the suggestion of trickery as those appeared to be of which I had read and heard descriptions. Writing was produced at my first "slate-writing" sitting with Eglinton, to which I was accompanied by Mr. R. W. Hogg; but Mr. Hogg and myself were both independently of opinion that Eglinton produced the writing himself without the intervention of any extraordinary agency. In writing our detailed report of the sitting, we appreciated, as we had never done before, the difficulties of observation and of recollection, difficulties which we thought must almost effectually prevent a full and accurate description from being given of events analogous to those which we attempted to record. Our report, and the reports of various other sitters with Eglinton, most of whom were, however, convinced of the genuineness of Eglinton's phenomena, were printed in the *Journal* of the S.P.R. for June, 1886, with some explanations and criticisms by Mrs. Sidgwick, who drew attention to two of the incidents in his career "which show that we must not assume any disinclination on his part to pass off conjuring performances as occult phenomena."[2] Mrs. Sidgwick, who had previously had the advantage of witnessing some of Mr. Davey's performances, and comparing her reports with those of another witness, and who had therefore been able to form some practical estimate of the frailty of human perception and memory under the peculiar circumstances involved, expressed her opinion that the phenomena recorded in the accounts as having occurred in the presence of Eglinton were attributable to "clever conjuring."

In the meantime, in the course of a visit to India for the purpose of investigating the "Theosophical" phenomena of Madame Blavatsky, I had had a somewhat considerable and varied experience in comparing the testimonies of numerous *bonâ fide* witnesses to events belonging to the class of conjuring performances. The most instructive to me in the first instance were the different accounts which I heard from eye-witnesses of the tricks of the Hindoo jugglers. I saw many of these performances, and saw them

[1] A word proposed as a substitute for "psychography."

[2] See the previous article, p. 350.

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frequently, and having learnt secretly from the jugglers themselves how they were done, I was thereafter in a position to compare the accounts of them with the actual occurrences, and I was surprised exceedingly to find to what extent they were misdescribed by intelligent spectators who were unaware of the *modus operandi* of the tricks. With the advantage of this experience, I studied in minute detail the testimony to Eglinton's phenomena recorded in the *Journal* for June, and found that if only the same kinds of misdescription were allowed for in these reports as I had known to be honestly displayed by equally intelligent witnesses, the phenomena were perfectly explicable by conjuring. Not only was this the case, but there were many little incidents mentioned, for the most part innocently and almost casually, in the reports, which afforded indications that if Eglinton's performances were not conjuring, they were very curiously adapted to resemble conjuring operations. And when to these facts, besides the clear evidence of Eglinton's previous imposture, was added the further fact, emphatically pointed out by Mrs. Sidgwick, that every experiment with Eglinton so devised and carried out as apparently to exclude the possibilities of trickery by dispensing with the necessity for continuous observation, had *failed*,[1]—there could, I thought, be little doubt, in the minds of rational and impartial inquirers, of the justice of the conclusion which Mrs. Sidgwick had reached.

But this was not the case. Correspondence and controversy made it clear that the ordinary reader did hesitate to agree with Mrs. Sidgwick, and it soon became manifest that a common but erroneous assumption prevailed concerning the reliability of human testimony under the peculiar circumstances at issue. It appeared that a large number of the readers of Mrs. Sidgwick's article in the *Journal* for June were prejudiced in favour of ordinary human powers of observation and recollection under—it is to be remembered—exceptionally adverse circumstances; and that they were thus prejudiced simply because they had never made any special experiments, with the view of ascertaining exactly how much reliance could be placed upon the reports of even acute and intelligent observers of the "slate-writing" performances of a conjurer known as such. They had decided *à priori* as to the capacity of human perception and memory under quite peculiar conditions, and most of them, I venture to say, had thus decided, not only without possessing any familiarity with the various modes of producing "slate-writing" by conjuring, but without possessing any familiarity with conjuring tricks in general, and without being aware of the extent to

[1] For the discussion of this point see *Proceedings*, X., pp. 70-2, *Journal* for June, 1886, pp. 332, 333, *Journal* for November, 1886, pp. 458-60, *Journal* for December, 1886, pp. 475 and 481-85.

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which we are all subject to *illusions of Memory*, which, in relation to the reports of "psychography," are more deserving of consideration than even illusions of Perception.

It seemed desirable, therefore, to carry out a somewhat more systematic investigation than had heretofore been attempted,—to provide the ordinary reader with the opportunity of comparing for himself the records given of conjuring performances by the uninitiated, with the testimony offered for the genuineness of mediumistic phenomena. To the accomplishment of this task Mr. S. J. Davey has given much valuable labour, as the sequel abundantly shows. This, however, was not enough. It is obvious, of course, that any report is worthless for proving occult agency if a similar report by an equally competent witness is given of what is known to be a conjuring trick. But this in itself would not enable us to estimate the true worth of testimony in such cases; on the contrary, it might just as well lead to a new and irrational faith in the unlimited capacity of conjuring. No doubt there are special "dodges," unique wonders of workmanship, staggering flashes of well-nigh incredible dexterity, for which we must always leave ample margin in any pronouncement upon the limitations of a conjurer. Still, with all this, and after the largest allowances have been made for the possibilities of simple failure to observe, it will be admitted that there are numerous records of "psychographic" phenomena that have occurred with mediums (and also with Mr. Davey), which, *as described*, are inexplicable by trickery. It was of the utmost importance, therefore, to determine how far such records might be misdescriptions, and what were the chief causes of the misdescriptions. In the course of a paper contributed to the *Journal* I urged that the principal cause of misdescription, apart from mal-observation, was the untrustworthiness of memory, and I endeavoured to classify roughly the main forms into which the errors of recollection fell. That students of mental science like Mr. Roden Noel and Mr. Massey should put aside so easily the considerations which I alleged with respect to the treachery of memory, suggests that these considerations had, in all probability, been absolutely unheeded by the ordinary recorder, unfamiliar with the more delicate processes of introspective discrimination. And although in the *Journal* I felt it almost needful to apologise for my exposition of the lapses to which we are all liable, on the ground that they had been "almost entirely overlooked by the antagonists of Mrs. Sidgwick's view," the result has shown, not only that they had been entirely overlooked in the degree to which I urged them, but that the most eminent defenders of mediumistic phenomena refused to admit their validity or their significance. But my warrant for the importance of these considerations was much more than the experience of my own lapses in recording, confirmed as that was by the

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discovery of radical discrepancies between independent reports of one and the same séance, in the cases where such independent reports were given of sittings with Eglinton; nor was it restricted to the lessons which I had learnt by a comparison of oral and written accounts of common conjuring tricks with my knowledge of the real events; my warrant consisted further in the fact that all the forms of error to which I alluded are actually embodied in the reports of Mr. Davey's performances. In repeating these considerations here, then, I desire the reader to bear in mind that they are not vague theoretical speculations as to possibilities which have rarely if ever been realised, but warnings against veritable pitfalls which are dangerous even to the most wary investigator, into which Mr. Davey's sitters demonstrably fell, and Eglinton's sitters also demonstrably, in the cases which admitted of direct ascertainment.

I shall first recount an incident which occurred in connection with a Hindoo juggler's performance unconnected with Spiritualism, and which produced a deep impression upon myself at the time.

The juggler was sitting upon the ground immediately in front of the hotel, with his feet crossed. Two small carved wooden figures were resting on the ground, about two feet distant from the juggler. Some coins were also lying on the ground near the figures. The juggler began talking to the figures, which moved at intervals, bowing, "kissing," and bumping against each other. The coins also began to move, and one of them apparently sprang from the ground and struck one of the figures. An officer and his wife, who had but recently arrived at the hotel, were spectators with myself, and we stood probably within two yards' distance of the juggler. I knew how the trick was performed; they did not know. The officer drew a coin from his pocket, and asked the juggler if this coin would also jump. The juggler replied in the affirmative, and the coin was then placed near the others on the ground, after which it betrayed the same propensity to gymnastic feats as the juggler's own coins. Two or three other travellers were present at dinner in the evening of the same day, and in the course of the conversation the officer described the marvellous trick which he had witnessed in the afternoon. Referring to the movements of the coins, he said that he had taken a coin from his own pocket and placed it on the ground himself, yet that this coin had indulged in the same freaks as the other coins. His wife ventured to suggest that the juggler had taken the coin and placed it on the ground, but the officer was emphatic in repeating his statement, and appealed to me for confirmation. He was, however, mistaken. I had watched the transaction with special curiosity, as I knew what was necessary for the performance of the trick. The officer had apparently intended to place the coin upon the ground himself, but as he was

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doing so, the juggler leant slightly forward, dexterously and in a most unobtrusive manner received the coin from the fingers of the officer as the latter was stooping down, and laid it close to the others. If the juggler had not thus taken the coin, but had allowed the officer himself to place it on the ground, the trick, as actually performed, would have been frustrated.

Now I think it highly improbable that the movement of the juggler entirely escaped the perception of the officer—highly improbable, that is to say, that the officer was absolutely unaware of the juggler's action at the moment of its happening; but I suppose that although an impression was made upon his consciousness, it was so slight as to be speedily effaced by the officer's *imagination* of himself as stooping and placing the coin upon the ground. The officer, I may say, had obtained no insight into the *modus operandi* of the trick, and his fundamental misrepresentation of the only patent occurrence that might have given him a clue to its performance debarred him completely from afterwards, in reflection, arriving at any explanation. Just similarly, many an honest witness may have described himself as having placed one slate upon another at a sitting with a "medium," whereas it was the medium who did so, and who possibly effected at the same time one or two other operations altogether unnoticed by the witness.[1]

Now it is the universal mental weakness of which the above incident is an illustration, that forms one of the main sources of error in the reports of "psychography." There are, of course, other sources of error, such as the direct illusions of perception caused by mechanical contrivances or the dexterity of the medium or the dominant expectations of the witness; there is also notably the distraction of the sitter's attention to such an extent that he is not aware at all of certain actions performed by the medium, but this often results in positive misdescription owing to the weakness of memory; as Mrs. Sidgwick remarks (*Journal* for June, 1886), "we are liable not only to allow our attention to be distracted, but to forget immediately that it has been distracted, or that the event which distracted it ever occurred"; and the source of error which I desire in particular to press upon the reader's notice is the perishability, the exceeding transienee, the fading feebleness, the evanescence beyond recall, of certain impressions which nevertheless did enter the domain of consciousness, and did in their due place form part of the stream of impetuous waking thought. //

It is, moreover, not simply and merely that many events, which did obtain at the sitting some share of perception, thus lapse completely from the realm of ordinary recollection. The consequence may indeed

[1] For an example see SITTING II, *Note* 7, p. 487.

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be that we meet with a blank or a chaos in traversing the particular field of remembrance from which the events have lapsed;[1] but this will often be filled by some conjectured events which rapidly become attached to the adjacent parts, and form, in conjunction with them, a consolidated but fallacious fragment in memory.[2] On the other hand, the consequence may be that the edges of the *lacunæ* close up—events originally separated by a considerable interval are now *remembered* vividly in immediate juxtaposition, and there is no trace of the piecing.[3]

Another source of error which bears a kinship to this depends sometimes upon the absence of a prolonged carefulness in writing out the original record of the sitting. Events which occurred during the sitting, which made a comparatively deep impression, which had not, at the time of recording, sunk beyond the possibility of recall, nevertheless do not appear in the report, because they were *temporarily* forgotten; and having been thus omitted, the temporary forgetfulness is likely to become permanent, owing to the very coherence given to the defective account by the recording.[4]

Last September I spent many hours recalling and writing notes of a slate-writing séance. The task occupied me some six or seven continuous hours on each of the two days following the evening of the séance. Taking the first page of my MSS., I find, among what are plainly interpolations[5] after the page was originally completed, an exceedingly noteworthy passage.

I had held the slate against the table instantaneously after the "conjurer" had placed it in position; the slate was shortly afterwards withdrawn, and the chalk which had been placed upon it was found crushed. The chalk marks were cleaned off. A second time I held it similarly, and on withdrawal a dash was found on the slate, which was again cleaned. After noting these and other directly connected events, I had originally written, placing the occurrence before the production of writing: "He then turned the slate over, and put the nib of chalk on, and asked me to hold." My alteration of this reads:

[1] *Partial omission.* For an example see SITTING IV, Report I, Mr. Padshah's discussion of [*f*], p. 440.

[2] *Substitution.* For an example see SITTING III, *Note* 5, p. 490.

[3] *Complete omission.* For an example see SITTING II, *Note* 17, p. 489.

[4] *Complete omission temporary.* For an example see SITTING IV, *Note* 12, p. 491.

[5] I still recollect, as I think, my surprise at finding, while I was engaged in making the record, that I had forgotten at the moment such an important incident as that referred to in the interpolation; but apart from this, the passage was undoubtedly written afterwards, as appears from its position, &c. I may add that I had probably spent an hour or two in originally noting the first page.

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" After holding some time, he asked me to put my holding hand upon his other holding B.'s, so as to complete circuit. With this exception I held the slate in each case against the table. Later, he asked me to hold again." I had nearly omitted this most important exceptional circumstance here described, correctly described—as I have since learnt from the " conjurer." I may further notice that it occurred *before* the first writing was obtained, as I rightly placed it. The " conjurer " did turn the slate over as I originally wrote, on three subsequent occasions during the sitting, but he did *not* do so previous to the appearance of the first writing. My temporary forgetfulness thus involved the temporary insertion of a conjectured event. Or, since the event thus inserted did actually occur later in the sitting, the insertion of it in the wrong place may be regarded as an illustration of the tendency to transposition, to which Mr. Angelo J. Lewis has also drawn attention (*Journal* for August, p. 362), in referring to the difficulty of recalling in their proper order such events as those in question ; it is almost impossible to avoid confusing the sequence if the events are crowded, even if they appeared at the time of their occurrence to be of special importance.[1]

In addition to the mistakes which thus originate from the lapsing of certain events beyond recollection, there is the further mistake to which we are liable, of unwittingly inserting events between others which occurred in immediate sequence. This of course also depends upon the weakness of memory ; the events as they originally occurred may have acquired only a loose coherence in consciousness, so that an event afterwards *imagined* usurps easily a place in the series and becomes fixed by recording and repetition. A perfectly pure interpolation,—that is, one which does not involve either *substitution* or *transposition*,—probably does not occur very often, and it would not be easy to establish the fact of its occurrence in any particular case ; mixed interpolations are not uncommon.[2]

Now it is quite impossible to estimate rightly the reports of " psychography " and analogous performances without having some experimental knowledge as to how far such reports may be rendered untrustworthy by these faults of partial and of complete omission, of substitution, of transposition, and of interpolation.[3]

Suppose that we are considering the testimony of a witness to his

[1] *Transposition.* For an example see SITTING XV, *Note* 3, p. 494.

[2] *Interpolation.* For examples see SITTING III [*c*], p. 436, and *Note* 5, p. 490 ; SITTING IV, *Note* 15, p. 492 ; SITTING VIII, *Note* 1, p. 493.

[3] I have not attempted to arrange the faults of memory which I have briefly specified in any system of exclusive division, but rather to exhibit them in their modes of genesis. This is not the place to discuss them in greater detail.

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own separate and complete examination of a slate immediately previous to the apparent production of writing. Then, according to what I have been saying, we have—with a perfectly *bonâ fide* witness—four possibilities to consider besides the one that his impression is correct. It may actually be that no examination at all was made by the witness (interpolation); it may be that, although made, the examination was not made in the perfect manner now described (substitution); it may be that the examination, although faultless and made at the sitting, was not made on the occasion alleged (transposition); or it may be that although the examination was made as described, and on the occasion alleged, events, perhaps unnoticed or regarded by the witness as insignificant, intervened between the examination and the apparent production of the writing (omission).

I need hardly say that in relation to these inherent faults of memory leading to misdescription, we must consider the natural tendency to exaggerate in recording phenomena suggestive of occult agency; hence, in many cases, further omissions and interpolations. But we must carefully distinguish this tendency to exaggerate from another cause of transfiguration which affects both perception and memory. I refer to the mental attitude of the sitter during the séance.[1] Events that under ordinary circumstances, or if the witnesses were intent upon discovering a trick, would make a comparatively deep and lasting impression upon consciousness, glide past or are swiftly forgotten, simply because of the absorption of the spectator's interest in the supposed "supernormal" manifestations. The distortion traceable in many reports is largely due to special lapses of memory for the explanation of which we must look chiefly to this peculiar emotional state. I shall refer to this consideration in pointing out some of the difficulties in the way of Mr. Davey's investigations (see p. 396); and its importance, even as regards mal-observation, has, I am sure, been widely under-estimated. We cannot doubt that many a Spiritualist has found his convictions confirmed at some séance by displays of the most paltry imposture, who would, had he attended the séance under the assurance that he was about to witness a conjuring performance, have detected the *modus operandi* instantly. I may give an instance which came under my own observation. At a materialisation séance given by Firman, at which I was present, a supposed "spirit-form" appeared, draped in a semi-transparent flowing robe,—so transparent, in fact, that Firman's bare arm was visible behind it, waving it to and fro. When the figure retired to the "cabinet," the door closed upon a portion of the robe. The door opened again slightly, and the end of the robe was drawn into

[1] An illustration of these remarks will be found in the accounts of the different witnesses of SITTING II. See p. 426.

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the "cabinet." Most of the sitters perceived this clearly, but one, a "believer," averred conscientiously that the fabric was not withdrawn, and that he saw it slowly melt away.

I think it will hardly be denied that there are extreme cases where unquestioning faith incapacitates an otherwise intelligent witness; and although I do not challenge Mr. Massey's opinion that for mediumistic phenomena a certain psychical co-operation with the medium on the part of the investigator may be necessary, I entertain no doubt that the witness who gives this co-operation is less likely to discover trickery than the man who is bent on discerning the *modus operandi* of what he knows to be conjuring. Nay, I shall go further and say that there is an important difference between the investigator, however "sceptical," who thinks it *possible* that supernormal manifestations will occur, and the investigator who has some solid ground of assurance, independent of his own "scepticism," that the manifestations will be conjuring tricks. The failure to understand this has caused some Spiritualists to put forward the claim that Mr. Davey should produce in their presence a phenomenon similar to, and under the same conditions as, some phenomenon which they describe themselves as having witnessed with a professional medium, or that he should at all events produce the *appearance* of those conditions, &c. In the first place, those who have put forward this claim do not seem to have taken the obvious course of demanding first that the *medium* should reproduce the phenomenon as they desire Mr. Davey to reproduce it; and in the second place they ignore the fact that their own "psychical condition," so different in the two cases—in one, a favouring co-operation, in the other, a resolve to expose—might be a bar to Mr. Davey, but an open door to the medium. Mr. Massey thinks that the sort of co-operation required is "a mental disposition perfectly consistent with the most scientific vigilance." (*Proceedings*, Part X., p. 98.) But his belief in the possibility of this is not supported by what we know of mental action, since if any attention is being given to a favouring co-operation, probably less will be available in consequence for so dissimilar a task as the exercise of "scientific vigilance"; it is certainly not in accordance with my own experience as a psychically co-operating sitter with mediums, and is directly opposed to the conclusions which I have formed as an observer of Mr. Davey's witnesses.

In estimating, therefore, the value of the testimony to "psychography," we must ask—How much misdescription are we likely to find in the record that may be due to the ignorance of the witness concerning the points worth mentioning? How much misdescription are we likely to find owing to the impulse of the witness to exaggerate, possibly stimulated by the impetus of a new enthusiasm or the momentum of a cherished belief? We then come to the events *as recollected at the time*

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of the record. How much distortion from the *events as originally perceived* must we expect to find in this recollection, owing to the inherent weakness of memory, increased as that may be by the peculiar mental attitude or emotional state of the witness? How far, in the next place, may a description of the events as perceived by the witness, have differed from a full and accurate description of the events as they actually occurred, owing to the special mal-observation displayed by the witness in consequence of a peculiar mental attitude or emotional state? Finally, how much must we allow for the mal-observation that may be caused by the exceptionally disturbing influence of "a person skilled in particular forms of deception, whose chief object is to prevent the witnesses from perceiving many of the actual occurrences, and to persuade them, by ingenious illusions, to an erroneous belief concerning others"? (*Journal* of the S.P.R. for January, 1887.)

I endeavoured to show in the *Journal* (October, November, Supplement to December, 1886)—making certain assumptions as to the defects of perception and memory under the special circumstances involved—that the reports, printed in the *Journal* for June, 1886, of Eglinton's performances, were worthless for proving occult agency. The assumptions which I made are completely justified by the mistakes which have been exhibited by those witnesses of Mr. Davey's performances who are known to myself—persons whose general intelligence, knowledge of conjuring, powers of observation and retentiveness, &c.—so far as I can judge of these—entitle them to be placed on the same level as the writers of the reports printed in the *Journal* for June, the majority of whom I also know personally. And I have not yet seen any report of "psychography" which, when due allowance is made for the untrustworthiness of observation and recollection, excludes the possibilities of conjuring.

By way of illustration I shall here deal briefly with a case concerning which Mr. C. C. Massey specially challenges judgment. It is true that he does this chiefly upon the question of mal-observation, but the case will serve as well to illustrate the possibilities of memory illusion and trick mechanism. Mr. Massey quotes from the case in *Proceedings*, Part X., pp. 87, 88, and refers to his report in *Light* of April 19th, 1884, from which I take the following extract:—

> There was a pile of Mr. Eglinton's own slates upon the table, and it was always upon one or other of these that the writing was obtained. Of the two that were used, I cleaned one, after it had been well wetted, with a dry sponge, myself, on both sides; the other I saw similarly treated by Mr. Eglinton. Of course I watched to see that there was no unobserved change of slate, nor did Mr. Eglinton rise from his seat during the séance,

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except once, to write down an address I had given him. It will be understood that we sat in broad daylight.

We noticed two facts (always observed likewise with Slade), one of which, certainly, could not result from any voluntary act of the medium. This was the lowering of the temperature of the hand which held the slate, just before and after the writing. The other fact was the cessation of the sound of writing when Eglinton broke the contact of his hand with my own.

From my experience with Slade, I was sure that success was near when I felt the coldness of the medium's hand, as he rested it, with the slate, on the table, just before the writing came. Mr. Eglinton now laid one of the two equal-sized slates (10⅝ inches by 7⅝) flat upon the other, the usual scrap of pencil being enclosed. Both slates were then, as I carefully assured myself, perfectly clean on both surfaces. He then forthwith, and without any previous dealing with them, presented one end of the two slates, held together by himself at the other end, for me to hold with my left hand, on which he placed his own right. I clasped the slates, my thumb on the frame of the upper one (⅞ inch), and three of my fingers, reaching about four inches, forcing up the lower slate against the upper one. We did not hold the slates underneath the table, but at the side, a little below the level. Mr. Noel was thus able to observe the position. Mr. Eglinton held the slates firmly together at his end, as I can assert, because I particularly observed that there was no gap at his end. I also noticed his thumb on the top of the slates, and can say that it rested quite quietly throughout the writing, which we heard almost immediately and continuously, except when Mr. Eglinton once raised his hand from mine, when the sound ceased till contact was resumed.

The inner surface of one of the slates was shortly afterwards found covered with writing.

Mr. Roden Noel corroborates Mr. Massey's description, saying "Every word of this account I am able to endorse."

Now I suppose that the writing had been prepared by Eglinton beforehand, and that it was upon one of the slates which Mr. Massey was then holding. How much (*a*) mal-observation, or (*b*) lapse of memory, or (*c*) ignorance of conjuring contrivances on the part of Mr. Massey does this supposition appear to involve?

(*a*) It must be observed, to begin with, that the phenomenon was not a simple and isolated one; nor was it, so far as appears from the account, suggested by Mr. Massey, or previously prepared for by him; the slates were Eglinton's, and there was a pile of Eglinton's slates on the table; Mr. Massey's attention, moreover, seems to have been partly given to the temperature of Eglinton's hand.

What Mr. Massey really meant when he wrote in *Light*, "Both slates were then, as I carefully assured myself, perfectly clean on both surfaces,"[1] is by no means clear. *When* did Mr. Massey

[1] The above sentence (together with Mr. Noel's endorsement) hardly seems exactly equivalent to "our statement that Mr. Eglinton, after enclosing the

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assure himself? *before* or *after* Eglinton laid one slate upon the other? If *after*, are we to presume that he took the slates into his own hands and examined all four surfaces? Who, in this case, placed the slates together again? Mr. Massey, or Eglinton?—"we must have particularity of statement, evidence that the witness has himself analysed the observation into the acts of perception constituting it, and that at the time of observation." (*Proceedings*, Part X., p. 89.) We should, I think, do least violence to Mr. Massey's report if we suppose him to have meant to say that he *had* carefully assured himself just *before* Eglinton laid one slate upon the other; and in this case I hold that Mr. Massey's observation could have been deceived, that there might have been one side of one slate, which he never saw, or that another slate might have been substituted for one of two slates, both sides of which he did see. Mr. Massey does not state that he took the two slates in question into his own hands, and I have no ground for supposing that at that time he was an expert in detecting sleight-of-hand manipulations of slates.[1] So much for the amount of mal-observation required.

(*b*) Proceeding now to lapse of memory, let us suppose that the slates were clean when Eglinton laid them together as described. Mr. Massey says that Eglinton "then forthwith, and without any previous dealing with them, presented," &c. The sitting was in the afternoon, and Mr. Massey wrote his account of it in the evening of the same day. We have to consider therefore whether it is possible that Mr. Massey—with the grant of an exceptionally good memory — should have *remembered* Eglinton's presentation of the slates to him as having immediately followed upon Eglinton's original placing of them together, although these events might in reality have been separated by an interval during which Eglinton might have changed one of the slates for a third. For example, suppose that when Eglinton lifted the slates the pencil dropped out, and Eglinton removed one slate, placed a scrap of pencil on the second slate, and then replaced, not the first, but a third slate lying close by on the table. Might some apparently trivial (to the conception of Mr. Massey) incident of this kind have been completely forgotten by Mr. Massey when he was writing his account, so that the preceding

pencil within the slates which we *then* 'carefully assured' ourselves were *both* quite clean on *both* surfaces," &c. (*Proceedings, loc. cit.*). There is nothing said in the original report about *Mr. Noel's* "carefully assuring" himself, and the meaning of *then* is here less apparently ambiguous than in the original report.

[1] To avoid complication I am dealing with points of observation and memory as separately as possible. But in connection with Mr. Massey's statement which I have considered above, I might have questioned whether he had not misplaced his *feeling* of assurance or the *process* by which he assured himself.

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and succeeding events became joined in his remembrance? So far am I from thinking this impossible, that I regard it, owing to my experiences with other witnesses, as not even improbable. Indeed I think it even possible that Mr. Massey's holding of the slates might have been *interrupted* by some analogously "trivial" incident. Statements most express and definite, made by an honest witness, may, as I have already pointed out, be erroneous from other causes than simple mal-observation or the unwitting interpolation of "specific and positive acts of perception," though they may be erroneous from these causes also. They are often due to other and more frequent forms of the universal weakness of human memory, and may be the result of transposition in the order of events, or of a mere and sheer lapse.

Concerning the possibilities, then, either of mal-observation or of lapse of memory, I traverse Mr. Massey's assertion that "the witness *could* not innocently use terms *expressly and definitely* inconsistent with what really happened," which I must characterise as an assumption completely destroyed by the reports of Mr. Davey's performances.

(*c*) But let us now admit, for the present purpose, that Mr. Massey's account of the incident is correct. He adds, in his report in *Light* (p. 159), that "as writing by the medium himself at the time is absolutely out of the question, there are only three other conceivable suggestions as opposed to occult agency." I do not of course question the veracity of the witnesses; and the other two suggestions, which Mr. Massey offers reasons for rejecting, are "a change of slate," and "concealed writing brought out by heat." Another suggestion has since, apparently, occurred to him.

> "As it is imaginable that a thin sheet of slate, already inscribed on one side, might be loosely fitted into the frame of one of the slates used, clean surface uppermost, so as to fall into the frame of the other slate, written side uppermost, when the first was placed upon the second, it is fortunate that I was able to exclude that suggestion by my possession of the slate on which the writing appeared, which, by-the-bye, was wrapped in paper, either by myself or by Mr. Eglinton—under my eyes, at my request, and carried away by me, *immediately* after we had examined the writing, the sitting being then closed." (*Proceedings*, Part X, pp. 88-9.)

There is clear indication that Mr. Massey had not contemplated this possibility at the time—two years earlier—of the sitting, and it might be contended that the slate which Mr. Massey took away was not that one of the two slates upon which the writing was first found, but another similarly inscribed slate, which Eglinton had provided for the purpose; it probably often happens that sitters request permission to take away the slates upon which writing has appeared. Mr. Massey would apparently guard against this hypothesis of a *subsequent* change

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of slate by the last sentence of the passage quoted above, but no importance can be attributed to this,—if only on the ground that Mr. Massey was unaware, at the time of the sitting, of the possibility to which he has more recently drawn attention. If the sentence in question expresses—not some record made by Mr. Massey on the day of the sitting, but—Mr. Massey's *remembrance after two years*, and if he seriously means it to exclude the hypothesis before us, there would be a vaster divergence than I have hitherto supposed between Mr. Massey and myself as to the ordinary psychology of memory ; and I should, especially when I recall the rigorous signification with which Mr. Massey professedly uses the word *immediately*, class the sentence as an instance of *bonâ fide* transfiguration of the same character as some which I supposed in Mr. Davey's reports of Eglinton. (*Journal* of the S.P.R. for November, 1886.)

But I may point out that there is another suggestion still, which does not appear to me to be inconsistent with anything that Mr. Massey has said. The slate upon which the writing was found may have been an ordinary slate, and may have been taken away by Mr. Massey, and *the other slate*, though apparently ordinary, may have been a trick slate, with room for a false flap that could be fixed, if necessary, by a spring, and that was also adapted to fit the ordinary slate, and which had been placed so as to cover the prepared writing. The details of the trick will be obvious.

Mr. Massey's case is thus, in my opinion, vitiated on three separate grounds, by the considerations due to the possibilities of mal-observation, lapse of memory, and trick mechanism. I cannot, therefore, attach much value to his opinion, which, when his record appeared in *Light*, was :—

" I am as satisfied that this was a genuine phenomenon as I am that the words on this paper are of my own writing."

But while in this instance Mr. Massey's confidence in 1884 proves to have been misplaced, in consequence of his ignorance of a possible piece of trick apparatus, I do not think that his high estimate of the evidence for " psychography " generally is invalidated chiefly either by ignorance of this kind, or by his large trust in human observation. It is invalidated chiefly, I venture to think, by his *à priori* presumption that honest witnesses cannot use terms " *expressly and definitely* inconsistent with what really happened " ; and he could not have made this presumption had he given due weight to the possibilities of memory illusion. I have already shown what small lapses of memory may have made his own specific and positive assertions erroneous ; and it is obvious how, by simple omissions and transpositions, without any pure interpolations at all, the record of an honest witness may be rendered

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full of the most fundamental misstatements. Much of Mr. Massey's paper, as he himself says, was "an attempt to show" that "the supposition of such descriptions as 'he' and others have given of Eglinton's slate-writing being given of the performances of an avowed conjurer . . . is an impossible one." (*Proceedings*, Part X, p. 108.) The reader may decide for himself whether this "impossibility" has been realised or not. For my own part, I maintain that the reports which follow are a practical and complete rejoinder to the considerations alleged by Mr. Massey in his reply to the position advanced by Mrs. Sidgwick.

I may here again draw attention to some of the difficulties (~~which~~ I pointed out in the *Journal* of the S.P.R. for October, 1886) in the way of obtaining adequate reports of "slate-writing" performances which are known independently to be the result of conjuring, and to the manner in which these difficulties have been partially, though not completely, overcome by Mr. Davey. In the first place, proficiency in the production of apparently "occult" slate-writing requires not only practice in the manipulation of slates, &c., but a lengthened experience of sitters, which cannot be acquired in a short time by a person who is chiefly occupied with other business. It is hardly to be expected that accounts of a novice's phenomena should compare for marvellousness with the results of "old mediumistic hands" like Eglinton and Slade. Still, Mr. Davey was able to devote much of his time during the latter part of last year to the improvement of his methods, and has thus been able to produce results which in quality, if not in quantity, may fitly be compared, for the purposes of our inquiry, with the productions of the best professional mediums.

In the second place, I must repeat that it is impossible to induce the same peculiarity of mental attitude in the sitters with a professed conjurer, as they would have assumed had they been sitting with a professional medium. I think I may safely say that not a single person of all those whose reports were published in the *Journal* for June felt certain beforehand that Eglinton's performances were explicable by conjuring; indeed, I may go further and say that nearly all, if not all, thought it not improbable that the phenomena were genuine, and that most of them had been strongly impressed by reports which they had previously heard or read. Now the evidence of a person holding this attitude is likely to be of decidedly less value *cæteris paribus* than that of a person who fully believes that he is watching a conjuring trick. I do not mean merely that there is a reluctance on his part to say or do anything which may imply a direct suspicion of the honesty of the "medium," or that, so far as his attention is directed at all, it is too exclusively occupied with the observation of the conditions at the time when the "occult" agency is *supposed* to be actually

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producing the writing ; though from these causes also, in many cases, his testimony is likely to be less reliable. What I mean is that the idea of communication from the "spirit-world," or of some supernormal power in the "medium," will, in most persons, possess activity enough, even before any results are obtained, to interfere more or less with the observation of the conditions involved ; and after the results are obtained, the dominance of the idea will frequently be great enough to contribute very materially to the naturally speedy oblivescence of many details of the sitting which were hardly noticed at the time of their occurrence, which in the course perhaps of an hour or two have dimmed out of recollection, but which, nevertheless, would have suggested the secret of the trick. Under this head I may also refer to the fact that the conversation held by the sitters with a professed conjurer will probably be of less avail in distracting their attention than if they were sitting with a "medium" with any the smallest expectation that "occult" phenomena might occur. In the former case they are well aware that the conversation is for the express purpose of distracting their attention from the movements of the conjurer ; in the latter case, they endeavour to a certain extent to occupy the mind—according to instructions—with matters foreign to the sequence of events then and there transpiring.

In the third place, comparatively few persons are willing to write out reports of slate-writing experiences with a full account of the supposed test conditions, if they have any suspicion that the writing has been produced by mere conjuring. They are afraid of appearing ridiculous, and in this dread, if they are persuaded to write reports at all, they write them with a meagre allowance of detail, and with an abstention from dogmatic statement. No doubt the fear of ridicule has deterred many persons from writing reports on behalf of the professed "medium," but we must not disguise from ourselves the fact that when this fear has been overcome by the enthusiasm which often accompanies the formation of a new belief, the reports then are less to be trusted, by reason of that very enthusiasm. Analogous to that undeliberate warping of evidence which arises from the desire to justify the adoption of a new faith and to aid in proselytising others, is that which arises from the desire to strengthen the grounds of a conviction which has already been fully formed ; the spiritualistic bias has been much more operative in transfiguring the accounts of mediumistic phenomena than most Spiritualists would be willing to admit. Possibly a wider experience may result in our finding a counterpart to this in the testimonials to professed conjuring performances, but my experience hitherto leads me to think that such a result is highly improbable.

These difficulties have been partly obviated by the fact that many of

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Mr. Davey's sitters were not informed until after they had written their reports that his phenomena were due to conjuring. It has, nevertheless, weakened some of the accounts, that Mr. Davey felt himself restrained from asserting that the phenomena were produced by "spirits"; he frequently asserted that they were *not* produced by spirits, but that he preferred to adopt the ordinary procedure of the spiritualistic medium; and, refusing to offer any explanation, thus shrouding their origin in convenient mystery, he usually requested his witnesses to determine the causes of the phenomena for themselves, the possibility of trickery included. Sometimes, indeed, he assured his sitters that he would take advantage of any carelessness which they displayed; and on one occasion he informed a sitter to whom the locked slate was afterwards entrusted and who placed it in the tail of his coat, that if he obtained an opportunity he would even take the slate from the pocket of this very sitter, and write upon it surreptitiously. Later in the sitting this witness, who I may say had been previously impressed by some writing obtained at a sitting with Eglinton, was called upon to produce the locked slate, and place it upon the table; yet so much had he been carried away by the appearance of the writing just produced by Mr. Davey on a single slate, that he had, for the time, completely forgotten the existence of the locked slate, and did not remember what he had done with it until the other sitters reminded him that he had placed it in his own pocket. This is a very extreme case of the influence of a mental attitude which has undoubtedly in some degree been very prevalent among sitters for mediumistic phenomena.

Not that it is by any means universal; and this leads me to say that one great advantage which some mediums, especially Eglinton, have used very freely, has been foregone by Mr. Davey. He has not been withheld from producing phenomena by the apparent observancy of the sitters. My own choice of sitters for Mr. Davey was determined chiefly[1] by the desire to obtain educated and intelligent witnesses who did not know certainly that Mr. Davey's performances were conjuring, and who could be relied upon to write out a detailed account soon after the sitting. Mr. Davey's unfortunate ill-health, soon after I first met him in September of last year, alone prevented him from obtaining a much larger number of reports. The witnesses were invariably urged to write their accounts as soon as possible after

[1] I had another reason as well for requesting Mr. Davey to give a sitting to Mr. Padshah. I knew that Mr. Padshah had had some unconvincing sittings with Eglinton. Mr. and Mrs. Russell were unexpected witnesses; Mr. Legge was also an unexpected witness. A séance was given to Mr. Dodds because he had scoffed mercilessly at Mr. Legge's account of his experience.—See SITTINGS II, III, IV, VIII.

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the sitting, while the occurrences were still fresh in their memory. It will be difficult for persons who have not had experience in making records of this kind to realise how quickly even incidents which have been recognised as important fade out of memory. And nothing betrays more fully the misappreciation of the value of the testimony we are considering than the reliance which has been so commonly placed upon detailed reports written weeks, months, and even years after the séance. I may refer here to the worthlessness of second-hand accounts and of abridged accounts. A careful original account, however faulty—if written shortly after the sitting, will often be found to contain some clues to the trick operations of the medium, which may be entirely absent from the later account. An instance of this was furnished by one of the reports printed in the *Journal* of the S.P.R. for June, 1886. The report was one sent to our Society by three of our Corresponding Members in St. Petersburg. It appears to have been condensed in a German magazine, *Neue Spiritualistische Blätter*, the "principal occurrences" only being mentioned; and a translation of this condensed account is given in *Light*, September 25, 1886. From this later version of the séance a series of incidents which indicate, as I think, how the chief trick was performed, are entirely omitted; and writing, which according to the original report is described as having been obtained on an ordinary slate, is described in the later version as having been obtained between sealed double slates.[1]

Ceteris paribus, the testimony of two witnesses to the same occurrence is rightly regarded as better than the testimony of one. We must, nevertheless, be cautious in the application of this principle to the testimony for "psychographic" phenomena. A reference to the reports which follow will show that wherever separate accounts are given of the same sitting, the witnesses are never in complete agreement, and they sometimes differ on important points. This we found also to be the case where independent accounts were given of the same sitting with Eglinton (*Journal* for October and November, 1886). In the large number of cases, therefore, where the detailed record of a sitting has been made by one only of two or more witnesses, and the record thus made has been every word of it endorsed by the other witness or witnesses, we have another proof of that plasticity of memory to which I have drawn attention. It must be concluded that in the majority, if not all, of these cases, some of the *remembrances*, whether true or false, of the later co-signatories have become transformed to fit the remembrances of the recorder, and this, perhaps, in most instances, by the mere reading of the record. It is of course not easy to obtain accounts which shall be absolutely independent, since

[1] See Supplement to the *Journal* for December, 1886, p. 516.

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this requires that no communication of any kind connected with the phenomena should pass between the witnesses after the commencement of the séance until the reports have been written, and probably only an approximation to this absolute independence has been attained where separate accounts have been given of the same sitting with Mr. Davey.

It may occur to some ingenious readers of the reports which follow and the notes given in the Appendix, that owing to illusions of perception and memory, Mr. Davey and myself [1] have given misdescriptions of what really happened at the séances, that the other witnesses are right and we are wrong. It is unnecessary to explain the "psychical" conditions under which Mr. Davey and myself were sitting, so different from those of the other sitters; I may refer such readers to the opinion of persons versed in conjuring tricks, and familiar with the misdescriptions given of them by the uninitiated—and especially to the opinion of Mr. Angelo J. Lewis (p. 485). I repeat that the "psychographic" phenomena described in the following records are conjuring, and only conjuring, performances, and I may add that I was very careful myself, in the séances where I was present, to take the part of an ordinary sitter, and to avoid doing anything which would assist Mr. Davey in the smallest degree. Indeed, Mr. Davey would have preferred my absence, as part of the task which I had set myself was to watch Mr. Davey's movements at the critical moments, in order that I might give my independent testimony concerning the mode of production of the phenomena.

These phenomena, as described, may well seem marvellous enough to demand the hypothesis of occult agency: writing between a conjurer's own slates in a way quite inexplicable to the conjurer,—writing upon slates locked and carefully guarded by the witnesses,—writing upon single slates held by the witnesses firmly against the under surface of the table,—writing upon slates held by the witnesses above the table,—answers to questions written secretly in locked slates,—correct quotations appearing on guarded slates from books chosen by the witnesses at random, and sometimes mentally, the books not touched by the "medium,"—writing in different colours, mentally chosen by the witnesses, covering the whole side of one of their own slates,—messages in languages unknown to the "medium," including a message in German for which only a mental request had been made, and a letter in Japanese in a double-slate locked and sealed by the witness,—the date of a coin placed by the witness in a sealed envelope correctly written in a locked slate upon the table, the envelope re-

[1] Mr. Davey agreed with my notes except where I have stated to the contrary.

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maining intact,—a word written between slates screwed together and also corded and sealed together, the word being chosen by the witness after the slates were fastened by himself, &c., &c. And yet, though "autographic" fragments of pencil were "heard" weaving mysterious messages between and under and over slates, and fragments of chalk were seen moving about under a tumbler placed above the table in full view,—none of the sitters witnessed that best phenomenon, *Mr. Davey writing.*

A few words remain to be said as to the principle which has been followed in adding or withholding notes explanatory of the *modi operandi* adopted by Mr. Davey.

The object of the notes given in the Appendix is not to explain the tricks, though explanations of some of the incidents are given or suggested. To explain the tricks would in itself be of little advantage to the investigator of the "physical phenomena" of mediums, since many methods of producing "psychography" may exist besides those which Mr. Davey has employed; and were all of those in present use to be made public property, others would doubtless be invented, and accidental opportunities for producing successful illusions would still arise. I may point out moreover,—and this is a consideration frequently overlooked—that it is a great mistake to suppose that specific verbal explanations, in as far as these are possible, of all the methods practised by "mediums," would effectually check deception even by those very methods; there are tricks that can be explained to a witness, and then performed in his presence without his detecting them, and while he imagines himself to be fully on his guard against them.[1] It would be a still greater mistake to suppose that explanations of the methods in use would convince those who have testified from personal experience to the genuineness of the "psychography" of Eglinton, Slade, &c., that such methods were used for the production of the phenomena which they witnessed. They will scarcely be likely to *remember* the occurrence of events which they perhaps never observed at all, or observed only partially and erroneously; which, whether correctly or incorrectly observed, they have afterwards continually misdescribed or completely forgotten; and which, in many cases, would be distinctly excluded by the acceptance of their testimony as it stands. Further, it must be said,—and this will become obvious to the careful student of the reports—that no description of particular movements or peculiar apparatus would suffice as an exhaustive explanation of the performances recorded; the best part of the trickery is in truth indescribable, it is as fluent and uncertain as the

[1] I have actually seen this done.

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shifting attention of the witnesses, and varies with the variations of their temporarily dominant expectations and emotions.

The object of the notes, then, is to show to investigators the kind and degree of mistakes which may be made by educated and intelligent witnesses in recording their impression of a performance the main lines of which are planned with the deliberate intention of deceiving them, but few, if any, of the details of which can be described as absolutely fixed.

The notes, as given, might suggest to the ordinary reader some unfounded conclusions. They seem in some cases to indicate so much carelessness on the part of the sitters, to open out such easy possibilities of trick for the conjurer, that the reader may fancy that the witnesses were unusually gullible, and that Mr. Davey had in reality little to do. To this the supporters of Eglinton may probably add that an "experienced Spiritualist" would have run no risk of being similarly deceived. These conclusions, I have no doubt, would be mistaken. In the first place, the witnesses would certainly not have been objected to before actual trial as of less than average competence; nor do I think that as a matter of fact they have shown less than average acumen or care. They may be taken, too, as a fairly representative group, including, as they do, successful men of business, men of ordinary university training, electrical engineers, members of the legal and educational professions, &c.; they include one professional conjurer, and others—as Mr. Padshah and Miss Symons—who had given some previous attention, as their accounts may sufficiently show, to the risks of mal-observation on such occasions as these. Of the great treachery of memory, indeed, the majority of Mr. Davey's sitters have been unaware, but of this the witnesses of other "slate-writing" performances have, unquestionably, been at least equally unaware. In support of this it is enough again to remind the reader that in all the cases where separate accounts, more or less independent, of the same sitting were given by the witnesses of Eglinton's séances recorded in the *Journal* of the Society for Psychical Research for June, 1886, a comparison [1] of the accounts elicits the fact that the witnesses exhibited forms of memory-illusion precisely parallel to some of those which have been exhibited by the witnesses of Mr. Davey's performances.

And be it observed that mistakes of the kind illustrated in the notes are not, prior to special study, any proof of obtuseness or particular deficiency of memory. Mr. Davey himself, before he had studied the "slate-writing" forms of conjuring, was a decided offender in this respect (see *Journal* of the S.P.R. for October and November,

[1] See the criticism of the evidence in the *Journal* for October and November, 1886.

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1886); and I have pointed out my own shortcomings and those of my colleagues with, I hope, an unsparing hand (see Supplement to the December number of the *Journal*). I do not, in point of fact, think that this unpreparedness and inobservancy of mind, in the presence of a conjurer, is a thing of which anyone who is not familiar with the tricks already need be ashamed. I have a strong suspicion—founded by this time on a pretty wide experience—that those of my readers who may be most disposed to deride the simplicity of the witnesses now to be cited, would themselves have come out of the ordeal no better than Mr. Rait, and not so well as Mr. Padshah.

But, although mankind—as I believe—are thus inattentive and careless and forgetful beyond their own common notion of themselves, it must not be supposed that it is an easy task to play upon their inattention and forgetfulness as Mr. Davey has done. On the contrary —without making any claim for him of inimitable skill—it must be pointed out that his achievements, simple as they may seem, and by reason of their very simplicity, belong not to a low but to a high class of conjuring performance. For the psychologist, and quite apart from the question of effect producible on large audiences, there may be said to be three classes of conjuring of progressively deeper interest. Least interesting to the psychologist are the effects which depend on machinery or apparatus, great as the mechanical skill involved may be. More interesting are those which depend on pure prestidigitation, on an assured competence to perform some given action so swiftly and cunningly that the spectator will fail to see it. But higher still in psychological interest comes a class of conjuring performances which consist not so much in eluding the perceptions of the witnesses by the speed and dexterity of one's own movements, as in gently inducing them, by means different in each case, to bewilder and entrap themselves. The conjurer here wins as by the adroitness of a clever thief, who poses for the nonce as a detective, persuasively points out the most subtle and efficient precautions against robbery, and all the while is emptying your pockets. In this last class of performance, the better the conjuring is, the less of it is needed; and its greatest triumph is when the spectator's mind has been brought into such a state that he—so to say—does his conjuring for himself, and stands astounded at his own interpretation of some entirely obvious phenomenon. Thus Mr. Padshah, in one of the most instructive of the incidents below to be recorded, turned the conjurer's very scrawl into a crowning success, and read *Books* into *Boorzu*.

Once more; if it be claimed in any quarter that "experienced Spiritualists" would have been able to detect Mr. Davey's methods more easily than the witnesses actually adduced, I trust that I may be allowed to say, without giving offence, that to my mind the presumption

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is strongly the other way. I have already explained that the power of detecting conjuring tricks is not a test of general capacity, but rather a result of having studied similar conjuring tricks beforehand. The "experience" involved in much séance-going is assuredly not an experience that makes in this direction; the mental attitude induced is the very worst possible for the discovery of trickery, and it has been on "experienced Spiritualists" that those mediums have thriven whom mere ignorant outsiders have afterwards caught in palpable fraud. I do not, of course, mean that no "experienced Spiritualist" has ever caught a rogue out; but such exhibitions, for instance, as those of Haxby and Firman (see *Proceedings*, Part X, pp. 60-62), certainly show that it is not to the circles of devout believers that we are to look for detection of even the grossest and most transparent imposture. But I am anxious not to be supposed to assert that "experienced Spiritualists" are less acute than other men. I must yet again emphasise the fact that the difference depends on previous attitude of mind; and there is plenty of evidence to show how many minds at how many séances, have been in much the same condition as Mr. Padshah's when he recognised the convincing word *Boorzu*. I will cite one instance only, which exemplifies the influence of the Spiritualistic bias even beyond the sphere of professed mediums. It is a letter written by perhaps the most experienced of all Spiritualists, endorsing an opinion held by a man than whom none more eminent, none more widely or justly respected, has ever avowed adherence to a belief in Spiritualism. "M.A. (Oxon.)" wrote as follows to *The Medium and Daybreak* of August 24th, 1877:—

> I am glad to see that Mr. Alfred Wallace agrees, after seeing Lynn's medium, with the substance of my letter in your issue of July 6th. Given mediumship and shamelessness enough so to prostitute it, and conjuring can, no doubt, be made sufficiently bewildering. It is sheer nonsense to treat such performances as Maskelyne's, Lynn's, and some that have been shown at the Crystal Palace, as "common conjuring." Mr. Wallace positively says, "If you think it is all juggling, point out exactly where the difference lies between it and mediumistic phenomena." (See *Proceedings*, Part X, p. 66 and *note*.)

Few readers indeed will question the proved sagacity, the absolute straightforwardness, of the illustrious naturalist whose statement is quoted by "M. A. (Oxon.)" Still fewer perhaps will think that, without a strong mental predisposition, the author of *Essays on Natural Selection* would have committed himself to the view that unembodied spirits ran Dr. Lynn's entertainment at the Westminster Aquarium. For myself, I can but repeat his challenge in another sense, and say—let the experienced Spiritualist "point out exactly where the difference lies between 'Mr. Davey's performances' and mediumistic phenomena."

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EXPERIMENTAL INVESTIGATION.

By S. J. Davey.

For some time past I have practised "slate-writing," and have given up much leisure time to the subject, with a view to discovering how far ordinary witnesses can be deceived by conjuring performances. I have received reports of my experiments from various persons, and these I subjoin, with comments, in some cases, as to lapses of observation or memory on the part of the witnesses. Lest there should be any misunderstanding I must explain what induced me to take up the subject, and the general conclusions to which I have been led.

Readers of the *Journal* of the S.P.R. are aware that I sent reports of sittings with Eglinton to our Society in 1884, and that I had previously sent reports of the same sittings to the periodical *Light*. I do not now attribute any value to these reports as proving the reality of so-called "psychography," for reasons which will appear in the sequel.

My chief interest in Spiritualism generally was awakened by an experience of my own, which was as follows:—In 1883, owing to a serious lung complaint, I spent several months at a Continental health resort. During this visit, one of my companions died under circumstances of an unusually distressing character; and another friend and myself had been in frequent attendance upon him during his last illness. His body was subsequently dissected, in the presence of my other companion, Mr. C. Three weeks after this I was startled one night by seeing what appeared to be the face and form of my deceased friend under circumstances that greatly surprised me, and the next day, whilst visiting Mr. C., who lodged in the same hotel as myself, he informed me that he had that night experienced a remarkably vivid dream in which he had seen our deceased friend. I then for the first time related to Mr. C. what had happened to myself.[1]

On my return to England I began to devote some attention to the study of alleged psychical phenomena, and I perused several works relating to the subject, including Zöllner's *Transcendental Physics*, *Psychic Force*, by Professor Crookes, *Miracles and Modern Spiritualism*, by Alfred Russel Wallace, *The Debatable Land*, by Robert Dale Owen, *Psychography*, *The Report of the Dialectical Society*, &c., and I formed a circle of friends for the investigation of the alleged phenomena.

[1] I have since had some correspondence with Mr. C., who does not look upon the incident as anything more than a dream coincidence. At the time, I attached particular significance to my own experience, as my friend, when alive, had discussed the question of Spiritualism with me.

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During my first experiments I found myself affected a good deal by involuntary movements which I could not then account for, though I now have little doubt they were caused simply by nervous excitement; however, nothing of any significance happened, and it was at this stage of my investigation that I made the acquaintance of Eglinton, of whose so-called "psychography" I had heard. At the conclusion of my first séance with Eglinton, which took place in June, 1884, I could not account for the phenomena except on the Spiritualistic hypothesis, and I was led to believe, from the "communications" which I then received, that I possessed psychic powers. My second séance with Eglinton, on October 8th, 1884, was a failure, but my third, on October 9th, 1884, was a success. I was somewhat excited at these results, and even contemplated making a collection of cases to convince the unbelieving world. On October 9th, 1884, the supposed invisibles informed me that I had "developed my own powers to an appreciable extent, owing to their former advice." Now, between my first and third séances I certainly had experienced privately one or two incidents which I then regarded as genuine psychical phenomena, and I will briefly relate one of these experiences.

One afternoon in September, 1884, I took two slates and determined to experiment alone. I held them together with a small pencil grain between. I was in my library; the slates were taken out of a private box by myself; I glanced at them and placed them in the position above described. In the course of some few minutes I lifted up the slates and examined them, and found the word "Beware" written in large characters across the under side of the upper slate. My astonishment at this cannot well be described, as I felt convinced I had previously thoroughly examined the slates, and I took the first train to London, and showed them to my friend Mr. X. (see *Journal* for October, pp. 435, 436). He agreed with me in saying it was almost incredible. I then attributed the above, and one or two kindred phenomena, to the action of an abnormal power proceeding from myself.

It was afterwards proved to me that these experiences were neither more nor less than simple hoaxes, perpetrated by some of my friends. In the case of the particular incident which I have described, the slate had been tampered with during my previous absence from home. I have no doubt that, not suspecting any interference with my slates, I had not thoroughly examined them immediately before sitting, as I supposed myself to have done. Another incident of a somewhat ludicrous character may be mentioned here. I had bought a trick slate, which had been sold to me as an explanation of the process used by mediums. I thought, however, that this was scarcely true, as the trick seemed to be a very palpable one. I had put this slate away in my drawer with the other slates containing the

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writing of Eglinton's supposed spirits. One morning, on going to this drawer, which I usually kept locked, I found the following words, or something to the same effect, written across the false surface of the trick slate : " We object to your learning trickery." I then compared this writing with some on Eglinton's slates, and found it apparently identical. I was naturally somewhat amazed, and I did not then for a moment suspect that my friends were hoaxing me, and that the above sentence had been written in careful imitation of the writing on Eglinton's slates. Also, during séances held privately, I continued to be frequently seized by spasmodic movements when I believed " uncanny " manifestations were about to take place. As a conjurer, I have been since amused sometimes at similar convulsions in others during my conjuring performances, when the sitters have supposed that the writing was being produced by supernatural means ; my own shudderings during these performances being, of course, part of the trick.

I had several other séances with Eglinton after October 9th, 1884, all of which proved blanks, except one held on January 15th, 1885. One of my friends who accompanied me to this sitting assured me he had actually seen Eglinton imitating the sound of writing at the time when I thought a long communication was being written. I endeavoured to be more watchful at the two sittings which I had after this, the final séance being on June 25th, 1885 ; but at neither of these did any results occur, although I did not inform Eglinton of the information I had received. However, partly in consequence of my friend's conviction that Eglinton's performances were only tricks, I began, after getting no further results, to apply myself anew to see what could be produced by conjuring. I then met with an individual who professed to sell me " secrets," which he gave me to understand he had procured from an American medium. I also bought one by which words, &c., could be made to appear on the flesh after it was rubbed over with burnt paper. This trick has evidently been exhibited by Eglinton as a " mediumistic phenomenon " (See *'Twixt Two Worlds*, pp. 52, 54). I soon made use of the knowledge thus acquired by performing before friends and acquaintances, and I found that even at that early stage of my practice many of them could be deceived as to my real *modus operandi*. Eglinton has attempted to give particular validity to the accounts of my successful séances with him in 1884, claiming my testimony as that of one who had " specially studied and practised the art of simulating the slate-writing phenomena under conjurers' conditions " (*Light*, July 31st, 1886). I have already pointed out elsewhere that I was not an expert in 1884, when I wrote the reports in question, which Eglinton describes as " among the most favourable and decisive which have appeared." The extent of my

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knowledge on this subject at that time will be found described by myself in *Light*, August 21st, 1886, as follows:—

I went to Mr. Eglinton on June 30th, 1884, and I do not remember ever having previously performed a single conjuring trick as applied to slate-writing, and also the question of conjuring in any other form had in no way interested me. Previously to my second séance, October 9th, 1884, I made some three or four attempts with a thimble, pencil, and a slate held under the table, and with a trick slate made of card-board, with a movable flap and blotting-paper.

I noticed that many persons made statements concerning my performances, as to the conditions of the production of the writing, which were just as emphatic as I made in my own reports about Eglinton, and I also noticed that nearly all these statements were entirely wrong. Even when I sometimes revealed the fact that I was merely a conjurer, the reply which I frequently received was something of this kind: "Yes, you may say it is conjuring, but it could not have been done by that means when I did so-and-so" (describing a supposed test) "and yet we got the writing all the same." The following extract from a letter to me is typical of the views taken by several of my investigators:—

. . . .

I certainly think your slate-writing quite equal to what we saw at Nottingham-place [with Eglinton], but till I see how it is done, and it is thoroughly explained to me, I cannot give up my belief that you yourself employ more than sleight of hand for your results. You see I am a St. Thomas.

. . . . .

As I went on I was gradually forced to the conviction that my own reports about Eglinton were just as unreliable as these statements about myself, although I was not then aware of the serious discrepancies between them which Mr. Hodgson has lately pointed out in the *Journal* (October and November, 1886).[1] In

[1] A critic, "C. C. M.," says in *Light*, January 22nd, 1887:—"Of course in very many cases the *modus operandi* could and would be explained, at least privately to the witnesses, to their complete satisfaction. These would be really trick cases, as to which the antecedent reports will always have some evidential defect, discoverable by a careful critique without any presumption at variance with the distinct and definite statements of the witnesses (except in the case of witnesses whose veracity, or capacity for *ordinary* observation, is questionable), and such, therefore, as would not be adduced in any judicious selection of evidence to prove the genuine phenomena." Now, in a previous number of *Light* (August 14th, 1886) Mr. C. C. Massey asserted, concerning some of my testimony to Eglinton's performances, that "there is no room for the hypothesis of innocent misdescription, which might afterwards come to be recognised as such by the witness himself." I believe, nevertheless, that the performances of Eglinton, which I endeavoured to record, were due to trickery

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consequence of the change which was taking place in my opinion, I wrote, on July 30th, 1885, to Mr. Farmer, requesting him for "private reasons," not to make any reference to myself, either directly or indirectly, in the work about Eglinton (*'Twixt Two Worlds*), which he was then preparing for the press.

From a study of various exposures of slate-writing mediums, and other incidents which have been privately brought to my notice, I cannot now entertain a doubt that they have frequently practised deception; and whether it is a fact that they, nevertheless, occasionally obtain the help of "spiritual" beings, or manifest supernormal powers, is a question upon which I have good reasons for being now very sceptical, though I do not of course profess to know how all the slate-writing tricks are performed. Indeed, only last month (February, 1887), I was informed of a special *modus operandi* employed by an American medium, Mrs. Simpson; this method was entirely unknown to me, nor do I think I should have discovered it myself.

Until recently I had not endeavoured to obtain written reports from persons who sat with me, and I was desirous of obtaining them under as nearly as possible the same conditions, as regards the mental attitude of the sitters, as those obtained by professional mediums for slate-writing; I did not wish people to know with absolute certainty by my own professions beforehand, that the slate-writing was only conjuring, though I urged them to treat me as a conjurer, to use tests, and take precautions against trickery, &c. Few persons would imagine how difficult it is for ordinary witnesses to accurately record a "slate-writing" séance, even if they are very careful and quick observers; and how prone the majority of witnesses are to exaggerate or distort records of events which they believe to be of an abnormal character. In consequence of the prominence given in certain quarters to my name in connection with "slate-writing," I assumed the professional [1] name of David Clifford. The desirability of this step may be illustrated by the following incident: A short time ago, at a séance, I met a gentleman who spoke in very disparaging tones of the performances of a certain amateur conjurer known as Mr. A., and who remarked to the effect that the statements of Mrs. Sidgwick (*Proceedings*, Part X,

on his part, and that my reports, adduced by Mr. Massey in his "judicious selection of evidence," were vitiated by "innocent misdescription." I think it not at all unlikely that I was guilty of the amount of misdescription hypothetically attributed to me by Mr. Hodgson, because precisely similar misdescriptions have been given of my own performances by witnesses whose intelligence and acumen are certainly not inferior to mine, and whose veracity is unquestionable.

[1] By the use of this term I do not mean to imply that I have ever demanded any fee for a séance; I have never accepted any recompense whatsoever.

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pp. 67–70) as to this conjurer's powers did not in the least explain the subject of "psychography." At the conclusion of my performance this same gentleman (who knew me only under the name of Clifford) declared in my presence, and in that of his co-investigators, that the experiments he had just witnessed were more conclusive as to the existence of supernormal phenomena than those he had witnessed in the presence of a well-known professional medium. Had he then known I was Mr. A., the "amateur conjurer," I do not think he would have shown such enthusiasm as regards the "incomparable" nature of my phenomena.

In some of the reports which I received I was described as Mr. A., and in several others as Mr. Clifford; in these cases I have substituted my real name, for the sake of clearness.

I think it would be no easy task to expose an expert in slate-writing, provided he had made up his mind not to give his investigators the chance of doing so. A practised conjurer in this particular branch of his profession soon acquires a sufficiently keen insight into character to know when there is no risk of detection. If the performer has any reason to think that any part of his trick will be seen, he can take refuge in a blank séance; nor would it generally be the case that if the trick were partly performed the observance of strict conditions by the sitter would result not merely in failure, but in exposure, as Mr. Massey seems to suggest. (*Proceedings*, Part X, pp. 93, 94.) I have, several times, had to deal with this danger, and have always been successful.[1] Of course, cases will arise when, if the right steps are taken by the sitter, exposure will result; and this is precisely what has happened on more than one occasion, with, for example, Dr. Slade. There is one danger to which I think a conjurer is liable, unless he is very careful, viz., to give too little credit to the shrewdness of a sitter, just as he probably often gives too much. The remedy obviously would be to increase the number of entirely blank séances. If I were forced to give blank séances to persons of whose keenness I was afraid, I should, of course, frequently give blank séances to others whom I had no reason to fear, and with whom I could produce marvellous phenomena whenever I liked. I have found, moreover, that a blank sitting occasionally, with an investigator who at other times gets good results, makes the phenomena look more mysterious than ever, and forms an additional reason in his mind for not attributing the phenomena to conjuring. A plan, I understand, that is very frequently adopted by a well-known American medium, is to simulate sometimes, in a very marked manner, the ap-

[1] Since the above was written, an incident has occurred which some of my readers will probably think an exception; it happened at a sitting with Mr. Dodds, and I will refer to it in my comments upon his report.

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pearance of trickery in his slate-writing. Not unfrequently one of his investigators falls into the trap, observes what he supposes is a clear case of deception, and demands an instant exposure of the slate. The medium then protests against the "unwarrantable suspicion," and finally reveals the slate, to the chagrin of his would-be exposer, who of course finds it perfectly clean. Then, by a subtle process, the medium does write on the slate, to the subsequent amazement of his witness. From the account of a recent exposure by a lady Spiritualist in America, who detected Slade in the very act of writing, I understand that the speed with which he wrote on a slate held under the table greatly astonished the observer. I have good authority for believing that the account is to be relied upon. (See New York *Sunday Times*, July 5th, 1885.)

I may now briefly refer to the argument that "psychography" must be of an abnormal (or supernormal) character, since conjurers have been unable to explain the phenomena. My own opinion, as that of an amateur conjurer, has been claimed in its favour, but I have already pointed out that this is only a misrepresentation of the facts of the case, and that I was a deficient observer, and an ignoramus as regards conjuring, when I wrote the reports favourable to Eglinton. At the same time, I understand that certain conjurers have professed their inability to explain the slate-writing of some mediums by conjuring. But, after my own experiences, I am not at all surprised at this. That the testimony of a specially skilled conjurer *in this particular branch* is of value I do not deny, yet at the same time it does not, I think, follow that he must therefore know all the secrets, such as one with more experience might have acquired. If he is very confident of his own ability to find out any trick and cannot explain the *modus operandi* of the medium, he may possibly think it inexplicable by conjuring; and the remarks made by Mrs. Sidgwick at the close of her article in the *Journal* of the S.P.R. for December are particularly suitable to a case of this kind. A very good instance of this has come under my notice.

When Eglinton was in Calcutta, Mr. Harry Kellar, a professional conjurer, requested the "opportunity of participating in a séance, with a view of giving an unbiassed opinion as to whether," in his "capacity of a professional prestidigitateur," he could "give a natural explanation of effects said to be produced by spiritual aid." Eglinton eventually met Mr. Kellar, and the result was that Mr. Kellar came away utterly unable to explain by any natural means the phenomena that he witnessed; and he said that the writing on the slate, "if my senses are to be relied on, was in no way the result of trickery or sleight of hand." This occurred early in 1882, and Mr. Kellar's opinion still continues to be quoted in favour of the genuineness of Eglinton's phenomena. Yet I am not aware that Mr. Kellar, before sitting with Eglinton, had any

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special knowledge of the different methods of producing slate-writing by conjuring, and I have little doubt, after reading his account of a sitting in 1882, quoted in *Light*, October 16th, 1886, p. 481, that he was ignorant of at least some of these methods. But this does not seem to be my own view only; it seems to be that of Mr. Kellar himself, who since then has apparently turned his attention to slate-writing, and has changed his former opinion about the genuineness of the phenomena; he now professes to be able to "duplicate any performance given by mediums of whatever nature after he has seen it done three times." This was mentioned to me by an American gentleman whom I met recently, but I have also seen a notice of it in *Light* for March 28th, 1885, p. 147, from which I have taken the above extract; yet Mr. Kellar's former opinion, given, as I presume, when he was not a special expert in slate-writing, is continually quoted by Spiritualists, just as my own opinion, given when I was absolutely incompetent and knew next to nothing about conjuring in any form whatever, has been quoted as the opinion of a specially qualified conjurer.

I do not myself place much value upon the opinion of conjurers who have not previously become thoroughly versed in the ways of deceiving sitters in slate-writing; not only because of this incident in which perhaps Mr. Kellar's over-confidence in his own powers of detection led him into a mistake, although he has after long experience publicly proclaimed his disbelief in "mediumistic" phenomena, but also because I have myself been able to deceive a gentleman accomplished in general conjuring.

On August 26th, 1886, I received a letter from a well-known professional conjurer, whose programme includes several *exposés* of alleged spiritualistic frauds. In his letter to me this gentleman[1] informed me that he had heard a great deal about my slate-writing, and was most anxious to witness the phenomena, as he had had séances with a well-known professional medium; and he politely requested an interview with me. He was a stranger to me personally, but I at once offered to give him a séance, which was arranged for September 13th, 1886. At the conclusion of the séance[2] he gave me his testimony as follows:—

September 13th, 1886.

I can see no explanation by trickery of the experiments in slate-writing I have seen performed by Mr. Davey this evening.

(Signed)————

[1] I have not here disclosed his name, as, since I have informed him of my conjuring powers, he has desired me not to do so. The names and addresses of all the writers of statements and reports are in the hands of the Hon. Secretary of the S.P.R.

[2] I had a curious experience with this gentleman. I asked him to think of a number. A number which I thought would be right was then, without his knowledge, marked on the slate by my process. I then asked him to tell me

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Some days afterwards he wrote to me as follows:—

September 24th, 1886.

It gives me much pleasure to add my testimony to that of many others you have, and I certainly can state that in some mysterious manner which to me seemed quite inexplicable, writing appeared on slates which I had purchased myself, which had been previously thoroughly *washed*, and while they were held together apparently very tightly. And it was specially remarkable that the writing was in the very colour I asked for.

(Signed)————

Another professional conjurer was shown my locked slate by an investigator, the writing having been allowed to remain, and on hearing the account of the witness, he offered an explanation, which was, however, entirely wrong; I instance his opinion merely for the sake of pointing out that his great knowledge of conjuring in general did not enable him to suggest an explanation which would I think have occurred to him if he had been skilled in the various special methods that may be used by conjurers in connection with slate-writing.

It has sometimes happened that an investigator, who knew beforehand that my performances were conjuring, has thought he had obtained a clue to my methods, but in nearly every case where I have suspected this, I think his discovery has only tended to perplex him more than ever. Whilst visiting Professor Henry Sidgwick at Cambridge some few months ago, I gave both Professor Sidgwick and Mrs. Sidgwick two séances for slate-writing. Amongst other phenomena, I obtained an answer on my locked slate, written underneath the question Professor Sidgwick had written. I had requested Professor Sidgwick to keep special charge of the slate. He afterwards concluded I had obtained some means of opening and writing on it, and he informed me as to when and how he thought I had done this. It is interesting to note that I did not in any way perform the trick in the manner Professor Sidgwick surmised, as I have since proved to him; he has informed me that my explanation was "completely unexpected," and he says:—

I was so satisfied with my own conjecture (difficult as it was for me to imagine it actually realised) that the method you actually used never occurred to me—nor anything at all like it.

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the number he had thought of. He said 98. I lifted up the slate and showed him the figures 98 that had been written before he had spoken. This may of course have been merely an odd coincidence, but the fact that I have had several somewhat similar experiences with other investigators led me to think that there might be something of the nature of thought-reading in it. I endeavoured to arrange some further experiments with Mr. ——, but his many engagements, and afterwards my serious illness, prevented our meeting again.

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To those of my readers who are specially interested in the subject, I may recommend a book entitled *The Bottom Facts of Spiritualism*,[1] by Mr. John W. Truesdell, who seems to have had considerable experience in slate-writing. He gives an interesting account in Chapter XVI. of a slate-writing séance recorded by Mr. L. W. Chase, of Cleveland, Ohio, and I have no doubt, after my own experiences as a producer of slate-writing, that Mr. Truesdell's subsequent version of the matter is the true one. In the *Daily Courier* of Syracuse, New York, December 7th, 1872, Mr. L. W. Chase made the following statements :—

The medium (Mr. John W. Truesdell) then took up a common slate, and, after carefully washing off either side, placed it flat upon the table, with a bit of pencil, about the size of a pea, underneath. We then joined hands, and after the lapse of about ten minutes, under the full glare of gas-light, we could distinctly see the slate undulate, and hear the communication that was being written, a copy of which I herewith append :—My dear Brother,—You strive in vain to unlock the hidden mysteries of the future. No mortal has faculties to comprehend infinity.—CHARLOTTE.

The above lines were not only characteristic of my beloved sister while in the form, but the handwriting so closely resembled hers that, to my mind, there cannot be a shadow of doubt as to its identity.

In reference to a further event, Mr. L. W. Chase adds :—

A short communication from my mother (and in her own handwriting) was found plainly written.

I have quoted the above extracts since they serve to show how a person may be deceived in the matter of spirit identity ; for Mr. John W. Truesdell, at the close of Chapter XVI., frankly informs his readers that he himself wrote the messages, and describes the methods he employed. The resemblance between the handwritings was, I presume, imaginary.

The fact that "messages" occasionally contain private family details, &c., is often quoted as a proof of the Spiritualistic theory in connection with slate-writing, but many persons would be surprised to find how frequently a slate-writing conjurer may become possessed of apparently private matters in connection with his investigators, and they should also not forget that peculiar chance coincidences sometimes occur. It is not very long since I met a gentleman who was a perfect stranger to me personally, and I depicted scenes to him that I knew had taken place many years ago, with an accuracy that utterly bewildered him, and I went into such private details of his family matters as convinced him I had a strange insight into his past life. Yet this was merely due to a chance coincidence. Some months previously these and other details

[1] Published by Carleton and Co., New York.

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had been incidentally mentioned to me by a person well acquainted with his history, and although he was not a public character, his name, in connection with the events of which I had heard, became somehow fixed in my memory. Nor is this the only experience I have had of a somewhat similar nature.

Then it must be borne in mind that when witnesses become deeply impressed with the wonder of the performance, they not unfrequently give way to a little natural excitement, and whilst they have laboured under the excitement I have picked up items of information from the witnesses themselves, which when reproduced by me at future séances have been declared "wonderful tests."

During the past few months I have given séances to many total strangers who have applied to me for sittings. In some cases I have given these performances away from my own residence, and I have requested the investigators to use all possible caution to guard against any trickery, leaving them, however, to make their own suppositions concerning the mode of production of the phenomena. Latterly I have stipulated that the sitters should write out reports as soon as possible afterwards; and upon receiving these reports I have informed them without delay that the phenomena were only conjuring. Formerly in some cases I had given the sittings over and over again to the same persons, with an occasional blank to stimulate their curiosity; nevertheless they never detected the *modus operandi*.

I shall now give nearly [1] all the accounts that I have received, but before doing so I wish my readers to be clearly aware that the writing performances described in the following records were due to my own unaided powers as a "slate-writing" conjurer. Two years ago I should have questioned the power of a conjurer to produce such records from ordinary witnesses as those which I now append, and that others shared my doubt in this respect is, I think, apparent from the following Editorial Note in *Light*, September 4th, 1886.

If he [Mr. Davey], or any other conjurer, can produce the *appearance* of the conditions which he *seemed* to observe with Mr. Eglinton, and the writing under such *apparent* conditions, so as to induce an inexperienced

[1] The only reports which I have not quoted are two by Mrs. Sidgwick, one by Mr. Hodgson, and three others. These last three resembled the majority of those which I have quoted; two of the writers desired me not to print their reports at all; the third desired me not to print his report unless it was a correct account of what occurred at the sitting. Mrs. Sidgwick was not only aware that I was a conjurer, but I had told her a good deal about my tricks before my first séance with her. Mr. Hodgson was also aware that I was a conjurer, and had some knowledge beforehand of my *modus operandi;* his report was written chiefly for comparison with an account promised by the gentleman to whom I have referred on pp. 409-10 as having exhibited such enthusiasm, but who, unfortunately, notwithstanding my repeated requests, has never sent me any report.

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witness to write such a report as those he wrote himself, it will be time enough to talk of mal-observation as a possible explanation.

I shall begin by quoting a few brief statements of a general kind merely in illustration of the impressions left upon some of those from whom I did not exact a detailed report.

Statement of MR. A. PODMORE.

July, 1886.

A few weeks ago Mr. D. gave me a séance, and to the best of my recollection the following was the result. Mr. D. gave me an ordinary school slate, which I held at one end, he at the other, with our left hands: he then produced a double slate, hinged and locked. Without removing my left hand I unlocked the slate, and at Mr. D.'s direction, placed three small pieces of chalk—red, green, and grey—inside: I then relocked the slate, placed the key in my pocket, and the slate on the table in such a position that I could easily watch both the slate in my left hand, and the other on the table. After some few minutes, during which, to the best of my belief, I was attentively regarding *both* slates, Mr. D. whisked the first away, and showed me on the reverse a message written to myself. Almost immediately afterwards he asked me to unlock the second slate, and on doing so I found to my intense astonishment, another message written on both the insides of the slate—the lines in alternate colours, and the chalks apparently much worn by usage.

My brother[1] tells me that there was an interval of some two or three minutes during which my attention was called away, but I can only believe it on his word.

AUSTIN PODMORE.

Statement of MRS. JOHNSON.

My sisters and I being most interested in the subject of slate-writing and anxious to see something of it, Mr. Davey kindly arranged a meeting at his house. We sat at an ordinary table in a well-lighted room, and writing was quickly produced on the inner surface of one of two slates held firmly together, once by Mr. Davey and myself, at other times by my sisters and Mr. Davey; at first just under the edge of the table, then above, and afterwards on one of my sister's shoulders. This was the more wonderful as we had purchased the slates on our way from the station. Of course between the slates were placed three points of different coloured chalks, *after which*[2] Mr. Davey asked us in which colour the writing should appear, and it did so in the colour we elected, the slate being covered with writing. We are all quite certain that the slates were never out of the hands of one or other of us, and we are totally unable to account for the slate-writing.

M. JOHNSON.

[*September*, 1886.]

[1] Mr. Frank Podmore had been previously informed by me as to the details of the particular methods which I intended to employ in the séance described above.—S.J.D.

[2] These words were added by Mrs. Johnson later.—S. J. D.

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Statement of MR. SCOBELL.

November 25th, 1886.

DEAR SIR,—

I had the pleasure of attending a séance given by you some few months ago, and beg to relate what took place to the best of my recollection.

First, you produced a framed slate which folded, and upon which there was a patent lock. You opened the slate, cleaned it perfectly free from writing, put two or three pieces of crayon or pencil therein, locked it up, and placed the key in the hands of one of my daughters, who was present. The slate was laid on the table, and the hands of all of us were placed on and around it. You then told us to think of some subject upon which we should like a few lines, and to say the colour in which we should like them to appear. This was left to one of my daughters. You then appeared to be invoking the aid of some unknown person, which appeared to be attended with considerable mental agitation to yourself, and a slight scratching was heard, and upon the slate being finally unlocked and opened, two or three lines of writing appeared therein, and they were upon the subject my daughter had lent her mind, and in the colour writing desired by us.

The next thing you did was to solicit us to take out any volume from your bookcase, turn to a page, and fix our special attention on a passage. This I did without your seeing the page or passage. The book was handed to you, and you in a short time told us the right page and right paragraph.

I can only say that my daughters and myself were perfectly astonished with your performance, and had we been predisposed to believe in Spiritualism, we should have been convinced in such belief through your séance, as the whole performance seemed to us a phenomenon incapable of any explanation and not to be produced by any ordinary natural means.—Yours faithfully,

R. W. SCOBELL.

Mr. S. Davey, Jun.

Statement of MR. S. ELLIS.

November 29th, 1886.

. . . . . .

Both Mrs. Ellis and myself are pleased to have an opportunity of testifying to the intense gratification you have afforded ourselves and friends on several occasions, both at our house as well as under your own roof, by the psychical phenomena you have exhibited, and we are *now* as much as ever at a loss to arrive at the *natural means* employed, as at the startling results produced—so astonishing that it is almost impossible to believe even the testimony of two senses. The productions of the "locked slate" fully bear out the foregoing statement.

. . . . . .

S. ELLIS.

Statement of MRS. BARRETT.

. . . Your wonderful performance on the slate completely puzzled me. I have not got over it yet. Thinking over it as much as ever I can, I am as far off having any idea about it as at first. You say you did

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the writing, so I suppose you did ; but how ? That is what I want to know. You gave me a clean slate without a mark or scratch of any kind upon it. I examined it carefully, I sponged it with water, and at your desire I locked it up and kept my eye upon it. When it was unlocked and the slate examined, I discovered, to my astonishment, that it was written all over from top to bottom. I never lost sight of the locked slate, and I never lost sight of you ; and as far as I could judge, it was impossible for you or any one present to have done it ; yet the wonderful fact remains ; the slate was perfectly clean when it was locked up, and written all over when unlocked. This is a mystery, and as I am unable to look through a wooden cover, I cannot imagine a clue to it. Perhaps some of these days you will enlighten me.

Statement of MISS STIDOLPH.

I have much pleasure in recording my recollections of a séance with Mr. S. J. Davey. His powers are certainly marvellous, and while I have not the very smallest belief in "Spiritualism" or "mediums" of any kind, believing the things so called to be gross deceptions, I was amazed at my friend's scientific skill. Apparently he has no appliances. I was seated with him at a small table when he gave me the following astounding evidence of his powers. He gave into my hands a slate which, when locked, looks like an ordinary box. This box I opened, washed the slate, locked it, and took the key ; for some minutes we sat, he with one hand on mine, his other hand on the table. Presently a faint scratching was heard, and continued some little time ; when it ceased Mr. Davey unlocked the slate, and lo ! it was covered with clear, distinct writing—a letter addressed to myself, and stating if I would wait a little while the writer would go to the Cape and bring me news of my brother. Then I again washed the slate ; again it was locked, and again I kept the key. Mr. Davey then asked me to take any volume I liked from the library, to look at a page and remember the number of it. This I did, and again we sat as before. In a few moments the slate was unlocked, when on it was written, not only the number of the page I had thought of, but some of the words which were on the self-same page, and these not ordinary words, but abstruse words, as the book I selected was a learned one. This I considered a most marvellous feat, and utterly incomprehensible. That the scientific researches of my friend will lead to most important results I have no doubt. His aim is to expose deception, and if this object be attained he will benefit society and throw light on a subject which has hitherto been considered to belong exclusively to the " powers of darkness."

E. STIDOLPH.

I would mention that the shelves from which I took the book contained hundreds of volumes, and Mr. Davey had no idea which I had selected as he closed his eyes and went to the extreme end of the room.

E. S.

November 25, 1886.

Proceeding now to more detailed accounts I shall first quote reports by Mr. J. H. Rait and Mr. Hartnall J. Limmer, of a sitting which I shall call

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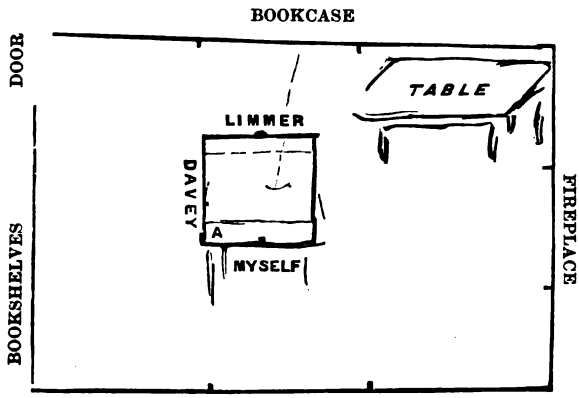
SITTING 1.*

These accounts were written independently, from notes taken during the sitting. Mr. Limmer had had a successful séance with me some months previously, of which he wrote no account.

1. *Report of* Mr. Rait.

On Wednesday evening, the 8th September, 1886, at 7.30, I betook myself, in answer to a previous invitation, to the residence of Mr. S. J. Davey. I had brought with me at his request three new common school slates privately marked by me and of medium size, a box of assorted crayons, and a book to take notes in. Arrived there I was introduced to Mr. Limmer, who with Mr. Davey and myself formed the trio in whose presence the manifestations which I am about to record took place.

At 8.30 p.m. we seated ourselves as shown in the diagram. Mr. Limmer



A. This is where the Slate was held.

sat directly opposite me, while Mr. Davey sat on my left, the gas burner being directly overhead so as to distribute light equally on all surroundings. Before I begin, however, I will call attention to the following facts.

1. During the whole séance, with but one slight exception, the gas was burning brightly.

2. The slates used were the 3 already mentioned and a double one of Mr. Davey's of superior make, with ebony backs and fitted with a lock, which, after having cleaned it and inserted a small fragment of slate pencil, I locked, and at his request put it in the pocket of my coat, where it remained till used. With these slates there could not possibly be any tampering,[1] as during the whole séance they never for one moment left the room.

---

* I have numbered the sittings in the order in which I have quoted them, and have also lettered the chief events described in each, so that where more than one account is given of the same sitting, the reader may easily compare the different descriptions given. The small index numbers refer to notes which will be found in the *Appendix*, pp. 487-95.

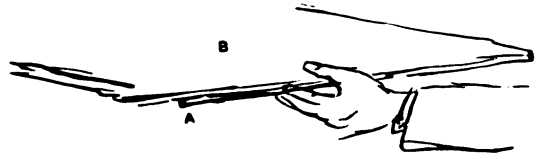
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3. While the writing was taking place under the table, Mr. Davey's left hand was held by Mr. Limmer while his right with the exception of the tops of his 4 fingers was full in my view.

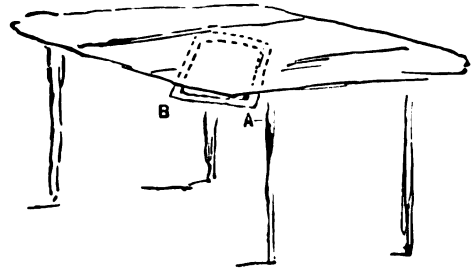
4. The chalks used were my own, wrapped separately in paper, and before the séance had never been taken out of the box.[2]

5. A fact that appears to me most wonderful is that the point of the slate pencil or crayon was always worn and invariably [3] formed part of the last stroke.

At Mr. Davey's request I took one of my new slates, cleaned, wiped it, and placed a minute fragment of slate pencil on its surface, and held [4] it under the table at the corner of the table with my left hand, pressing it firmly all



A. Slate. B. Surface of Table.



The dotted lines show that part of the Slate under the Table.
A. Extremity held by me. B. Held by Davey.

the time. Mr. Limmer held my right on one side and Mr. Davey's left on the other, while Mr. Davey also supported the slate under the table with his right; thus it will be seen that a chain was formed by the hands. After remaining a few seconds thus.

[*a*] Mr. Davey: "Are you there?" No answer.

Mr. D: "Are you going to give us any answer this evening?" A distinct ticking sound was here heard and after 3 seconds or so it stopped and I withdrew the slate; on it was an imperfect scrawl which no one could decipher.

[*b*] Mr. D.: "We will try again; please hold the slate firmly; engage in conversation; try and not concentrate the thoughts too much on one subject."

Mr. D.: "Are you going to give us any answers this evening or not? Now *do* try." This time the noise of the ticking of a pencil was most distinctly heard as if firmly and deliberately writing. I called Mr. Limmer's attention to the fact and he informed me the writing was distinctly audible to him. I withdrew the slate and on it distinctly written was *Yes*.

[*c*] Mr. D.: "Will some one now ask a question?"

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After some thought it occurred to me to ask what o'clock it was at present, there being no timepiece in the room.

Mr. D.: "Will you kindly tell us what time it is?" The ticking was *immediately*[5] resumed. I watched Mr. Davey while seemingly talking to Mr. Limmer, but could detect nothing suspicious in his movements; three distinct ticks were heard and I put the slate on the table and examined it. It was written in the same indistinct hand, and began with a scrawl, but in the middle of the sentence I could decipher "nine" plainly. On asking Mr. Limmer to look at his watch he replied that it wanted a quarter of an hour to 9.

[*d*,*e*,*f*] On putting the question "Will there be a war with Russia?" we got the vague reply "*Perhaps.*" In reply to other questions the answers obtained were "*try chalk*" (this refers to the difficulty experienced in distinctly writing on a new slate) and "*answer later.*"

So far nothing striking had occurred beyond very scrawly writing, and replies which might mean anything; but something better was in store for us.

[*g*] I now suggested[6] a slight variation in the experiment, which both Mr. Limmer and Mr. Davey agreed to. I will mention however that in the right-handed breast pocket of my coat I had placed a sealed envelope containing some questions of a most impossible nature, and which I had written on the afternoon of the 7th September, intending to produce them at the séance with a view to getting them answered; they being all the time in the envelope and their contents unknown to anyone but myself. I determined therefore to put the question, "What does the right-handed breast pocket of my coat contain?"

Requested by Mr. Davey to clean and again privately mark my slates, I did so; and at his request Mr. Limmer and I chose 3 fragments of chalk,—pink, green, and blue. These 3 fragments were placed on the surface of one of the slates. I then placed another slate on the top of this so that the chalks were between.[7] This time the slates were *above the table;* we joined hands and began talking, the question concerning my coat pocket having been put. It is important to note that during this experiment both of Mr. Davey's hands were in view, also that the writing began almost instantaneously on joining hands. Mr. Davey became very agitated, his hands slightly trembled under mine, and he occasionally gasped for breath as though in pain. (These fits occurred at intervals throughout the séance and always when the writing was taking place, but on no occasion did he move either his hands or feet.) The writing distinctly continued, cool, deliberate, and steady. I could even hear the occasional dashes as in stroking the t's, &c.; it invariably seemed to come, away from Mr. Davey, immediately underneath my fingers. I could almost feel the chalk as it moved along in its weird progress, guided by what mysterious agency I know not.

All at once Mr. Davey said, "Quick!! in what colour will you have it written?" Pink was chosen. This is what appeared on lifting one slate off:—

DEAR SIR,—This experiment is a very difficult one, and we can but rarely repeat it. (In green) You may rest assured that we shall do all in our power to answer (in blue) you this evening, but we are very anxious that you

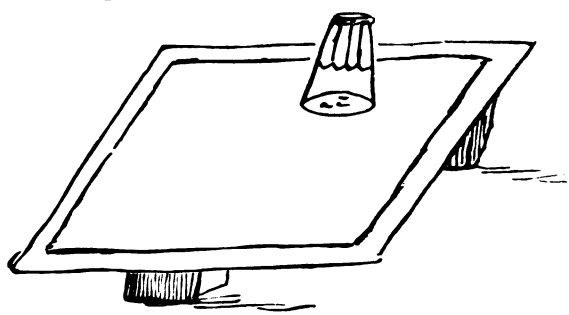
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——not——this question (in pink) simply on account of the——question we will try and answer your question later on——and the——endeavour to convince——any test you may suggest. "ERNEST."

The latter part written in pink. Part of the message we could not decipher, and I accordingly cannot repeat it in full. This message occupied about 2 minutes or less in writing, and was on the whole fairly well written.

[*h*] The next experiment was with Mr. Davey's closed slate. After it had been produced from my pocket we laid it on the table locked and with the small piece of pencil inside, joined hands as before and the question was put, "Will the Emperor of Germany live through the present year?"[8] Immediately the writing began, exactly the same as on previous occasions, and when after the space of 4 minutes (about) I carefully unlocked the slate we found the following wonderful message: "My Dear Sirs,—It is a popular error that if we can produce this writing under these conditions we might at the same time have a knowledge upon all questions of a mundane nature. One is apt to forget that prophet seer and prophetess are children all of 'mother guess,' and this rule applies to us. Yet for ourselves we can foresee much to happen in in the year *1889*, and to do this we need but carry out the instructions of Bonnet (?) who said, 'Ne vous lassez jamais d'examiner les causes des grands changements, puisque rien ne servira jamais tant à vôtre instruction.' Your test is a severe one, for we have not the gift of clairvoyance to-night. On VII —— we think (or thank) your friend from time to time in explanation of this mystery try your test again later on and we shall succeed. We hope to——" (here the writing ends). This is clearly a direct reply to all our questions, and "the severe test" referred to, points evidently to my *coat pocket's contents*. What the mysterious VII. means I do not know, except that it may have some allusion to the 7th September, the day on which I wrote the questions. This belief is strengthened[9] by the answer we got in trying to find out the writing after the Roman letters VII, later on in the evening, and which read (as much as we could make out of it) *Septem*. This long message was to my mind the most marvellous result of all, and its effect was strongly marked on Mr. Davey, who seemed in a state of great prostration, and called for a glass of water.

[*i*, *k*] Mr. Davey then placed a slate on two small boxes which rested on the table, thus; 3 pieces of chalk,—blue, pink, and red—were then chosen



and placed on its surface (the slate) and over the chalk was placed a tumbler; the gas was slightly lowered, and we were told to say what figure we would

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like to have drawn. I chose an octagon, Mr. Limmer chose a square. I saw a piece of chalk slightly move and on lifting the glass we saw two very indistinct marks. We however resolved to try again. This time the red piece of chalk distinctly moved, but very quick. Lifting the tumbler we found this figure  which evidently was intended for part of Mr. Limmer's square.

[*l*, *m*, *n*] I desired[10] after this to have the writing on the double slate of Mr. Davey's continued at the point where it had been broken off, and obtained this result on one of my slates which I held underneath the table and which began immediately. "We hope to see you again—Joey." I was also anxious to know what the VII signified as I have already said before ;—on the first attempt we got the answer—"good-bye Joey"—but we were more successful on again putting the question, the result being a distinct "Septe———" ; whether, as I have already said, it was intended for September I cannot tell.

As it was getting late (10.30) the séance concluded. In finishing this statement I will add that for my part I am "an outsider," have never before given slate-writing or Spiritualism a thought until Mr. Davey lent me "Psychography" and a copy of *Light* dated 8th November, 1884, and invited me to relate my experiences as they appeared to my senses of sight and hearing only ; which I have endeavoured to do in as complete a manner as possible. What the agency is that moves the fragment of pencil I know not ; I leave that for the *savants*. It is a wonderful thing that part of an answer was written in French, a language totally unknown[11] to Mr. Davey. Also that 3 colours were employed in writing another answer. Trickery to my mind is utterly impossible in *any* respect. How it is all done I cannot tell ; my advice to the "sceptics" is "go and judge for yourselves." JOHN H. RAIT.

10/9/86.

2. *Report of* MR. LIMMER.

On Friday, the 8th September, 1886, I had the privilege of being present at a "Spiritualistic" séance given by Mr. S. J. Davey at his residence . . . Mr. Herbert Rait . . . was the only other person present besides Mr. Davey and myself.

The only table used was a small one which Mr. Davey informed us was technically known as a "Pembroke." This table I thoroughly examined, and nothing that could aid Mr. Davey in any way could I discover. The proceedings then commenced by placing a common slate, bought that evening and marked by Mr. Rait, under the corner of the table and supported in that position by the right and left hands of Mr. Davey and Mr. Rait respectively, while I completed the circle by holding their disengaged hands.

[*c*, *c*] The question "What is the time ?" was then asked by Mr. Rait, and after a short interval I distinctly heard writing, but on looking at the slate the answer was not readable : the question was therefore repeated, and shortly after the word "nine" was obtained.

[*d*, *e*, *f*] The next question asked by Mr. Rait was, "Will there be a

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war with Russia or not?" in reply to which we received the word "Perhaps." The same gentleman then asked "Will the Emperor of Germany live through the year?" Instead of receiving a direct reply the words "Try chalk" were found written upon the slate, and on adopting that suggestion we obtained the single word "later."

I may mention here that all the chalk and slates (with the exception of the "locked slate" mentioned later on in this report) used during the evening were brought by Mr. Rait, and had never been in the possession of Mr. Davey.

[*g*] The next test was that of two common slates being placed *upon* the table, one above the other, the frames of which *fitted* so accurately that it appeared utterly impossible to insert anything by which the pencil could be put in motion. These slates were previously examined by Mr. Rait and myself. Green, pink, blue and red chalk having been inserted by Mr. Rait, the circle was again formed in the manner before described, Mr. Davey having this time, though, *both* hands placed upon the top slate. The question, "What does my right hand breast coat pocket contain?" was put by Mr. Rait, and it was agreed that the colour in which the answer should be written should be pink. I distinctly heard the chalk passing rapidly between the slates, and in about two minutes we had the following message before us.

(In pink)

"DEAR SIR,

"This experiment is a very difficult one, and we can but rarely "repeat it. (In green.) You may rest assured that we shall do all in our "power to answer (in blue) you this evening, but we are very anxious that "you should not put this question (in pink again) (word not plainly written "here) simply on a/c of the (word not readable) question. We will try and "answer your question later on, and the (word not readable) endeavour to "convince (word not readable) any test you may suggest.

"ERNEST."

At this stage of the proceedings Mr. Davey appeared to be rather exhausted, and drank a glass of water.

[*h*] Mr. Davey then produced a "locked slate," which I examined *most minutely*, and as far as I was able to judge, the surfaces were genuine slate and had not undergone any process of preparation which would aid him in obtaining writing. A small crumb of pencil was inserted, and the slate closed and locked by Mr. Rait. The key was then given into my possession. We then placed our hands in an exactly similar position as before, and Mr. Rait having repeated the question "Will the Emperor of Germany live through the year?" I very soon heard the pencil travelling over the surface of the slate. After the lapse of about four minutes the slate was carefully unlocked by Mr. Rait, and the [12] pencil very much worn was found at the place where the writing ended.

The lines on the first side of the slate ran in a diagonal direction from left to right, but on the second side it was done in the usual manner, *i.e.*, from side to side. The writing was of a very neat character and the majority of the letters were well formed. The following is a copy of the letter.

"MY DEAR SIRS,—It is a popular error that if we can produce this writing "under these conditions we might at the same time have a knowledge upon all

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" questions of a mundane nature. One is apt to forget that ' Prophet, seer, " and prophetess are children all of Mother Guess ' and this rule applies to " us, yet for ourselves we can forsee much to happen in in (the word ' in ' " occurred twice here) the year 1889 and to do this we need but carry out " the instruction of Bonnet (this name was indistinct) who said ' Ne vous " ' lassez jamais d'examiner les causes des grands changements puisque rien " ' servira jamais tant à votre instruction.'

* " Your test is a severe one for we have not the gift of clairvoyance "to-night on VII oz we think (or thank) your friend from time to time " in explanation of this mystery.

"Try your test again later on and we shall succeed.



Saw Pencil lie here, on carefully opening the Slate.

[*l*, *m*, *n*] The writing having stopped so abruptly, two [13] ordinary slates were placed upon the table in the manner before described, and it was asked by Mr. Rait that the letter should be concluded. Within a period of 15 seconds from the time of asking such question and after completing the circle with our hands, the words "to see you again, Joey," were written.

The two slates were again placed in the same position as before, and Mr. Rait having put an unimportant question, after the completion of the circle as before, I saw upon the slate " Good-bye, Joey " ; but on a second trial a scrawl was obtained which looked very much like " Sept. Joey " but it was impossible to say definitely what it was intended for.

[*i*, *j*, *k*] The final test to which Mr. Davey was subjected was that of writing under an inverted tumbler under the following conditions. An ordinary tumbler was inverted and placed upon one of the slates brought by Mr. Rait. This slate was raised slightly from the table and supported by two small boxes placed under the ends of the slate. Blue, pink, and red chalk were then placed under the glass by Mr. Rait, and after joining hands, Mr. Rait asked that an octagon should be formed with the red chalk. After waiting for a few minutes the red chalk was seen to make two short lines almost at right angles to one another, thus,  The same test, after the slate had been cleaned, was repeated, and with precisely the same result. I then asked that a square should be formed by the red chalk, and two sides of it were made almost instantly, and in the colour required. Although

* This probably refers to some questions which Mr. Rait had written and enclosed in a sealed envelope and placed in his breast coat pocket and known only to himself. It will be remembered he previously asked " What does my right-hand breast coat pocket contain ? "—H. J. L.

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looking to within a few inches of the tumbler and seeing the pencil move, I failed to discover anything which could have caused it to do so.

I can only say that the whole thing was totally inexplicable to me, and to the best of my belief it was impossible for Mr. Davey to have produced any of the above results by the aid of trickery, as he did not appear in any way to try to divert my attention either from himself or the slates, and I watched him as closely as it was possible throughout the whole proceedings.

HARTNALL J. LIMMER.

SITTING II.

The following three reports are by a member of the Council of the American Society for Psychical Research, and his wife and daughter. I shall speak of them as Mr. and Mrs. and Miss Y. The reports ought to be specially instructive in consequence of the differences of attitude illustrated by the sitters. Mrs. Y. was unaware, until after her report had been written, that the phenomena were nothing but conjuring. Miss Y. was unaware of this fact during the sitting, but I understand that she was unintentionally informed of the true nature of my performances before she wrote her report. Mr. Y. was aware, before any arrangement had been made for the sitting, of the work upon which I was engaged, and knew that any phenomenon which might occur would be due to my own conjuring powers.

1. *Report of* MRS. Y.

On the evening of September 10th, 1886, I went with my husband and daughter to a room in Furnival's Inn, to witness the slate-writing performances of Mr. Davey. On our way we stopped at a stationer's, and my husband purchased three perfectly new ordinary school slates. We found Mr. Davey to be a young man of manifest intelligence and great earnestness of scientific purpose. He impressed me as being thoroughly honest and above all trickery. He also impressed me as being in a very critical state of health, and I should say the nervous strain of his slate-writing performances was most injurious to him.

[*a*] We seated ourselves at an ordinary Pembroke table, brought out of the kitchen attached to the chambers belonging to the friend who had loaned his room for the occasion. A piece of chalk was placed on one of our slates, and the slate was held tightly up against the underside of the table leaf by one of Mr. Davey's hands and one of my daughter's. Their thumbs were on top of the table, and their hands spread underneath on the underside of the slate. I held Mr. Davey's other hand, and we all joined hands around the table. I watched the two hands holding the slate without a moment's intermission, and I am *confident* that neither Mr. Davey's hand nor my daughter's moved in the least during the whole time. Two or three questions were asked without any sign of response.[1] Then Mr. Davey asked rather emphatically, looking hard at the corner of the table under which they were

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holding the slate, "*Will* you do anything for us?" After this question had been repeated three or four times, a scratching noise was heard, and on drawing out the slate a distinct "Yes" was found written on it, the chalk being found stationary at the point where the writing ceased. As my eyes were fixed uninterruptedly on both my daughter's hand and on Mr. Davey's also, and as I certainly had fast hold of his other hand all the time, I feel *confident* he did not write this word in any ordinary way.[2]

[*b*] This same result was obtained two or three times. But Mr. Davey did not seem to think it was enough of a test, and he proposed that we should try it with the slate on the table in full sight of us all, with a candle[3] burning brightly in the middle of the table.

[*c*] He gave me a locked slate of his own, which I thoroughly washed and locked myself, and put the key in my own pocket. We then joined hands, and Mr. D. and my daughter placed one hand each on the slate as it was lying on top of the table. Different questions were asked, and we waited some time, but no response came. Mr. Davey seemed to me very much exhausted, and I urged him to desist from any further efforts. But he seemed loth to do this, and said he would rest a little while, and would then, perhaps, be able to go on. After a short time of conversation, the slates all the while being in full view and carefully watched by me, we again tried it, under the same conditions as before, only that this time Mr. D. requested us each to take a book at random from the shelves in the room, and mentally think of two numbers representing a page and a line, and he would see if he could reproduce it. This also failed of any result, and Mr. D. said he feared he was too tired to produce anything, as he had been very much exhausted by a long and very successful séance the night before. We again begged him to desist, but after a short rest, during which he walked into the next room for fresh air, I thought, he insisted on another trial. The slates still remained all the time in full view on the table. Mr. D. asked my daughter to choose another book, which she did at random, he having his back to her and standing at some distance while she did it.[4] This book was at once tied up and sealed by one of the party, Mr. D. never touching it from first to last. I then held it in my lap, while we joined hands as before, and Mr. D. and my daughter each put one hand on the slate. Still nothing came. Then we changed positions, and I placed my hand on the slate instead of my daughter, giving her the book to hold. During this change she kept her hand on the slate until I had placed mine beside it, and the book was awaiting her on the opposite side of the table, my husband all the while holding Mr. D.'s other hand. I am *confident* that Mr. D. could not possibly have manipulated the slate during this change, for it was in full sight all the while, and our hands were on it, and the book was tied and sealed on the opposite side of the table. A few minutes after this readjustment Mr. D. seemed to have a sort of electric shock pass through him, the perspiration started out in great drops on his forehead, and the hand that was touching mine quivered as with a nervous spasm. At once we heard the pencil in the slate moving, and in a few moments Mr. Davey asked me to unlock the slate. My daughter took the key out of her pocket and handed it across the table to me, and I unlocked the slate, and found it covered on both the inner sides with writing. When read, this writing

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proved to be a sort of essay or exhortation on the subject of psychical research, with quotations from the book chosen intermingled throughout. I forgot to say that Mr. D. had asked us *all* to choose in our minds two numbers under ten to represent a page and a line of the book, but had finally concentrated his thought on what my husband was thinking. In the writing there were quotations from every page we had any[5] of us thought of, but not always the line; but in the case of my husband the line was correct, but not the page. He had thought of page 8, line 8. The line was quoted from page 3, and Mr. D. said this confusion between 8 and 3 quite frequently occurred, because of the similarity of the numbers. This test seemed to me *perfect*. The slate was under my own eye on top of the table the whole time, and either my daughter's hand or my own was placed firmly upon it without the intermission of even a second.[6] Moreover, we closed and opened it ourselves.

[*d*] After a short rest, Mr. Davey asked us to wash two of our own slates and put them together, with pieces of chalk of different colours between, and all of us to reach across the table and hold them all together. This we did,[7] and then Mr. D. asked my husband to choose mentally three colours he wished used in writing. After all holding the slates closely pressed together for a few minutes, we placed them on the table, and Mr. D. and I placed our hands on them while the rest joined hands. In a few moments the same sort of electric shock seemed to pass through Mr. D., and his hand and arm which were on the slates quivered nervously, and immediately a scratching noise was heard. He then asked me to lift one slate off the other, which I did, and found one side covered with writing in three colours, the very three my husband had mentally chosen. I am perfectly confident that my hand was not removed[8] from the slates for one single instant, and that I never lost sight of them for a moment.

By this time Mr. D. seemed to us to be so much exhausted that we begged him to give up any further tests, but he insisted on trying one more, which was as it proved the most remarkable of all.

[*e*] He placed one of our slates on three little china salt-cellars that lifted it up about an inch from the table. Upon the middle of this he placed several pieces of different coloured chalks, and covered them with a tumbler. Then he told my husband to form a mental picture of some figure he wished to have drawn on the slate under the glass, and to name aloud the colour he would have it drawn in. He thought of a cross, and chose aloud the blue colour.[9] I suggested that blue was too dark to be easily seen, and asked him to take white, which he agreed to. We sat holding hands and watching the pieces of chalk under the tumbler. No one was touching the slate this time, not even Mr. D. In a few minutes, Mr. D. was again violently agitated as with an electric shock, which went through him from head to foot, and immediately afterwards we *saw*, with our own eyes, each one of us, the pieces of chalk under the glass begin to move slowly, and apparently to walk of their own accord across the space of the slate under the tumbler. My husband had said just before that if the piece of red chalk under that tumbler moved, he would give his head to anyone who wanted it, so sure was he that it could not possibly move. The first piece of chalk that began to walk about was that very red piece! Then the blue and white moved simultaneously, as though

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uncertain which was the one desired. It was utterly astounding to all of us to see these pieces of chalk thus walking about under the glass with no visible agency to move them! All the while Mr. D., whose hands were held on one side by myself and on the other side by my husband, seemed to be on a great nervous strain, with hot hands and great beads of perspiration. When the chalks stopped moving, we lifted the tumbler, and there was a cross, partly blue and partly white, and a long red line marking the path taken by the red chalk! We were impressed by this test beyond the power of words to declare. The test conditions were perfect, and the whole thing took place under our eyes on top of the table with no hands of anybody near the slate. This was the close of the evening's performances.

Upon reading over my account I see that I have put the leaving of the room by Mr. D. in the wrong place. It should have been just before the writing on our slates with coloured chalks instead of just before the writing on the locked slate. But in either case the slates were all the time in full view on the table with the rest of us who remained behind.

I consider the test conditions to have been perfect throughout, and see no possible explanation for the very remarkable phenomena that occurred.

MRS. ———

September 14*th*, 1886.

2. *Report of* MISS Y.

The exhibition was given in Mr. Hodgson's sitting-room, a medium-sized room with a large square table in the centre, covered with a cloth. Mr. Hodgson and my father and mother and I were in the room, seated around this table, when Mr. Davey entered. He looked at the table, and said it would not do. So we pushed it aside, and a Pembroke table was brought in in its place; I do not know whether it was the property of Mr. Hodgson or whether Mr. Davey had brought it with him. It was quite bare, and we placed on it a candle and three single slates which my father had bought at a shop on our way to Furnival's Inn. We also had on it a bowl half full of water, containing a sponge to wash the slates with, and a cloth with which to dry them. On the large table was a lamp and on the mantelpiece were three candles, so the room was quite clearly lighted. We sat in a circle around the table, my mother next to Mr. Davey, then my father, then Mr. Hodgson, then I by Mr. Davey.

[*a*] Mr. Hodgson brought us a little pasteboard box, in which were a number of small pieces of chalk of different colours. I chose two of these and placed them on one of our slates. We had all previously written either our names or our initials on that side of the slate. Mr. Davey slipped the slate under the edge of the table, I holding on to it all the time, and we held it flat under the table with our thumbs above the table. I held the slate very firmly against the table, and I am sure I did not relax my hold once. After waiting some time and asking various questions, we heard, or seemed to hear, the chalk moving on the slate. We drew the slate out,[10] and on it was written "Yes," which was an answer to our last question.

[*b*] We again put the slate under the table, and, in order to be sure that nothing had been written on it, I half slipped it out again and saw that it was perfectly clean. After some more waiting, my father asked when we

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were to sail for America. The chalk again squeaked, and on drawing the slate out we found "the 18th" written very indistinctly. This happened not to be the date, which was the 15th. I forgot to mention that while we were waiting for the writing we had all joined hands, and talked on indifferent subjects. Just before the writing came Mr. Davey grew very quiet and writhed with his arms. His left hand, the one not holding the slate, pressed very hard upon the table. Meanwhile, my father and mother had changed places, because it was indicated in some way, by the writing on the slate, I think, that we were not all seated in our proper places.

[*c*] After these experiments, Mr. Davey seemed very much exhausted. But he drank some water, and insisted on going on to try the experiment with the books. He had previously brought out his own little slate, a double one made of ebony, with a silver lock on it. He said he would use this in the experiment. We saw that it was clean, and then one of us locked it. I think my mother put the key in her pocket. Then we each chose a book at random from a large bookcase at the end of the room, in which the books were arranged apparently without any system. I can't remember whether we left the slate on the table while we chose our books, or whether one of us held it.[11] When we sat down at the table again, I put my hand on the slate and leaned my elbow on my book. Then Mr. Davey asked us each to think of two numbers under 10, one for a page in our book and one for a line on that page. This we did, and sat waiting for some time with our hands joined, but no writing appeared on the slate. Mr. Davey seemed so exhausted that we determined to give up the experiment, and I put my book back in its place. We sat as before around the table, discussing the failure of the experiment. Finally Mr. Davey started up and said, "We must try it with one book alone. Will you choose one, Miss ——?" I supposed that he asked me to do it because my seat was nearest to the bookcase. I got up and went to the bookcase. Mr. Davey stood by the table with his back to me. That latter fact I feel as if I remember most distinctly. I mention it to show that I chose my book at random and was not influenced in my choice by him. As I came back to the table he said, "Do not let me see the name of the book." But as I did not understand what the trick was to be, I forgot his injunction and placed the book on the table at my right hand. Mr. Davey was on my left. However, I only left it there for a minute or two, and I am sure that I either looked at it or held it the whole time, so that he could not have opened it without my knowledge. Mr. Hodgson brought me some string and this I passed around the book several times and tied with four knots. Then my mother sealed the knots and took the book. She did not hold it in her hand the whole time, but either let it lie in her lap or sat on it. But Mr. Davey could not have taken the book or opened it without her knowledge, as he sat perfectly still and we saw everything he did. We opened the double slate, and after we had seen that it was perfectly clean, I put some chalk in it, locked it, and put the key in my pocket; and I also kept hold of the slate during the experiment. Mr. Davey asked us each to think of two numbers as before. Finally he asked us to write them down on a slate. I wrote mine on one of our own slates so that he could not possibly see what I had written, and I placed it on the table away from Mr. Davey, and leaned my elbow on it.

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I think the others did the same with the other slates. To my remembrance,[12] some of us watched the locked slate all the time while we were writing.

After a few minutes Mr. Davey asked my mother to change places with me. This we did, but I did not relax my hold of the slate until she had her hand on it. She gave me the book, and I sat on it, and we again joined hands. Mr. Davey's right hand was on the slate which was on the table, and my father held his other hand. Mr. Davey said that the experiment was too difficult while we all thought of different numbers. So he asked my father to think of his numbers, and the rest of us not to think of ours. After a little while the chalk inside the slate squeaked a good deal. I took the key out of my pocket, and one of us, my mother, I think, unlocked the slate. Both sides were covered with writing, all of which I will not quote. Then we cut the string of the book, having found the seal untouched. We opened the book at my father's page and line, 8 and 8, but there was nothing there that was quoted on the slate. So we looked at page 3, line 8. There we found this line, "The greenest grasses Nature laid." On the slate was this sentence, "The *greenest grasses* will be laid by *Nature*." It was not in quotation marks, although three of the words were underlined. On my mother's page, 8, but not on her line, 4, was the title of a poem, "The House of Clouds." This was on the slate, underlined. On Mr. Hodgson's page, 7, but not on his line, 9, was the title, "The Deserted Garden." This was also on the slate, underlined. On my page, 1, we found nothing that was quoted on the slate.

[*d*] After this experiment, we put aside Mr. Davey's slate and took two of our own. We cleaned them, and placed on one a number of little pieces of coloured chalk. The second slate was put on the first one, and my mother and Mr. Davey held it above the table. Mr. Davey asked my father to think of three colours. We joined hands once more, and in a little while we heard writing between the slates. When we took one off, on the under one was written :—

In *red*, "We are very glad to be able to give you this."
In *white*, "We can do more yet."
In *green*, "Good-bye."

My father had thought of red, white, and *blue*. We could not be sure by the night light whether the "good-bye" was written in green or blue. But there was a piece of chalk on the slate that looked much more blue than the piece with which the "good-bye" was written.

[*e*] After this we tried one more experiment. Mr. Davey placed one of our slates on two little Japanese salt-cellars, made of china covered with wicker, and one common glass salt-cellar. On the slate we put a number of pieces of coloured chalk, and over this a clean tumbler. Meanwhile Mr. Davey took the candle from our table, and put it on the other one. This made the light a little less distinct, but it was still very good. Then Mr. Davey asked my father to draw a figure and write a colour on his double slate. My father made a star, and wrote "Red." This he showed to all of us except Mr. Davey, after which he locked it, and put it in his pocket, and gave me the key. We joined hands, and Mr. Davey's hands did not touch the slate or the glass at all. We sat for some time, without any results.

Finally, we gave it up, and my mother and I put on our cloaks to go home

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But before we left the room, we decided to give it one more trial. We thought that perhaps we had made too complicated a figure, so we unlocked the slate, and rubbed out what my father had written before. Then I drew a cross, and he wrote "Blue." We sat down at the table and watched the chalk with the closest attention. Mr. Davey's arms shook violently, and once when the chalk began to move, he snatched his hands off the table. But my father and mother did not let go of them. While we were waiting for the chalk to move Mr. Davey seemed very much excited, and he asked my father what colour he had written. My father said "Blue," whereupon my mother said, "What a pity you did not say white. It would have been so much easier to see the white move." So my father said, "Very well, let it be white." At Mr. Davey's request, both he and I kept our minds fixed on white, and on the figure I had made on the slate.

Finally, the red chalk actually did move across the slate. Mr. Davey snatched the glass off. I expected to see a red cross, but the red had only made a slight short mark. There was a long white mark, and across it, near the top, was a green mark. But the green mark was very small, and not at right angles with the white mark, nor did it extend as far on one side of the white mark as on the other.[13]

That is all that happened, as nearly as I can remember. It took place two evenings ago, the 10th of September. The only curious thing I noticed about Mr. Davey was the odd way in which his arms, and sometimes his whole body, writhed, especially just while the slate-writing was going on. At the time, I was convinced that they were not tricks, although I had no other explanation for them.

September 12th, 1886.

3. *Report of* Mr. Y.

On September 10th, 1886, last evening, with my wife and a daughter of nineteen years of age, I availed myself of an invitation to see the phenomena of slate-writing at the rooms of Mr. Hodgson, No. 1, Furnival's Inn, London.

The "medium" was introduced as Mr. Clifford [Davey, see p. 410], a gentleman of known social standing who had never accepted any pecuniary returns for his performances.

Mr. Hodgson's room was, throughout the conference, lighted by four candles and one shaded lamp, there being no moment of obscuration of light through the whole evening. The large heavy table in the room was, at Mr. Davey's suggestion, substituted by a smaller one with two folding leaves, the table ordinarily in use in Mr. Hodgson's breakfast-room. The three slates were wood bound, about 8 × 10 in. size. They were purchased by me at a cost of threepence each, from a stationer in Holborn, on my way to the conference. Their surfaces were very rough, requiring much washing with a sponge and dry rubbing before they were smooth enough for use.

Mr. Davey had two much larger slates with false black card surfaces, showing how persons were often imposed on by professional mediums;[1] but

[1] The remark which I believe I made was that the slate with a false flap was often put forward by professional *conjurers* as an explanation of the slate-writing tricks performed by "mediums."—S. J. D.

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of these no use whatever was made. He also had a small silver-mounted ebony framed locked slate. I shall distinguish this by "D.'s slate," and the ones I bought by "my slates." In a card paper box were a number of very small pieces of pencil of six different colours. The whole apparatus has now been described.

[*a*] Mr. Hodgson sat opposite to me, on my left sat my wife opposite to my daughter, between whom and myself Mr. Davey was placed. A pencil was put on one of my slates, which was sustained under the edge of the table by my daughter's fingers at one end and by Mr. Davey's at the other, their thumbs being all the time in sight on the top of the table. The hands of all five of the party were then joined, and soon we heard a sound like that of a pencil. My slate was slid out from under the table by my daughter. At the first and second examination nothing was on the slate, and it was washed afresh, and soon the word "yes" was found scrawled on the upper side of the slate as an answer to some indifferent question.

[*b*] This was once repeated.

My daughter was sure that her hand had pressed the slate to the under side of the table during the whole time. It is to be noted that during about a minute of the time of waiting Mr. Davey seemed seized with violent nervous contractions of his face, arms, and hands, which appeared to draw largely on his strength. They were succeeded by a feverish condition of the surface of his hand.

[*c*] He next requested us to select, each one, a book from Mr. Hodgson's library. We did so, and he proposed to give us the contents of lines, selected by page and line by us, in D.'s locked slate. But nothing came. He then proposed to try it again on a single book, and my daughter, leaving him at the table, replaced[14] on the shelves the book she had first taken down, and took at random a copy of Mrs. Browning's *Poems*, Second Series. 1880. London edition.

He requested us to mentally choose each one a page and line by numbers below 10.

I selected page 8, line 8,
My wife page 8, line 4,
Mr. Hodgson[15] page 7, line 9,
My daughter page 1 line 9,

and we each one told aloud[16] the page and line selected.

During this time and previous to the announcement of the selection, a pencil had been put into D.'s slate, which had lain on the top of the open table throughout. It was then locked, and the key placed in my daughter's pocket. My wife's hand was then placed upon D.'s slate as it lay on top of the table, and it certainly so remained until, after hearing the sound of writing, my daughter produced the key, and we opened the slate.[17] My choice had been page 8, line 8, and while the others conversed Mr. D. bade me fix my mind intently on these figures during a space extending probably to 10 minutes. Then my wife unlocked D.'s slate, and found the following words written in legible hand. The italics are as in the original.

"How far you remain, oh unbelieving ones, from the goal of your endeavours. It is not through the domain of Physical Phenomena, but

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through the empire of the soul's dominion, that man must enter upon the higher paths that stretch away into the Divine. 'The Kingdom of God is within you.' Seek not to entangle the brightness of your soul in the Labyrinthine *Maze* of the physical world *which will prove* to be merely a *House of Clouds*, and will leave you more forlorn than a *Deserted Garden*, where not even the *greenest grasses* will be laid by *Nature* to sanctify her right. We men a" (here it ends with a long irregular line, such as might be made by a pencil rolling).

On referring to the book which had been lying in our sight tied up and sealed, we found on page 8 the heading to be *The House of Clouds*, being the words italicised in the slate-writing. On page 3 (which, Mr. D. said, the power, whatever it was, might have mistaken for 8 as being like it) and line 8, we found "the greenest grasses Nature," words also italicised on the slate.

The other words, "*which will prove*," in italics were not in the pages of poems indicated. There seems to have been no attempt to give any words from the lines selected by the other three persons.

[*d*] We next placed small pencils, in six colours, between two of my newly-bought slates, marked by ourselves with our names written in pencil, without removing them from the top of the table, and the hands of some of the party were laid upon them for some minutes, after which they were held up in the hands of two persons. I had been asked to choose the colours in which the writing should be made. I mentally chose red, white, and blue, but did not tell my choice. After holding Mr. D.'s hand for some minutes, with my mind strongly fixed on these colours, the slates were opened, and we found, in the order I had mentally selected :

(Red) "We are glad to be able to give you this."
(White) "We can do more yet."
(Blue) "Goodbye."

[*e*] The last performance was the moving of the pencils on my slate under a glass. Two Chinese cups were taken from the mantel. On these the slates rested, with pieces of pencil cut by ourselves from the ends of coloured crayons of various colours, on its top, under the glass. Upon D.'s lock slate, which he could not see, I wrote "Blue" as the colour which should be used, and my daughter made a cross for the figure to be written. We then locked D.'s slate, which I placed in my pocket, while my daughter put the key into her pocket. We joined hands as before, but there was no movement of the pencils. He took the glass off, threw off the pencils, and put them back again in a group, near the centre. Again we joined hands. I selected white for the colour, at my daughter's outspoken suggestion, and Mr. D. became spasmodically excited, trembling greatly.

Soon the red pencil began to move in full view of all of us. It stopped and soon began again to move. The distance traversed was probably an inch. I did not see the other pencil ends move, though they might have done so.

Upon removing the glass we found traces in white, green, blue, and red, but scarcely the figure traced by my daughter on D.'s locked slate.[18]

Having in my boyhood practised legerdemain I am able to see how a large portion of the publicly performed tricks are, or could be, done ; and sur-

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prising as were the very able performances of Mr. D., I could tell how most of them could be done[19] without anything beyond a probable mind-transference of thought intensely concentrated on my part. But I stood in the same relation to the performances which I could not unravel, in which others stood to those which I could perform or explain. I cannot therefore make my own discernment the limit of the "natural," and say that the performances undiscovered by me are "supernatural." I am surprised when I find that those versed in conjuring, when they reach the limit of their own ingenuity and knowledge, ascribe to supernatural causes what is beyond their ken.

Mr. Davey is a gentleman, I believe, incapable of intentional deception. He makes no statement of his performances beyond the fact that they are phenomena to be accurately observed. They exceed in their apparent supernaturalism the displays usually made by paid mediums. I believe that a full explanation of his methods would "fire a shot heard round the world" in almost every civilised community where the phenomena of so-called "Spiritualism" are perplexing, and often madden, true and good people.

Whatever may be the real psychical phenomena which lie behind or alongside of the supposed revelation from spirits, they should be separated from the often proved deceptions of paid mediums. And I can conceive of no more effectual step towards this than for some one who excels these magicians upon their own chosen field, to frankly tell the world how it is all done. Scientists then would have the ground cleared for accurate investigation, and, more important still, millions might be saved from the delusions of deceitful "mediums." For the atrocious wickedness of deceitfully trespassing by fraud upon the most holy of all human relationships, the sacred regard for the dead, it is difficult to find strong enough terms to express our contemptuous reprobation.

SITTING III.

The sitting described by Mr. Legge in the following letter took place on the same evening as the one described in the foregoing three reports, September 10th, 1886.

Report of MR. LEGGE.

12, Mitre Court Chambers,
Temple, E.C.
12*th September*, 1886.

MY DEAR HODGSON,—

I said I would let you have a straightforward account of what I saw in your chambers on Friday evening; here it is, written while my recollections are distinct. I had been sitting with Hughes, who told me you had a séance on. We were talking on various subjects, and never touched that of the séance going on in the next room, so that in fact I soon forgot all about it. Presently however the door opened, and you

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came in with Mr. ——, whom I had never seen before, and behind him were his wife and daughter. A little embarrassed by sudden introductions, I passed out into the entry to your rooms, and there saw for the first time Clifford (the name, is it not?) [Davey, see p. 410]. In a few minutes the ———s left, and I went into the room where the séance had been. There I was introduced to Davey, who suggested, after some talk on what had gone before, that I might like to see something.

[*d*] I jumped at the proposal, and as a preliminary took Davey's locked slate, opened it, and cleaned it (or rather cleaned it again, for it was clean already), then, having slipped in a bit of pencil, locked it, and put the key in my pocket, keeping the slate also in my hand or under my arm all the time afterwards.[1]

[*a*] Next I chose one of your slates, cleaned it, and, at Davey's request, having put a fragment of pencil upon it, slipped[2] it under the table, so as just to cover it with the slab, the pencil of course being on the upper surface. The table was a plain deal one, and I satisfied myself that there were no projections on the under-surface which could leave a mark. We then formed contact, Davey's right hand being partly on my left and partly on the slate, *i.e.*, where his hand overlapped mine which held the slate pressed against the table. The faint sound of writing was distinctly audible, and when it ceased I drew the slate out. There were merely indistinct scrawls upon it.

[*b*] But it appeared that I ought to have asked a question to myself, and so extracted an answer from the slate. So after I had cleaned the slate I thought of a question. I acted precisely as before.[3] The sound of writing was again heard, and the slate, when I drew it out, bore clearly and distinctly written the word "yes"—the final letter of which was done in particularly admirable style. The question[4] had reference to some doubtful increase in my official salary, and I am bound to say I was as much delighted as astounded by the mysterious writing.

[*c*] The next experiment was the placing of 3 bits of coloured chalk on the table, and of a clean slate (selected and placed by myself)[5] over them. I put my hand on the slate, Davey his on mine, and we joined contact. Again we heard the sound of writing, and when I lifted the slate there was written large and neatly in the coloured chalks (three lines or so in each colour) this message:—"Don't you think I've done enough for you to-night I'm tired Joey." I noticed the chalks seemed worn, showing signs of work, just like the little bit of pencil in the previous experiment.

[*d*] After this Davey asked me to write a question in chalk on one of your slates. While I was writing it he asked for a drink of water, and you pointed to a corner of the room where there was some. He went there and when he came back seemed to have forgotten his request for he now asked me for the locked slate, which I had latterly put in my pocket.[6] I brought it out, placed it on the table, set my hand on it, Davey his on mine, and joined contact just as before with Hughes and yourself, Hughes holding my right and your left, you Davey's left. Then we heard the same writing sound, very faint this time, and after a considerable interval I was told to take up the slate and unlock it. Taking the key out of my pocket I did so,

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and saw written on both leaves a long message, precisely as I give it:—"If you don't believe in spirit power after this you are not worth the attention of any honest medum (*sic*) Joey." After this, Davey, who seemed pretty tired, had to rush off to catch a train. I should add that the room had been in full lamp[7] light all the time, the lamp being placed on a side table thus throwing a certain light under as well as over the table we were sitting at. Also that the contact was not continuously perfect, for I remember that Hughes and yourself occasionally left one hand free for a short time, and lastly that there was no enforced silence.

The above are the facts as detailed as I can give them; I offer no comment on them for indeed I can't. Though I had heard of such experiments before, personal experience was entirely new to me, and has left me in immense perplexity.

If you see Davey, please thank him for his kindness in troubling after an already long sitting to give me some specimens of his "craft," or whatever name one can give so nameless a faculty. I am also sincerely obliged to Hughes and yourself.—Yours,

J. G. Legge.

SITTING IV.

The next three reports are by Mr. Padshah, and Mr. and Mrs. Russell. Mr. Padshah had had some previous experience with a well-known medium, but had not been convinced that the phenomena which he had witnessed in the medium's presence were not the result of trickery. His account of his séance with me shows that he was in some respects a careful observer, and that he was still more careful in recording his remembrances. He was not informed until after he had written his report, that the phenomena were due to conjuring. Mr. and Mrs. Russell, however, knew before the sitting that they were about to witness conjuring performances. They came on an unexpected visit to Mr. Hodgson, and on learning that I was about to give a sitting, requested permission to be present. I was perfectly conscious of the fact that they were both using their best endeavours to discover my exact *modus operandi*. And although Mr. Russell failed to detect any of my writing processes, he correctly observed and remembered some of my manipulations with slates above the table, which, it will be seen, entirely escaped the observation or remembrance of Mr. Padshah.

1. *Report of* Mr. Padshah.

1, Furnival's Inn, London.
Sept. 15, 1886.

This evening in Hodgson's room we had a séance with Mr. Davey; Mr. and Mrs. Russell, Mr. F. S. Hughes, Hodgson and myself being the party. Before sitting I had some interesting conversation with Mr. D. about the results usually got by him and some which I had with Eglinton. Mr. D.

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in course of the conversation told me he was very anxious that his results should be tried and watched like those of any professional medium, and indeed, his subsequent proceedings were very agreeably contrasted with those witnessed at the professional séances. There was every apparent desire to get the conditions named by members of the party, and to see that results were obtained under those conditions. I had suggested in our preliminary conversation how important it might be to get my own name—not surname—which no one except myself in the room knew. The slates on which we desired the writings were three of them Hodgson's, three I had bought this evening at Lilley's, Cambridge, and one Mr. D.'s own double slate. I regret that desiring to add some friends to the party, I had left the rooms to call upon those friends, and during that interval, Hodgson and Mr. Hughes being busy, we necessarily could not keep the slates in our eye for a short interval during which Mr. D. was in the room.

Well, we commenced, I sitting all the time next to Mr. D., except once, when Mrs. Russell and I interchanged places, with no advantage ; and so we resumed the original order.

[*f*] There was full light on every corner of the table ; two of my (?) slates, one washed by myself, the other[1] by Mr. D., were put very nearly in the centre with a number of small chalk-pieces between them of different colours —(five in all, I find now on inquiry from Hodgson—red, blue, green, yellow, white—but which I was *not* sure of, then, not having noticed them).

[*a*] Under the table with the frame projecting on Mr. D.'s side, was a single slate, also mine, I believe, and washed by I do not know whom, Mr. D. supporting it on his side by the four fingers underneath, and the thumb over the table in sight of all ; his left hand joining with that of Mr. Russell's right, Mr. R.'s left with Mr. Hughes' right,[2] Mr. Hughes' with Mr. Russell's, and Mrs. Russell's left with my right, all resting either on the table, or otherwise always in sight ; and my left supporting also the slate just the same as Mr. D. Between the slate and the table were put successively chalks and a small pencil, the chalks being crushed, and therefore given up.

[*f*] Mr. D. and Mr. Russell often put their hands on the pair of single slates.

[*g*] Mr. D.'s double slate, *not* washed,[3] I believe, that I can remember, but locked up by myself carefully, with the key always in my pocket or on my RIGHT hand near Mrs. Russell, never out of my view, was in my charge, generally being behind my back.

[*a*] For some time there seemed to be no result, Mr. D. telling us that he felt no "go" in the thing, and asking me if it was not due to my undue scepticism. Of course I assured him that my failing was rather in the reverse direction. The conversation was generally on Spiritualistic subjects, being mostly a good-humoured discussion of the experiences of some Spiritualists. On Mr. D.'s asking me to select a particular colour of chalk to write between the two slates,[4] I suggested white ; but we never got it.

[*b*] He then wished me to fix my mind on a particular number. I selected five (5), and drew an image of it before my mental eye. The number we got was, however, 6 ; and I must say, that but for the horizontal

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stroke, I myself would be unable to distinguish often between my 5's and 6's. Mr. D. then asked if there were going to be any manifestations—the answer[5] was legibly "Yes."

[*f*] Then we[6] asked for a writing on one of the pair of slates, of mixed colours, mine being blue, and Mrs. Russell's selection red. *Sometimes* I think we all put our hands on the pair of slates and then both Mr. D.'s hands were in full view, and there could be no mistake of what they were doing,—viz., that they were shaking sometimes with great force, at the same time that his teeth were chattering.

[*d*, *e*] However, before any writing came there as asked for, we had first a message on the single slate "Wait," and at another time, I noticed (without any clear sound of writing as was unmistakeable during the two previous cases)—and I believe nobody had observed it before I drew their notice—a message on one side of the slate, "Try the (?) chalks."

[*f*] Well, now we all concentrated our attention on the pair of slates very nearly in the centre; and I thought, as requested, of two numbers, 5, 7; Mr. D. very shortly after a deal of shaking of his hands, at length said that we might see the slates. There, to my surprise, I beheld a message forsooth, in two coloured pencils, —blue and red, which I copy below.

(Blue Pencil):

"We are very pleased to be able to give you this writing under these conditions, which must or ought at least to the ordinary mind do away with the possibility of it being produced by ordinary means.

(Red Pencil):

"If you will be kind enough to wait patiently you may rest assured we will do our best to do more for you.

"EARNEST."

[*c*] I forgot to say that before this writing appeared, on the large slate, instead of the numbers we wanted, we got written[7] "Boorzu." Now this as it happens is the original Persian, the modern corruption of which is my initial name. This would be extraordinary except that it might have happened by accident, and also I had not time enough to see the last "u" before the word was wiped off by Mr. D.

[*g*] Then we tried to get some results with books, but as it appeared to me Mr. D. had read almost every book in Hodgson's library, it was not easy to select one to preclude the hypothesis of thought-transference. So we attempted to get numbers again, and I concentrated my attention on the same two previous numbers (5, 7); we soon got the 7 on the single slate, but instead of the 5, we got "Think Book." Mr. D. desired me to think of one; my mind was unsettled between *The Brain as an Organ of Mind*, by Bastian, and *International Law*, so to avoid any interference with the conditions, I pitched upon the periodical, *Mind*. Mr. and Mrs. Russell having left us, we all concentrated our attention on the double closed slate, which, on opening at frequent intervals, we had found unwritten. The key was *now* in my pocket, *that* is certain, for on seeking to open it, I found it entangled with the coppers in my waistcoat pocket. The double slate was also undoubtedly locked, for I carefully locked it myself. I mentally, as before,

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concentrated my attention on getting the word "Mind" written within. After some time Hodgson said he heard the sound of writing, and on opening it we found the slate full. The following is the text :—

"This phenomenon is not Spiritualistic, nor is it the projection into objectivity through the higher faculties unfolded by the abnormal issues of human developments—'Mediumship'? Yes. But mediumship of WHAT? Do you think you could appreciate if we were to tell you? Ah no! The Spooks of one, the Adepts of another, the transcendental Egos of another, and the fourth dimensions of a fourth, are but the frantic struggling dreams of the dark and ignorant present human race who have not acquired the possibility of CONCEIVING even an approximation to the real solution.

"Your own predominant desire is *to explain*, but for these and kindred facts, it will be ages before the loftiest soul can touch the true *theory*, as we find it exhibiting no distinct changes of form, and if impossible with one or more vibration.

"The Brain AN organ of Mind, ha! we laugh."

This completes the text. I opened the slate myself, and I found some scratches made by the pencil over the writing. Also the facet seemed to have worn out a little by writing. After this we made some fruitless efforts at getting something, but we could not, and in a very short time we adjourned. As the table round which we sat was removed, Hodgson pointed out that it was beyond suspicion,—a fact which I had omitted to notice.

[*f*] How came, now, the writing between the pair of slates, and in the closed double slate? About the former, it is certain that the slate on which the writing came was one of the three I had purchased that evening at Cambridge; as was attested by its size corresponding with the two others marked, and also by the shape of the frames, and the cracks[8] in them noticed by Hodgson. I confess I do not remember even after such a brief lapse of time, whether I had examined[9] the two slates *not* washed by me, and found them unwritten. I imagine I must have, for otherwise it would be very stupid; and, besides, if there had been any writing it would not have escaped the notice of Mr. Russell, who seemed to be particularly careful. Besides, we constantly looked to see if there was any writing there. Of course, a conjurer of ordinary pretensions could deceive on the last point. There might be writing on the bottom surface of the lower slate, while we could observe only the three upper surfaces, if so many. Before we saw the writing there, Mr. D. gave a push,[10] and though I am almost sure that it was I who removed the upper slate, and found the writing there, I am afraid I cannot be certain. Indeed, I doubt if I can with any confidence assert whether the writing was on the lower surface of the upper slate, or the upper surface of the lower slate, even if I was certain that it was not on the lowest face. When I remember that Mr. D. is deliberately anxious to be tried by no other than a conjurer's standard, and also that I have omitted to notice things so elementary, and yet so essential, even some of them actually suggested for my observation by Mr. D., I regret I did not ask some one else of the party to observe and act. For it is evident that if I did not see the slates clean on *all* the surfaces before commencement, my testimony becomes absolutely valueless. But now suppose that we have satisfaction on these heads, still it may be considered possible that the writing may be precipitated

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by chemical means. Whether, if the writing disappears under the influence of water, the chemical theory may still hold, of course I cannot say. But if so, it is curious that Mr. D. could *push* the slates at a particular moment; and before that none of us could notice, in that full light, any formation of letters, or gradual precipitation, that I can see. Besides, Mr. D. could barely have had time enough to tamper with the slates. He told me himself that he had observed them lying. He had almost 40 minutes to himself, with little intervals, when Hodgson would come in. He might during that interval have written out all the first message, without using a chemical; in that case we are all guilty of gross negligence which it is ridiculous to credit my colleagues[11] with. But he might have also used a chemical; only he could not have foreseen the opportunity of my going out; and as everyone is supposed to bring his own slates, why he should carry about chemicals with him it is difficult to see. In this connection I may also observe that Mr. D. remarked to me during our conversation after tea, how great the temptation is for the occultist to be fraudulent; when pecuniary remuneration is not the object, "the good of the cause" is supposed to justify them, and it may not be unjust to add,—the desire to make people talk about them is not altogether a factor without influence. Just imagine the temptation in Vanity Fair of an * *, the guest of princes and emperors, and having the great honour of a recommendation from the first of living Englishmen—Mr. * *! But it is only fair to Mr. D. to say that he holds this justification, he says, in great abomination. As for the selection of colours being blue and red, and turning out so, it seems to me quite natural, and it may not be without significance that the white writing with chalk we asked for never came. Besides, there is nothing in the matter itself which may not have been written beforehand, indeed it was not what we had wanted. Now, though I point out my own defects of observation, it is only to show how little really my testimony is worth except for points of confirmation; and I hope I shall be able to remedy them next time.

[*g*] Somewhat different is the case of the double closed slate. I do not remember it to have been washed; but there never was any writing on it except a scratch occasionally, whenever I opened it, with the exception of the last time. As I opened it myself I think I could easily have observed any *gradual* precipitations. The reference to "Brain as an organ of Mind" is not altogether without significance. It is also evident that Mr. D. must have minutely studied the time it takes for complete precipitation; or that the whole precipitation takes place simultaneously; or that the phenomenon is undoubtedly genuine. The theory of mere writing without a chemical and then bamboozling me would be really contemptible.[12]

[*c*] The reading of numbers was not a failure; but it was not convincing. "Boorzu," however, was remarkable.

On the whole, I myself strongly incline more towards the genuineness of the phenomena than the reverse; but I cannot disguise it from myself that that is largely due to a previous impression gathered from Mr. D.'s results with others which were read out to me. If I get the same things next time with *my own* double-slate, and a pair of slates that have never left my sight, I think I should be justified in being convinced of something abnormal.[13]

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2. *Report of* Mr. Russell.

[16, Somerfield Road, Finsbury Park, N.]

On Wednesday evening, September 15, I was present with my wife at a slate-writing séance given by Mr. Davey. We sat in the private sitting-room of my friend Mr. R. Hodgson, at No. 1, Furnival's Inn. Besides Mr. Davey, Mr. Hodgson, my wife and self, there were present Mr. Hughes (another great friend of mine) and . . Mr. Padshah. I had never seen either Mr. D. or Mr. P. before. We sat round an ordinary deal table. Mr. P. was on Mr. D.'s right hand, I on his left. On the table were 3 or 4 single slates which Mr. P. had brought with him, and a double slate fitted with lock and key belonging to Mr. Davey.

[*g*] As soon as we were seated at the table Mr. D. washed the double slate with sponge and water, and then handed it round for inspection. As we expressed ourselves satisfied that it was perfectly clean, he placed a small piece of ordinary crayon inside, locked it and gave it to Mr. Padshah to keep. Mr. P. having put it on his own chair behind his back,

[*a*] Mr. D. took one of the single slates, washed it clean, put a small piece of crayon on it and placed it under one corner of the table, holding it there with his right hand (thumb in sight on the table, four fingers out of sight below), Mr. P. holding it in the same manner with his left hand. We then joined hands and talked,[14] waiting for the sound of writing. After some minutes Mr. D. brought up the slate, but there was nothing on it.

[*f*] He then put some small pieces of chalk on one of the other slates lying on the table, covered it with another slate, and said he would try to get some writing there if we would choose the colours we would like it in. Mr. P. chose blue and my wife (at my suggestion) red.

[*a*] Mr. D. then replaced the single slate under the corner of the table, holding it as before, but again several minutes passed without any result. He then asked my wife to change places with Mr. P., which she did, holding the slate with her left hand as he had done. But again, after several minutes, there was no writing.

[*b*] Then my wife and Mr. P. took their old places, Mr. D. once more put the slate under the corner as before, and asked Mr. P. to think of some number under 10, saying that he would try to get it written for him. He then said aloud: "Please say whether we shall get anything to-night," soon after which Mr. P. declared he heard the sound of writing; whereupon the slate was brought up, and the word "yes" and the number "6" were found upon it.[15] Mr. P. said he had thought of 5, but explained that he made his fives in such a curious way that they might easily be mistaken for sixes.

[*c*] Mr. D. now said that a start having been made, more success might be looked for, so the experiment was repeated, the slate being brought up at intervals of from 5 to 10 minutes. The first time it had the letters BOORZ[16] upon it, which Mr. P. explained were the first five letters of his Christian name which was in Persian written BOORZU. Neither Mr. Hodgson, Mr. Hughes, my wife, nor myself had ever heard of this name before, but I did not quite understand whether Mr. D. had or had not heard it from Mr. P. before the sitting began.

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[*d*, *e*] Next time there was the single word "Wait," and a little later the words "Try Chalks." We accordingly concentrated our attention on the two slates with the chalks between them, which had been left lying on the table.

[*f*] Mr. Davey and Mr. P. each placed a hand on them, and we completed the circle. From time to time Mr. D. opened the slates, but for a long time there was no result.

[*g*] Presently he got up and went to the bookcase, saying he would try to read something from a book. He asked Mr. P. to go and choose one. Mr. P. did so (taking the locked slate with him), and suggested several books, to all of which Mr. D. objected on various grounds. Finally, however, a volume of Swinburne's poems was selected and placed on the table, Mr. D. saying he would try to get a reference in the locked slate to any particular page and line below 10 Mr. P. might choose. But though the slate was opened two or three times, no writing was found on it.

[*f*] In the meantime, Mr. D. had once more examined the two slates where the coloured chalks were, but finding nothing, had placed them side by side, and carelessly, as if in a fit of absent-mindedness, had taken the chalks from the slate which had been at the bottom, and placed them on the other. He had then put them together as before, except that the original position of the slates was reversed, the old bottom one being now at the top, and the old top one at the bottom. Presently, asking Mr. P. if in a former sitting with Eglinton the medium had not got some writing on his shoulder, he took up the two slates and placed them on Mr. P.'s shoulder, but in less than a minute took them off, reversing[17] them as he did so, and replaced them on the table. The old bottom slate was now once more at the bottom, and the old top one at the top, but each slate had been reversed, so that the two sides which had originally been turned to the table were now turned up. In a few minutes, Mr. D. had a sort of convulsion, Mr. Hodgson and Mr. Hughes said they heard sounds like writing, the slates were opened, and there, on the lower one, was a message, half in green,[18] half in red (nearly the colours chosen by Mr. P. and my wife), expressing a hope that we should be satisfied with writing given thus, under such excellent test conditions. Mr. P. remarked that he had asked for blue, and that the colour given was green; and then, on being asked, said he could not see how Mr. D. could have produced this writing by ordinary physical means, and then my wife and I left.

I am writing this account without notes,[19] on the morning of Friday, September 17th. J. Russell.

My wife and I have written our accounts independently, but I have since read through hers, and find I have omitted to say that there was a good light in the room.

3. *Report of* Mrs. Russell.

[16, Somerfield Road, Finsbury Park, N.]

I was present with my husband at a séance given by Mr. Davey to Mr. Padshah at Mr. Hodgson's rooms in Furnival's Inn, on Wednesday night, the 15th inst.

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There were six of us present. We sat round a small deal table, which had a drawer at each[20] end. The one my end was empty. I did not examine the other. Two lamps were in the room, and four candles, one of which was on the table. Mr. Padshah sat next to Mr. Davey and I next to Mr. Padshah.

[*g*] He began by cleaning the inside of a locked slate given him by Mr. Davey, who having chosen and put inside a small piece of chalk, desired Mr. Padshah to lock the slate and keep it in his possession. Mr. Padshah locked it and put it behind him in the chair he was sitting in, and the key in his pocket.

[*a*] Mr. Davey then took a small ordinary slate, and a small piece of slate pencil with no points, asking Mr. Padshah to first clean the slate himself on both sides. This being done they both held the slate under the edge of the table with the fingers on the slate and the thumbs on the edge of the table. We then all joined hands, and sat talking for some time. Once or twice Mr. Davey took out the slate to examine, but found no writing. He then asked me to change places with Mr. Padshah, and hold the slate, which I did. Once or twice he took out the slate whilst I was holding it, and once there was a zigzag pencil mark on it which was not there before, but no writing.

[*b*] Mr. Padshah then took the slate again. We still went on waiting, and taking out the slate to look at. Twice, some white chalk that Mr. Padshah had chosen was crushed when we looked at it. Mr. Davey then bent his head close to the table and asked in a loud voice, "Tell us if we shall have any manifestations to-night or no; only one word Yes or No." After waiting again Mr. Padshah said he heard the sound of writing. On looking, "Yes" was found written on the slate. The letters were very uneven and scrawling. Mr. Davey then asked Mr. Padshah to think of a number, and a figure 6 was given instead of a 5 which he had thought of. But Mr. Padshah explained it by saying that he usually made those figures very much alike, and it would be easy to confuse them.

[*d*, *e*] After waiting again the single word "Wait" was found, and a little time afterwards "Try chalks" in the same bad writing (so bad that we turned it first one way and then another to make it out) with a very imperfect figure 8 that Mr. Padshah had been thinking of. Mr. Padshah himself discovered this last just as Mr. Davey was putting back the slate under the table.

[*g*] Nothing was yet found in the locked slate.

[*f*] Mr. Davey then put in several pieces of coloured chalks between two slates which had been lying on the table all the time, with one piece of pencil inside, and he and my husband placed their hands on it.

[*c*] On again taking up the slate under the table, a curious word appeared written on it which we could not read, written in much better characters, but which appeared to me to be a foreign word. On Mr. Padshah's looking at it, he exclaimed "Why it is my own name Boorzu, which I am hardly ever called by!" No one at the table knew it was Mr. Padshah's name, Mr. Davey being positive that he had never heard it before, and indeed neither of us had. Mr. Padshah then reminded Mr. Davey that he had asked him to ask his name before tea, which Mr. Davey said he had forgotten.

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[*g*] Nothing having been written between the two slates, Mr. Davey then asked Mr. Padshah to go to the bookcase and choose a book. He brought one and put it on the table, but Mr. Davey objected that it was too big. I think it was a book of Spencer's. Mr. Davey then went to the bookcase with Mr. Padshah and helped him to choose a book, saying it must be a small one, and in large print, that a good clear, large print was of the most importance. Mr. Padshah, on going to the bookcase, took the locked slate with him. They brought back a volume of Swinburne's poems, Mr. Davey opening it here and there, and observing that the worst of it was he knew that particular book very well. Mr. Padshah then thought of a page under 10, but no writing was given. I then went to the bookcase for a book, and brought back *Aurora Leigh*, which, on Mr. Davey's seeing, he said it was the same as they had had two or three nights before, and it would not do.

[*f*] He then decided to give up the book test altogether, and concentrated all his attention on the two slates on the table. He asked Mr. Padshah and myself to choose a colour that we would have the writing in. Mr. Padshah chose blue, and I[21] red. There were 3 or 4 different small pieces of coloured chalks[22] in the slates. Mr. Padshah and myself then held our hands over the slates with Mr. Davey and my husband. Mr. Davey became very intense, saying we *must* get some manifestations that night. Mr. Padshah said that perhaps they would not write on the table between the slates, that although they had said "try chalks," they did not say on which slate. We waited some time without any result. Once Mr. Davey put the slates on Mr. Padshah's shoulder, asking if Mr. Eglinton had not tried him in that way. He replaced them after a few seconds on the table, and turned them over to look inside, but nothing was found. At last Mr. Davey became more intense, and after a kind of convulsive shaking, he turned open the slates once more, and, with some excitement, showed us one whole side covered with even good writing, half in green and half in red. I cannot remember what it was exactly, not having taken a copy. But the green was something about giving us a good manifestation that night, and the red about waiting patiently. This last being in my colour, struck me as a curious coincidence, as I had been the most impatient all the evening. Then Mr. Padshah again unlocked the locked slate, but found nothing, and after our waiting some time longer, Mr. Davey suggested we might perhaps be too many, as he had seldom had such bad results in so long a sitting. As my husband and I wished to get home, we then left, it being past 10 o'clock, and we began soon after eight. Mr. Davey proposed going on with the sitting after we had left, with what results I do not know.

I am writing this account from memory, without notes, on Friday evening, September 17th.

BESSIE RUSSELL.

SITTING V.

Previous to my sitting with Mr. Block he had been informed that my "phenomena" were not due to the agency of "spirits," and he

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was exceedingly sceptical as to the occurrence of any phenomena at all under such conditions as had been described to him.

Report of MR. A. S. BLOCK.

October 30, 1886.

DEAR MR. DAVEY,

Few of the persons who have witnessed your extraordinary performances can have done so with more impartial minds than I and my young son, Alfred, did. He, a youth of 16, perfectly ignorant of the whole subject of Spiritualism, mediums, or psychical science, with eyes quick to discern every movement of hand or body ; I, calmly observing what I *saw* without desiring to theorise or account for the same, or the way in which it was accomplished.

Having heard of what you were doing I was curious to witness myself your performances, and you kindly gratified me by giving me what I suppose you would call a séance. To my own disappointment, and I fear to your own inconvenience and perhaps greater strain of mind in consequence, I had but half-an-hour with you, having to catch my last train home.

You, my son, and I having adjourned to the library, sat down at a small ordinary table with folding flaps, when you produced several slates and a small folding slate with hinges and patent lock. Giving me the latter you asked me to thoroughly sponge and wipe it, and placing a very small piece of pencil between the two slates, I locked them and gave the key to my son, and placed the slate in my right hand pocket, being the side away from you.

[*a*] You then handed me an ordinary slate which you requested me also to well sponge and wipe and put a mark in the corner of each side, which I did. Then, putting a small piece of pencil in the middle of the slate you placed it—or slid it—*under* the corner of the extended flap of the table, placing the fingers of your right hand under it, and your thumb on the upper side of the table, and your left hand on the table ; I placing the fingers of my left hand next and touching yours under the slate, and thumb on the table, and with my right hand holding the left hand of my son. In a few seconds you said, "Will you ask a question?" when I asked, "What shall I be doing this time to-morrow night?" In about 3 or 4 minutes a slight scratching was to be heard, and you slid the slate from under the table, and only a mark of an illegible word was to be seen.

[*b*] The slate was again sponged and wiped by me, and again replaced by you in the same position as before—when you, either as part of the performance or in fun, evinced some impatience and demanded an answer to my question, and in a few minutes scratching was again heard, and on withdrawing the slate from under the table, the word "Reading" very legibly written, was on the slate.

[*c*] You then took two slates which you handed to me to sponge and wipe as before, which I did, and placing 3 or 4 small pieces of coloured chalk, which you placed between the 2 slates, which were placed *on* the top of the table, you asked my son to take a book from the bookcase, to think of a page without letting you know either the book or the page thought of, and keep the book in his possession. Then asking him in what coloured chalk the writing should appear—he desired it should be in red—you placed both

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your hands firmly on the upper slate; I placed both mine, and my son did the same, all of us pressing on the slates firmly.

Waiting a few minutes, you again manifested impatience and excitement at the little delay, when we soon after distinctly heard a scratching between the slates, which when looked at, the upper slate was found covered with writing, in *red* chalk as desired. The writing was apparently an extract of some kind, but unfortunately the opportunity of testing its accuracy was lost as my son omitted to think of a page.

[*d*] Although the time at our disposal was but a few minutes—a quarter of an hour at most—you kindly performed another trick, which was writing between the locked slates. As I have said, these were handed to me by you at the commencement of our sitting, were sponged and wiped by me, a piece of pencil placed between the two slates—locked by me, and key handed by me to my son and the slates placed in my pocket, so that it was manifest you never had any touch or handling of these locked-up slates. Asking me to unlock them I did so and found them in the same condition as when I placed them in my pocket. I, however, again wiped them with the sponge—you replaced the small piece of pencil, I locked them together again, handing the key to my son, and handing you the slates thus locked. These you placed on the top corner of the table, placing both your hands upon them—I and my son doing the same. In about 3 minutes, at most, you began to press energetically upon the slates, when we heard very distinctly a slight scratching between them. You called my attention to the sound, lifting your hands, called my observation to the fact that when you did so the sound stopped,—being again audible when you replaced your hands. In a few seconds taking away your hands, you asked me to unlock the slates, which I did and there saw writing in a good flowing hand—not in your style I observed, on the whole of the upper, and on part of the lower slate. I read the first few lines, which were that it was hoped I had enjoyed the entertainment.

I much regret my hurried departure.

In the above memorandum, I have repeated I believe faithfully what I saw.

Yours faithfully,

ALFRED S. BLOCK.

After receiving Mr. Block's report I asked him the following questions:—

1. Kindly say on which side the writing appeared when the slate was held against the table, viz., was it on the lower side where my fingers were or upon the upper side nearest the table; also when you grasped the slate with me against the table do you remember if you held it firmly or not?

2. Did I endeavour to distract your attention from the slates?

3. To the best of your belief were the slates devoid of writing when you examined and marked them, and did either Alfred or yourself observe the slightest opportunity for my writing on them by ordinary natural means?

Mr. Block replied on November 6th, 1886, as follows:—

1. The writing was on the side of the slate nearest the table, and as you held the slate and I also held it very tightly against the under side of the

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table flap, it appeared to me to be impossible for you to have touched the pencil or *that* side of the slate on which the writing appeared.

2. You certainly did not appear to endeavour to distract my attention from the slate—quite the contrary.

3. To the best of my belief and as far as the evidence of my own and Alfred's eyes could be relied upon the slates were all perfectly devoid of writing or marking before the performance, in addition to which as I have said I well sponged and wiped the slates myself and marked them before you received them from me.

I may also state that neither Alfred or I observed the slightest opportunity for your writing on them by ordinary natural means.

A. S. Block.

SITTING VI.

Mr. Ten Brüggenkate had discussed with me some of the literature relating to "slate-writing" phenomena, including some controversy concerning my own performances as "A., the Amateur Conjurer," but I had carefully refrained from making any statement myself concerning the exact nature of my phenomena until after the sitting.

Report of Mr. B. J. Ten Brüggenkate.

November 30th, 1886.

It was my good fortune to witness last night some of the most interesting feats of what appeared to be conjuring that I have ever seen. I had previously had several conversations with Mr. Davey upon the subject of Spiritualism and slate-writing, and last evening when alone with him at his house he volunteered to give me a séance.

The room was a well lighted library, the table at which we sat was an ordinary somewhat old-fashioned Pembroke table, and the slates used were of the common school type, as well as one small folding slate fitted with hinges and a Chatwood lock and key.

[*a*] Mr. Davey gave me the locked slate and asked me to examine it carefully, which I did and failed to find any trick or anything of the kind about it. The "medium" then asked me to write a question upon the slate, to place a small piece of pencil between the two, to lock it up and put both slate and key in my pocket. I did this in Mr. Davey's absence, he having been called away, for a moment. Mr. Davey then took one of the ordinary slates, and placing a splinter of pencil upon it we both held it close under the table, and after a lapse of a few minutes got some writing upon it, the writing I remarked at the time being in an opposite direction to Mr. Davey. Mr. Davey then returned to the locked slate, *which had been in my pocket all the time*, and upon placing this slate upon the table, very faint scratching was heard, and a complete and full answer to my question was returned. What was to me most extraordinary was, that Mr. Davey did not know what question I had asked, and yet the answer was definite and complete.

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[*b*] The next performance was even more wonderful. I took two common slates, thoroughly cleaned them, and placed some pieces of red chalk between them, and we kept our hands firmly upon them; in a short time faint scratching was heard and upon lifting the top slate I found it to be covered with writing written in a diagonal direction across the slate, the writing again appearing in an opposite direction to Mr. Davey, *i.e.*, as we sat opposite one another it appeared as if I had written it.

[*c*] The last experiment was only partially successful. Mr. Davey asked me to choose a book from the shelves, unknown to him, and to sit upon it in order that it should be invisible to him—then to write a number upon a slate; I wrote "*five*"—then to think of a number; I thought of "*seven*." The locked slate was again put upon the table, scratching was heard, and upon opening it I found a verse from page 8 line 4 of the book I had chosen, written distinctly upon the slate. I wish it to be observed that I did not fix my mind attentively upon the number "seven" I had thought of —my attention being called off by some remarks of Mr. Davey; also that Mr. Davey did not know the book I had chosen, so that I quite fail to see how he could produce any writing from the book. This ended the séance, and I am at a loss to conceive how the writing can possibly come upon the slate. There was not a chance of Mr. Davey being able to get at the slates during the performance. When I placed the two open slates one upon another with the red chalk between them, I made the remark that if writing was produced upon either of them I should be ready to believe anything—for they were covered with my hand directly they were on the top of each other and were never moved until writing appeared.

B. J. Ten Brüggenkate.

SITTING VII.

The next two reports are independent accounts of a sitting held on December 1st, 1886. Mr. Venner was introduced to me by a friend in 1885, in order that he might witness one of my performances. He had previously given the question of Spiritualism some thought, and had been present at several séances given by a professed medium. Since that time he has had frequent sittings with me, in company with his own friends. Mr. Manville and Mr. Pinnock I met for the first time at the sitting here recorded.

1. *Report of* Mr. Robert Venner.

Séance, December 1st.

On Wednesday, December 1st, my two friends, Mr. M., Mr. P., and myself attended a truly remarkable slate-writing séance given by Mr. D. at his own house. Neither Mr. M. nor Mr. P. have had any previous experience in slate-writing séances. I have been present at something like a dozen of Mr. D.'s; the first of the series must have taken place nearly a

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year and-a-half ago. At no séance, at which I have been present, have I heard any theory advanced by Mr. D. to account for the production of the phenomena, and he has always strictly guarded himself from any claims to the assistance of the supernatural. I consider that this disclaimer places him in a disadvantageous position, as compared to that of mediums claiming similar results as the work of spiritual agency. In the first place, it debars him from imposing numerous most convenient conditions on the investigator; in the second, it deprives him of much prestige, which cannot but assist the performer; in the third, it prevents him from pressing into his service bad spirits, atmospheric conditions, &c., &c., to account for mistake or failure.

The room in which the séance took place is a small one, and is used as a library; it was well lighted by a couple of gas burners. The table at which we sat was of such a size that all four of us could conveniently join hands when seated; it had two flaps. Before the commencement of the séance we made a thorough investigation of its under-side. The slates employed were all, with one exception, ordinary school ones; no German parchment was used. The exception was a handsome book-slate, cased in black wood resembling ebony, and furnished with a lock. The two halves of the slate fitted very exactly together when closed and locked. The approximate outside dimensions were five inches by eight.

All the slates belonged to Mr. D., whom I shall in future designate as the medium; we brought none of our own. The medium also provided a box of crayons, mostly either red or green, a sponge, a duster, and a glass of water.

Mr. M. objected that the contents of the glass might contain chemicals; we therefore had it emptied and refilled.

The order of sitting was as follows:—Mr. P. and I occupied positions on the medium's right and left hands respectively, Mr. M. sat opposite to him.

[*d*] At the request of the medium, Mr. P. wrote a question in the book-slate (I shall call this slate A in future); he then locked it and pocketed the key. Neither Mr. M. nor I knew the nature of the question at the time. The slate was left for some minutes upon the seat of an arm-chair, but was subsequently transferred first to Mr. P.'s coat, and then to the table at which we sat. Mr. M. suggested aside to me that we should fix a hair in such a manner to the outside of the slate that it could not fail to be broken if the slate were opened. I thought the suggestion a very good one, but we were not able to put it into execution, no gum being forthcoming, nor any opportunity presenting itself of distracting the medium's attention.

The medium showed and explained to us a means commonly employed in producing slate-writing by fraud.

Experiment No. 1. [*a*]

Ordinary slate taken, marked by Mr. P. and myself, and then held beneath the table-flap by Mr. P. and the medium. We got no result during the next half-hour, and Mr. P. and Mr. M. therefore changed places. After a considerable interval the sound of writing audible, and the word

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"yes" found written; the writing was weak and straggly. As nothing further occurred for some time, the original order of sitting was resumed.

Experiment No. 2. [*b*]

The medium requested Mr. M. to next ask a question. Mr. M.'s question was something to this effect:—"I had the pleasure of an introduction to a lady last night, I do not know her address, and I should be much obliged by its production." After a considerable pause the word "Marylebone" written.

Experiment No. 3. [*c*]

Two ordinary slates taken, cleaned by us, but not marked, pieces of red and green chalk introduced between them, the slates then deposited in front of the medium in full view, and about four or five inches from the edge of the table and from the medium's body; the medium rested one of his hands on the upper surface of the top slate, and my hand reposed on his.

After a pause the sound of writing distinctly audible; this continued for about 15 seconds, then the medium remarked, "What a pity I forgot to ask you what colour you would have it in." Mr. M. suggested green; sound of writing continued for about five seconds longer, then ceased. On the removal of the top slate, the bottom slate was found to be completely covered with writing. The writing ran in diagonal lines across the slate; the writing was upside down with respect to the medium; the writing was firm and distinct in character. The first three-quarters of the message were written in red, the last quarter in green; its substance was as follows:—

"We perceive that you possess powers of a very high order, but you have not done what is right for their development. Success can only be obtained by industry, patience, and study, and is not this true as applied to all branches of human affairs? Why should a man be entitled to the assistance of astral angeloids simply because he sits at table and thinks of nothing at all? Ah, no; should you indulge in further investigation with a professional psychic."

This is the end of the red message, the remainder is in German, and written in green. I am not a German scholar, and I shall not give the message in the present report. I understand from Mr. P.* that in construction and idiom it is perfectly correct. During the occurrence of the writing, as also before it took place, I watched the medium narrowly, but I could obtain no clue to the means employed. As the writing had been accompanied by some very convulsive spasms of the medium, Mr. M.

* Mr. Pinnock wrote a report, but requested me not to publish it unless it was a correct account of what occurred. I may, however, quote the following passage, which I believe to be accurate, with reference to the above incident. "At this point Mr. Davey had asked us if we should like to have the rest written in a different chalk (we had put a red and a green piece on the slate); we assented. I at the same time thought to ask Mr. Davey to let the remainder be written in German, but I did not express this wish aloud. To our great astonishment the first part was written in red chalk, and the next in green, the green writing being in German." This might be described as a communication given to the sitter, in answer to his mental request for a language unknown to the "medium."—S.J. D.

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inquired if these were beyond his power to control. A perfectly frank answer in the negative was returned.

Experiment No. 4. [*d*]

The medium and Mr. P. placed their hands upon slate A, which had remained in sight in front of the latter since the commencement of the séance. The sound of writing audible almost immediately. Mr. P. opened slate, and we found the question he had written, together with the accompanying answer.

Question. "Give me my name in full if you can?"

Answer. "We are sorry we cannot do this for you, Mr. Pinnock; perhaps we may be able to do so later on."

The writing was firm, and distinct in character from that of some of the other messages.

Experiment No. 5. [*e*]

The medium requested each of us to take a small handful of chalks out of the box on the table. Mr. P. took 11, Mr. M. six, and I three. The medium divided the three chalks I had selected between the other two. We had previously agreed that Mr. P.'s number should represent a page, and Mr. M.'s number a line, of some book to be chosen mentally by one of the party, the medium promising to endeavour to reproduce on the slate the line so determined. In the present case it was of course the eighth line of the 12th page.

The medium requested me to choose a book. I accordingly left the table and walked up to a small case containing, at a rough guess, 60 volumes. I had already selected one of these, when Mr. M. raised the objection that, as I was a personal friend of the medium, it would be a better test if the selection fell either to him or Mr. P. The medium acquiesced.

The slate A was cleaned, and a fresh fragment of pencil introduced; the slate remained in full view with one of the medium's hands resting on it. Mr. M. rose and noted a volume mentally. The sound of writing audible.

The message, on examination, proved to be an address to Mr. M., but contained no quotation from the book he had chosen. I had not time to make a copy of the message in full, but the commencement was as follows:—

"You, who have studied the question of electricity, can the more readily appreciate the wonder of these performances. We think you"———

The medium seemed angry at the appearance of this message, which had no bearing on the question asked, and expressed a desire that we should try a second time. Mr. P. was therefore requested to select a book.

On Mr. Manville asking the reason of the non-success of the experiment, he received the answer "muddle" written on an ordinary slate.

Experiment No. 6. [*f*]

Mr. P. selected a volume mentally[1] without removing or even touching it;

[1] Mr. Pinnock wrote to me on December 14th, 1886:—"In my report I omitted to state that I selected a book mentally without of course telling anyone which one I had selected."—S.J.D.

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he then returned to his place. Two ordinary slates taken, placed together beneath the flap of the table, and held by Mr. P. and the medium. The slates were not specially marked by us, but Mr. P. informed us that the traces of former messages on them offered an easy means of identification. Writing audible. On examination the following message found——

"The difference in this respect Shakespear."

Mr. P. went up to the book-shelf, opened the volume he had selected, and handed it to Mr. M., who found line 8 of page 12 to consist of the following words :—

Line 8. "The difference in this respect between Shake—"

Line 9. "spear and Beaumont," &c., &c.

We informed the medium that he had only been partially successful.

Slates held a second time under the table by Mr. P. and the medium.

Words "and Beaumont" written.

Slates held under the table-flap for the third time. The omitted word "between" written, and "Shake" instead of the whole word Shakespear. The message was now perfectly correct. The character of the writing in the above messages was weak and straggling.

Experiment No. 7. [*g*]

As we were in doubt as to some of the words written in the message commencing "We perceive," &c., Mr. M. requested the medium to try and reproduce them.

Two ordinary slates taken, cleaned, and laid on the table in full view.

Almost immediately the sound of writing, and the words "perceive" and "human" written. These were the words in debate. We also got the meaning of certain German words written, the translation of the sentence being, "The weather will change to-morrow." This likewise proved to be the correct rendering.

Experiment No. 8. [*h*]

The medium tore off half a sheet of letter-paper bearing the address of his house ; this he gummed to the surface of an ordinary slate, a fragment of lead pencil was put on the paper, and the slate then transferred beneath the table-flap, and held by Mr. P. and the medium. Writing immediately audible. At our request the slate was exposed before it had ceased. To the best of my remembrance the slate could not have been beneath the table-flap for more than 20 seconds. On examination we found the following message written in a hand which bore a much greater resemblance to the medium's than any of the others. Its purport was as follows: —

"D. has not got the mystic instrument up his sleeve or his left hand trousers pocket ; we give you this information for the benefit of the SKEPTICS. We do not profess to be possessed of powers out of the range of ordinary human beings, yet we are anxious nevertheless to show you that we can at times give evidence of an intelligence apart from our friend D., and we shall be pleased to try any tests you may devise.

"Mr. V., we are anxious to communicate with you in reference to your relative, Sir R. * * * although of course."

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Here I suppose the examination had caused the message to break off short; a long pencil mark running from the last letter of the final word seemed to justify this supposition.

This brought a very interesting séance to a close.

In conclusion, I may remark that in addition to the before-mentioned slate-writing séances with Mr. D. I have also sat at a couple of dark séances for materialisation. I can offer no explanation of the phenomena which took place.

ROBERT F. VENNER.

2. *Report of* MR. E. MANVILLE.

2nd December, 1886.

My friend Mr. Venner asked me to accompany him and another friend of his last evening to see Mr. S. J. Davey, who, he said, would show us some phenomena that would probably astonish us. I willingly acquiesced, being not only anxious to see the phenomena (of the nature of which I had been informed), but also to try if I could in any way observe the means utilised to produce the effects. I may mention I had not seen Mr. Davey before this evening, neither had Mr. Pinnock (Mr. Venner's other friend), but Mr. Venner had known him for some time.

Mr. Davey received us in a small library, probably containing some 300 [over 1000.—S. J. D.] books, and during the whole evening gave me every assistance to examine everything used.

[*d*] I first of all examined a small double slate about eight inches by five inches; this consisted of two slates, each let into an ebony back; the ebony backs were hinged together on one side, and there was a hasp and lock on the other side. When the slates were folded together and locked, the two slates were face to face, with just enough room between them for a "crumb" of slate-pencil locked in between them to move about freely. The slate was washed quite clean with a sponge and water, and dried with a cloth, and then given to Mr. Pinnock to write a question on one side. This he did, and then locked the slates together, retaining the key.

Mr. Davey now brought forward a table, which I examined carefully. It was an ordinary table on four legs, with a flap on each side; it was made of wood about half-an-inch thick; there was one drawer under the table, which I removed altogether, and which was left out all the evening. After this was done, there was nothing about the table which could conceal anything, and had anything been concealed about the table, as far as I could see it must have been in the thickness of the wood.

Mr. Davey then showed me some ordinary slates, in wooden frames. These I helped him to wash and dry. We then took our seats round the table. I was facing Mr. Davey. Mr. Pinnock was seated on Mr. Davey's right hand, and Mr. Venner on Mr. Davey's left hand.

[*d*] Mr. Davey asked Mr. Pinnock to place the locked slate under his (Mr. Pinnock's) coat and then button up the coat.

[*c*] We now took three slates, on one of them we placed three fragments of crayon, two of which were red, the other green, we then covered up this slate with another and left them on the table in full view.

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[*a*] On the third slate we also put a piece of crayon and then held the slate underneath one flap of the table which we put up for the purpose. Mr. Davey's fingers were under the slate and his thumb on the table; Mr. Pinnock's fingers and thumb were in the same position. Mr. Venner held Mr. Davey's free hand with one of his hands and one of my hands with his other. I held Mr. Pinnock's free hand with my other. I have omitted to say that we all three wrote our initials in different corners of the slate before it was put under the table. We sat in this way talking and smoking for some time, twenty minutes to half an hour I should say, nothing whatever occurring. At last Mr. Davey asked me to change places with Mr. Pinnock. This I did and thus had one of my hands on the slate. Mr. Davey now said, that in the manner usual at séances we would ask questions of an imaginary being; and he said, "Are you going to do anything to night, Joey?" After a short pause he repeated the question, and then I felt the slate vibrate as if being written on, and could hear a scratching noise; we took the slate from under the table-flap and saw the word "yes" written over Mr. Venner's initials, and I particularly noticed that the writing was *towards* Mr. Davey, and upside down to him, and in all we saw afterwards this was the case.

[*b*] I now asked a question as to the whereabout of a person at that time, not knowing the answer myself; we waited for some time without any result, when Mr. Davey asked me to again change places with Mr. Pinnock.

[*d*, *c*, *g* &c.] I did so, and Mr. Davey told Mr. Pinnock to place the locked slate on the table beside the two slates we had left face to face, and we also lifted the uppermost of these two slates and found the slates still quite clean, with the three pieces of crayon between them. We again waited some time with no results; meantime, having a discussion as to mediumship of different people, and then Mr. Davey asked if I were a medium. After a pause I heard vigorous scratchings on the two slates left face to face on the table and on which Mr. Davey's arm was resting, his two hands being engaged, one in holding the slate under the table flap, the other in holding Mr. Venner's hand; the scratching lasted roughly under ten seconds, and I expected to see a dozen words or so, and was therefore amazed to discover, when the top slate was lifted, that the underneath slate was covered with writing from corner to corner, and also the writing was not straight across the slate, but was across it diagonally; three-quarters of the writing was in red, the other quarter in green, and *no crayon was left*. We read through the writing, a copy of which will appear in Messrs. Venner and Pinnock's report, and found that the part in green was in the German language and characters; about five words were illegible, and these, later on in the evening, we asked for, and obtained them, and still later in the evening we asked for whom the writing was intended, when my name "Manville" was written.

[*d*] Mr. Davey now put his hand on the locked slates which had been left on the table since Mr. Pinnock took them from under his coat; we heard scratching inside. Mr. Pinnock then took the key from his pocket and unlocked the slate and handed it to me. I for the first time saw the question written in it, with an answer below; the question was "Give me my name in full if you can;" the answer was "We are sorry we cannot do this for you, Mr. Pinnock, perhaps we may be able to later on."

[*e*] Mr. Davey now said he would endeavour to get a given line on a

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given page of a book written for us. Mr. Venner therefore looked over the titles of the books ranged on the shelves and selected one *mentally*, without touching it with his hands; at this moment I suggested it would be better if I were to select the book, as I did not know Mr. Davey at all, whilst Mr. Venner did. Mr. Davey acquiesced. I selected a title in order to decide what line and page we should select. I took a pinch of crayons from a box, Mr. Pinnock doing the same. On counting, mine came to 6, Mr. Pinnock's to 11, Mr. Venner's came to 3. Mr. P. and I divided Mr. V.'s, making mine 8, and Mr. P.'s 12, so we decided that it should be p. 12, line 8. We then washed the locked slates clean, locked them, Mr. Pinnock retaining the key. Mr. Davey placed his hand on the slates, and scratching was heard for a few seconds; on the slate being unlocked by Mr. Pinnock and handed to me, I found it was full of writing of a different character from that we had seen before; it consisted of an appeal to either Mr. Venner or myself, asking if one who was acquainted with electricity could fail to appreciate the difficulty of producing phenomena such as we were witnessing that evening; unfortunately the slate was washed before we had taken a copy. The writing in this case was not diagonal, but straight across the slate; it started about a quarter of an inch from the top of the slate, went right down to the bottom, then was continued round one side and finished up in the quarter of an inch left at the top of the slate, with two lines written *upside down*, and was signed with the initials T. P., I think. This was interesting to us, but Mr. Davey was vexed we did not get the line out of the book written, and so, placing the slate under the table flap, he asked the reason; the word "muddle" was written, and we apprehended it was on account of Mr. Venner and myself both having chosen a book; we therefore thought it would be best for Mr. Pinnock, who knew Mr. Davey no better than I, to select another book.

[*f*] This he did. We washed the two slates, laid them face to face on the table, when the following words were written: "The difference in this respect." Mr. Pinnock now took down the book he had selected from the shelf, and handed it to me; I opened it at the 12th page and looked at the eighth line. I found the first two words completed a sentence; then came the five words above, and then two more to finish the line. I said the written words were right, but not complete. The slate was covered again, and three more words were written: "Shakespeare and Beaumont." On looking at the book I found Shakespeare was the last word in the line, the other two being in the next line. I said a word was still missed out. The slates were put together again, and two more words written. On looking at the book these turned out to be the two words terminating the last sentence. I said there was still the word missing, and this time the word "between" was written, making the sentence complete: "The difference in this respect between Shakespeare and Beaumont." I then asked for the last word in the line by itself, and this was written "Shakes," which was correct, as Shakespeare was half on one line and half on the other. The name of the book was *Lectures on Shakespeare, &c.*

[*g*] We next asked another question, and this time had the answer written on the *underneath* side of the *upper* slate instead of on the *upper* side of the *underneath* slate.

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[*h*] Mr. Pinnock asked if we could not get the writing on a piece of paper instead of the slate. Mr. Davey said we might try, and thereupon tore a sheet of writing-paper into two, and pasted one half on to a slate by the four corners; he cut off a small piece of black lead from the end of a pencil, put it on the paper and covered the slate with another slate. Writing was heard at once, and we separated the slates and found the paper written over diagonally as in the case of the first slate. The paper was not, however, quite full, and it looked as if the slates were separated too soon, as the sentence was not finished. The writing was evidently written with the point of the pencil.

[*i*] Mr. Davey was now very tired, but he offered to try one more experiment. A slate was raised on two glass blocks above the table, on top of the slate was placed a piece of crayon, and over the crayon was inverted a glass tumbler. Mr. Davey asked me what figure the crayon should draw. I said a triangle. We all joined hands and watched the crayon through the glass. After a few minutes, the crayon not having moved, Mr. Davey placed a slate under the table and asked if it would move, when the answer "No" was written, and we then finished our evening's experiments.

I have endeavoured in this report to merely give an account of what I saw, and not to give any attempt at an opinion as to the way in which the phenomena were produced; but this I may say, that it appears to me exceedingly improbable that electricity, as we at present understand it, was used. Everything occurred under full light and between the hours of 9 p.m. and 1.30 a.m. E. MANVILLE.

DEAR MR. DAVEY,

I received your note yesterday just before leaving town. The writing always appeared on the upper side of the slate held against the table-flap; also the pencil was in every case, I noticed, at the end of the writing and decidedly worn, and in one or two cases, I recollect, on the last stroke. Will you kindly add this to my report. . . . E. M.

11*th December*, 1886.

Oxford.

SITTING VIII.

My object in giving these séances has not been so much to "defy detection" as to enable some estimate to be formed concerning the possibilities of mal-observation and lapse of memory under certain peculiar conditions. Hitherto I have never refrained altogether from producing "phenomena" merely because I was afraid that the witness might discover my methods, although I have on several occasions given blank séances to persons who had already witnessed my phenomena, and whom I had no reason to fear. At the commencement of the sitting I saw that Mr. Dodds was an investigator who was justly entitled to a blank séance, and his account therefore is particularly interesting from the fact that notwithstanding his keenness, he failed to detect my real *modus operandi*.

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Report of MR. J. M. DODDS.

12, Mitre Court Chambers, Temple, E.C.

19th December, 1886.

DEAR MR. HODGSON,

I now send you a report of our séance as I promised, for publication or not, just as you please.

On Mr. Davey's kind invitation I accompanied you last night to his house at Beckenham. There we dined, talking of telepathic and hypnopathic symptoms and similar subjects. I ought to say that my attitude was that of one totally sceptical regarding "spirits," very suspicious of trickery, and only in the faintest degree open to conviction that some quasi-explanation for the strange phenomena of which I had heard is to be found in the hypothesis of a new force or medium of transmission. I had never before (as I told Mr. Davey) attended at a séance. I had, however, some hearsay knowledge of his wonderful performances. But I did not know his point of view—*i.e.*, whether he professed to act through "spirits" or otherwise; and although I tried to discover this, his answers and yours were so vague that I could not make sure. I inclined, when the séance began, to the opinion that Mr. Davey was a "believer," but was somewhat reassured as to his *bona fides* by his professed inability to imitate a simple conjuring trick which you showed us, and by his reminding me of some precautions which, in my inexperience, I was neglecting. Lastly, I am bound to say that although as Mr. Davey's guest I felt a little shy of showing my suspicions, I thought it all the more desirable to keep a close watch. This I was able to do as the room was well lighted throughout the evening.

I. The dinner-table was cleared and wheeled aside, and an uncovered ordinary Pembroke table was brought in. You and Mr. Davey left the room while I wrote a simple question in a small double slate belonging to Mr. Davey, which I carefully inspected, locked and kept within sight. The three of us then sat down at the Pembroke table, which we had examined. I unsealed a packet in which I had brought three new school slates; Mr. Davey chose one of them, which he and I, after making sure it was blank, held, in the manner to be described, under the corner of one of the extended table-flaps, with a small piece of pencil lying on its upper surface between slate and mahogany. The locked slate with the question inside was laid on the table—I had not let it pass out of my sight. Mr. Davey sat at a corner, his right hand and my left meeting on the under surface of the slate below the table-flap, while you, sitting opposite him, held his left and my right hand in yours. The problem as explained to me was: Given my question known to me alone; required an answer to be written upon my blank slate in position under the table, and to appear through some unexplained agency upon its upper surface where the chip of pencil lay; the answer either to give the information demanded, or at least to show knowledge of the question.

For several minutes we sat thus, either in silence or discussing psychical topics. Mr. Davey professed to expect no great success with me, and you reminded him of several séances which, after bad beginnings, had ended successfully. I asked some questions about the qualities required in the

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sitter, and, as before, received answers that did not enlighten me regarding Mr. Davey's standpoint, and therefore increased my vigilance.

No "phenomena" were forthcoming. At my request the slate (which, while underneath, I, of course, always pressed flat against the table) was now transferred to the top surface of the table, another was placed over it, and the pencil chip remained between, and Mr. Davey and I laid our hands upon the upper slate. No more success than before.

The conditions were subsequently twice varied. First my slate was restored to its original position under the table (said to be the usual one for preliminary manifestations), but with the stipulation on my part that I should keep it pressed against the flap with knee as well as hand; afterwards, deserting my slate altogether, we laid our hands upon the locked double slate containing the question,—but all in vain.

Finally, when more than an hour had passed, two of my slates, examined and found blank, were laid together, pencil between, and placed in position, like the single slate in the first effort, against the lower surface of the flap—our hands also remaining as at first. Very soon scratching was heard although I could detect no movement with my eyes, hand, or knee: and, when the slates were brought to light, written upon the upper surface of the lower slate was the word "Yes." Now, as my question had been, "Where did I buy my slates?" I was not much struck by an answer that did not apply, and might have been written by some quite conceivable piece of jugglery; and my doubts were increased when I found upon the other side of the same slate, and therefore on the surface (such was my belief) where Mr. Davey's hand had rested, the word "Wait." I was, therefore, very little impressed by this result; and indeed, rather to my surprise, neither Mr. Davey nor yourself seemed to expect me to draw any conclusion from it.[1]

A subsequent experiment—in which I repeated my first question, carefully expunged from the double slate and still unknown, except to myself—upon one of the open slates, came to an abortive ending through Mr. Davey's catching sight[2] of what I had written.

II. After an interval, Mr. Davey, who acknowledged that he was not in a good frame of mind for "manifestations," was induced by you to try the "book" experiment. This was explained to me to consist in my mentally choosing from the books, which, to the number of, I should guess, about 700, [1000] lined the room, any one with a clear title; I was then to take twice over a handful of fragments of slate-pencil from a box on the table, privately count each handful before replacing the fragments, and keep the results to myself: the first result was to represent the number of a page of the book chosen, the second the number of a line on that page; Mr. Davey, yourself, and I were to lay our hands upon his double slate, laid upon the surface of the table after being examined, found blank, and locked with pencil-chip inside by me; I was to concentrate my thoughts upon the book and numbers and Mr. Davey was to try to discover (by some mode of thought-transference, I inferred) book, page, and line: the pencil locked inside the slate was then to write some words quoted from the place thought of!

The preliminary programme was carried out, and I may say that while choosing the book I took care to walk right round the room and not to let my eyes linger on any one spot. Thus the problem was: Given a book, page

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and line known only to me and recorded nowhere—required to be written in a blank locked slate lying under our hands the corresponding quotation, which, be it observed, was unknown *even* to me, for of course I had not touched, much less opened the book.

This appeared impossible by any amount of jugglery, and I could scarcely take the attempt seriously. We sat down, however, and laid our six hands upon the slate. I concentrated my mind with the utmost intensity at my command upon book, name, and numbers, and soon Mr. Davey appeared to labour under some excitement, and, to my disgust, began (with an explanation that it was the custom) to invoke some unseen agents in an appealing tone. Presently, to my relief, he desisted, and the attempt was given up as a failure. Mr. Davey said he could not decide between two books.

After a short rest it was suggested that I should name the book, and that the experiment should be resumed in a modified form. The problem was now: Given a certain book, viz., *Taine* on *Intelligence*[3]; required to be written in a blank locked slate, lying under our hands, a quotation unknown to anyone present, taken from a page and line known only to myself. The book, of course, remained untouched on the shelf. We sat as before with the slate under our hands and eyes. I concentrated my thoughts. Mr. Davey soon appeared to reach a high pitch of exaltation; his arms and body became subject to a violent "*frisonnement.*" He again appealed to his ghostly helpers, and on this occasion his efforts were rewarded, for, in a few minutes, to my utter amazement—Mr. Davey's hands and your own being well in sight and unemployed—I heard sounds of writing within the slate which continued for half a minute or more. On unlocking the slate I found, legibly written, a quotation, almost, but not quite, verbally correct, from page 15 of Taine's book, beginning at the eighth line. Some "clear-obscure" remarks, which I at once interpreted as relating to a friend of mine, followed.

I had thought of the eighth line of the 28th page. The correspondence was, therefore, not exact, the line only being correct. What struck me, however, was not the coincidence of the quotation, nor the gibberish about my friend, which hinted information easily ascertainable by anyone who, like Mr. Davey, had met him—it was the occurrence of what the evidence of my senses told me was writing by a piece of inanimate pencil inside a locked slate, with no conceivable means of explanation! For a moment I confess I was completely staggered; my notions of causation were turned topsy-turvy; visions of "magnetic force" and "occult action" danced before my brain. Then came the reaction; but instead of accusing my senses of perjury, I illustrated human nature by telling you in plain English (during a momentary absence on Mr. Davey's part) what opinion I had formed of him. I regret to think I used the word "humbug"; none could be less applicable!

I had not just then much desire to continue the séance; but you seemed to desire it, and as I recovered from my bewilderment, one or two slight circumstances—one of them Mr. Davey's half acquiescence in a suggestion that he should try to obtain writing *without any pencil sandwiched in the slates*—occurred to me as confirmatory of my notion that he had been slate-shuffling in some very clever way. So I asked him point-blank, as you remember,

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what was his theory ; he answered that he does not so far profess any theory, but merely undertakes a close imitation of the phenomena attributed by believers to spirits. I had not quite realised this before, and was now for the first time able to appreciate Mr. Davey's standpoint—though no less in the dark as to his method. We seemed, as you afterwards remarked, to "have an understanding" from this time ; and with my good temper I recovered my vigilance.

III. The last experiment consisted in my writing a question as at first in the locked slate, to be answered by writing produced between two of my plain school slates by chips of pencil ; the slates having, of course, been examined and found blank as usual. The slates were laid upon the table-top, and except that I had unintentionally changed my seat to your former one opposite Mr. Davey—you taking mine in exchange—the conditions were as before. We laid our hands on the upper slate, but after several efforts no result was obtained. We were proceeding to make another trial, and Mr. Davey, in the act of displaying the slates to show that they were still blank, made a remark to you which had the effect of causing me to look at you ; just then, more by accident than design, I noticed that before replacing the upper slate upon the lower one he reversed its position. Seizing it at once, I found one of its sides—that which would have been underneath—covered[4] with an inscription which I certainly had not seen or heard written, and which in my delight I forgot to read. Evidently the next effort would have been the success of the evening !

The game was up ; at least you and Mr. Davey chose to think so, for you at once let me into the secret of the great Psychical Plant. I don't profess to understand Mr. Davey's *modus operandi ;* but of this I am certain, that I have to thank you for an introduction, not to a world where the rules of nature are superseded, but to a most surprising exhibition of sleight of hand.—Yours very truly, JAMES M. DODDS.

SITTING IX.

I had never seen either of the writers of the following accounts until the day of the sitting, but I understand that they had already learnt beforehand that what they were about to witness was unquestionably due to conjuring.

1. *Report of* MR. A. B. T.

Monday,

Grosvenor-place, S.W.

DEAR MR. DAVEY,—

I am just writing a small account of what I saw you do last Thursday night (as you requested), at Mr. T. B.'s house, when I had the pleasure of meeting you, and witnessing your wonderful feats of slate-writing. The following is as near as possible what took place, by memory : We, a party of five (exclusive of yourself), were sitting in the

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drawing-room, round a plain deal table with flaps, which had been brought from the kitchen. You provided three ordinary slates and a small handsome lock-up slate with a lock and key. There was also a sponge, cloth, and glass of water on the table, with which I cleaned the slates. The first thing you did was to give me the small lock-slate to examine, and having assured myself that no trickery existed in it, I cleaned it and placed a small piece of coloured pencil on it, locked it up, and put it in my pocket. The key I placed in my waistcoat pocket.

[*a*] You then took a point of pencil and laid it on the table, over which you placed one of the common slates which I am positive I had thoroughly sponged and wiped. We joined our hands, and you and I placed ours firmly on the slate. You asked your spirit-friend "Joey," if he could give us any help, and very soon after an extraordinary sound of scratching was heard under the slate. Upon raising it, the following appeared in large bold letters right across it: "All right; here we are again. Hurrah!—Joey." This was very satisfactory, and "Joey" worked very hard to answer us afterwards.

[*c*] For you next held a slate with a small piece of pencil upon it under the flap of the table, and wished a question to be asked. In reply to mine, as to when my train would arrive at Victoria, the reply came very soon, "*Wait.*"

[*d*] This was not considered a sufficient answer from the [spirit ?] world, so you quickly rubbed the slate, and immediately held it again under the flap of the table. We waited some time, and then got some writing as before, "*No chalks,*" and on looking at the slate I saw you had forgotten to place the chalk upon it. It was expecting too much of "Joey" to write without a chalk.

[*e*] You then took two slates, which I once more wiped clean, and placed them one upon the other on the table, with a tiny piece of pencil between them. There was a very short wait, and then the sound of quick writing was heard. This lasted for nearly a minute. Upon raising the slate, upon the top one was written as follows:—

"Dear Friends,—It is not so much the agency question we would have you set your minds upon, as it is the mere fact that the phenomena take place under conditions which upon every reasonable mind preclude the *possibility* (?) by known rational means. You may rest assured we shall do all in our power to co-operate with you this evening; we must, however, ask you to have patience, as we can't carry out any tests or answer any question until we have become more *en rapport* with one another. Rest assured and we will do our best, and remember Der *Teufel* is zu zwart nit als hig wel geschildered. —*Joey.*"

[*f*] We next experimented with the slate which I took from my pocket. You asked me to choose a book from the bookcase, and one of the party to think of the page and line. I went to the bookcase, and could not make up my mind between three or four, and finally took Virgil's *Aeneid*. The slate was placed on the table, and "Joey" was again asked to write a passage from the selected book (in any coloured chalk I liked). Again the scratching of the pencil was heard upon the slate. When it was opened, the piece of chalk was nearly worn away, and rested upon the last word of the following: "We should prefer that when you experiment for tests, such as

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the one you now propose, that you should form a smaller circle, and devote yourself exclusively to this one form of phenomena, and although it is not impossible we may succeed to-night, yet we are greatly hampered by the co-operation of too many minds. We have no objection to try the tumbler, although we don't guarantee a —— ERNEST."

This was the last experiment tried, as time drew on, and I wanted to catch my train back to town. As to that part of the test relating to the passage chosen from the book, it failed.

I was very sorry to see you in such weak health, and the excitement under which you laboured showed plainly that the mental strain upon you must have been great. I noticed upon every occasion of the writing appearing you trembled and shuddered as if under great nervous pressure, but why this should be, if, as you say, these manifestations are only the result of trickery and conjuring, I do not know. At all events, you have mystified me entirely. I do not believe in spiritual manifestation in the least, but how you manage to bamboozle so many people I can't make out.—Believe me, Mr. Davey, sincerely yours, A. B. T.

2. *Report of* MISS M. T. B.

Whilst staying with my uncle at Beckenham I had the good fortune to meet Mr. S. Davey, and to witness some of his interesting manifestations. I had heard of his wonderful powers, and was therefore very pleased when I learnt that he had accepted my uncle's invitation, and had volunteered, after dinner, to show us some of his experiments.

We were five in number, and were seated round an ordinary deal table, which had previously been carefully examined so as to preclude any possibility of trickery.

Before commencing the séance, Mr. Davey produced a book-slate, carefully cleaned it, and gave it to one of our friends, asking him to place a small piece of pencil in it, lock it up, and put it with the key into his pocket. There it remained until later on in the evening it was required for use.

[*a*] Our first experiment was with an ordinary school slate. Mr. Davey placed a piece of chalk on the table, sponged and wiped this slate perfectly clean, and placed it upon the chalk. We all joined hands, Mr. Davey resting his upon the slate. After a few minutes a faint scratching was heard, and on being examined, the slate was found to have written upon it in good bold characters, "Hurrah, here we are again, Joey." This seemed to me most wonderful, as all the time Mr. Davey's hands were visible.

[*b*] Next, Mr. Davey placed a piece of chalk upon a slate, and put the slate under the table, supporting it with his right hand. After listening for some little time, we again distinctly heard a faint scratching, and in answer to the question whether we should have any manifestations that night, we found the answer, "Yes."

[*c*] Again a question was asked as to the time of the departure of the last train to London Bridge, and in reply we found "Wait" written upon the slate.

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[*e*] Mr. Davey then volunteered to produce writing in two differently-coloured chalks, and the two selected (blue and white) were placed between two ordinary slates. Again we joined hands, Mr. Davey resting his, as before, upon the slates. After waiting for some little while (in this case longer than previously) the scratching was heard, and upon examining the slate, it was found to be covered in writing, half being in blue chalk, the other half in white.

[*f*] Mr. Davey now asked for the book-slate, and requested one of our friends to think of two numbers, then to select a book from the bookcase, taking care to keep the title of the book well in his mind. Mr. Davey proposed to produce the quotation from the chosen page and line of the book. Unfortunately, with this trick there was a little mistake, as our friend glanced at several books before settling which he would finally choose, and the quotation consequently was not produced. Instead of the quotation, some advice was found to be written. I do not doubt that this failure was caused by the want of concentration of mind upon the chosen book. With this trick I was particularly struck with the fact that there was a visible difference in the size of the chalk when placed upon the slate and when it was examined after the writing had been produced, and also the remainder of the chalk was discovered at the end of the last word written; both these facts seemed to me to prove that the writing was produced by the chalk alone, and by no other secret agency.

SITTING X.

The following report is by a Japanese gentleman whom I had met once previously, and who attributed sundry phenomena of "mediums," which had been discussed, but which he had not personally witnessed, to the action of some new unrecognised force.

Report of MARQUIS Y. A. T.

[*a*] On January 24th, 1887, I had the pleasure of seeing Mr. Davey's slate-writing performances in his private room. He first removed a table, which was in the corner, into the middle of the room, and brought two common slates, one double-slate which can be locked, a sponge, a box of chalks, and a glass of ordinary water. Then he told me to examine and sponge and wipe them thoroughly; so I did, and put first the common slate, a piece of chalk being under it, and put our hands on it; a faint sound of scratching was heard. When the sound had ceased, Mr. Davey turned it out as follows: (No. 1) was written on it.

No. 1.

"Japanese is very difficult language to write, but we will do our best. We are sorry not to see Baron ——— this evening, please give him our kind regards.—JOEY."

[*b*] Next I locked the double-slate (small piece of chalk was put in it), and laid before him, and we put our hands on it while I was holding

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the key in my hand. As soon as the scratching sound had ceased I unlocked it and found such words as follow:—

No. 2.

"A student like yourself will easily understand the importance of this writing, which, as far as the senses are able to judge, would appear to be of a supernatural character. This, however, is not the case. In order to prove to you that we are above ordinary conditions of conjurers, and also demonstrate the absurdity of writing being produced by chemical action we are willing to carry out any test you may suggest which would serve to dispel such a theory from those who have not witnessed these performances."

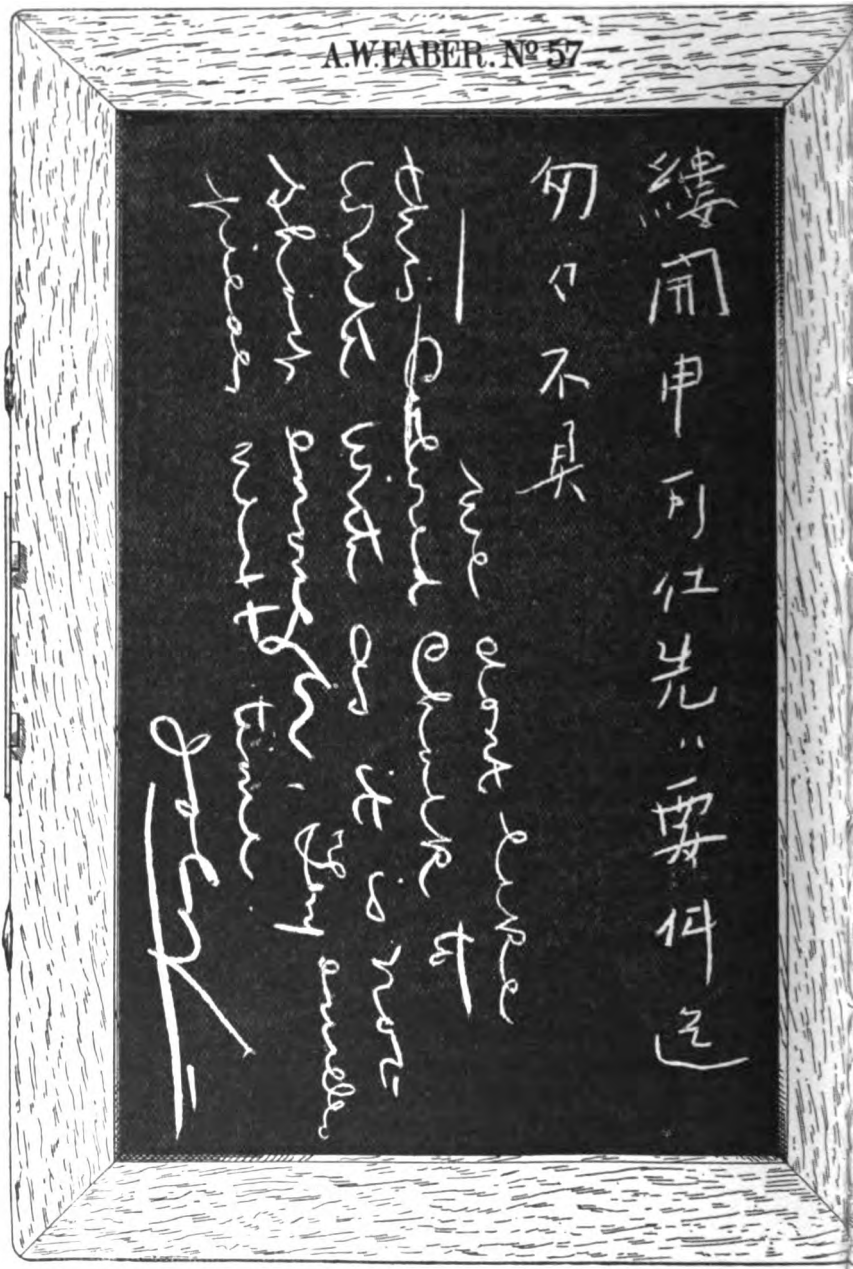
[*c*] Again I put another common slate on the table and we put our hands on it. In turning it we found a Japanese but really Chinese character was written.

No. 3.

A Chinese letter . This letter is also used in Japan because the Japanese are using the Chinese characters. In Japan this letter is used as a verb, and means "to be scattered" or "to be dispersed." It is pronounced "Chinu" in Japan.

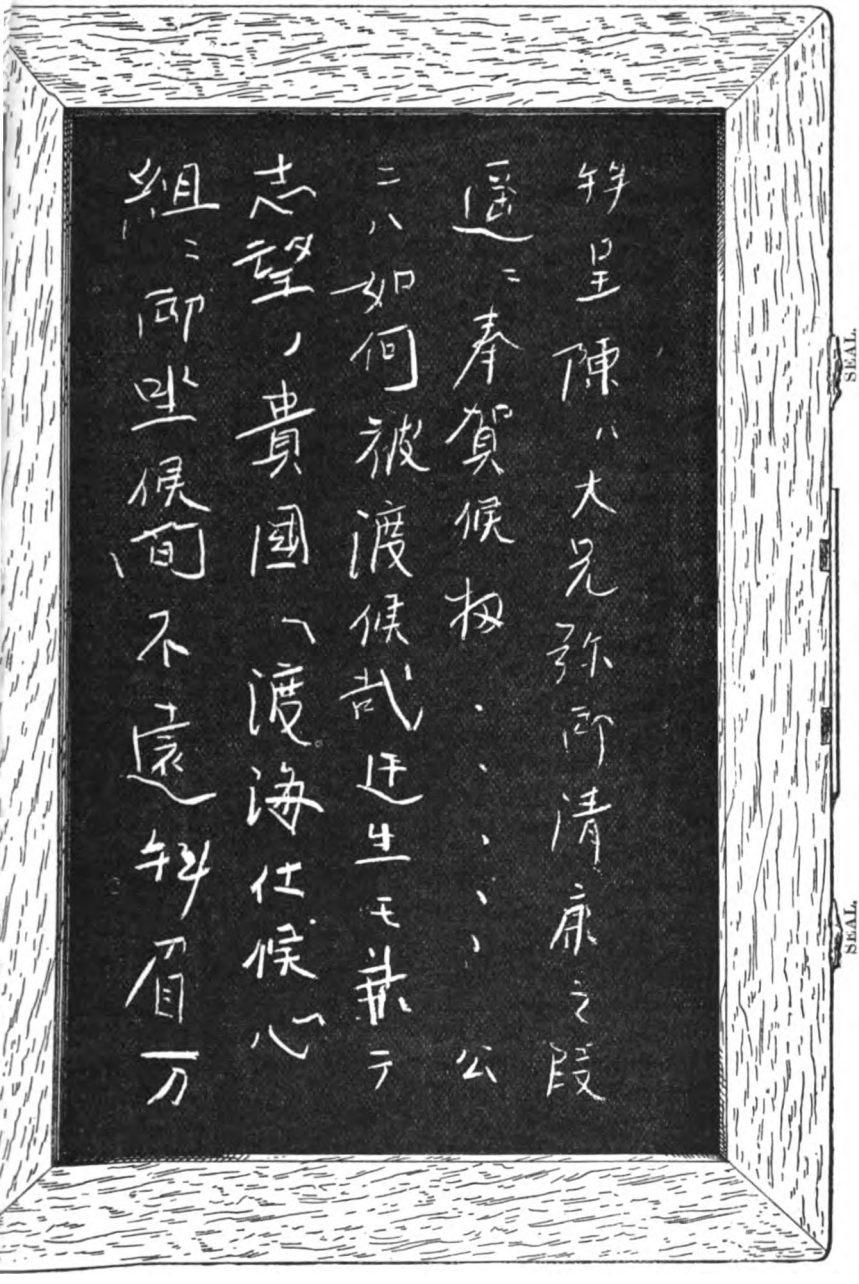
[*d*] Once more I locked the double-slate (this time I put white and blue pieces of chalk in it), and put the key in my pocket and even sealed it myself. In opening it I found a letter in Japanese character was written and also an English as follows:—

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A.

Hai tei shikareba taikei go-seikô no dan haruka ni gasi tatematsuri soro sate wa * * * kô ni wa ikaga wataraserare soro ya usei mo kanete shibô no ki-koku ye tokai tsukamatsuri soro kokoro-gumi ni goza soro aida tôkaraz haibi banru kaishin tsukamatsuru beku madzu wa yôken made sôsô fugu (in Japanese character, with white chalk).

Japanese, when translated, relates to my friend Prince * * * in Japan, and it also means it is pleased to give me writing in Japanese.

B.

We don't like this coloured chalk to write it as it is not short enough. Try smaller piece next time. — JOEY.

This performance was more than wonderful, and I could not see how anything could have been written. But I hope I will have an opportunity to learn about this by reading Mr. Davey's excellent work on this subject. I had asked for writing to come in blue colour, and writing in blue English colour is an excuse for not doing so, I suppose. Y. A. T.

SITTING XI.

Mr. H. W. S., the writer of the following record, was a comparative stranger to me, as I had met him on only one previous occasion. He requested me to give him a séance, as he had heard of my performances from some of his friends who are well-known to me. Previous to the sitting I informed him, as I have also informed many others, that my phenomena were not to be accounted for by the "Spiritualistic" theory.

Report of Mr. H. W. S.

February 11th, 1887.

After the very interesting scientific phenomena to which I was an eye-witness last night, it gives me much pleasure to detail the various astonishing feats displayed by Mr. Davey [*v.* Clifford.]

The apartment in which I was received was a well-stocked library, and the furniture, including the table at which we sat, was of the ordinary make and style, with none of the intricacies so necessary to the every-day conjurer; and I am convinced that the furniture of the room and its general surroundings played no part whatever in the accomplishment of the facts which I am going to narrate.

Having produced a small book-slate, Mr. Davey asked me to examine it, and to satisfy myself as to its simplicity of construction, &c. I did so; the slate was composed of two ordinary pieces of slate, about six by four inches, mounted in ebony covers hinged on one side with two strong plated hinges, and closed in front, beyond the question of a doubt, with a Chatwood's patent lock.

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With the exception of a small escutcheon, bearing the initials of the donor, the slate was plain and substantial, and bore the strictest inspection, so as to entirely preclude the idea of chemicals or any other similar agent being used to it.

[*a*] After I had finished examining the slate, Mr. Davey asked me to write in the slate any question I liked while he was absent from the room. Picking up a piece of grey crayon, I wrote the following question: "What is the specific gravity of platinum?" and then having locked the slate and retained the key, I placed the former on the table and the latter in my pocket.

After the lapse of a few minutes I heard a distinct sound as of writing, and on being requested to unlock the slate I there discovered to my great surprise the answer of my question: "We don't know the specific gravity, JOEY." The pencil with which it was written was a little piece which we had enclosed, and which would just rattle between the sides of the folded slate.

Having had my hands on the slate above the table, I can certify that the slate was not touched or tampered with during the time the writing was going on.

[*b*] Next; having taken an ordinary scholar's slate and placed a fragment of red crayon upon it, Mr. Davey placed it under the flap of the table. I held one side with my hand as before. I then heard the same sound as previously, and when the slate was placed on the table I found the following short address distinctly written: "Dear Mr. S——,—The substitution dodge is good; the chemical is better, but you see by the writing the spirits know a trick worth two of that. This medium is honest, and I am the only true JOEY." The writing was in red crayon, and was in regular parallel straight lines.

[*c*] Then, again, Mr. Davey requested me to place a small fragment of slate-pencil in the lock slate, which latter had been previously cleansed with sponge by *me*. Respecting the method of closing the slate, &c., everything was done as in the *first* instance; the slate was locked, and I retained the key.

As soon as the sound of writing was over, I picked the slate from off the table, where it had been lying right under my eyes, unlocked it, and read as follows: "We are very pleased to be able to give you this writing under these conditions, because with your special knowledge upon the subject you can negative the theory of antecedent preparation of this slate as advanced by certain wiseacres to explain the mystery.—'JOEY.'" The fact that the pencil when removed from the interior of the slate had diminished in size and showed distinct traces of friction, convinces me that it was the pencil and nothing else which produced the caligraphy. If the particles taken from the pencil by friction did not go on the surface of the slate, where could they go?

[*d*] Lastly, as requested by Mr. Davey, I took a coin from my pocket without looking at it, placed it in an envelope and sealed it up. I am certain that neither Mr. Davey nor myself knew anything about the coin. I then placed it in the book-slate together with a piece of pencil, closed it as previously and deposited it on the table; and having placed my hands with those of Mr.

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Davey on the upper surface of the slate, waited a short time. I then unlocked the slate as requested, and to my intense amazement I found the date of the coin written, by the side of the envelope containing it.

The seal and envelope (which I have now) remained intact.

This last feat astonished me more than the others, so utterly impossible and abnormal did it appear to me. I may also mention that everything which was used, including the cloth and sponge with which the slates were cleansed, were eagerly and thoroughly scrutinised by me, and I failed to detect anything in the shape of mechanism of any kind. Were I sceptically inclined towards Spiritualism, I should have attributed the feats I witnessed to it, but I am convinced from the *bonâ fide* manner in which Mr. Davey proceeded to perform his mysterious writing, Spiritualism plays no part in it whatever. Were I asked to account for the method by which the writing was done, or rather to advance any theory based upon which it would be possible to produce such phenomena, I should suggest a powerful magnetic force used in a double manner, *i.e.*, 1st. the force of attraction, and 2nd. that of repulsion.*

But Mr. Davey has by great perseverance and study cultivated his scientific secret to such an extent that were it magnetism, electricity, pneumatics, or anything else, it would baffle the most accomplished in any of those branches of science to form even an approximate idea of his *modus operandi*.

SITTING XII.

Mr. Henry Hayman was introduced to me by Mr. H. W. S., the writer of the preceding report. In connection with this sitting I may observe that not only is it commonly the case that witnesses believe themselves to have taken precautions which they did not take, but that they also frequently omit to record precautions which they did take.

In the present instance, for example, Mr. Hayman suggested during one experiment that it might be said that I produced the writing by means of mechanism connected with my knees; I thereupon desired one of the sitters to look under the table during the continuance of the experiment; Mr. H. W. S. proceeded to do so, but was unable to discover anything suspicious.

Report of Mr. Henry Hayman.

February 16th, 1887.

[*a*] Mr. H. W. S. and myself visited Mr. S. J. Davey last evening, and he gave us a séance of his slate-writing. He first got a plain table, without any secret contrivances, let me examine it, which I did thoroughly, then

* Compare the theory framed by Dr. E. von Hartmann to account for slate-writing phenomena, in *Der Spiritismus*. See C. C. M.'s translation, *Spiritism*, pp. 45-48.—S. J. D.

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brought two ordinary school slates, and asked me to wash them with a sponge and water, so that if there was any writing on, it might be washed off. He next placed one flat on the table, asked me to take two small pieces of chalk, and put them on the slate, which I did, a blue and a red piece ; then he put the other slate on the top, and we joined hands and pressed them on the top of the slates. After a minute or two I distinctly heard writing ; when it had ceased he asked me to lift it up. When I did so the bottom one was covered with writing in the following words (half in blue and half in red chalk) : " You will please pardon us friends if we do not enter with you to-night into experiments of a very minute nature, the grand fact of this writing should be sufficient, and we do not care to cloak the wonderment thereof by descending to underhand coin tricks, and such like phenomena, which however startling to some would fail upon those who like yourself are acquainted with conjuring possibilities. Good-bye."

[*b*] The next thing he showed me was a slate which locked up with a patent lever lock. After I had washed the slate, he asked me to write down on the inside any question I liked, then put a piece of chalk in, lock it up, and put the key in my pocket. The question I asked was, " What kind of weather shall we have to-morrow ?" He was out of the room while I wrote it down, and it was locked up by the time he came back ; he then placed it on the table, the gas being alight at the time, we joined hands and put them on the top of the slate. After a little I again heard writing, and when I opened it there was the answer, in red chalk, each side of the slate : " Ask the clerk of the weather." It had been written with the piece of chalk I had put in. I am quite certain the slate had not been opened after I had locked it up.

HENRY HAYMAN.

P.S.—I may add that I watched Mr. S. J. Davey very closely, but I could see no possible means by which any of his slate-writing could be done by ordinary known means.

H. H.

Statement of MR. H. W. S.

February 16th.

It is with still greater astonishment that I, in company with my friend, Mr. H., witnessed last night a séance of, if possible, greater anomalies than the previous one. Whilst confirming all the details given by my friend, Mr. H., I should like to draw attention to the fact that there were two witnesses in the matter, whose evidence is undoubtedly more reliable than that of one person. Moreover, it is far more difficult to perform in their presence, as the observation is more intense.

[H. W. S.]

SITTING XIII.

Mr. Stanley W. Jones, the writer of the following report, was inclined to account for the phenomena which he witnessed, and for analogous "mediumistic" phenomena, by some theory involving the action of magnetism.

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Report of MR. STANLEY W. JONES.

I called on Mr. S. J. Davey, by appointment, on the evening of Friday, March 25th, 1887, bringing with me two perfectly new slates, which I had purchased that day and privately marked. I was shown into a well-furnished study, but without any of the usual paraphernalia of the conjurer about it. An ordinary dark wooden table with two flaps was brought forward, which I carefully examined. I pulled out the single drawer, finding it full of papers, and nothing suspicious or mysterious about it in any way.

[*a*] In answer to my request, Mr. Davey took an ordinary slate of his own, which I carefully sponged and wiped. He placed the same under the leaf of the table, I putting between the surface of the slate and the wood of table a piece of crayon. I supported one side with my left hand, he the other with his right. His left hand and my right were clasped. He asked me to propound some question. I accordingly submitted the following interrogatory: "On what day of the week does the 1st April fall?" After a certain interval he said, "Let us examine the slate." It was raised, but apparently presented an unchanged appearance. After replacing it as before, in a minute or two I heard a very faint scratching, and on looking at the surface the following fairly legible scrawl appeared: "I don't know."

[*b*] Mr. Davey now placed in my hands a small ebony-backed slate, with Chatwood's lock; bidding me, while he retired from the room, write any question therein. I inscribed, "What was the exact date of my birth?" placing the key in my pocket. I put, however, a new piece of crayon inside. The slate was now laid on the table and we placed our hands upon it. After a short time the scratching was again heard, and on unlocking the slate the following perfectly legible answer appeared: "I do not know your birthday." The facets of the crayon, which were perfectly unbroken on being put in, I found worn away, and resting on the last y.

[*c*] I now took the two new slates which I had purchased, and which had never for a moment passed out of my possession, I even taking the precaution of sitting on them during the foregoing proceedings. I placed a piece of red crayon therein, and screwed them down top and bottom so tightly that by no possibility could even the thin edge of a penknife be introduced. I then corded the slates twice across and across, sealing them in two places with red and blue wax (for of course any attempt to remove the seals by heat would cause the colours to fuse, and thus immediately detect the artifice), stamping them with my own private signet. Mr. Davey placed the slates under the table, and requested me to name some word I would like written. I stipulated for "April." After a few minutes, during which I most carefully watched him, he returned them, and after 10 minutes' work, so tightly were they closed, I found exactly what I had desired.

[*d*] He next took his own slate again, laying it upon the table, I having previously placed a piece of crayon therein, and pocketing the key after locking it. After a slight interval, a distinct and continuous scratching as of regular writing was heard, which lasted exactly 25 seconds. On unlocking the slate, the following message in a clear running hand appeared: "Dear Sir,—We regret to think that in this enlightened age there are still to be und investigators in the realm of Trixography whose minds do not

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aspire beyond the pencil thimble, and 'half-a-crown' trick slate. We are therefore pleased you should impose tests upon our powers, as we are anxious to thoroughly satisfy you of our medium's honesty. Good-bye."

This concluded a most interesting, successful, and perfectly satisfactory psychographic séance.

The precautions I took entirely preclude any idea of trickery or conjuring. It is also a noticeable point that whereas the last "message" was concluded in 25 seconds, it takes at least *five minutes* to transcribe. I was extremely careful in doing my *utmost* to detect any artifices of Mr. Davey, but must own that not only was I most completely baffled, but everything seemed perfectly open and above board, the entire proceedings being transacted in the full glare of two powerful gas jets. I left very much impressed with Mr. Davey's marvellous powers and the phenomena I had witnessed.

STANLEY W. JONES.

[*c*] P.S.– *Nota Bene.*—After perusal of above, considering that the expression, "I found exactly what I desired," might be liable to a possible misconstruction, I think it better to add that I state in the most unequivocal, explicit, and emphatic manner, that after Mr. Davey had returned me my two slates, secured as above described, and which I *most* carefully and minutely examined to detect any signs of tampering, finding however my seals intact and the cording and screws in exactly the same condition as when they left my possession a few moments before, and that the word "April," which I had asked for, was legibly written with the crayon, on one of the inside surfaces. Whether the top or bottom I did not observe. The apparently impossible having thus been solved as I hereby testify.

STANLEY W. JONES.

SITTING XIV.

The following account is by a gentleman who has had considerable opportunities of observing and taking part in experimental inquiry. I shall speak of him as Dr. Q. He was aware that my performances were conjuring, and had read my paper in the *Journal* of the S.P.R. for January, 1887. He had had sittings with "slate-writing" mediums, and knew precisely the object of my investigation, although he did not know the methods which I employed. His account is remarkably good, and I quote it chiefly to show the rapidity with which slates fastened together as described can be manipulated.

Report of DR. Q.

[*a*] I have witnessed this afternoon, about three hours ago, some remarkable phenomena, when sitting with Mr. Davey, which I think worthy of a brief record without comment. The séance was in a friend's room, in the early afternoon, in thoroughly good daylight. An adjoining room, entirely separate from the experimenting room, gave me the opportunity of making my preparations out of Mr. Davey's sight. I took three common school-

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room slates and examined them carefully by myself, testing the security of the joints of the wood frames, the solidity of the piece of slate enclosed, and its freedom from marks of chalk. I had brought a strong lens and was thereby able to mark for identification each slate, A, B, and C, with marks not visible to my own eyes without a lens. I then laid B on C and tied them tightly round with strong string whose elasticity was very slight. The knots I sealed and marked the seals. I had left a small piece of whitish chalk between the slates. I brought them in this condition back to the experimenting room where Mr. Davey was, and we seated ourselves at the corner of a wooden table without tablecloth. The only drawer in the table which I could find had been removed. I gave the slates to Mr. Davey, who was sitting on my left. He took them and held them in his two hands under the table for a minute or more,[1] then gave me his left hand above the table, and I held it in my left hand. My knees under the table were separated by a leg of the table from free movement towards Mr. Davey. After two or three minutes, during which there had been some conversation, he asked me to suggest some word which should be written between the slates. I said at first Vladivostok, but as he thought this inappropriate I changed it for Hong Kong. I heard scratching sounds, but observed less movement of Mr. Davey's right elbow than there had been before. After a minute or two he reproduced the slates and asked me to examine them and see what had been written inside. I found no appreciable displacement of the string, no change in the seals, and the marks of identification were clear. I cut the string, therefore, and opened the slates. On one I found rather indistinct scratches in an apparently continuous line, of which one-half bore a considerable resemblance to a badly-written Hong; the other half was of about equal length, but not decipherable.

[*b*] I retired to the preparing-room to make ready for another experiment. I drew on the internal surface of B five vertical lines, and on the internal surface of C five vertical and five horizontal lines with the fragment of whitish chalk and tied and sealed them as before. This time I thought that the apposition of the edges was more complete and secure than before. I brought them to Mr. Davey, and after they had been handled as before, I asked that the word Irishman should be written, but there was no success; I did not find any appreciable alteration on the inside or outside of the slates. My left knee had been under the apparent position of Mr. Davey's right hand.

[*c*] In the third experiment the same slates were used; they were prepared in Mr. Davey's presence. They were tied and the knots sealed and also two screw nails were driven through the wooden frames of both slates, one at what I may call the south-east corner and the other at the middle of the north end. This made firm and satisfactory apposition of the frames in the neighbourhood of the screws. The screws were not sealed, but the position of the fine broken woody fibres round them was noted. I did not succeed in making the tied string quite as tight as in the previous experiment. I noticed no difference in the manipulation of the slates from the first two experiments. I made no attempt to touch Mr. Davey's hand with my left knee. I asked that 77 should be written, and after a few seconds explained myself by saying that they should be written out in full, not in numbers.

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The slates were brought above the table in less than a minute after this. I could find no change externally, and written inside I found the figures 77, and also a fairly well-formed "Sev," followed after an indistinct interval by signs resembling "ty," and these also by some almost indecipherable scratches.

[*d*] For a fourth experiment I prepared the same slates in the adjoining room. A fresh screw was fixed in the previous hole near the south-east corner, and another was passed through both frames a little below the north-west corner. The exact position of the heads of the screws was noticed, but they were not sealed. I carefully examined the piece of chalk left between the slates with my lens, and found two smooth rubbed facets on it. These and the other rough surfaces of the irregular polygonal mass I marked with very finely cut lines. The slates were tied with thinner and more yielding string, and the knots sealed. A rather fragile drop of sealing wax was placed on the junction of the crossed strings over the middle of the slate. The chief object of the experiment was to test the rapidity with which the phenomena occurred when Mr. Davey was not under my observation. I was to stand with my back to Mr. Davey, to hold out the slates to him behind my back, and to order some word which was to be written between them behind me out of my sight, and the slates returned to my hand behind my back as soon as possible. I was to note the time spent on this. On a first attempt I held out the slates behind my back saying, "commandment." Mr. Davey took them, asking at the same time what was the word required. I saw that I had not made myself plain, turned round and took back the slates within one or two seconds, and found no change externally except that the fragile drop of sealing wax on the crossed strings was broken. I took the slates back again to the preparing-room, and put on another similar drop. On a second trial I again said, "commandment," putting the slates behind me with my left hand, holding my watch in my right, and keeping my back to Mr. Davey. They were returned to my hand in 30 or 31 seconds. Some sounds which might be described as shuffling and scratching had been heard by me. I laid them on the table, and on examination found no change externally; then cut the strings and found on the inner surface "commandment" written more distinctly than the previous words had been and near the edge[2] of the slate. Whilst I was looking at the word Mr. Davey touched and to some extent broke the piece of chalk. In examining it afterwards with a lens I found only two smooth rubbed facets, each of which was still marked with the finely cut line I had made on it: over some only of the remaining rough surfaces could I find the fine lines that I had previously made over all. I made no accurate comparison between the marks I could produce on the slate by the whitish chalk and those forming the words or parts of words. In no case was the piece of chalk large enough to touch both internal surfaces at the same time.

March 25th, 1887.

SITTINGS XV. AND XVI.

Miss Symons was introduced to me by Mrs. Sidgwick on the day of our first sitting. I gave to her and Mrs. Sidgwick three sittings in all, of

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the second of which, a dark séance, she wrote no account. As I have already stated (p. 415, note), I shall not quote the accounts written by Mrs. Sidgwick, as I had told her a good deal about my tricks beforehand, and she knew that my performances were conjuring. Notwithstanding this, however, Mrs. Sidgwick was unable to explain some of my phenomena. At my request, she has furnished some notes concerning the reports of Miss Symons, and she also makes the following statement:

"I did not communicate what I knew about Mr. Davey to Miss Symons till after the second séance here recorded, as my object in taking her to the séances was to obtain an account of what she witnessed, written as nearly as possible in the same state of mind as when she wrote certain accounts (printed in the *Journal* of the S.P.R. for June, 1886) of Mr. Eglinton. I therefore merely represented Mr. Davey as a person through whom remarkable phenomena occurred, which I wanted to have investigated. Mr. Davey himself seemed to me (as I have recorded in my note-book) to talk very openly to Miss Symons. He seemed to tell her almost as much as he had told me about his tricks and those of other 'mediums,' but it was doubtless mixed up in a mystifying way. Unfortunately, Miss Symons had great confidence in my care as an investigator, and, without revealing the actual situation, I could not succeed in making her feel herself dependent entirely on her own observation. It is due to her to state this, as, had she left me out of account she believes she would have used more precautions than she did, and she considers that she was more careful in her investigation of Mr. Eglinton than in that of Mr. Davey."

These sittings were the earliest I gave which were recorded in detail; my experience then was comparatively limited, and I have since become much more practised in certain methods, and have also acquired the knowledge of new ones.

SITTING XV.

Report of Miss Symons.

Slate-writing séance, November 16th, 1885, at 14, Dean's-yard, with Mrs. Sidgwick, and a medium whom I will designate as Mr. A. [changed throughout to D., see p. 410]. Our sitting commenced at 7.45 p.m. We took our places round a deal table in the following order:—The medium Mr. D. at one corner, next him Mrs. Sidgwick, and I opposite.

Neither Mrs. Sidgwick nor I had brought any slates, and we were, therefore, obliged to use those brought by Mr. D. We sat in a good light, a lamp and several candles were burning in different parts of the room. We first washed the slates ourselves with water brought us by Mr. Podmore, so that there was no question of its containing any admixture of chemicals, by which means writing might be produced, as has sometimes been suggested to me; the table, too, was above suspicion, having just been bought by Mr.

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Podmore for this particular séance. After each one of us had separately washed and dried the slates, one was marked by Mrs. Sidgwick, a piece of pencil was placed on it, and it was held by Mr. D. under the table, who warned us to watch him very carefully, as he gave no promise *not* to cheat, did we give him the faintest opportunity for so doing, and who wished us distinctly to understand that he did not claim to produce the phenomena he hoped to show us, by spirit agency. Prior to placing the ordinary slate under the table, we had washed and examined a small double folding slate, also belonging to the medium. This slate was locked by Mrs. Sidgwick, who put the key in her purse, and the purse in her pocket, and who sat upon the slate.

The single marked slate, of which I have previously spoken, was now held by Mr. D. under the table. We joined hands, and contented ourselves by asking merely that any word might be written, or the single word "Abbey." The medium, after the lapse of a few minutes only, showed himself very impatient at no writing having been produced. He proposed using another slate, which had also been washed and dried by us. Another piece of pencil was tried; these and other movements—for he constantly moved the slates to ascertain whether anything had been written—made it much more difficult to watch him narrowly, than had he been content to wait quietly and patiently for results. Still I was not able to detect any change of slates beyond the two which had been washed and cleaned by us. No writing had appeared, and Mr. D. soon proposed that we should try the following test, suggested by him.

[*a*] One of us was to stand with a newspaper on a table behind us, and with one finger was to point at random at any word; the other was to sit at the deal table with him. It was agreed that I should be the one to point to a word on the newspaper behind me, and I took up my position for this purpose at another table, about a couple of yards from the one at which Mrs. Sidgwick and Mr. D. were sitting. We had waited a few seconds only when the medium—who, as I have said before, seemed restless and impatient throughout the evening—suggested that I should blow out the candles behind me, as he thought darkness behind the paper might facilitate the accomplishment of the test. I complied, and returning to the table again placed my hand behind my back, and put my finger, as before, at random on any part of the paper. I had no sooner done as he had asked, than Mr. D. regretted that I should ever have moved from my place, as he thought it possible that the word written—if writing came at all—would be the *first* and not the second word to which I had pointed. It was not long before writing was heard. Mrs. Sidgwick and Mr. D. turned to the candle behind them, but were unable to decipher the word written. Mr. D. asked that it might be re-written. Another slate was used, on which they presently read the word "Melbourne." We then turned to see the word at which I was pointing. It was, however, not "Melbourne," neither was that word anywhere in the immediate neighbourhood of my finger, though we did afterwards find it in larger type, and two columns further on. Whether I had at first pointed to this word, could not of course be ascertained. It is possible that I did so, though a test which we tried later on, and to which I shall presently allude, proves that the "control" was not incapable of making a mistake. As to whether this word was obtained under good

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conditions I cannot give an opinion, as I was not sufficiently near the medium to be able to watch him closely.

[*b*] We next reversed our positions, Mrs. Sidgwick sitting opposite Mr. D. and I next him ; the double slate remained on the chair on which I sat.[1] After again washing two slates, and placing one on the top of the other, Mr. D. and I together held them under the table ; they were once or twice removed to see that the pencil was still there, and that no writing had come, but always returned immediately, and they were not reversed or changed by Mr. D., so far as I know, whilst we were together holding them, up to the time when we again apparently heard the scratching of the pencil. We found, on carrying the slates to the light, that there was a message of moderate length covering half the slate, and signed "J.S."

[*c*] Again we sat as before, and under the same conditions writing came on one of the two slates held by Mr. D. and me under the table, half the message being in red chalk and half in blue—a bit of each had been placed on the slate. Again I could detect no trickery whatever; the slates were clean when we laid the bits of chalk between them, and one was covered with writing when they were removed from the table. Unfortunately the slates had not been marked, and I did not notice whether the bit of chalk was resting at the last stroke of the last word, or whether the nib was at all worn down. The message was of decided interest, it was as follows :—"My dear Friends, We have no wish to deceive you as regards the Agency question. The name of a deceased relative, especially a mother, is [far too sacred, although] most effective," &c.—the ordinary Spiritualistic jargon—then, "Our friend made a mistake the other night, dear Miss S. Agradezco á V. su visita. Espero que le volviere á ver á V. pronto. Tengo que macharme, A Dios." Then the message continued : "Yes, your haunted house was a failure." The last part of this sentence was too badly written to be deciphered ; it appeared to be to the effect that the writer had not been able to be present. Now this message appears to me to be *striking*, though not of course conclusive. I must explain that about a month ago I had had a sitting with Mr. Eglinton for slate-writing, and had asked a question in Spanish, to which I had had the reply that "there was no French scholar present." Hence the reason of the remark "Our friend made a mistake the other night," &c. (the former séance had taken place in the day-time). This message, which had amused me at the time, had by no means been forgotten by me, although it had not been in my conscious thoughts for many days, and certainly not during the séance of which I write ; it was known to Mrs. Sidgwick also, to whom I had written an account of the séance with Mr. Eglinton soon after it took place. But what caused an allusion to this séance of a month ago, and through the agency of a medium who it seems improbable could have heard of this former séance ? However, as I have said before, *interesting* and *striking* though this message appears to be, it gives no proof of thought-transference, as Mr. D. *may* have heard of the séance through some ordinary means, though from his conversation he appeared to be on any but intimate terms with Mr. Eglinton, and he was quite unknown to me and I believe to Mrs. Sidgwick (?) before we met him on this evening at Dean's-yard. He also told us that he did not know a word of Spanish. Still, it would have been no very difficult task to have got a few sentences written for this particular

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séance, and there was nothing in the message from beginning to end which might not have been written previous to the séance. But admitting all this, I was not conscious of any movement by which he could have changed a cleaned slate, which I was holding with him, for one on which the message was written. The allusion to the haunted house is less striking, for Mr. D. is known to Mr. Podmore, and might have heard of it through him, or many other sources.

[*d*] We next tried for writing on the locked slate. I must remark here that though we had sat on this slate during the greater part of the séance, we had not done so throughout. We had left it on the chair when we turned to the candles behind us to read the message. Mr. D. had quickly picked it up, and asked us not to lose sight of it, as he wished to preclude all possibility of fraud. He might, of course, in this moment[2] have changed the slate for one on which a message was already written, but the nature of the test we obtained, I think, negatives this supposition; besides which, before it was held under the table, Mrs. Sidgwick gave me the key, we unlocked the slate, found no writing there, and after the slate was again locked, I put the key in my pocket.[3]

It was now proposed by Mr. D. that we should try to obtain a line from a page of any book to be taken at random from Mr. Podmore's shelves. This was done by Mrs. Sidgwick, who took care only—at Mr. D.'s request—to select a book with good type. This book was shown to Mr. D., who opened it, looked at the type, and considered it sufficiently clear. Mrs. Sidgwick placed it on the table, and her and my hands rested on it, whilst Mr. D. and I held the small locked slate under the table. It was at this point, after choosing her book, that the slate had been opened, found clean, and the key given to me. It was decided that Mrs. Sidgwick should think of the page of the book from which the line was to be taken, and I of the line, counting from the top of the page, it being agreed—at Mr. D.'s wish—that to facilitate the test, we should each think of a number below 10.

Again, so far as I could see, we gave Mr. D. no opportunity for changing the slate. I am quite certain that he did not do so whilst we were holding it together. And in this case the message must have been written *in our presence*, as we did get *a* line copied from this very book, though not the line of which we were thinking. When the slate was again unlocked, we found writing on each side; the message was to the effect that we were not sufficiently *en rapport* with one another to get the best results as yet, but that they were willing to give us some proof of their power. Then followed a few words in inverted commas, after which an illegible word, with which the message broke off abruptly. Mrs. Sidgwick then explained that she had been thinking of page 9, and I had thought of line 4. Mrs. Sidgwick quickly turned to this page and line, but no such words as those quoted were to be found. Mr. D. suggested that the 9 in Mrs. Sidgwick's mind might have been reversed and wrongly read as 6. We, therefore, turned to page 6, and on the last line of that page and the first line of page 7, we found the words for which we were looking.

In this case—admitting the genuineness of the phenomenon—there might again have been thought-transference, for the book had been in both Mrs. Sidgwick's and Mr. D.'s hand, and either might have caught sight of these very

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words. With this the séance ended, as Mr. D. expressed himself too tired to sit any longer, and complained of a very bad headache. He seemed to suffer much after each message had been produced, and complained of great dryness of the throat.

JESSIE H. SYMONS.

November 19th, 1885.

SITTING XVI.

Report of MISS SYMONS.

Slate-writing séance given by Mr. D., at 14, Dean's-yard, Westminster, Mrs. Sidgwick and myself present :—

I took slates with me—two ordinary ones, and one a folding slate, framed in wood, with a padlock and key.

[*a*] We first used the ordinary slates; they were cleaned, dried, and placed one on the other upon the table, a nib of pencil between them, and Mrs. Sidgwick's, medium's, and my hands resting on them. No writing being heard, Mr. D. and I held them underneath the table. Eventually, however, writing was produced whilst the slates were on the table in position I have before described. The message was a long one, covering completely one side of slate. We examined them when they were placed the second time on the table, and satisfied ourselves that they were clean. I am sure that the slates were not changed, because mine had rounded corners and Mr. D.'s, I observed, were square.[1]

[*b*] The medium next asked me to fetch a book from the outer room. I took one at random from the shelves of the library. Mr. D. saw me take it out, but did not touch it. I brought it into the inner room and put it on a chair between Mrs. Sidgwick and myself, whilst we prepared another slate and bit of pencil. Being again satisfied that the slates were clean, the book—into which I had not looked, and the name of which I did not know—was placed on the slate, all our hands resting on it as before. I mentally thought of a page and line, from which a quotation was to be made, both numbers, at medium's request, being under 10. After a short time writing was heard. On the slate was written, "Cantor lecture will be given on Mondays at the Kensington Museum—this is all we have power to do." We looked at p. 2, line 7, the numbers I had thought of, but did not find the words quoted. The medium, however, was very sure that they would be found somewhere near, and he soon discovered on last line of p. 7 "Cantor lecture," and on second line of p. 8 "will be given on Mondays," and a few lines further down, "at the Kensington Museum."

[*c*] The test having been only a partial success, the medium proposed that we should try it again. He asked me to fetch a second book from the outer room. I took up a *Journal* of the Society lying on the table. I did not look to see which number I had chosen. Medium asked me to think again of two numbers under 10, to determine page and line from which quotation should be made. I did so, and very shortly after was written in red chalk, "No such page." This was true, for on opening volume we found it commenced at a hundred and something.

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[*d*] Mr. D. wished to try this test again, so I fetched a third book. This happened to be *Time*—both he and I saw the title. This time I told him which numbers I was thinking of—p. 8, line 5. We held one slate under the table, and another with the book on it remained on the table—both these slates were Mr. D.'s. After a time writing was heard, and it was on the upper slate that we found the quotation, correctly given this time, "The Imperial Parliament," line 1, and then a few words taken from line 5. The slate used was a large folding one, with a lock, belonging to medium. Into this he slipped a sheet of paper and a bit of lead pencil ; it was on the paper that the quotation was written. Mrs. Sidgwick had the key, and it was she who opened the slate.[2] The séance was held by full gaslight. The writing came always on underneath surface of slate—that lying nearest the table.

[*e*] Mr. D. then proposed showing us another trick.[3] He took up 12 squares of paper, asked me to name any 12 animals I liked, whose names he wrote on the 12 squares of paper. These were shuffled together, and I was asked to choose one, which I was to glance at and then instantly to burn. Mr. D. at the same time threw the other squares into the fire. I next wrote the first and last letters of the animal I had chosen on another piece of paper, this Mr. D. burned in the gas, bared his arm and showed us that there was nothing written there, rubbed the ashes of the burnt paper over the bare arm, and presently what looked like letters became very faintly visible. They did not, however, become sufficiently distinct to enable us to read them, and Mr. D. said he would presently get the animal's name written on a slate.

[*f*] We sat round the table again, as before—Mrs. Sidgwick opposite medium and I next him. One slate was held underneath table by Mr. D. and me, and the others were left on the table, with our hands resting on it. I asked that the names of my sisters might be written—this was not done. Neither did "Joey," in answer to Mrs. Sidgwick's question, succeed in telling us where we had spent the greater part of the day. "Joey" was also unable to get any writing on my little folding locked slate, though we gave him two or three times the opportunity of doing so.

[*g*] Mr. D. asked him to tell us any secrets about either of us, and we heard the sound of writing on the slate lying on the upper surface of the table. The sound continued, when Mr. D. withdrew his hands a short distance from the slate, but ceased when he withdrew them to a greater distance. A long message was written again, covering the whole side of the slate, and commencing at a spot where the medium had previously requested it to commence by putting a small cross.

The "secrets" were such as were more or less known to us all, referring to a possible explanation I had given of our last séance with Mr. D. to "Blue Bricks," and telling me that I could get slate-writing if I sat sufficiently often, and "not with Mrs. Sidgwick" ! !

One of our messages at request was written in different-coloured chalks, three bits of which had been placed on the table, underneath the slate.

[*h*] The last experiment Mr. D. showed us was the visible moving of the chalk under an inverted tumbler.

Two bits of chalk were placed on a slate, the tumbler covering them ; the slate was isolated from the table. Mr. D. held Mrs. Sidgwick's and

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my hands, and there was no contact by either of us with the slate. Presently one bit of chalk was observed to move slightly. Mrs. Sidgwick asked it to trace the figure 4 (Mr. D. having proposed that she should choose a number under 10), and on removing the tumbler and inspecting the slate, we found the figure 4 somewhat faintly traced on the slate. I do not believe that this was a genuine phenomenon, though I have no theory as to how the trick was performed. I only observed that though the chalk moved, it did not appear to be forming a 4, although that figure was plainly visible when Mr. D. afterwards gave us the slate.

[*i*] Before he left, Mr. D. held a slate with me under the table, and asked that the name of the animal written on the slip of paper I had chosen should be written on the slate. Writing was heard, the slate brought up, and I found "rhinoceros"—wrongly spelt—in red chalk. This was correct, though how Mr. D. knew, or by what means the word was written, I have no idea, for the slate appeared to me to be clean [4] when we put it under the table.

JESSIE H. SYMONS.

February 23rd, 1886.

SITTING FOR MATERIALISATION.

The foregoing reports have all related to "Slate-writing," or analogous phenomena. I have, however, also given a few sittings for "Materialisation," and I may in the future endeavour to exhibit more fully the possibilities of trickery in this direction, but this branch of the subject has been of less interest to me, partly because the experiences which originally impressed me in connection with Spiritualism were not "Materialisation" but "Slate-writing" phenomena—partly because the testimony offered by Spiritualists for the genuineness of the latter appears to be so much superior to that offered in favour of "Materialisations." Still, the following reports of a séance which I gave last year may be instructive by way of suggesting what may be done by trickery. Although only three of the six sitters wrote reports, none of them contributed in the smallest degree to the production of the "phenomena."

1. *Report of* MRS. JOHNSON.

October 7th, 1886.

I have just returned from paying a quite unexpected visit to Mr. Davey. We had invited him to our house for to-morrow to give us one of his wonderful manifestations, but received a bad account of his health, which prevented him keeping his appointment. I, therefore, with my sister, called to inquire after him, and found that, although unable to leave the house, he was about to hold a séance with some friends, and invited us to join them.

On entering the dining-room we searched every article of furniture, but could find nothing that could in any way assist in the materialisation which followed. Mr. Davey also turned out his pockets, and we looked under his

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coat and waistcoat. After the door was locked and sealed, and the gas turned out, we, six besides Mr. Davey, sat round a table, all joining hands. I had hold of Mr. Davey's left hand and a gentleman opposite of his right, none for a moment letting go until the end of the séance. A musical box was playing on the table; by degrees it floated about and knocked a gentleman on the head. Knockings were heard in different parts of the room, and bright lights seen. A gong sounded several times, and then appeared the head of a woman, which came close to us, and then dematerialised. After a few seconds another form appeared, the half figure of a man holding a book, with lambent edges, which it raised over its head, moved close to us, bowed several times, and by degrees seemed to disappear with a scraping noise through the ceiling. During the séance I with the others had various taps on the head and body, a gentleman complained of the coldness of a hand pressing on him, and the séance was altogether a most interesting, remarkable and startling phenomenon, and I can in no way account for it.

MARIANNE JOHNSON.

2. *Report of* MISS WILLSON.

Thursday Evening, October 7th.

DEAR MR. DAVEY,

We have just returned from a séance at your house, and while all is fresh in my memory, I hasten to send you my account of what happened. You had kindly promised to come to my sister's house to-morrow evening to give us a "materialisation," and perhaps some slate-writing, but having received a telegram and letter from you saying you must disappoint us, as your doctor had forbidden you for the present to exert yourself much or to be out in the night-air, my sister and I called to-day to inquire after you.

We found you at home, and you persuaded us to stay to a short séance.

Seven of us, including yourself, entered the dining-room, which we immediately examined, looking under the tables and sofa, behind curtains, inside the cheffonier, &c. After convincing ourselves that nothing was concealed, and you having turned out your pockets, we locked the door, and placed a sealed paper across it. We then sat round the dining-table, holding hands in a circle, a musical box was placed on the table, and the gas turned out. In a short time we heard raps in various parts of the room, a gong sounded in one corner, the musical-box, playing, floated in the air, and struck the head of one of our party. Several felt themselves touched, and one said he distinctly felt a cold hand placed on his head.

A female head appeared, in a strong light, floating in the air, and afterwards a half-length figure of a bearded man, in a turban, reading a book, appeared in the same manner, bowed to some of the assembly, raised his book above his head, and floated about the room, finally disappearing through the ceiling with a scraping noise. This all happened while two of our number tightly held your hands, and are convinced they never relaxed their clasp.

On the gas being relit, we found the door still locked with the paper unbroken.

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Trusting our visit did not fatigue you, and that your proposed trip will soon restore you to health, when we hope you will resume your interesting investigations, I remain, sincerely yours,

E. M. WILLSON.

3. *Report of* MR. RAIT.

On Thursday evening, the 7th October, 1886, I was present at a séance held by Mr. Davey, at his house. There were in all eight* persons, myself included. We took our seats at 7.30 p.m., round an ordinary dining-room table (in the dining-room of the house), which, at Mr. Davey's request, we examined carefully, as also any other objects in the room which demanded our attention. The door of the room was locked, and I placed the key in my pocket, it was also sealed with a slip of gummed paper ; the gas was then turned out, so that we were left in darkness. A musical box was wound up, and set to play an air, with the object, as I suppose, to enliven the proceedings ! I held Mr. Davey's right hand, his left was held by Mrs. [Johnson] ; the rest joined hands, so that during the séance a continual chain was formed which was maintained the whole time. After we had remained some time thus, various noises as of a shuffling of feet, &c., were heard in different parts of the room, and I distinctly felt something grasp my right foot; almost immediately I was touched on the forehead by a cold hand, which, at Mr. Davey's request, also touched those that wished it. The musical box was lifted, and although it was dark I fancied I saw it, surrounded by a pale light, descend through the air ; it certainly struck me lightly on the side of the head, then it was again raised, and deposited on the table.

The hand which touched me was cold and *clammy;* it evidently belonged to a most courteous and obliging spirit, for it did exactly what we desired ! and at my wishing to feel the full palm on the back of my head (so as to ascertain its shape and size) it rested there for fully three seconds ; it was, however, a somewhat weird experience ! Various raps were now heard, a gong sounded behind my back, and we were told by Mr. Davey to pay attention, as something wonderful was about to take place. Faintly, but gradually growing more distinct, a bluish white light appeared hovering about our heads ; it gradually developed more and more till at length we beheld what we were told was the head of a woman. This apparition was frightful in its ugliness, but so distinct that every one could see it. The features were distinct, the cheek bones prominent, the nose aquiline, a kind of hood covered the head, and the whole resembled the head of a mummy. After favouring those of the company who wished to see its full face by turning towards them, it gradually vanished in our presence. The next spirit form was more wonderful still ; a thin streak of light appeared behind Mr. Davey, vanished, appeared again in another part of the room, and by degrees developed into the figure of a man. The extremities were hidden in a kind of mist, but the arms, shoulders and head were visible. The figure was that of an Oriental, a thick black beard covered his face, his head was surrounded by a turban ; in his hands he carried a book which he occasionally held above his head, glancing now and then from underneath it. The face came once so near to

* *Seven.* See the other reports.—S. J. D.

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me that it appeared to be only two feet from mine. I thus could examine it closely. The eyes were stony and fixed and *never moved* once. The complexion was not dusky, but very white; the expression was vacant and listless. After remaining in the room for a few seconds, or rather a minute, the apparition gradually rose, and appeared to pass clean through the ceiling, brushing it audibly as it passed through. The séance here terminated; the gas was turned on again, and everything appeared the same as when we first sat down; the door was unlocked, the seal being found intact. I will mention that during the whole of the séance I held Mr. Davey's right hand, with but one exception, when it was found necessary for him to light the gas to see to wind up the musical box, as it had stopped playing. *Nothing was prepared beforehand; the séance was* quite *casual;* we could have sat in any room we wished, and we had full liberty to examine everything in the room, even to the contents of Mr. Davey's pockets, which were emptied (before beginning the séance) by him on the table before our eyes!

October 8th, 1886. JOHN H. RAIT.

Now I should have no hesitation whatever in challenging Spiritualistic "mediums," or any other persons, to reproduce the phenomena described in the various reports which I have quoted, *under the conditions described by the witnesses.* I need hardly say that not one of these detailed reports is accurate throughout, and that scarcely one of them is accurate in even all the points of importance. I think it undesirable at present to publish the details of my methods, but I have communicated them to Mrs. Sidgwick and Mr. Hodgson. I have also communicated them to Mr. Angelo J. Lewis, known under the name of Professor Hoffmann as the author of several books on conjuring and magic. Mr. Lewis sends me the following statement:—

I have read with much interest the foregoing reports of sittings with Mr. Davey, testifying, as will be seen, to occurrences fully as striking and apparently abnormal as anything recorded as having taken place at sittings with Mr. Eglinton. I have since had the opportunity of discussing the matter in detail with Mr. Davey, who has indicated how far the descriptions of the sitters (though given in all good faith) differ from the actual occurrences, and has explained the various methods employed by him, some of such methods being those in actual use by professional mediums in America and elsewhere, and others the outcome of his own ingenuity. I have been much struck with their combined boldness and simplicity, and in view of the complete illusion they admittedly have produced in so many cases, the "doubt" which I expressed in the *Journal* of the Society for Psychical Research for *August*, 1886, as to the possibility of the *whole* of the Eglinton manifestations being produced by trickery, has been greatly shaken. Mr. Davey's successes prove that it is possible for a conjurer, devoting himself specially to slate-writing feats, to produce, under the same external

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conditions, results of precisely the same kind and quality as those produced by the professed medium. Indeed, in so far as the conditions vary at all, they are greatly in favour of the professional medium, first, by reason of the prestige derived from his claim to supernatural powers; and, secondly, by reason of his cherished privilege of producing no results at all unless he may consider it perfectly safe to do so.

I am not at liberty to divulge Mr. Davey's methods, nor would any good purpose be served by doing so; but I willingly certify, for the benefit of any person who may still entertain a doubt upon the matter, that his "manifestations" are in every case produced by perfectly natural means, no Spiritualistic or other unknown force having any part in them.

ANGELO J. LEWIS.
("Professor Hoffmann.")

Enough has been said, in the notes to the reports, to suggest to the reader how wide a margin must be allowed for the possibilities of misdescription in the numerous records to be found in Spiritualistic literature, of occurrences described in much the same manner as those which I produced by trickery. It seems to me not improbable that had I claimed the agency of "spirits," the effect upon many of my sitters would have been yet more impressive, and their reports would have been still more wonderful. But my position debarred me from more than one advantage which has been used, I believe, by many a trickster "medium." I was unwilling, for instance, to trade upon their emotions by professing to give messages from dead relatives and friends, as I might in many instances have done—thus rendering the recipients of such messages less capable as observers of the phenomena, and more prejudiced in favour of their genuineness. I should find it very difficult myself to draw any line as to the possibilities of mal-observation and lapse of memory in *bonâ fide* witnesses beyond saying that I should allow for *at least* as much as may be exemplified in the foregoing reports.

I may here again remind my readers that it was not as a sceptic, but as a believer in "psychography," that I originally approached this investigation as to the results that might be produced by conjuring. I gradually became convinced that my belief in "psychography" was unjustified, that I could not attribute any value to the records of sittings which I had with a professional medium in 1884, without claiming a superiority which undoubtedly does not exist, to the numerous witnesses of my own phenomena.

In some of my earlier experiments I believed that there were indications of thought-transference between myself and my sitters. My later sittings have offered no support to this view, but, owing partly to my inexperience, I laboured sometimes under considerable nervous excitement in my earlier sittings, and I have not felt this latterly. This may have conduced to what occasionally seemed to me

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to be a certain amount of community of thought between my sitters and myself, and I hope at some time to make a special series of experiments for the purpose of ascertaining whether my conjecture is well founded or not.

In conclusion, I may say that the results of my investigation as to the possibilities of conjuring in relation to "psychography" have been a revelation to myself no less than to others. I am aware that in addition to the methods which I have employed for producing "slate-writing," there are other methods, which I know to be conjuring, but which have not yet been shown to me; and I should certainly not be convinced of the genuineness of Spiritualistic phenomena of this kind by any testimony such as I have seen recently published in great abundance, which presents so many close analogies to the reports of my own conjuring performances.

APPENDIX.

Notes to Sitting I.

By S. J. Davey.

[From notes made September 19th, 1886.]

1. Although Mr. Rait's slates did not leave the room during the séance, one of them was left unguarded on the table on one occasion for about sixty seconds.

2. The chalks *had* been taken out of the box before the séance.

3. This was not invariably the case; Mr. Rait examined the chalks on only two or three occasions.

4. *I* put the slate below the table, and after a while I asked Mr. Rait to help me to hold it.

5. *Immediately* should be *about four minutes after the question was asked;* another writing was produced in the interval. See Mr. Limmer's report [*c.c.*].

6. It was *I*, not Mr. Rait, who suggested the change.

7. There is no mention, in either account, of my manipulations of the slates after the experiment [*g*] was decided upon.

8. Mr. Rait omits to mention that this question had been asked early in the sitting. See Mr. Limmer's report [*e*].

9. At the conclusion of the message Mr. Rait opened his envelope and I saw "September," and was therefore able to impart this information on a slate later on.

10. I "led up to" this request by Mr. Rait.

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11. It is obvious that a few words or sentences, or, if required, a long message, can be produced on special occasions, from languages unfamiliar to the "medium."

12. Mr. Rait did not take proper precautions for identifying the pencil.

13. It was a single slate that was used in experiment [*l*] ; see Mr. Rait's report.

Notes to Sitting II.

By Richard Hodgson.

[From notes made September 17th, 1886.]

1. Mrs. Y. does not mention that the slate was withdrawn more than once and placed on the table, and she apparently did not observe what D. did with the slate on these occasions in the act of placing it under the table again, and before Miss Y., who relinquished hold when the slate was on the table, again took hold of it.

Mrs. Y also does not say what the questions were. One of them, asked by Mr. Y., was, "On what day do we sail for America?" and another, asked by herself, was, "Have I got over-shoes on?" It is noteworthy that *later* a reply *was* obtained to this first question, which D. requested Mr. Y. to repeat.

2. It was, however, written in an ordinary way. It was not the case that neither Mr. D.'s hand nor Miss Y.'s moved in the least the whole time. Part of the conjuring operation took place while Miss Y. was holding the slate, and while the thumbs of D. and Miss Y. were both visible, but another part of the operation took place in the intervals when Miss Y. was *not* holding the slate.

3. Mrs. Y. might have added that three more candles were burning on the mantel-piece, and a lamp turned to the full on an adjoining table.

4. I incline to think that D. walked with Miss Y. close to the bookcase, and waved his hand, requesting Miss Y. to choose a book.

[I did not remember this incident clearly when I made my note, my attention having been drawn elsewhere while Miss Y. was making her selection. But I learn from Mr. Davey that I saw correctly. I remember that after the writing had been produced, Mr. Y. asked Miss Y. if she had gone alone to the bookcase, and she replied that she had, and that Mr. Davey had remained by the table with his back towards her. Hence, probably, the agreement of the reports in the erroneous statement. I conjecture that Miss Y. transposed Mr. Davey's actions on the two separate occasions of her choice of a book. On the occasion of her first choice I believe Mr. Davey did remain close to the table as she describes.]

5. Miss Y. had thought of page 1, but no quotation had been given from this page.

6. This statement is erroneous. Mrs. Y. had not the slate under her eye the whole time, nor was it the case that either her daughter's hand or her own was placed upon it continuously.

7. This statement also is erroneous. The slates used in the experiment

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were, indeed, those which Mr. Y. had brought with him, but they were taken and placed together by Mr. Davey.

8. Mrs. Y.'s hand was removed from the slates during the experiment.

9. After the figure had been drawn and the name of the colour written in the locked slate (away from the table, and out of the sight of D.) by Mr. and Miss Y., Mr. Y. named the *colour* (only) aloud, at Mr. D.'s request.

10. Miss Y. does not mention the previous withdrawals of the slate. See note 2, and Mr. Y's. report [*a*].

11. Miss Y. herself took the slate in her own hand with her to the bookcase, and brought it back to the table, without relinquishing hold. She has thus here forgotten a precaution which she really took.

12. Miss Y.'s remembrance is here incorrect.

13. Miss Y. wrote her description of this from her recollection of the figure seen on the slate the night before, and she stated, after looking at the slate, that she had in memory confused the white and the so-called green (which in daylight is at once seen to be *blue*). The *long* mark was blue, the *short* one was white.

14. I think that two out of the three books originally chosen had been *previously* replaced, the one chosen by Miss Y. being one of them.

15. I chose mine by requesting Mr. Y. to take a number of chips of pencil at random out of the box, which he did, the numbers giving 7 and 9.

16. Each wrote down on a slate the page and line he or she had chosen, so that D. could not see it, and then placed the slate, writing downwards, on the table under his or her own charge. The numbers chosen were not spoken aloud till after the final opening of the slate.

17. The slate was not guarded continuously during the interval between the examination and the final opening.

18. I consider that the figure was a manifest attempt at a cross, three of the limbs being clear, the fourth being only a scrawl. The marks forming the "cross" were in blue and white; there was also a red track on the slate.

19. I have heard Mr. Y.'s explanations, but with the very partial exception of a portion of one of them they were incorrect, and I believe that there was no thought-transference.

The reader should remember that the object of the notes to the various reports is not, of course, to supply all their deficiencies, or even to point out all the errors and omissions noticed therein by Mr. Davey and myself. Some of these errors and omissions the reader may discover for himself by a comparison of independent reports of the same sitting. Let him compare, for example, the three descriptions of [*e*] in Sitting II., bearing in mind that Mr. Y. knew all along that the performances were conjuring, that Miss Y. knew this only just before writing her report, and that Mrs. Y. did not know it until her report had been written. I agreed with Mrs. Y. that some of the other chalks moved, besides the red piece, and that the figure produced on the slate was clearly intended for a cross (and Mr. Davey afterwards assured me that he had intended to draw a cross), and I have no doubt that Mr. Y.'s description of the incident unduly diminishes the "marvel" of the phenomenon, just as Mrs. Y.'s unduly increases it.

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Notes to SITTING III.

BY RICHARD HODGSON.

[From notes made September 13-15th, 1886.]

1. This was not the case. The slate was sometimes lying on the table, with Mr. Legge's hand upon it; and he lost perception of it for a short period, notwithstanding his vigilance.

2. Mr. Davey took the slate and asked Mr. Legge to hold it under the table with him. After a short time the slate was withdrawn by both of them at Mr. Davey's suggestion, but no writing was found upon it. When Mr. Davey, alone, took hold of the slate again to place it under the table, he used an opportunity, and Mr. Legge did not observe what was done. These circumstances are omitted from Mr. Legge's report. The withdrawal which in his report appears to have been the first, was in reality the second.

3. Mr. Legge did not act precisely as before. On the second and third occasions on which the slate was placed under the table, Mr. Legge did not take hold of it until after it had been placed there by Mr. Davey.

4. Mr. Legge omits to notice that Mr. Davey had asked a question as to whether any manifestations could be obtained.

5. The slate was neither selected nor placed by Mr. Legge. Mr. Davey first placed some coloured nibs of chalk on the table just in front of Mr. Legge. He then took one of his own slates which Mr. Legge had not touched, and apparently sponged both sides thoroughly. Mr. Davey himself then placed the slate over the pieces of chalk, and asked Mr. Legge to place his hand upon the slate. Mr. Legge then for the first time touched the slate.

6. Mr. Legge has omitted to mention more than one important previous detail concerning the locked slate. After locking it, he first, at Mr. Davey's request, put it in his pocket, also the key. Later on, he was requested by Mr. Davey to bring it out and place it on the table and put his hand upon it, first opening it to see if any writing was in it, and locking it again, and taking possession of the key. It lay on the table thus some time, and Mr. Davey found an opportunity of manipulating it. (See Note 1.) Mr. Legge's great care over some precautions was the very cause of his neglect of others.

7. In addition to the lamp, there were four candles burning the whole time. Three of them were on the mantel-piece. I do not recollect whether the fourth was on the mantel-piece or on one of the tables.

Notes to SITTING IV.

BY RICHARD HODGSON.

[From notes made September 22nd, 1886.]

1. The slates were both of them Mr. Padshah's, but I cannot recollect that either of them was washed by any person, and I find upon inspection—as they are still in my possession—that they were certainly not washed.

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2. Mr. Padshah has omitted to mention myself. I sat between Mr. Russell and Hughes.

3. I do not myself remember. Mr. Russell states that it was washed by Mr. Davey, and Mrs. Russell states that it was washed by Mr. Padshah himself.

4. I thought the selection at that time had reference to the writing on the slate held underneath the table.

5. See note 15.

6. Mr. Padshah does not say that it was Mr. Davey who suggested that writing between the two slates should be asked for.

7. The word really written, as I learn from Mr. Davey, was "Books," and was thus curiously misread by Mr. Padshah, who had, he tells us near the beginning of his report, suggested the importance of getting "my own name —not surname—which no one except myself in the room knew." I believe that no one in the room except Mr. Padshah knew that his initial name was *Boorzu*, in the original Persian. Mr. Davey had written "Books" in order to suggest the experiment with a book, which was afterwards carried out. Mr. Padshah had apparently been much impressed with the idea of getting his first name written, and it is no matter for surprise that, with such a dominant idea, he should interpret a scrawly *Books* into a *Boorz*. It was just Mr. Padshah's devotion to his test that produced the illusion.

8. Not cracks, but a peculiar chip in the frame on one side, which I had observed closely when Mr. Padshah first showed me his slates.

9. Mr. Padshah had not examined them.

10. What Mr. Padshah describes as a "push" was merely the result of the shaking of Mr. Davey's hands in his endeavour to produce the appearance of "convulsive movements."

11. None of Mr. Padshah's colleagues expressed any opinion as to the manner of the production of the writing, and it was explained before the séance that the reports written should be as independent as possible.

12. Notwithstanding Mr. Padshah's confidence on this point, this "contemptible" theory is the true one; his attention was actually diverted from the locked slate, and for some time he entirely lost perception of it although it was then lying on the table. His confidence on this point is a striking illustration of the influence of temporary forgetfulness, which not improbably would have become permanent had he not, after giving me his report, made further efforts of recollection after I had told him that the slate-writing was due to conjuring. He wrote his report on the night of the sitting, beginning shortly after the sitting was over. He gave me his report as soon as he had finished it, and I then assured him that the slate-writing in every case was the result of conjuring, that the writing on the slate was not "precipitated," but was ordinary writing with a slate pencil, and that he had actually lost sight of the slate during the sitting. He then endeavoured again to recall the events of the sitting, and succeeded eventually in recollecting the particular occasion when an opportunity was given to Mr. Davey of dealing with the locked slate unobserved.

[I did not then inform Mr. Padshah whether he was right or not in this recollection, and his temporary forgetfulness *has* become permanent. Apparently he afterwards quite forgot the occasion when he gave Mr. Davey

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the opportunity to produce the message, and he wrote to me on November 21st, 1886: "I now imagine Davey wrote while he studiously directed my attention to a variety of books, and naturally absent-minded, my attention was absorbed with a view to make a judicious selection, thus withdrawing my eye from the slate itself. Whether it is so or not, I think it is more than possible it might have been done that way." During this incident, however, —unfortunately for Mr. Davey—Mr. Padshah had taken the locked slate with him and carefully guarded it; see Mr. Russell's report [*g*].]

13. I learn from Mr. Padshah that he has had sittings with Eglinton when "phenomena" occurred, that he was not convinced by them "of something abnormal," and that he was much more impressed by the sitting with Mr. Davey.

14. Mr. Russell took very little share in the talking, and can be hardly said to have joined in the conversation at all!

15. Mr. Russell here states that the "Yes" and the "6" were found at the same time on the slate. My remembrance as to this point is not vivid, but it agrees with Mr. Russell's. From Mr. Padshah's report it would appear that there were *two* withdrawals, the first for the "6," the second for the "Yes." Mrs. Russell also makes two withdrawals, but reverses the sequence, taking the first for the *yes*, and the second for the "6." The circumstances occurred, I think, in the following order:—

Mr. Padshah was in the first place asked to think of a number; later, Mr. Davey put the question as to whether there would be any manifestations. When the slate was withdrawn, the *yes* was first *observed*, then the 6.

16. Mr. Russell makes this statement as though he had read and distinguished the letters himself, which I believe was not the case. [I have since learnt that he did not see the word at all, as it was so hastily wiped away by Mr. Davey.]

17. I think that Mr. Davey turned the two slates over together in the act of placing them on Mr. Padshah's shoulder, not in the act of replacing them on the table. [Mr. Davey tells me that Mr. Russell is right; Mr. Hughes agreed with me.]

18. *Blue.* See Note 22.

19. Mr. Russell made a very few brief notes during the sitting, but did not use these in writing his report.

20. There is a drawer at *one end only* of the table. Mrs. Russell probably *inferred* that there was a drawer at the other end, where, however, the table has never been fitted for a drawer. The table is perfectly honest, and the drawer has never been used by Mr. Davey.

21. It was Mr. Russell who chose red, and Mrs. Russell adopted his choice.

22. There were chalks of five colours between the slates, red, green, blue, yellow, and white. The "blue" writing afterwards exhibited appeared in the then light to be of a greenish tinge, and as attention was drawn to the writing's being green, Mr. Davey abstracted the *blue* piece of chalk that had been between the slates, probably so that if investigation of the chalks were made, it might be said that as there was no blue between the slates, green had been used. In daylight the writing was at once seen to be *blue*. Mr. Davey's manipulation of the chalks was not observed by any of the other sitters, and

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I mention it as typical of many incidents which occurred at the sittings where I was present, and which in some cases were of the utmost importance, but were entirely unnoticed by even the keenest of the uninitiated witnesses.

Notes to SITTING VIII.

BY R. HODGSON AND J. M. DODDS.

1. I had some conversation with Mr. Dodds on the day after he finished his report, and notwithstanding his close observation during the sitting, and the great care which he had taken to record accurately the events which he had witnessed, he agreed with me concerning particular lapses of observation and memory, which have produced some errors in his report. That he did not discover Mr. Davey's *modus operandi* in producing the writing was due chiefly to mal-observation, but mal-observation of a kind that perhaps the keenest uninitiated witness would find it almost impossible to avoid. Mr. Dodds at one time or another had lost perception of each slate upon which writing was produced. One of the instances of lapse of memory is worth specifying because it illustrates tendencies to which I have previously adverted,—the tendency to minimise the marvel of a phenomenon known to be due to conjuring, and, possibly, the tendency to represent a subsequent impression as having been experienced during the sitting.

The word *Yes* found written upon the slate was the word desired by Mr. Dodds himself, his question on the double-slate having been given up for the time for the express purpose of obtaining some simple phenomenon which was not to be regarded as a test, but merely as a "start." Mr. Davey had suggested that we should try to get some simple word written such as *no* or *yes*, that if writing once began, we should probably "get plenty of it," and test questions could be attempted later. Mr. Dodds assented to this. Hence neither Mr. Davey nor myself expected Mr. Dodds to be specially influenced by the production of the word, though he appeared to be much more impressed in the first instance than he afterwards, when writing his report, supposed himself to have been.—R. H.

On talking over the sitting with Mr. Hodgson, two days afterwards, I agreed with him that in my account of the production of the word "Yes," my memory played me false, and I unconsciously minimised the result; and that his account given above is the correct one.—J. M. D.

2. This happened accidentally, and it was Mr. Davey who drew attention to it. J. M. D.

3. I chose this book because I happened to have been reading another of *Taine's* books in my chambers on the morning of the day of my sitting.
J. M. D.

4. At this stage, had Mr. Davey been a professional medium, he would perhaps have expressed surprise at the prematurely discovered writing, and passed it off as an unexpected production of the "spirits," remarking that the sound of the writing was not always heard by the sitters, and that even the medium himself could not always tell when it was being produced. It

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would have been difficult for Mr. Dodds to have explained how, under the conditions as described by him, the writing, covering a side of one of his own slates, could by any possibility have been produced by Mr. Davey himself.

R. H.

Notes to SITTING XIV.

BY RICHARD HODGSON.

[From notes made March 26th, 1887.]

1. According to my recollection, Mr. Davey used both hands in placing the slates under the table, and again in the course of replacing them upon the table, but his left hand did not remain below the table in any instance for a longer interval than—I should name as a maximum limit—ten seconds.

2. The word "Commandment" *ends* at the edge of the slate, but it begins very nearly at the centre of the slate, and is written almost parallel with the longer axis of the slate, traversing rather more than half the length of the slate surface. The scrawled words "Seventy-seven" are written diagonally, very nearly across the centre of the slate, and the number 77 is in a similar position on the other side of the centre. The writing intended for Hong-Kong is in a position somewhat to the right of the centre. The slates are still in my possession.

Notes to SITTING XV.

BY MRS. SIDGWICK.

1. According to my independent notes (made Nov. 17th, 1885), the locked slate was at this period examined and was blank.

2. According to my notes "this moment" was of sufficient duration to give plenty of time and opportunity to write the message.

3. I infer from my notes and recollection that no examination of the slate was made at this period, for I had in my mind at the time two possible explanations of the trick, and any such examination would have been incompatible with either. Moreover, Mr. Davey assures me that from the way in which the trick actually was done he knows that the slate cannot have been examined at this point. Miss Symons must have transposed the examination which I record as having taken place earlier (see Note 1), to this period.

Notes to SITTING XVI.

BY MRS. SIDGWICK.

1. According to my notes (made Feb. 23rd, 1886), Mr. Davey had one round-cornered slate among his, though I noticed, as I thought, decided differences between it and Miss Symons'. This is worth mentioning, as

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showing a difference of opinion on a point which we both thought we observed particularly. Besides omissions, there are at least two important positive misdescriptions, which I am not at liberty to specify further, in Miss Symons' account of the first incident of the séance. I well remember the impression which this incident made on me at the time. I could not make it out at all. I believe I thought it more puzzling than any professed Spiritualistic phenomena I have seen, assuming these latter to be conjuring. There seemed less possibility of its having been done by conjuring. The hypothesis of the change of slates, which at first did not seem to be possible—and which was, in fact, as Mr. Davey assures me, erroneous—never seemed plausible ; only I was unable to think of any other explanation at all. The reason it puzzled me so much was that I thought I knew pretty well the possibilities of slate-writing, and there seemed to be no loop-hole here for any of them. It may interest the reader to compare my own account of the incident :—

"Miss Symons' two slates were held together on the table and under the table by her and Mr. Davey. Then one of Mr. Davey's square-cornered slates was substituted for one of them ; then again removed and the two round-cornered ones again held, on the ground that though it might be easier to get writing on Mr. Davey's slate, it would be more satisfactory to get it on Miss Symons'. We waited a considerable time. Mr. Davey asked me to draw the curtains between the two rooms. Then we again sat as before ; the two slates on one another on the table and our hands on them. The sound of writing was heard, and, presently, on looking between the two slates, one of them was found to be written on all over one side. I cannot remember every detail of what occurred, but the impression produced on my mind most distinctly was that one of Miss Symons' slates had been written on all over one side [the impression was so far true], and that there had been no possible opportunity for Mr. Davey to have done this. The slate seemed to have been on the table with our hands on it from the moment we had seen it clean. I do not know what happened while I drew the curtain, but cannot conceive its having been done then. Mr. Davey and Miss Symons still sat at the table, and even if there had been opportunity there was no time."

2. According to my notes it was for the first of the three book experiments that the paper and lead pencil were used, and Mr. Davey agreed with me. The paper was S.P.R. paper, and Mr. Davey tore off a corner for further identification.

3. "Another trick" was Mr. Davey's own expression.

4. The word was, however, then already on the slate.

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VII.

MULTIPLEX PERSONALITY.

By Frederic W. H. Myers.

Ὅσσον γ' ἀλλοῖοι μετέφυν, τόσσον ἄρ σφισιν αἰεὶ
καὶ τὸ φρονεῖν ἀλλοῖα παρίστατο.
Empedocles.

I purpose in this paper briefly to suggest certain topics for reflection,—topics which will need to be more fully worked out elsewhere. My theme is the multiplex and mutable character of that which we know as the Personality of man, and the practical advantage which we may gain by discerning and working upon this as yet unrecognised modifiability. I shall begin by citing a few examples of hysterical transfer, of morbid disintegration; I shall then show that these spontaneous readjustments of man's being are not all of them pathological or retrogressive; nay, that the familiar changes of sleep and waking contain the hint of further alternations which may be beneficially acquired. And, lastly, I shall point out that we can already by artificial means induce and regulate some central nervous changes which effect physical and moral good; changes which may be more restorative than sleep, more rapid than education. Here, I shall urge, is an avenue open at once to scientific and to philanthropic endeavour, a hope which hangs neither on fable nor on fancy, but is based on actual experience and consists with rational conceptions of the genesis and evolution of man.

I begin, then, with one or two examples of the pitch to which the dissociation of memories, faculties, sensibilities may be carried, without resulting in mere insane chaos, mere demented oblivion. These cases as yet are few in number. It is only of late years—and it is mainly in France—that *savants* have recorded with due care those psychical lessons, deeper than any art of our own can teach us, which natural anomalies and aberrant instances afford.

Pre-eminent among the priceless living documents which nature thus offers to our study stand the singular personages known as Louis V. and Félida X. Félida's name at least is probably familiar to most of my readers; but Louis V.'s case is little known, and although some account of it has already been given in English,[1] it will be

[1] *Journal of Mental Science* for January, 1886. *Proceedings of the S. P. R.*, Part X., 1886.

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needful to recall certain particulars in order to introduce the speculations which follow.

Louis V. began life (in 1863) as the neglected child of a turbulent mother. He was sent to a reformatory at ten years old, and there showed himself, as he has always done when his organisation has given him a chance, quiet, well-behaved, and obedient. Then at fourteen years old he had a great fright from a viper—a fright which threw him off his balance and started the series of psychical oscillations on which he has been tossed ever since. At first the symptoms were only physical, epilepsy and hysterical paralysis of the legs; and at the asylum of Bonneval, whither he was next sent, he worked at tailoring steadily for a couple of months. Then suddenly he had a hystero-epileptic attack—fifty hours of convulsions and ecstasy—and when he awoke from it he was no longer paralysed, no longer acquainted with tailoring, and no longer virtuous. His memory was set back, so to say, to the moment of the viper's appearance, and he could remember nothing since. His character had become violent, greedy, and quarrelsome, and his tastes were radically changed. For instance, though he had before the attack been a total abstainer, he now not only drank his own wine but stole the wine of the other patients. He escaped from Bonneval, and after a few turbulent years, tracked by his occasional relapses into hospital or madhouse, he turned up once more at the Rochefort asylum in the character of a private of marines, convicted of theft but considered to be of unsound mind. And at Rochefort and La Rochelle, by great good fortune, he fell into the hands of three physicians—Professors Bourru and Burot, and Dr. Mabille—able and willing to continue and extend the observations which Dr. Camuset at Bonneval and Dr. Jules Voisin at Bicêtre had already made on this most precious of *mauvais sujets* at earlier points in his chequered career.[1]

He is now no longer at Rochefort, and Dr. Burot informs me that his health has much improved, and that his peculiarities have in great part disappeared. I must, however, for clearness' sake, use the present tense in briefly describing his condition at the time when the long series of experiments were made.

The state into which he has gravitated is a very unpleasing one. There is paralysis and insensibility of the right side, and (as is often the case in right hemiplegia) the speech is indistinct and difficult.

[1] For Dr. Camuset's account see *Annales Médico-Pyschologiques*, 1882, p. 75; for Dr. Voisin's, *Archives de Nevrologie*, September, 1885. The observations at Rochefort have been carefully recorded by Dr. Berjon, *La Grande Hystérie chez l'Homme*, Paris, 1886, and by Drs. Bourru and Burot in a treatise, *De la suggestion mentale*, &c. (*Bibl. scientifique contemporaine*), Paris, 1887.

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Nevertheless he is constantly haranguing any one who will listen to him, abusing his physicians, or preaching, with a monkey-like impudence rather than with reasoned clearness, radicalism in politics and atheism in religion. He makes bad jokes, and if any one pleases him he endeavours to caress him. He remembers recent events during his residence at the Rochefort asylum, but only two scraps of his life before that date—namely, his vicious period at Bonneval and a part of his stay at Bicêtre.

Except this strangely fragmentary memory there is nothing very unusual in this condition, and in many asylums no experiments on it would have been attempted. Fortunately the physicians of Rochefort were familiar with the efficacy of the contact of metals in provoking transfer of hysterical hemiplegia from one side to the other. They tried various metals in turn on Louis V. Lead, silver, and zinc had no effect. Copper produced a slight return of sensibility in the paralysed arm. But steel, applied to the right arm, transferred the whole insensibility to the left side of the body.

Inexplicable as such a phenomenon certainly is, it is sufficiently common (as French physicians hold) in hysterical cases to excite little surprise. What puzzled the doctors was the change of character which accompanied the change of sensibility. When Louis V. issued from the crisis of transfer, with its minute of anxious expression and panting breath, he was what might fairly be called a new man. The restless insolence, the savage impulsiveness, have wholly disappeared. The patient is now gentle, respectful, and modest. He can speak clearly now, but he only speaks when he is spoken to. If he is asked his views on religion and politics, he prefers to leave such matters to wiser heads than his own. It might seem that morally and intellectually the patient's cure had been complete.

But now ask him what he thinks of Rochefort; how he liked his regiment of marines. He will blankly answer that he knows nothing of Rochefort, and was never a soldier in his life. "Where are you, then, and what is the date of to-day?" "I am at Bicêtre; it is January 2nd, 1884; and I hope to see M. Voisin to-day, as I did yesterday."

It is found, in fact, that he has now the memory of two short periods of life (different from those which he remembers when his *right* side is paralysed), periods during which, so far as can now be ascertained, his character was of this same decorous type and his paralysis was on the left side.

These two conditions are what are now termed his first and his second, out of a series of six or more through which he can be made to pass. For brevity's sake I will further describe his *fifth* state only.

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If he is placed in an electric bath, or if a magnet be placed on his head, it looks at first sight as though a complete physical cure had been effected. All paralysis, all defect of sensibility, has disappeared. His movements are light and active, his expression gentle and timid. But ask him where he is, and you find that he has gone back to a boy of fourteen, that he is at St. Urbain, his first reformatory, and that his memory embraces his years of childhood, and stops short on the very day when he had the fright with the viper. If he is pressed to recollect the incident of the viper a violent epileptiform crisis puts a sudden end to this phase of his personality.

Is there, then, the reader may ask, any assignable law which governs these strange revolutions? any reason why Louis V. should at one moment seem a mere lunatic or savage, at another moment should rise into decorous manhood, at another should recover his physical soundness, but sink backward in mind into the child? Briefly, and with many reserves and technicalities perforce omitted, the view of the doctors who have watched him is somewhat as follows: A sudden shock, falling on an unstable organisation, has effected in this boy a profounder severance between the functions of the right and left hemispheres of the brain than has perhaps ever been observed before. We are accustomed, of course, to see the right side of the body paralysed and insensible in consequence of injury to the left hemisphere, which governs it, and *vice versâ*. And we are accustomed in hysterical cases —cases where there is no actual traceable injury to either hemisphere —to see the defects in sensation and motility shift rapidly—shift, as I may say, at a touch—from one side of the body to the other. But we cannot usually trace any corresponding change in the mode of functioning of what we assume as the "highest centres," the centres which determine those manifestations of intelligence, character, memory, on which our *identity* mainly depends. Yet in some cases of *aphasia* and of other forms of *asemia* (the loss of power over *signs*, spoken or written words and the like) phenomena have occurred which have somewhat prepared us to find that the loss of power to use the left—which certainly is in some ways the more developed—hemisphere may bring with it a retrogression in the higher characteristics of human life. And the singular phenomenon of *automatic writing* (as I have previously tried to show[1]) seems often to depend on an obscure action of the less-used hemisphere. Those who have followed these lines of observation may be somewhat prepared to think it possible that in Louis V.'s case the alternate predominance of right or left hemisphere affects memory and character as well as motor and sensory innervation. Inhibit his left brain (and right side) and he becomes,

[1] *Proceedings of the S.P.R.*, Vol. III.

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as one may say, not only left-handed but *sinister;* he manifests himself through nervous arrangements which have reached a lower degree of evolution. And he can represent in memory those periods only when his personality had assumed the same attitude, when he had crystallised about the same point.

Inhibit his right brain, and the higher qualities of character remain, like the power of speech, intact. There is self-control; there is modesty; there is the sense of duty—the qualities which man has developed as he has risen from the savage level. But nevertheless he is only half himself. Besides the hemiplegia, which is a matter of course, memory is truncated too, and he can summon up only such fragments of the past as chance to have been linked with this one abnormal state, leaving unrecalled not only the period of sinister inward ascendency, but the normal period of childhood, before his *Wesen* was thus cloven in twain. And now if by some art we can restore the equipoise of the two hemispheres again, if we can throw him into a state in which no physical trace is left of the severance which has become for him a second nature, what may we expect to find as the psychical concomitant of this restored integrity? What we *do* find is a change in the patient which, in the glimpse of psychical possibilities which it offers us, is among the most interesting of all. He is, if I may so say, born again; he becomes as a little child; he is set back in memory, character, knowledge, powers, to the days before this trouble came upon him or his worse self assumed its sway.

I have begun with the description of an extreme case, a case which to many of my readers may seem incredible in its *bizarrerie.* But though it is extreme it is not really isolated; it is approached from different sides by cases already known. The mere resumption of life at an earlier moment, for instance, is of course only an exaggeration of a phenomenon which frequently appears after cerebral injury. The trainer, stunned by the kick of a horse, completes his order to loosen the girths the moment that trepanning has been successfully performed. The old lady struck down at a card party, and restored to consciousness after long insensibility, surprises her weeping family by the inquiry, "What are trumps?" But in these common cases there is but a morsel cut out of life; the personality reawakens as from sleep and is the same as of old. With Louis V. it is not thus; the memories of the successive stages are not lost but juxtaposed, as it were, in separate compartments; nor can one say what epochs are in truth intercalary, or in what central channel the stream of his being flows.

Self-severances profound as Louis V.'s are naturally to be sought

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mainly in the lunatic asylum.[1] There indeed we find duplicated individuality in its grotesquer forms. We have the man who has always lost himself and insists on looking for himself under the bed. We have the man who maintains that there are two of him, and sends his plate a second time, remarking, "I have had plenty, but the other fellow has not." We have the man who maintains that he is himself and his brother too, and when asked how he can possibly be both at once, replies, "Oh, by a different mother."

Or sometimes the personality oscillates from one focus to another, and the rival impulses, which in us merely sway different moods, objectify themselves each in a *persona* of its own. An hysterical penitent believes herself one week to be "Sœur Marthe des Cinq Plaies," and the next week relapses into an imaginary "Madame Poulmaire," with tastes recalling a quite other than conventual model. Another patient seems usually sane enough, but at intervals he lets his beard grow, and is transformed into a swaggering lieutenant of artillery. The excess over, he shaves his beard and becomes once more a lucid though melancholy student of the early Fathers. Such changes of character, indeed, may be rapid and varied to any extent which the patient's experience of life will allow. In one well-known case a poor lady varied her history, her character, even her sex, from day to day. One day she would be an emperor's bride, the next an imprisoned statesman—

> Juvenis quondam, nunc femina, Cæneus,
> Rursus et in veterem fato revoluta figuram.

Yet more instructive, though often sadder still, are the cases where the disintegration of personality has not reached the pitch of insanity, but has ended in a bewildered impotence, in the horror of a lifelong dream. Speaking generally, such cases fall under two main heads—those where the loss of control is mainly over *motor* centres, and the patient can feel but cannot act; and those where the loss of control is mainly over *sensory* centres, and the patient acts but cannot feel.

Inability to act just as we would wish to act is a trouble in which we most of us share. We probably have moods in which we can even sympathise with that provoking patient of Esquirol's who, after an attack of monomania, recovered all those social gifts which made him the delight of his friends, but could no longer be induced to give five minutes' attention to the most urgent business. "Your advice," he said cordially to Esquirol, "is thoroughly good. I should ask nothing better than to follow it, if you could further oblige me with the power to *will*

[1] The cases cited here come mainly from Krishaber's *Névropathie Cérébro-cardiaque*. Several of them will be found cited in Ribot's admirable monograph *Maladies de la Personnalité*.

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what I please." Sometimes the whole life is spent in the endeavour to perform trifling acts—as when a patient of M. Billod's spent nearly an hour in attempting to make the flourish under his signature to a power of attorney ; or tried in vain for three hours, with hat and gloves on, to leave his room and go out to a pageant which he much wished to see. Such cases need heroic treatment, and this gentleman had the luck to be caught and cured by the Revolution of 1848.

Still more mournful are the cases where it is mainly the sensory centres which lie, as it were, outside the personality ; where thought and will remain intact, but the world around no longer stirs the wonted feelings, nor can reach the solitary soul. " In all my acts one thing is lacking—the sense of effort that should accompany them, the sense of pleasure that they should yield." " All things," said another sufferer, " are immeasurably distant from me ; they are covered with a heavy air." " Men seem to move round me," said another, " like moving shadows." And gradually this sense of ghostly vacancy extends to the patient's own person. " Each of my senses, each part of me, is separate from myself." " J'existe, mais en dehors de la vie réelle." It is as though Teiresias, who alone kept his true life in unsubstantial Hades, should at last feel himself dream into a shade.

Sometimes the regretful longing turns into a bitter sense of exile, of banishment, of fall from high estate. There are words that remind us of the passionate protestations of Empedocles, refusing to accept this earth as his veritable home. Κλαῖσά τε καὶ κώκυσα, said the Sicilian of Sicily, ἰδὼν ἀσυνήθεα χῶρον (" I wept and lamented, looking on a land to me unwonted and unknown "). " Lorsque je me trouvais seul," said a patient of Krishaber's, " dans un endroit nouveau, j'étais comme un enfant nouveau-né, ne reconnaissant plus rien. J'avais un ardent désir de revoir mon ancien monde, de redevenir l'ancien moi ; c'est ce désir qui m'a empêché de me tuer. "

These instances have shown us the *retrogressive* change of personality, the dissolution into inco-ordinate elements of the polity of our being. We have seen the state of man like a city blockaded, like a great empire dying at the core. And of course a spontaneous, unguided disturbance in a machinery so complex is likely to alter it more often for the worse than for the better. Yet here we reach the very point which I most desire to urge in this paper. I mean that even these spontaneous, these unguided disturbances, do sometimes effect a change which is a marked improvement. Apart from all direct experiment they show us that we are in fact capable of being reconstituted after an improved pattern, that we may be fused and recrystallised into greater clarity ; or, let us say more modestly, that the shifting sand-heap of our being will sometimes suddenly settle itself into a new attitude of more assured equilibrium.

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Among cases of this kind which have thus far been recorded, none is more striking than that of Dr. Azam's often quoted patient, Félida X.[1]

Many of my readers will remember that in her case the somnambulic life has become the normal life; the "second state," which appeared at first only in short, dream-like accesses, has gradually replaced the "first state," which now recurs but for a few hours at long intervals. But the point on which I wish to dwell is this: that Félida's second state is altogether *superior* to the first—physically superior, since the nervous pains which had troubled her from childhood have disappeared; and morally superior, inasmuch as her morose, self-centred disposition is exchanged for a cheerful activity which enables her to attend to her children and her shop much more effectively than when she was in the "état bête," as she now calls what was once the only personality that she knew. In this case, then, which is now of nearly 30 years' standing, the spontaneous readjustment of nervous activities—the second state, no memory of which remains in the first state—has resulted in an improvement profounder than could have been anticipated from any moral or medical treatment that we know. The case shows us how often the word "normal" means nothing more than "what happens to exist." For Félida's *normal* state was in fact her *morbid* state; and the new condition, which seemed at first a mere hysterical abnormality, has brought her to a life of bodily and mental sanity which makes her fully the equal of average women of her class.

Now, before we go further, let us ask ourselves whether this result, which sounds so odd and paradoxical, ought in reality to surprise us. Had we any reason for supposing that changes as profound as Félida's need always be for the worse, that the phase of personality in which we happen to find ourselves is the phase in which, given our innate capacities, it is always best for us to be?

To make this question more intelligible, I must have recourse to a metaphor. Let us picture the human brain as a vast manufactory, in which thousands of looms, of complex and differing patterns, are habitually at work. These looms are used in varying combinations; but the main driving-bands, which connect them severally or collectively with the motive power, remain for the most part unaltered.

Now, how do I come to have my looms and driving-gear arranged in this particular way? Not, certainly, through any deliberate choice of my own. My ancestor the ascidian, in fact, inherited the business when it consisted of little more than a single spindle. Since his day

[1] For the fullest account of Félida, see *Hypnotisme, Double Conscience*, &c., par le Dr. Azam. Paris, 1887.

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my nearer ancestors have added loom after loom. Some of their looms have fallen to pieces unheeded; others have been kept in repair because they suited the style of order which the firm had at that time to meet. But the class of orders received has changed very rapidly during the last few hundred years. I have now to try to turn out altruistic emotions and intelligent reasoning with machinery adapted to self-preserving fierceness or manual toil. And in my efforts to readjust and reorganise I am hindered not only by the old-fashioned type of the looms, but by the inconvenient disposition of the driving-gear. I cannot start one useful loom without starting a dozen others that are merely in the way. And I cannot shift the driving-gear to suit myself, for I cannot get at much of it without stopping the engines, and if I stopped my engines I should not know how to set them going again. In this perplexity I watch what happens in certain factories—Félida's, for instance—where the hidden part of the machinery is subject to certain dangerous jerks or dislocations, after which the gearings shift of themselves and whole groups of looms are connected and disconnected in a novel manner. From hence I get at least a hint as to the concealed attachments; and if I see that new arrangement working well I have an object to aim at; I can try to produce a similar change, though a smaller one, among my own looms and by my own manipulation.

For even if these profoundest spontaneous changes are beyond the reach of imitation, there are smaller changes, long familiar to us, which we now see in a new light, as imitable in a manner which shall reproduce their advantages without their drawbacks. There is the painless trance which sometimes supervenes in hysteria; there is the action of alcohol; there is especially the action of opium, which from the first commended itself by its *psychical* effect, by the emotional tranquillity which it induces. Such at least seems to be the inference from the well-known passage where the wifely Helen determines to give her husband and his friends the chance of talking comfortably, without interrupting themselves by perpetual tears and lamentations.

> Then heaven-born Helen in their cups would throw
> Nepenthes, woeless banisher of woe:
> This whoso drank daylong no tear should shed—
> No, though he gazed on sire and mother dead;
> No, though his own son on that dreamy day
> Before his own eyes raging foes should slay.[1]

The successive discoveries of intoxicants, narcotics proper, and anæsthetics formed three important stages in our growing control over the nervous system. Mesmer's discovery, or rather his rediscovery of a process probably at least as old as Solon, marked an epoch of quite

[1] *Od.* iv. 219.

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equal significance. And the refinements on Mesmer's process which this century has seen, the discoveries linked with the names of Puységur, Esdaile, Braid, Charcot, &c., though often set forth with an air of controversy rather than of co-operation, will gradually be recognised as mutually concordant elements in a new branch of moral as well as physical therapeutics. Nay, it is a nascent art of self-modification; a system of pulleys (to return to our previous metaphor), by which we can disjoin and reconnect portions of our machinery which admit of no directer access.

One or two brief instances may indicate the moral and the physical benefits which hypnotisation is bringing within the range of practical medicine. And first I will cite one of the cases—rare as yet—where an insane person has been hypnotised with permanent benefit.[1]

In the summer of 1884 there was at the Salpêtrière a young woman of a deplorable type. Jeanne Sch—— was a criminal lunatic, filthy in habits, violent in demeanour, and with a lifelong history of impurity and theft. M. Auguste Voisin, one of the physicians on the staff, undertook to hypnotise her on May 31st, at a time when she could only be kept quiet by the strait jacket and "bonnet d'irrigation," or perpetual cold douche to the head. She would not—indeed, she could not—look steadily at the operator, but raved and spat at him. M. Voisin kept his face close to hers, and followed her eyes wherever she moved them. In about 10 minutes a stertorous sleep ensued; and in five minutes more she passed into a sleep-waking state, and began to talk incoherently. The process was repeated on many days, and gradually she became sane when in the trance, though she still raved when awake. Gradually, too, she became able to obey in waking hours commands impressed on her in the trance—first trivial orders (to sweep the room and so forth), then orders involving a marked change of behaviour. Nay more; in the hypnotic state she voluntarily expressed repentance for her past life, made a confession which involved more evil than the police were cognisant of (though it agreed with facts otherwise known), and finally of her own impulse made good resolves for the future. Two years have now elapsed, and M. Voisin writes to me (July 31st, 1886) that she is now a nurse in a Paris hospital, and that her conduct is irreproachable. In this case, and in some recent cases of M. Voisin's, there may, of course, be matter for controversy as to the precise nature and the prognosis, apart from hypnotism, of the insanity which was cured. But my point is amply made out by the fact that this poor woman, whose history since the

[1] *Annales Médico-Psychologiques*, 1884, vol. ii., p. 289 *sqq.* The case was rediscussed at the last meeting of the French Association for the Advancement of Science.

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age of 13 had been one of reckless folly and vice, is now capable of the steady, self-controlled work of a nurse at a hospital, the reformed character having first manifested itself in the hypnotic state, partly in obedience to suggestion, and partly as the natural result of the tranquillisation of morbid passions.

M. Voisin has followed up this case with others equally striking, into some of which a committee of the Société Médico-Psychologique is now inquiring.[1] And M. Dufour, the medical head of another asylum,[2] has adopted hypnotic suggestion as a regular element in his treatment. "Dès à présent," he says, "notre opinion est faite: sans crainte de nous tromper, nous affirmons que l'hypnotisme peut rendre service dans le traitement des maladies mentales." As was to be expected, he finds that only a small proportion of lunatics are hypnotisable; but the effect produced on these, whether by entrancement or suggestion, is uniformly good. His best subject is a depraved young man, who after many convictions for crimes (including attempted murder) has become a violent lunatic. "T.," says Dr. Dufour, "a été un assez mauvais sujet. Nous n'avons plus à parler au présent, tellement ses sentiments moraux ont été améliorés par l'hypnotisme." This change and amelioration of character (over and above the simple recovery of sanity) has been a marked feature in some of Dr. Voisin's cases as well.

There is, indeed, in the sleep-waking state even of sane persons, a characteristic change of character, more easily recognised than described. Without generalising too confidently, I may say that there seems usually to be an absence of self-consciousness and anxiety, a diminution of mere animal instincts, and a sense of expansion and freedom which shows itself either in gaiety or in a sort of beatific calm. In Madame B. (a subject whose susceptibility to hypnotisation by Dr. Gibert and Prof. Janet from a distance has recently attracted much notice) there was something—as it seemed to me—indescribably absurd in the contrast between the peasant woman's humble, stolid, resigned cast of countenance and the childish glee with which she joked and babbled during the "phase somnambulique" of her complex trance. On the other hand M. Richet says of a recent subject of his own,[3] "She seems when in the somnambulic state to be normal in all respects except that her character has changed. When awake

[1] I have myself seen Dr. Voisin successfully hypnotise a melancholic patient who was in a state of extreme—it might have seemed of hopeless—restlessness.

[2] Dr. E. Dufour, médecin en chef de l'asile Saint-Robert (Isère). See *Annales Médico-Psychologiques*, September, 1886, p. 238, and *Contribution à l'étude de l'hypnotisme*, par le Dr. Dufour. (Grenoble, 1887.)

[3] *Revue Philosophique*, September, 1886, p. 327.

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she is gay and lively; when entranced, grave, serious, almost solemn. . . . Her intelligence seems to have increased."

And I may remark that this phase of the somnambulic character, this tendency to absorption and ecstasy, is a fact of encouraging significance. It is an indication that we may get more work out of ourselves in certain modified states than we can at present. "Ecstacy,' which in former ages was deemed the exalted prerogative of saints, is now described as a matter of course among the phases of a mere hysterical attack. The truth is, perhaps, more complex than either of these views would admit. Ecstasy (we may certainly say with the modern alienist) is for the most part at least a purely subjective affection, corresponding to no reality outside the patient, and appearing along with other instabilities in the course of hysteria. True; but on the other hand ecstasy is to hysteria somewhat as genius is to insanity. The ecstasy, say, of Louise Lateau assuredly proves no dogma, and communicates to us no revelation. Yet, taken strictly by itself, it is not altogether a retrograde or dissolutive nervous phenomenon. Rather it represents the extreme tension of the poor girl's spirit in the highest direction which her intellect allows; and the real drawback is that this degree of occasional concentration usually implies great habitual instability. The hysterical patient has an hour of ecstasy, during which her face, if we may trust Dr. Paul Richer's drawings,[1] often assumes a lofty purity of expression which the ordinary young person might try in vain to rival. But she pays for the transitory exaltation by days of incoherent scolding, of reckless caprice. And similarly, as I maintain, the power of exaltation, of concentration, which constitutes genius implies a profound *modifiability* of the nervous system, a tendency of the stream of mentation to pour with a rush into some special channels. In a Newton or a Shelley this modifiability is adequately under control; were it not so, our Shelleys would lapse into incoherence, our Newtons into monomania.

And I maintain that the hypnotic trance, with its liberation from petty preoccupations, its concentration in favourite channels, has some analogy to genius as well as to hysteria. I maintain that for some uneducated subjects it has been the highest mental condition which they have ever entered; and that, when better understood and applied to subjects of higher type, it may dispose to flows of thought more undisturbed and steady than can be maintained by the waking effort of our tossed and fragmentary days.

I have dwelt at some length on the *moral* accompaniments of the hypnotic trance, because they are as yet much less generally known than the physical. It would, indeed, be a mere waste of

[1] *La Grande Hystérie*, Second Edition, Paris, 1885.

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space to dwell on the lulling of *pain* which can be procured by these methods, or even on the painless performance of surgical operations during the hypnotic trance; but I will cite a case[1] illustrating a point comparatively new—namely, that the insusceptibility to pain need not be confined to the entranced condition, but may be prolonged by hypnotic suggestion into subsequent waking hours.

An hysterical patient in the hospital of Bordeaux suffered recently from a malady which was certainly not imaginary. She had a "phlegmon," or inflamed abscess, as big as a hen's egg, on the thigh, with excessive tenderness and lancinating pain. It was necessary to open the swelling, but the screaming patient would not allow it to be touched. Judging this to be a good opportunity for testing the real validity of deferred hypnotic suggestion, Dr. Pitres hypnotised the woman by looking fixedly in her eyes, and then suggested to her that *after she had been awakened* she would allow the abscess to be opened, and would not feel the slightest pain. She was then awakened, and apparently resumed her normal state. M. A. Boursier proceeded to open and squeeze out the abscess in a deliberate way. The patient merely looked on and smiled. She had no recollection of the suggestion which had been made to her during her trance, and she was not a little astonished to see her formidable enemy thus disposed of without giving her the slightest pain.

Cases like these are certainly striking enough to give a considerable impetus to further experiment. Hypnotism, however, has in England many prejudices to contend with. I shall touch on one such prejudice only—a very excusable one and germane to the main argument of this paper. "These duplications of state," it is said, "are not *natural;* and what is unnatural, even if it is not morbid, can never be more than a mere curiosity." I would ask of such an objector one single question: "Which state, then, do you consider, as unnatural, your own ordinary sleep or your own ordinary waking?"

This rejoinder goes, I think, to the root of the matter; for we do indubitably undergo every day of our lives a change of state, a shifting of our internal mechanism, which is closely parallel to the artificial changes whose induction I am here recommending. Our familiar sleep, whether considered from the psychical or the physiological side, has a curious history, strange potentialities. In its psychical aspect—to take the point which here most concerns us—it involves at least the rudiments of a "second state," of an independent memory. I should like, had I space, to show how the mere recurrence of a dream-scene—a scene which has no prototype in waking life—is the first stage on the

[1] First given in the *Journal de Médecine de Bordeaux*, and cited at length in Dr. Bérillon's *Revue de l'Hypnotisme* for September, 1886. Professor Pitres' name, I may add, carries great weight in the French medical world.

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way to those recurrent accesses of somnambulism, linked by continuous memory, which have developed into the actual ordinary life of Félida X. Leaving this point for future treatment, and passing to sleep's *physiological* aspect, we recognise in it the compromise or resultant of many tentative duplications of state which our lowly ancestors have known. Their earliest differentiation of condition, it may be, was merely the change between light and darkness, or between motion and rest. Then comes *encystation*, a fruitful quiescence, originally, perhaps, a mere immobility of self-defence, but taken advantage of for reproductive effort. And passing from protozoa to metazoa, we find numerous adaptations of this primitive duplicability of condition. We find sleep utilised as a protection against hunger, as a protection against cold. And, on the other hand, we find animals for whom what we call "true sleep" is wanting, whose circumstances do not demand any such change or interruption in the tenor of their lifelong way.

Yet why describe this undifferentiated life-history as a state of waking rather than of sleep? Why assume that sleep is the acquired, vigilance the "normal" condition? It would not be hard to defend an opposite thesis. The new-born infant might urge with cogency that his habitual state of slumber was primary as regards the individual, ancestral as regards the race; resembling at least, far more closely than does our adult life, a primitive or protozoic habit. "Mine," he might say, "is a centrally stable state. It would need only some change in external conditions (as my permanent immersion in a nutritive fluid) to be safely and indefinitely maintained. Your waking state, on the other hand, is centrally unstable. While you talk and bustle around me you are living on your physiological capital, and the mere prolongation of vigilance is torture and death."

A paradox such as this forms no part of my argument; but it may remind us that physiology at any rate hardly warrants us in speaking of our waking state as if that alone represented our true selves, and every deviation from it must be at best a mere interruption. Vigilance in reality is but one of two co-ordinate phases of our personality, which we have acquired or differentiated from each other during the stages of our long evolution. And just as these two states have come to co-exist for us in advantageous alternation, so also other states may come to co-exist with these, in response to new needs of the still evolving organism.

And I will now suggest two methods in which such states as those described, say, in Dr. Voisin's or in Dr. Pitres' case, might be turned to good account. In the world around us are many physical invalids and many "moral invalids," and of both these classes a certain percentage are sure to prove hypnotisable, with patience and care. Let us try to improve the moral invalid's character by hypnotic suggestions

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of self-restraint, which will continue effective after he wakes. And let us try to enable the physical invalid to carry on his intellectual life without the perturbing accompaniment of pain. I am not bringing out a panacea, and I expect that with the English race, and in our present state of knowledge, but few of these experiments will succeed. But increased experience will bring the process under fuller control, will enable us to hypnotise a larger proportion of persons and to direct the resulting phenomena with more precision. What is needed is the perseverance in experiment which springs from an adequate realisation of the ultimate gain, from a conviction that the tortuous inlet which we are navigating is one of the mouths of a river which runs up far into the unexplored interior of our being.

I have dealt elsewhere with some further cases which go to show the persistent efficacy of moralising suggestions—suggestions mainly of abstinence from pernicious indulgences—when made to a subject in the hypnotic trance.[1] It must suffice here to point out that such moralisation, whether applied to a sane or an insane subject, must by no means be considered as a mere trick or a mere abnormality. It is but the systematisation of a process on which religious and moral "revivals" have always largely depended. When some powerful personage has thrown many weaker minds into a state of unusual perturbation, unusual plasticity, there is an element in that psychical tumult which may be utilised for lasting good. A strong suggestion may be made, and its effect on the brain will be such that it will work itself out, almost automatically, perhaps for years to come. When Father Mathew spread the temperance pledge through Ireland he showed this power at its best. What it can be at its worst we see, for instance, in the recent epidemic of frenzy in the Bahamas, where the hysterical symptoms were actually the main object sought, and the dogma only served to give to that hysteria a stimulating flavour of brimstone. Scenes not dissimilar have been witnessed in England too; yet the sober moralist has been forced to recognise that a germ of better life has often been dropped, and has quickened, amid the turbulence of what to him might seem a mere scandalous orgy.

Just so did the orthodox physician look on in disgusted contempt at the tumultuous *crises* of the patients around Mesmer's *baquet*. But science has now been able to extract from that confused scene its germ of progress, and to use a part of Mesmer's processes to calm the very accesses which Mesmer employed them to generate. Let her attempt, then, to extract the health-giving element from that moral turbulence as well, and to use the potency which in ignorant hands turns men and women into hysterical monomaniacs, to revive in the spirits which she dominates the docility of the little child.

[1] *Proceedings of the S.P.R.*, Part X.

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This last phrase represents a true, an important analogy. The art of education, as we know, rests on the physiological fact that the child's brain receives impressions more readily, and retains them more lastingly, than the adult's. And those of us who have been well drilled in childhood are not apt to consider that the advantage thus gained for us was an unfair or tricky one, nor even that virtue has been made unduly easy to us, so that we deserve no credit for doing right. It surely need not, then, be considered as over-reaching Destiny, or outwitting the Moral Law, if we take persons whose early receptiveness has been abused by bad example and try to reproduce that receptiveness by a physiological process, and to imprint hypnotic suggestions of a salutary kind.

I ventured to make a proposal of this sort in a paper published in 1885; but, although it attracted some comment as a novelty, I cannot flatter myself that it was taken *au sérieux* by the pedagogic world. But as I write these lines I see from a report of the Association Français pour l'Avancement des Sciences (Session de Nancy, 1886) that the "Section de Pédagogie" has actually passed a resolution desiring "que des expériences de suggestion hypnotique soient tentées, dans un but de moralisation et d'éducation, sur quelques-uns des sujets les plus notoirement mauvais et incorrigibles des écoles primaires." I commend the idea then, with the sense that I am not alone in my paradox, to the attention of practical philanthropists.

My second suggestion—namely, that we may conceivably learn to carry on our intellectual life in a state of insusceptibility to physical pain, may appear a quite equally bold one. "We admit," the critics might say, "that a man in the hypnotic trance is insensible to pinching; but, since he can also notoriously, when in that state, be made to believe that his name is Titus Oates, or that a candle-end is a piece of plum-cake, or any other absurdity, the intellectual work which he performs in that mood of mind is not likely to be worth much." But my point is, as may have been already gathered, that this clean-cut, definite conception of the hypnotic state is now shown to have been crude and rudimentary. Dr. Pitres' case, above cited (where the patient was restored to ordinary life in all respects except that she continued insensible to pain), is a mere sample of cases daily becoming more numerous, where power is gained to dissociate the elements of our being in novel ways, to form from them, if I may so say, not only the one strange new compound "hypnotic trance," but a whole series of compounds marking the various stages between that and the life of every day. Hysterical phenomena, now for the first time studied with something like the attention which they deserve, point strongly in this direction. And apart from hysteria, apart from hypnotism, we find in active and healthy life scattered hints of the possible absence of

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pain during vigorous intellectual effort. From the candidate in a competitive examination who forgets his toothache till he comes out again, to the soldier in action unconscious of the bullet-wound till he faints from loss of blood, we have instances enough of an exaltation or concentration which has often made the resolute spirit altogether unconscious of conditions which would have been absorbing to the ordinary man. And here too, as in the case of moral suggestibility, already dealt with, the function of science is to regularise the accidental and to elicit from the mingled phenomenon its permanent boon. Already men attempt to do this by a mere chemical agency. There have been philosophers who have sought in laudanum intellectual lucidity and bodily repose. There have been soldiers who have supplemented with "Dutch courage" the ardour of martial fire. Philosopher and soldier alike expose themselves to an unhappy reaction. But by the induction of hypnotic anæsthesia we are taking a shorter road to our object; we are acting on the central nervous system without damaging stomach or liver on the way. It was an *abridgment* of this kind when sub-cutaneous injection of morphia replaced in so many cases morphia taken by the mouth. Yet though the evil done *in transitu* was subtler and slower, evil still was done. On the other hand the direct non-chemical action on the central nervous system, in which hypnotism consists, is not proved to be in any way necessarily injurious, and has thus far, when under careful management, resulted almost uniformly in good. Such at least is the view of all physicians, so far as I know, who have practised it themselves on a large scale, though it is *not* the general view at present of those men—physicians or others—who are content to judge from hearsay and to write at second-hand.

Let us not then, I would say, be satisfied if we can merely give some poor sufferer a good night by hypnotism, or even if we can operate on him painlessly in a state of trance. Let us approach the topic of the banishment of pain in a more thoroughgoing and bolder spirit. Looking at that growing class of civilised persons who suffer from neuralgia, indigestion, and other annoying but not dangerous forms of *malaise*, let us consider whether we cannot induce—in those of them who are fortunate enough to be readily hypnotisable—a third condition of life, which shall be as waking but without its uneasiness and as sleep without the blankness of its repose, a state in which the mind may go serenely onwards and the body have no power to distract her energy or to dispute her sway.

Is there anything in nature to render this ideal impossible? Let us consider the history of pain. Pain, it may be plausibly suggested, is an advantage acquired by our ancestors in the course of their struggle for existence. It would be useless to the fortunate animalcule, which, if you chop it in two, is simply two animalcules instead of

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one. But as soon as the organism is complex enough to suffer partial injury, and active enough to check or avoid such injury before it has gone far, the pain becomes a useful warning, and the sense of pain is thus one of the first and most generalised of the perceptive faculties which place living creatures in relation with the external world. And to the human infant it is necessary still. The burnt child must have some reason to dread the fire, or he will go on poking it with his fingers. But, serviceable though pain may still be to the child and the savage, civilised men and women have now a good deal more of it than they can find any use for. Some kinds of pain, indeed (like neuralgia, which *prevents* the needed rest), are wholly detrimental to the organism, and have arisen by mere correlation with other susceptibilities which are in themselves beneficial. Now if this correlation were inevitable—if it were impossible to have acute sense-perceptions, vivid emotional development, without these concomitant nervous pains—we should have to accept the annoyance without more ado. But certain spontaneously occurring facts, and certain experimental facts, have shown us that the correlation is *not* inevitable ; that the sense of pain can be abolished, while other sensibilities are retained, to an extent far beyond what the common experience of life would have led us to suppose possible.

Our machinery is hampered by a system of checks, intended to guard against dangers which we can now meet in other ways, and often operating as a serious hindrance to the work of our manufactory. A workman here and there has hit on an artifice for detaching these checks, with signal advantage, and is beginning to report to the managers his guess at a wider application of the seemingly trivial contrivance.

Be it mentioned too that not only pain itself, but anxiety, ennui, intellectual fatigue, may be held in abeyance by hypnotic treatment and suggestion. There is not, indeed, much evidence of any increase of sheer intellectual acumen in the hypnotic state, but in most kinds of ordinary brain-work the difficulty is not so much that one's actual power of thinking is inadequate to the problems proposed as that one cannot use that power aright, cannot focus one's object steadily or gaze on it long. Hypnotism may not supply one with mental lenses of higher power, but in its *artificial attention* we have at least the rudiment of a machinery like that which holds firm the astronomer's telescope and sweeps it round with the moving heavens, as compared with the rough and shifting adjustments of a spy-glass held in the hand.

These speculations, especially where they point to moral progress as attainable by physiological artifice, will seem to many of my readers venturesome and unreal. And in these days of conflicting dogmas and impracticable Utopias, Science, better aware than either priest or demagogue of how little man can truly know, is tempted to confine herself to his material benefit, which can be made certain, and to let

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his moral progress—which is a speculative hope—alone. Yet, now that Science is herself becoming the substance of so many creeds, the lode-star of so many aspirations, it is important that she should not in any direction even appear to be either timid or cynical. Her humble missionaries at least need not show themselves too solicitous about possible failure, but should rather esteem it as dereliction of duty were some attempt not made to carry her illumination over the whole realm and mystery of man.

Especially, indeed, is it to be desired that biology should show—not indeed a moralising bias, but—a moral care. There has been a natural tendency to insist with a certain disillusionising tenacity on the low beginnings of our race. When eminent but ill-instructed personages in Church or State have declared themselves, with many flourishes, "on the side of the Angel," there has been a grim satisfaction in proving that Science at any rate is "on the side of the Ape." But the victory of Science is won. She has dealt hard measure to man's tradition and his self-conceit; let her now show herself ready to sympathise with such of his aspirations as are still legitimate, to offer such prospects as the nature of things will allow. Nay, let her teach the world that the word *evolution* is the very formula and symbol of hope.

But here my paper must close. I will conclude it with a single reflection which may somewhat meet the fears of those who dislike any tamperings with our personality, who dread that this invading analysis may steal their very self away. All living things, it is said, strive towards their maximum of pleasure. In what hours, then, and under what conditions, do we find that human beings have attained to their intensest joy? Do not our thoughts in answer turn instinctively to scenes and moments when all personal pre-occupation, all care for individual interest, is lost in the sense of spiritual union, whether with one beloved soul, or with a mighty nation, or with "the whole world and creatures of God"? We think of Dante with Beatrice, of Nelson at Trafalgar, of S. Francis on the Umbrian hill. And surely here, as in Galahad's cry of "If I lose myself I find myself," we have a hint that much, very much, of what we are wont to regard as an integral part of us may drop away, and yet leave us with a consciousness of our own being which is more vivid and purer than before. This web of habits and appetencies, of lusts and fears, is not, perhaps, the ultimate manifestation of what in truth we are. It is the cloak which our rude forefathers have woven themselves against the cosmic storm; but we are already learning to shift and refashion it as our gentler weather needs, and if perchance it slip from us in the sunshine then something more ancient and more glorious is for a moment guessed within.

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VIII.

STAGES OF HYPNOTIC MEMORY.

By Edmund Gurney.

On a former occasion (*Proceedings*, Vol. II., pp. 69-70) I drew attention to some remarkable peculiarities of memory which may be observed in hypnotic "subjects." It has, of course, long been recognised as one of the most striking characteristics of hypnotic trance, in any but its very lightest stages, that the "subject" is oblivious, on waking, of what he has said and done, and of all that has passed in his presence, while the trance-condition lasted; but that, when he is re-hypnotised, these vanished memories recur to his mind. But the trance-condition had always, in relation to memory, been treated as a *single* state; or at any rate as double only in the sense that in its deeper stages consciousness seemed so completely to lapse that no impression at all could be made on the "subject's" mind, and consequently no material for memory could be stored there. Experiment showed, however, the existence of positive and distinct stages of memory within the conscious portion of the hypnotic trance. After being brought into a light stage of trance —what we may call state A—the "subject" is told something, with a direction to remember it. He is then carried into a deeper stage of trance—state B, and is asked what it was that he had just been told; he proves quite unable to recall it, and even to recall the fact that anything has been told him. He is now told something fresh, with a direction to remember it, after which he is recalled to state A; and now, when asked what he has been told, he does not mention and cannot recall what he heard a few moments before in state B, but repeats instead what had been told him in the prior state A, in which he now again finds himself. Brought once more to state B, he similarly remembers what he had been told in that state, while again completely oblivious of what was impressed on him in state A. On waking, he retains no memory of anything that has been told him;[1] though if ordered, in the trance, to remember and mention some particular item on waking, he will do so. I made the trials with a considerable number of "subjects," in different parts of England, employing three different hypnotisers, to each of whom the results were

[1] This is nearly, but not quite, invariable; with one "subject" I have twice found the thing told him in state A to be dimly remembered on waking—I presume because it had been told while the trance was still in its very lightest stage.

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as new and surprising as they were at first to myself; there seems reason to think, therefore, that the results are tolerably normal,[1] and not due to any special idiosyncrasies of operator or "subject"; as they certainly were not due to any guidance, or any interference with the free play of the "subject's" mind, in the remarks addressed to him during the progress of the experiment. I always found the two stages well marked, though in one or two cases we seemed to get upon a sort of knife-edge, when for a short time both the impressions seemed to be simultaneously remembered. The mode of effecting the passage from one stage to another has usually consisted in gentle passes over the face, without contact; but with one operator, the same effect was produced mainly or altogether by verbal suggestion—*e.g.*, by the simple direction, "Go deeper," several times reiterated. I must not digress into a discussion of the nature of the influence which the passes exercise; but I may just say that no experiments are better calculated to display the wonderful delicacy of that particular mode of affection, in the case of persons with whom it has been the rule to employ it. To the student of hypnotism the immediate responsiveness of the subject's mind and organism to the appropriate stimuli comes to seem as much a matter of course as that the tones of an organ should vary in obedience to the hand which turns on or shuts off the different stops; but among all these notable instances of stop-management on the human instrument, none is more impressive than to find that a few noiseless movements of one person's fingers, at a short distance from another person's face, have completely obliterated that with which the latter's attention two or three seconds ago was entirely engrossed, and have brought back within his mental horizon that which no other means in the world—no other physical operation, not the clearest verbal reminder, not the fear of death, nor the offer of £1,000 reward—could have induced or enabled him to recall.

Though there is nothing which would have prepared us for these memory-stages—since the passage from normal waking to deep hypnotic sleep is apparently a perfectly gradual one—it may be observed that we occasionally find some sort of analogy to them in dreams; though as these do not admit of deliberate testing, and the test has to be got

[1] I am speaking of cases where the trance-condition is definitely established—in the sense that the "subject," if left to himself, will lapse into a deep state of slumber, in which he shows a high degree of insensibility to sound and to pain, and from which only the original operator can rapidly bring him back to the normal waking state. I should not expect to get similar results in the very light forms of hypnotic affection which are so common in France; where the physical deviation from normality is far less marked, and the "subject" comes to himself, after the little course of therapeutic suggestion has been gone through, without any special means, and often without any break in the continuity of consciousness.

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so to speak, out of the dream itself, which naturally retains some sort of continuity of incident, the analogy is of a very broken and imperfect sort. The following case was lately sent to me by my friend, Mr. David Stewart, of Milton of Campsie, a careful and accurate reporter.

I don't know whether a case of "alternating memory" during ordinary dreaming may be of the slightest interest to you. This morning, in a dream about as ridiculous as dreams usually are, a number of circumstances led me to amputate the tail of a pony belonging to the farmer with whom I live, and while I was vainly endeavouring to fix it on again, the farmer came in. At this point all the previous circumstances of the dream were forgotten, and I racked my brains in a hopeless attempt to explain the state of affairs.

Memory was a blank, and still remains so. However, as the pony seemed likely to die, we lifted it into a large pot that was heating over the kitchen fire to give it a warm bath, and I went off for the veterinary surgeon. On the way I seemed partially to waken up, though still walking on the road to town. I felt that the events at the farm had been a dream, and I turned and walked back, feeling quite relieved.

Once home, however, the whole thing returned. Here was the pony, still in the pot. Every idea that I had been dreaming was gone. I only knew that I had gone for the vet. and come back without him. After some more fooling I awoke.

All this seems very silly, but it shows the existence of four distinct layers, as it were, of consciousness.

1. That of the first part of the dream, cut off by a sharp line of forgetfulness from all the rest.
2. The second and last part of the dream, which seem to be on the same level.
3. The middle, when I "dreamt it was a dream." This too was cut off sharply from the last part of No. 2.
4. Waking consciousness; remembering 2, 3, and 4, but not No. 1.

With the assistance of Mr. G. A. Smith (whom I will in future call S.), I have lately made a fresh series of experiments in hypnotic memory, in which some further points have been observed; and it may make the matter more intelligible to give the details of a few cases. The great point, of course, is to use the right means for ascertaining whether the thing told is or is not remembered. It would never do to begin by asking the "subject" point-blank, "Do you remember such and such a thing?"—as, if he were inclined to simulate, he might say "Yes," though, in fact, he did not remember it; while, apart from any question of simulation, the mere mention of this thing might recall it to him, though it had lapsed beyond recall had his mind been left to itself. A very little skill will surmount this difficulty. The first question should be asked in some neutral form of words, which will be understood as referring to one particular thing if that particular thing is truly remembered, but which, if it meets with no response implying memory, will equally serve as the introduction to some fresh topic.

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The following are epitomised samples of the sort of conversation which occurred.

A young man named S——t, (often mentioned in my paper on "Peculiarities of certain Post-hypnotic States") after being hypnotised, was told in state A that the pier-head had been washed away, and in state B that an engine-boiler had burst at Brighton station, and killed several people. He was then roused to state A, when he proved to recollect about the accident to the pier; after which a few passes brought him again to state B.

S.[1] "But I suppose they'll soon be able to build a new one."

Had the pier been now present in S——t's mind, this remark would have been naturally understood to refer to it, as it had formed the subject of conversation a few seconds before. But he at once replied, "Oh, there are plenty on the line"—meaning plenty of engines.

S. "The pile-driving takes time, though."

S——T. "Pile-driving? Well, I don't know anything about engines myself."

A few upward passes were now made, and it at once becomes clear that the memory has shifted.

S. "If they have plenty more, it doesn't matter much."

S——T. "Oh, they can't put it on in a day; it was a splendid place."

S. "Why, I'm talking about the engine."

S——T. "Engine! What, on the pier? I never noticed one there."

Again, the same "subject" was told in state A that a balloon had been seen passing over the King's-road. Some passes were made which carried him into state B, when S. said, "But I didn't see it myself."

S——T. "What was that?"

He was now told that two large dogs had been having a fight in the Western-road; and a few upward passes roused him to state A.

S. "But it was a good long time in sight."

S——T. "The balloon?"

S. "No, the dog——"

S——T. "Dog! Why, was there one on it? A dog on a balloon!"

The "subject" is brought down again to state B.

[1] The topics were in every case selected, the changes of state directed, and the substance and tone of Mr. Smith's remarks suggested, by me; the actual form of words being sometimes left to him, in order that the conversation might flow easily. I am much indebted to him for the ready and complete way in which he throughout met my wishes.

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S. "But it didn't remain in sight long; it soon went up."

S——T. "What didn't? What went up?"

S. "Weren't we talking about balloons?"

S——T. "No; but one of them dogs looked like a busted balloon when he was down."

A few upward passes, and S. says, "Which one?"

S——T. "Why, there was only one."

S. "One what?"

S——T. "Balloon."

S. "I was talking about dogs."

S——T. "I don't know nothing of dogs."

Three days afterwards, S——t was again hypnotised, and S. said, "What was that you said about the pier?"

S——T. "Oh, about the head being washed away."

This, it will be seen, was the memory appropriate to state A. Some downward passes were made, and S. said, "A good thing that things don't often happen like that."

S——T. "No, they don't at Brighton; they do on the Northern lines."

Here we have the engine accident again—the memory appropriate to state B. The balloon over the King's-road was now strongly suggested by S.; but that idea belonging to state A, it could not be recalled in state B. S. then said: "Oh, no; of course it was in the Western-road."

S——T. "Yes, something happened there."

S. "What was it?"

S——T. "A dog-fight; between two large dogs. They had a good old tussle."

Here is an instance with W——s, also often mentioned in my earlier paper.

He was told in state A that the statue of Sir Cordy Burrows had been dug up and carried off from the Pavilion Gardens, and in state B that a pipe had burst in North-street, and had caused a waterspout and a commotion. After bringing him back to state A, S. said, "Yes, I heard that people got very muddy over that job."

W——S. "What job?"

S. "What I told you about."

W——S. "Ah, they *would* get muddy over taking off that statue."

S. "I was talking about the pipe bursting." But no suggestion or description was able to bring back this occurrence—which belonged to the B class—to his mind.

The next day the same "subject" was hypnotised, and was immediately asked what had happened in the Pavilion Gardens.

W——S. "Sir Cordy Burrows? when they ran away with it?"

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S. "Ran into North-street, didn't they?"

W——s. "No."

S. "There was something about a pipe in North-street."

W——s. "Oh, I haven't heard anything about North-street."

He was carried in a few seconds into the further stage, when S. said, "Where was it carried off to?"

W——s. "They couldn't carry it, could they? But it carried itself pretty high. Carry a waterspout!"

S. "What about that statue?" But nothing would revive this A idea in the B state.

On March 23rd, S——t was hypnotised, and told that the spire of St. Paul's Church, in West-street, had fallen, and hurt some people. Some passes were made, and S. said: "Did you hear whether many people were hurt?"

S——t. "When?"

S. "In that accident."

He had no idea what was meant, and S. now told him that the accident had been at the Grand Hotel—that the lift had gone up with a run, and been smashed against the top. He was then brought back to state A.

S. "Yes, that's an unusual sort of accident."

S——t. "Yes, they don't generally fall like that, unless struck by lightning."

S. "Fall! Why, it went up."

S——t. "Went up?"

S. "Yes, at the hotel."

S——t. "It didn't fall on a hotel, did it?"

On March 27th, being asked, in state B, what it was that had happened in West-street, he replied, "The top of the church fell off."

S. "Wasn't there something that went up?"

S——t. "I don't think so."

S. "Went up with a run?"

S——t. "No; they were frightened the other side of the road, perhaps."

S. now brought him down to state B, and continued, "Oh, they were frightened, were they?"

S——t. "Yes, those that saw it were."

S. "Saw what?"

S——t. "Saw it go up."

S. "What go up?"

S——t. "That lift go up."

S. "I thought you meant that spire."

S——t. "What, is there a spire on the top?"

S. "Top of what?"

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S——t. "Of the hotel." And so on.

It is equally easy to start with state B. Thus, on April 7, the eleventh day from the last experiment, S——t was carried down into the deep speechless condition, and then recalled by one or two calls to the stage where he was capable of answering. The above conversation was then continued.

S. "Do you remember that accident that there was at Brighton?"

S——t. "What, at the Grand Hotel, when that lift went up?"

S. "Ah, we were talking of several accidents; wasn't there another in—in West-street?"

S——t. "No. The hotel *is* at the bottom of West-street." (It is very near to the junction of West-street with the King's-road.)

He is now roused, and S. continues, "Oh, just at the bottom of West-street, is it?"

S——t. "Not quite; nearly."

S. "What is?"

S——t. "The church."

S. "What church?"

S——t. "That one the steeple fell off; you were telling me about it. It fell on the roof of an hotel"—clearly the echo of his concluding remark on March 23rd.

Here is an instance of an entirely fresh experiment commencing with a suggestion in state B. W——s, having just been roused from the condition when he was incapable of answering, was told that there was a fine new specimen of a whale at the Aquarium.

W——s. "Oh! Where did they get that from?"

S. "It was found floundering on the coast."

The "subject" having been roused to the lighter state, S. went on, "So they'll have it in a tank."

W——s. "What?"

S. "Wasn't I telling you about something? What was I telling you about?"

W——s. "You told me *something*." He appears to consider.

S. "What sort of fish did I mention?"

W——s. "Fish! I don't know." He cannot recall this idea.

S. "Well, I was going to tell you about Miss Webb's display at the pier. They're going to have that at the Aquarium, in a tank."

State B is now reproduced, and S. proceeds: "But I suppose she's used to the water."

W——s. "They generally are; you don't often see them out of it, unless they're dead."

S. "I said it was at the pier."

W——s. "You said floundering on the coast."

S. "No, I said something about Miss Webb."

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W——s. "Webb! Whale ain't Webb."

It would be tedious to multiply these normal instances. But there were some of a more unusual kind. As I have said, the rule is to obtain *two* states or stages. If the attempt is made to carry the trance-condition beyond state B, the effect is either to bring the "subject" into an apparently deep sleep, in which he is incapable of answering, and probably of hearing; or to create such a desire for sleep, and aversion to being questioned, that he becomes more or less intractable. With one "subject" I have found that even the second stage, on one or two occasions, could not be obtained. In this deepening process sleep and apparent unconsciousness supervened before any dividing line had been established; so that, up to the last moment when he could answer questions, the memory of the things told him immediately after his entrancement remained. But there are other cases which are exceptional in just the opposite direction—cases where the course of the trance allows a distinct *third* stage of memory to manifest itself before unconsciousness sets in. The following instance will make this clear.

In state A, S——t was hypnotised; and the fact of his being in state A was ascertained by his remembering the balloon over the King's-road, and forgetting the dog fight and the engine-accident—the ideas of state B. He was now told that a foreign flag had been seen floating over the Pavilion, and was then carried on into state B, when S. said, "People may well complain."

S——T. "Yes."

S. "Why?"

S——T. "Why, the nuisance—those dogs fighting in the Western-road." (The idea proper to state B is revived.)

S. "No, I meant about the flag."

S——T. "What flag? There are plenty of flags about." (The idea proper to state A is forgotten.)

S. "No, I meant that cart running away in Montpelier-road"—a new idea, which will belong henceforth to the B class.

S——T. "What cart?" Then, scornfully, "Cart running away! It's the horse that runs away."

He was then informed more particularly that a horse with a cart had bolted in Montpelier-road; and the deepening passes were continued.

S. "So they found it bottom upwards."

There was no answer; the "subject" had lapsed into sleep. He was called by name, and a few reverse passes were made—when he woke with an "Eh?"

S. "They found it bottom upwards."

S——T. "What? When?"

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S. "A boat, I mean." He was then told that a very high tide had washed away a boat on the beach; but that after a time it had drifted ashore. This idea was suggested in what proved to be a separate and third stage, C, when he was on the very verge of lapsing into unconsciousness; and he did lapse immediately afterwards. He was roused, and S. said, "That's the effect of not tying it securely." S——t's answers now showed that the rousing had carried him over stage C, and that he was once more in stage B. He said, "Tied? They never tie them."

S. "No wonder it was washed away then."

S——T. "Washed away! Did it go over the cliff?"

S. "No; what do you mean?"

S——T. "That horse and cart you were talking about."

Here, then, was the stage B idea, the boat of stage C being forgotten. It remained to ascertain that what I have called stage C was not identical with stage A—that there had been a real progression beyond stage B, and not a mere oscillation between the A and B states. Accordingly, some reverse passes were made, with the view of bringing the subject into the A state; and S. said, "I dare say it will get knocked about on the beach."

S——T. "What knocked about?"

S. "What I was telling you about."

S——T. "Why, have they taken it on the beach now, then?"

S. "It *was* on the beach."

S——T. "Why, you said it was on the Pavilion."

S. "What do you mean?"

S——T. "That large flag."

Here then was the stage A idea, and the memory of the boat of stage C proved as unrevivable as it had been in stage B. S——t was now carried down without pause into the state of deep sleep—the most certain way of lighting on stage C being to go beyond it in this way, and then to revive the "subject" just enough to enable him to understand and answer. He was called by name several times, and a few reverse passes were made, before he answered, "Eh? what?" S. replied in words which would apply equally to carts or boats; but, as I expected, they were understood as applying to *boats*—the stage C idea.

S. "Is it customary to tie them?"

S——T. "Yes."

S. "I thought you said it wasn't." (He had said before that it was not customary to tie *carts*.)

S——T. "Oh, yes; sometimes they tie them to capstans, sometimes to larger vessels."

He was now questioned about the cart, but had no remembrance of it; also about the dog-fight (which, the reader will recall, was another

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stage B idea), with the same result. Some upward passes were now made, and S. said, "Did you say they tie them to a capstan?"

S——T. "No; they throw the reins loose over the horse's back."

S. "A lot of people saw it coming down."

S——T. "What, the horse and cart?"

Here is evidently the reappearance of stage B; and proceeding again on the upward or lightening course, we found the A idea, the flag on the Pavilion, duly remembered. This was on February 28th. On March 2nd, the same process was briefly repeated. Thus after the "subject" had proved his recollection of the flag, he was carried straight on into the furthest state, and S. said, "Have you heard of something running away?"

S——T. "No; not *running* away; it *broke* away on the beach: but it washed in again." (Here is stage C, stage B having been crossed without any questions.) The "subject" was roused a little, and S. said, "Yes; it very nearly got lost."

S——T. "What? I don't think so."

S. "If it hadn't been washed ashore, it would have been lost."

S——T. "It didn't go over the rails into the sea, did it?"

S. "What didn't?"

S——T. "That horse and cart." (Re-ascent into stage B.)

He was now completely roused, re-hypnotised, given a new A impression—viz., that the statue had been taken from the Pavilion Gardens—and then a few passes were made.

S. "So people ran in all directions."

S——T. "When, where? Anything serious?"

S. "That statue, you know."

S——T. "Statue! Was it in the way then?"

S. "In the way? When?"

S——T. "When that horse and cart ran away." (Re-descent into state B.)

He is now given a new B impression—viz., that the pipe had burst in North-street—and is then carried right on into deep sleep, and slightly roused.

S. "Yes, that's a novel idea, isn't it?"

S——T. "What?"

S. "Why, turning that——"

S——T. "What, the water turning that boat ashore?" (Re-descent into stage C.) And so on.

I will give one more instance of these memory alternations, which includes the third state. Immediately after the last appearance of the boat, which belonged, it will be remembered, to stage C, S——t was told that Brill's Baths were going to be transformed into a circus—

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which, he opined, would never pay. This was the final impression of March 2nd. On March 3rd, we began with stage A.

S. "What were you telling me about the Pavilion Gardens?"

S——T. "*You* were telling *me*—about the statue of Sir Cordy Burrows being taken away." (A.)

He is now told that a new Grand Hotel was to be built on the East Cliff. He expresses surprise, and says that "it is a funny place to choose." He is now carried deeper.

S. "Yes, it is a funny place."

S——T. "Why, they burst anywhere."

S. "What do you mean?"

S——T. "Why, you told me a water-pipe had burst in North-street." (B.)

S. "I was talking of the hotel."

S——T. "What, did it burst beside the *Unicorn?*" (This is a hotel in North-street.)

He is now told that there was to be a new Electric Railway along the West Cliff.

S——T. "Have they got the sanction of the Council?"

S. "Have you heard of anything to be done on the *East* Cliff?"

S——T. "Nothing that I know of. Only that lift for the railway." (This was a real project in connection with the East Cliff electric car.)

S. "That improvement will make up for the catastrophe at the Pavilion."

S——T. "What was that?"

S. "The statue."

S——T. "Statue!" This A idea cannot be recalled in state B.

He is carried deeper.

S. "So they are going to do it after all."

S——T. "Are they? A very good thing if it pays."

S. "What pays?"

S——T. "Why, that Circus at Brill's Baths." (C.)

He is now told that a new spire is to be put on St. Paul's Church, in West-street; and then we begin the reverse journey.

After a few upward passes, S. says, "Yes, St. Paul's wants one like that."

S——T. "Like what?"

S. "The spire for St. Paul's."

S——T. "I've never seen St. Paul's; it looks very nice in photographs." (He referred the remark to St. Paul's in London.)

S. "What is that they are going to do on the West Cliff, or at Brill's Baths?"

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S——T. "There's that new Electric Railway." (B.) The idea of the circus (C) could not be revived.

S. "That will be an improvement, like that hotel."

S——T. "Why, there's no hotel been improved."

S. "Not on the East Cliff?"

S——T. "What, are they going to build a new one?"

A few more upward passes, and S. resumes, "They have been painting it."

S——T. "You said they were going to build a new one."

S. "A new what?"

S——T. "Hotel on the East Cliff." (A.)

He is woke, and then immediately re-hypnotised. For the first few moments he only remembers "something about some hotel," and does not recall on which cliff it was to be. But a few more passes bring back state A completely.

S. "Was there to be something on the West Cliff?"

S——T. "You said the hotel was to be on the East Cliff." (A.)

He is carried further, and S. says, "On the East Cliff, is it to be?"

S——T. "Why, they've got one there!"

S. "One what?"

S——T. "An electric railway,"—which is true. From his exclaiming "Why they've got one there," it may be inferred that the hotel (A) was now forgotten, and that the idea of the new Electric Railway (B) which he had been told was to be on the *West* Cliff, had reappeared. The state is now deepened, and S. says, "Oh, they have got one?"

S——T. "No, not yet."

S. "What?"

S——T. "Why, a new spire to St. Paul's." (C.)

Brought back to state A, he remembers the hotel on the East Cliff, but when the new spire is suggested, he remarks, "What, to that church at Kemp-town?"

These samples are fair types of the dialogues that passed, and will sufficiently show, I think, that the results were fairly observed, and not forced or fished for in the course of the interrogatories. But it may be objected that I am taking the honesty of the "subjects" too much for granted, and that they may have acted their parts. Now, I should certainly not base a conclusion as to the genuineness of the experiments on the fact—which my experience of these "subjects" put quite beyond doubt—that they were in a true hypnotic state. I am very far indeed from holding that because a person is hypnotised he is incapable of deceit; indeed, I think it by no means improbable that even honest persons may be guilty of what looks like chicanery during that temporary dislocation of the mental machinery which the turning of the

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hypnotic screw involves.[1] But, putting morbid and exceptional cases aside, I would unhesitatingly assert that, with patience and observation, one may learn to know one's "subject" in the abnormal state, even as one may learn to know him in the normal state. He is a new person, with decided eccentricities, and he might fail to recognise himself; but, for all that, he has a quite recognisable character, the manifestations of which, in the narrow range of circumstances with which he is brought into contact, are specially constant and easy to predict. Thus one comes to trust, or, it may be, to distrust him, just as one might any other acquaintance. Now the tone, demeanour, and style of conversation of the "subjects" on whom these observations were made have always been perfectly open, candid, and consistent; there has never been the slightest sign of trickiness or evasion. I really owe this expression of confidence to their hypnotic character, as I am almost ashamed to feel how exclusively the high level of untruthfulness which the above dialogues undoubtedly maintained was due to my own share in them. Not, of course, that I should expect to impart my gradually-acquired confidence to others, who have to accept the grounds for it at second hand; but such considerations may fairly be used to reinforce more definite arguments. These are at least three in number. (1) The young men whom I employed had no means of discovering what results would be to my liking. Though it was, of course, impossible for Mr. Smith and me, after the stages had once manifested themselves, not to expect the results to turn out in the main as they did, we were careful to give the "subjects" no opportunity of knowing what these expectations were. The matter was never discussed in their presence, either when they were entranced or when they were awake—except that on waking they were offered a sovereign if they could repeat anything that had been told them in the trance; and no expressions of satisfaction or dissatisfaction, or comments of any sort, accompanied the experiments. I may mention, too, that in five distinct instances, through my forgetfulness, this or that "subject" was interrogated, when in a particular state, on topics which had been previously mentioned to one of the others when in that state, but not to him. On these occasions his mind appeared to be a complete blank as to what was referred to. I imagined, therefore, that there was some failure

[1] This seems to be the case also in other abnormal manifestations, as little connected as hypnotism need be with bodily, mental, or moral disease. Some of my readers will recall the Newnham experiments (*Phantasms of the Living*, Vol. I., pp. 63-9), where some of the answers, written with a planchette, showed a trickiness quite alien to the real character of the person who held it; and in the same class we may reckon the baseless predictions and ludicrous claims with which this little instrument so often deceives those who have been unconsciously directing it.

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or irregularity in these results—until an examination of my former notes showed me what the explanation was. (2) Even supposing that one "subject" might have hit, by luck or cunning, on the hypothesis of memory-stages, and might have divined that this was what I had in my mind, and so tried to act it out, what are the chances that several should have independently done so? It must be remembered that the experiments were as new to each of them in turn as at first they were to me; and with each of them the results were as clear and unmistakeable on the first day as ever afterwards. (3) Even if luck or cunning had led them all to the discovery, it is surely most improbable that they should all have had so unbroken a run of success, in a complicated task requiring, one would think, much natural aptitude, and certainly much quick observation and presence of mind. Though there are special ways in which hypnotic differs from normal intelligence, the difference has never been observed to lie in a superiority of nimble practical wit. An untrained lad, when hypnotised, might surpass his normal self at learning a lesson by rote, but not at a game like whist.

Of the fresh points of interest which this series of experiments exhibited, the first relates to the effect which persistent *bothering* apparently had on the memory-conditions. The effect was in some cases to *obliterate* the older impressions, but never to *confuse* them. Impressions made in state A did not reappear in state B, nor *vice versâ*; but impressions made on some previous day, in one state, might fail to reappear when that state reappeared, if a *newer* impression connected with the state had taken too strong a hold on the mind. Thus, at the beginning of the experiments on February 28th, S——t remembered, in state A and state B respectively, the impressions which had been connected with those states on February 26th; but after the various ups and downs of the journey to stage C and back again, and the giddy merry-go-round of flags, carts, and boats, he was unable to recall the balloon, in state A, and the dog-fight, in state B; though (as we have seen) remaining perfectly clear as to the *new* impressions now associated with these two states respectively. And on March 2nd, though the ideas of February 28th were each remembered in the appropriate state, no amount of suggestion could bring to remembrance the impressions of an older date. Exactly the same thing occurred on March 3rd. The impressions of March 2nd were remembered, each in the proper stage, at the beginning of the sitting, but could not be revived at its close, after a course of questions connected with a fresh series of impressions.

A second observation was that what I have called the "knife-edge," the middle line where the ideas of both stages were now and then for a moment present together, can apparently be broadened out with habit; the sharp angle becomes a gentle curve, and the stages at either end which remain completely out of sight of one another shrink

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proportionately in extent. Thus with W——s, whose mind has been carried over the ground again and again, one has now to be careful to impress the second or "state B" idea when he is closely approaching the deep speechless condition which marks the limit of the experiment.

Another fact which clearly came out was that people have good and bad hypnotic memories, just as they have good and bad ordinary memories. After an interval of less than three weeks, all the ideas that had been impressed on S——t proved to be forgotten and unrevivable, with one doubtful exception; and in perfect harmony with this, I found that it was impossible to get this "subject" to execute an order *à longue échéance*. He was told in the trance on March 3rd that he was to do a particular thing on March 28th; but the order had completely faded from his remembrance on March 23rd.

But a more important point was this—that even where the memories remain clear, the distinct separation of states may be *temporary* only. The case in which this was first shown greatly surprised me, as it was the first irregularity that had presented itself in many scores of trials. On March 2nd, W——s, while undoubtedly in state B, recalled the story of the balloon, which belonged to state A; and a few minutes afterwards, while in state A, he remembered the engine-accident which belonged to state B. Now both the ideas which seemed thus to be remembered out of their proper states had been impressed on him a week previously. In the interval a good many conversations of the type above exemplified had been held; and my first notion was that by ourselves repeatedly suggesting, in one state or the other, the idea not proper to that state—in order to show that in the wrong state no amount of suggestion would quicken the paralysed memory—we had by degrees created an independent impression of the A thing in the B state, (or *vice versâ*,) or had at any rate given the "subject" the material from which he could himself piece out some knowledge of it. The answers, however, had been given with a readiness and completeness which made this supposition seem decidedly strained; and subsequent trials showed clearly, I think, that it was unnecessary, and that there had really been no irregularity. The obliteration of the distinction in these cases was simply due to the week's lapse of time;[1] and after a longer period of 19 days, during the greater part of which no experiments were made, I found that the old

[1] The period may probably vary greatly under different circumstances; and I have not yet been able to ascertain whether the fusion itself is the rule or the exception. With S——t, we have seen that the separation of memories remained quite distinct on the 11th day, while in less than double that time there remained no memories to be separated. With W——s, on the other hand, who has been much more exercised, it happened in one case that impressions given on March 22nd and revivable only in the mutually exclusive stages on March 23rd, were fused on March 24th.

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ideas, of whichever state, could *all* be equally and indiscriminately recalled in either state A or state B; though in respect of more recent impressions these states proved as distinct and as mutually exclusive in their memories as ever. This was a great relief to my mind, not only as doing away with the uncertainty which the occurrence of exceptions in a uniform series of results must necessarily involve, but for a wider reason.

Probably all who have considered the phenomena of "double consciousness," or any cases where a single life has included parts of which one knows nothing of another, have asked themselves how far the individual really remained the same. Mr. Myers has recently pointed out, as I think with perfect justice, how much less of a single and complete thing personality is than we are apt to assume, how much the very idea of personality depends on the sense of continuity of memory, and how this fact involves apparent disruption and subordinate multiplications of personality, whenever by any means the chain of memory is abruptly snapped. But however much we may recognise as a fact that the *I* of to-day or of this year may fail to show any connection—save in the habitation of the same bodily tenement—with the *I* of yesterday or of ten years ago, we most of us cling, I imagine, to the notion that there is some sense in which it is still true that the two *I's* which inhabit the same bodily tenement have, after all, a sort of identity, and that their relation is fundamentally different from that between persons inhabiting different bodily tenements. And we should certainly feel it to be a justification of this notion, if there came a time when the inhabitant of the one tenement could look back, and remember simultaneously *both* the dissociated states—if he could in this way relate his present consciousness to each of them. Just as we should recognise a certain unity of personality in the fact that each of the *I*s, though separated in all else, retained some past memory in common, so should we recognise a unity in the fact that, though the two had had no common element, the memories of them co-existed in a single consciousness. That is to say, the point of union may be *above* the point of separation as well as *below* it. Now, whether or not such a final fusion in memory will ever be manifested in those major instances of broken identity which present the personal problem in an urgent form, I cannot guess; if not, then I confess that I see no manner in which our faith in the continued identity of the persons concerned, or, ultimately, in our own, can be sustained. For is not their case ours?[1] Does the boy or the man know aught of the life of the infant, who yet, we say, was he? Is not the physical change of death, which we must all undergo, a profounder one than any which

[1] See Mr. Myers' remarks above, p. 257.

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the brains of Louis V. or his like have undergone? The problem of continuance is the same for all; and though, in our total ignorance of the nature of the bond between mind and organism, it may be rash to found on present experiences presumptions as to untried modes of psychical life, I still think it is something if here and now, on a small scale, a union of divided states in a higher memory can be shown to take place. I say on a small scale; for with the hypnotic "subject" there is, of course, no question of an actual breach of personality, since the backward bonds remain unbroken: in each of his states of mutually exclusive memory his normal waking life is distinctly realised and remembered. At the same time, the experiments show that a separation of impressions which appears as distinct and complete as if they belonged to different individuals may in time, and by a spontaneous process, be dissolved away, and the two pieces of experience may merge into the general store over which the mind has unrestricted control. It would be easy to increase the gravity of the experiences were it worth while to afflict the "subject's" mind; he might be told of tragic events immediately concerning himself; he might even be incited to crimes and violence with real consequences of a most serious kind. But after all, the scale of the results is of little importance. It is one of the advantages of hypnotism that it condenses into a few minutes processes which it might take years of normal life to parallel; and when we remember that the ideas suggested were strongly impressed on the "subject's" mind, that they often surprised him and usually elicited a string of comments, and that in the other state the memory of them could not be evoked by the most explicit and persevering reminders, the breach and oblivion seem to be as utter as any which mere course of time could bring about. Yet no less utterly do they disappear in the natural development of the very condition out of which they arose. I do not wish to press the analogy of these hypnotic phenomena unduly; but if the superiority of man to the brutes depends on personality, and if personality depends essentially on memory, then those who desire that man's dignity should be maintained, and that personality should be continuous, can hardly afford to despise the smallest fact of memory which exhibits the possibilities of union and comprehension as triumphing over those of disruption and dispersion.

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IX.

NOTE ON CERTAIN REPORTED CASES OF HYPNOTIC HYPERÆSTHESIA.

In an interesting paper which appears in the *Revue Philosophique* for November last, M. Bergson of Clermont-Ferrand gives an account of a case of supposed thought-transference or clairvoyance which turns out to be much more probably explicable by hypnotic hyperacuity of vision. The case, I think, should be noted here, for to those who have satisfied themselves that transmission of thought does sometimes occur it is specially important to sift away all the spurious cases which, while apparently supporting, must in the end discredit the novel theory.

Briefly, then, MM. Bergson and Robinet found that a boy, who was supposed to be a clairvoyant, or a telepathic percipient, could read figures and words under the following conditions. One of the observers hypnotised the boy, stood with his back nearly against the light, opened a book at random, held it nearly vertically facing himself, at about four inches from his own eyes, but below him, and looked sometimes at the page and sometimes into the boy's eyes. The book had often to be slightly shifted; but ultimately the boy could generally read the number of the page. Asked where he saw it, he pointed to the back of the book, just opposite the number's true position. Asked where the binding of the book was, he put his hand underneath the book, and indicated the place where the binding would have been, had the book faced him.

It occurred to M. Bergson—and he deserves full credit for being the first to insist on this precaution—that, small though the figures were, the boy might really be reading them as reflected on the cornea of the hypnotiser. Experiments with slightly altered position showed that in fact the boy could not read the letters unless adjustment and illumination were carefully made as favourable as possible. The letters were 3mm. in height,—nothing is said of their thickness,—and their corneal image would be about 0·1mm. in height, as M. Bergson computes, under the conditions employed. This seems a very small image to see distinctly; but Mr. J. N. Langley and Mr. H. E. Wingfield, who have kindly tried some careful experiments to test this point, inform me that they can read on each other's corneæ the corneal image of printed letters of about 10mm. in height. We know from Binet and Féré's experiments, &c., how greatly the hypnotic state does sometimes increase acuity of vision; and we may, I think, conclude that the boy probably did read the letters on his hypnotiser's cornea.

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What, then, are we to make of the boy's statement that he saw the words as though in a book facing him? M. Bergson feels sure that this was the boy's real belief. There was no suspicion of charlatanism, and in fact the boy disliked the experiments, and now, as M. Bergson writes to me, refuses to renew them. M. Bergson supposes, and I think justly, that this was a case of *simulation inconsciente;* the hypnotised subject genuinely referring his sensations to the source to which his *first* hypnotiser (a believer in thought-transference) had suggested to him that they were due.

And, in fact, this unconscious simulation which leads the subject to refer his unusual sensations to the special cause which his hypnotiser, or some caprice of his own mind, suggests, is a not uncommon and a very interesting phenomenon. It was observed, for instance, by Elliotson, who pointed out a good many hypnotic peculiarities which his successors are now gradually rediscovering. It is a *hypnotic exaggeration* of a familiar phenomenon, namely, of the large infusion of erroneous inference which we most of us import into the account which we render to ourselves of our ordinary sensations.

A particularly curious case is briefly described in the *Journal of the Society for Psychical Research*, June, 1884. A man was brought to us who, when hypnotised, could often name cards held in front of him, although his eyes had been plastered up and bandaged in a most elaborate way. The man's friends took this for clairvoyance, and the man assented, being sure that he could not see the cards in the usual way. They "flashed upon him," as he said. Now, after a good deal of puzzling over the case, Mr. R. Hodgson found that he also could sometimes manage to see over similar bandages, through small chinks between the skin and the paper gummed over the eyes. But he, too, found that he saw fitfully, the power of vision seeming to come and go,—and he actually could not tell with which eye he was seeing, except by covering each eye in turn with his hand. The distorted position of the eyeball, and the minute and oddly-placed channels of vision, produced so much confusion that there seemed no reason to suppose that the hypnotised subject's belief that he was seeing "clairvoyantly" was other than genuine.

The case of M. Bergson's boy seems to have been a similar one. And his idea that he was reading from the book seems to have been a sort of compromise between the feeling that he was reading *somewhere* and the hypnotiser's suggestion that the words were being transferred supernormally from mind to mind.

Thus far, then, M. Bergson's narration and explanation seem credible enough, and his argument as against thought-transference in this boy's case seems well made out. But he proceeded to further

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experiments which, as recounted, seem incredible, and which may lead some readers to distrust the accuracy of the whole series.

To explain the difficulty, I must first point out that the word hyperæsthesia is loosely used for three different classes of phenomena. It is used (1) for an exaggeration of the familiar action of specialised organs, as when the eye is sensible to very small amounts of light. It is used (2) for alleged perceptions, which would imply a specialisation of what I may term our *undifferentiated fund of nervous sensibility* in novel directions. Sensibility to the action of magnets, of metals in contact, of medicaments at a distance, may or may not exist, but should scarcely be called by the same name as (say) the eye's extra sensitiveness to light. And again, the word is used (3) for cases where our non-specialised organs are credited with performing functions which, so far as we can see, demand a definite sense-specialisation, or our specialised organs are credited with functions which, on measurable anatomical grounds, appear to overpass the limits of their specialisation. This last class of cases must be received with extreme caution.

Well, M. Bergson says that he showed the boy a microscopic photograph of 12 men, its longest diameter 2mm., and that the boy saw and imitated the attitude of each man. Also that he showed the boy a microscopic preparation, involving cells not greater than ·06mm. in diameter, and that the boy saw and drew these cells.

Now I might, in the first place, object that thought-transference was not formally excluded, since M. Bergson himself knew the photograph and the look of the cells. I do not press this, for the other experiments seem to me to negative thought-transference in this case. I merely point out that if we wish to prove that a subject does not receive an image from our minds we should present to him an object with which we are ourselves unacquainted.

But the real difficulty is as regards the *minimum visibile*. It is usually (though not universally) supposed that in order to produce a definite image more than one retinal rod or cone must be stimulated; and that consequently no object can be separately discernible which does not subtend (say) an angle of 60 seconds, or whose retinal image is less than (say) ·004mm. in diameter. Floating particles, none of them exceeding ·0029mm. in diameter, have, I believe, been seen as a *cloud* in a ray of electric light sent through a tube of filtered air, but have never been seen *separately* by the naked eye.

Now, the *retinal image* of an object itself only ·06mm. in diameter, and placed within the range of distinct vision, will be much less than ·004mm. in diameter. To bring it up to this minimum the retinal image must be $\frac{1}{15}$ of the size of the object itself; and this implies a nearness to the eye involving mere darkness and blur. The microscopic slide was presumably transparent; but nothing was said as to the

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transparency of the *photograph*, and yet the points distinctly visible on the photograph must have been even *smaller* than the cells on the slide.

A letter with which M. Bergson has favoured me has done much to remove these difficulties. It seems that the photograph was transparent, and that the boy held it close to his eye. Moreover, after seeing the photograph the boy could not read ordinary print. "C'est trop grand," he said; and it was some time before the eye (which M. Bergson believes to have been always myopic) resumed its normal state. It seems, then, conceivable that hypnotic suggestion had induced (by spasm of the ciliary muscle?) some change in the shape of the crystalline lens, which made the eye a microscope for the time being. Mr. George Wherry has kindly communicated to me two somewhat analogous cases, where ciliary spasm (itself induced by microscopic or telescopic work) led to uniocular diplopia, in one case even triplopia. In these cases *irregular* ciliary spasm apparently turned the lens into a kind of *multiplying glass*:—is it possible that M. Bergson induced a *regular* ciliary spasm, which turned the lens into a *magnifier*?

Turning back to the question with which we started, the possibility of a hyperæsthetic explanation of cases of supposed telepathy, I must add that I earnestly hope that the experiments recorded in *Phantasms of the Living* may receive careful criticism from this point of view. Few, if any of them, will, I think, be found explicable by the *cornea-reading* discussed above, but there may be other sources of error which have escaped our care. Yet in the hands of some critics hyperæsthesia itself assumes attributes almost magical. In the *Revue Philosophique* for December, 1886, Dr. Ruault maintains that he and others have frequently sent subjects to sleep "by an effort of will" in an adjoining room; but that the real cause of the sleep was the suggestion given by the changed sound accompanying the hypnotiser's quickened circulation, which the subject hears through the wall. This is meant, it seems, to apply to the Havre case, now well known, of *sommeil à distance*, where Dr. Gibert or M. Pierre Janet can throw Mme. B. into the hypnotic trance, "by an effort of will," from their houses to hers.[1] Yet I confess that, whatever may be the true meaning of this curious history, I find it hard to believe that a peasant woman is sent to sleep by "the sound of a going" in the arteries of an elderly physician, at a distance of half a mile.

Since the above note was printed in *Mind* for Jan. 1887, some further experiments have been reported which may be noticed here as bearing more or less directly on the same problem—the

[1] An account of this case will be found in the *Proceedings of the S.P.R.*, Part X., Art. "Telepathic Hypnotism."

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sufficiency or otherwise of the ordinary senses to explain certain results noted in hypnotic hyperæsthesia. The hyperæsthesia of specialised sense-organs falls roughly into four divisions, as concerned with sight, hearing, smell (including taste), and touch—which, as here used, is the vaguest of the four categories. As regards smell, there seems no assignable limit which we can pronounce *à priori* that hyperæsthesia can never transcend. We have, that is to say, no distinct knowledge either as to the diffusibility of odorous particles, or as to the existence of odorous differences between objects not normally thus distinguishable by man. As regards hearing, our limit is more nearly calculable, for it depends on sound-waves, of which more is known; but nevertheless it is hard to say at what distance, for instance, a hyperæsthetic patient may disentangle her physician's step from the confused noises of the street. As regards sight, we may have difficulties arising from minuteness, from darkness, or from interposition of opaque objects. The difficulty of *distance* may be said to be compounded of minuteness and defect in light. The question of *minuteness* has already been touched on in Dr. Bergson's case. As to *darkness*, we may be prepared for an almost indefinite increase in retinal excitability, and for a considerable increase in the pupil's dilatation. The *interposition of opaque objects* seems at first sight to be a very definite obstacle. I will now, however, cite a case as to which it is not easy to form a decided opinion;—unless, indeed, we ascribe the coincidence to chance alone.

The case was published by Dr. Sauvaire in the *Revue Philosophique* for March, 1887. Mlle. S., a healthy girl, was hypnotised for the first time. It was suggested to her that there was a portrait on the back of a certain card (apparently the king of clubs), and that she would still see the portrait when awakened. She was awakened and recognised the portrait on the back of the same card, jumbled in the pack. This, of course, was not specially remarkable, on the theory that some trifling speck or crease affords a *point de repère* which enables the eyesight, stimulated by hypnotic suggestion, to recognise a card on which for other persons no mark is visible. But there was more than this. Another pack of cards, which the young lady had never touched, was placed before her, face downwards. She passed them through her hands, apparently, without turning any of them up, and as she did so she recognised another copy of the imaginary portrait, on the back of one of the new cards. The card was turned up, and proved to be the king of clubs—to correspond, that is to say, with the card in the first pack on whose back the hallucinatory portrait had originally been suggested.

Dr. Sauvaire suggests that she saw through the card, as it lay on the table, as we should see through it if we held it up to the light. Such an hypothesis would need strong confirmation. If the recognition

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was really due to hyperæsthesia, and was not merely a chance coincidence, it may be suggested that the face of one card adheres to the back of the next in differing degrees according to the amount of paint on the card, and that a delicate sense of friction may have been called into play. It has, indeed, often been suggested that hyperæsthetic subjects can see through the imperfectly opaque eyelids, and through the imperfectly opaque bandages applied thereto; but in such cases there has usually been strong light shining through the bandages, while in Dr. Sauvaire's case it would seem that the card's face was recognised *while lying on the table*, a feat more difficult to imagine. Efforts should, of course, be made to repeat the experiment.

Somewhat different is an experiment recorded by M. de Rochas,[1] on his familiar subject Benoît, an office-clerk, whose extraordinary suggestibility I have myself witnessed at Blois.

"I give to Benoît," he says, "a piece of cardboard, with the suggestion that it is a mirror. He looks at himself, arranges his hair, and his cravat." (This, of course, is mere acceptance of the suggestion.) "I place a real mirror behind him in such a position that the reflection from it falls on the card; he sees the back of his head; I put my finger against the mirror behind his head; he recognises my finger; I place my watch in the same place and turn it several times; he sees sometimes gold, sometimes something white (the watch-face), but without being able to say exactly what the object is."

It is difficult, I think, to suppose that reflections from the cardboard surface, imperceptible to the normal observer, really existed, and were really discerned by the subject. And it seems possible that in this experiment a shadow of M. de Rochas' finger may have been thrown by the real mirror on to the card, and the yellow and white light may have been alternately reflected on to it from the shining surface of the watch; while Benoît may have seen the back of his head, as well as his face, owing to suggestion. But if the experiments could be successfully repeated in such a way as absolutely to exclude such explanations as these, the results might be very interesting.

Dr. Taguet, of Bordeaux, had a few years ago a patient who was said to read words held up behind her back, and reflected on a card in front of her. Dr. Myers went to see this patient in the Asile des Aliénées at Bordeaux, in February, 1885, but at the time when he saw her she did not possess the power, and I have noticed no further account of her since that date.

M. de Rochas gives another case which, so far as it goes, recalls some old experiments of Townshend's. He believes (p. 283) that he rendered certain subjects by suggestion so sensitive to small degrees of

[1] *Les Forces non Définies*, p. 213. (Paris, Masson, 1887.)

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light that they recognised one another, when near at hand, in a room thoroughly darkened for Reichenbach's experiments on the alleged magnetic flames. The experiment is insufficiently described ; but here, too, is a line for further trial ; and in this case the sensitiveness of the dry plate might perhaps be utilised to give a precise measure of the degree of hyperæsthesia attained.

Another experiment of M. de Rochas', on auditory hyperæsthesia, though plainly inconclusive as it stands, presents matter for reflection. He rendered Benoît completely deaf by suggestion, contractured one of the boy's arms, and then found that when he spoke at the end of this arm, or indeed when touching any part of the boy's body, the voice was heard. It is obvious that this may probably have been the mere result of a suggestion unconsciously given to the subject that he *was* to hear under these conditions.

The question, however, is not so simple as it looks. It is possible, that is to say, that the suggestion to *hear* may have acted in a somewhat roundabout manner, may in some way have changed the condition of arm or body as well as of ear. Compare an experiment already given in these *Proceedings*, where Mr. Gurney shouted continuously into the ear of the subject, who was entranced; while the subject, on his part, did not apparently hear Mr. Gurney at all, but was aware of the lightest whisper uttered by his mesmeriser, Mr. G. A. Smith, who stood at a distance. Such a case may be explicable either by thought-transference or by what I have elsewhere termed *selective hyperæsthesia*. It may have been analogous to "silent willing," the utterance of the whisper forming no essential element in the transference of the idea, or there may have been suggested hyperæsthesia to sounds made by Mr. Smith, combined with suggested anæsthesia to sounds made by all other persons.

This possibility of combining hyperæsthesia and anæsthesia—localised nervous stimulus with localised nervous inhibition—offers one of the most hopeful avenues of hypnotic experiment. It enables us to isolate certain forms of sensibility and to observe them with much less than usual of the disturbing interruption of sensibilities on which we are not experimenting. Suggestions, moreover, directed to the internal viscera (which have, thus far, been inspired almost exclusively by a therapeutic aim), may be so arranged as to throw light on the working of special drugs. It would be interesting to see how far the viscera could take up, so to say, a suggestion to feel the action of a drug of whose nature the subject himself was not aware. It is possible that the action of minute doses might be thus discerned hyperæsthetically, and that such action might present instructive points of difference from the effect of the same drug in ordinary doses.

Such, then, are some of the problems which may be worked at, as

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it seems to me, on a suitable subject with good prospect of gaining real instruction. I bring them forward here because it would seem that suitable subjects are now being found in France, and because the experiments on hyperæsthesia thus far reported have been for the most part so unsystematic as to be nearly useless.

It is a strange and disappointing fact that for many years past, and notably since 1883, when the subject of mesmerism or hypnotism was first broached in these *Proceedings*, so little work should have been done in England in this direction. Beyond the experiments, scantier than could be wished, which the writers in these *Proceedings* have themselves been able to watch or to perform, there has been scarcely anything published in English since that date which has demanded notice. In France, on the other hand, so much has been done that the mere report and discussion of French experiments has formed a great part of our own task. This difference is largely due to the marked superiority of the French over the English as hypnotic subjects; apparently a racial difference which no effort of ours can nullify. Yet I cannot help suspecting that more of enterprise, more of familiarity with foreign work, on the part of the staffs of our own hospitals, might lead to the discovery of some of those fortunate subjects, "the frogs of the psycho-physiologist," whose special sensitiveness might teach us lessons all the more valuable because attainable without injury—or with positive benefit—to the subjects themselves.

FREDERIC W. H. MYERS.

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X.

CRITICAL NOTICES.

Le Magnétisme Animal, par ALFRED BINET et CH. FÉRÉ, Médecin-adjoint à la Salpêtrière. Paris : Félix Alcan, 1887.

This workman-like and brightly-written book forms a really valuable addition to the literature of its subject ; and few whose fate it has been to make any prolonged excursions into that literature will fail to realise what high praise such a statement involves. For one who wishes to gain a rapid, and at the same time a tolerably complete, view of the position of hypnotism in France, MM. Binet and Féré's treatise would form the complement to the two recent and equally excellent productions of the Nancy school, Dr. Bernheim's *De la Suggestion*, and Professor Beaunis' *Le Somnambulisme Provoqué*. The Parisian book has naturally a strong Parisian flavour. For scientific purposes Paris is the centre of the earth ; for hypnotic purposes the Hospice de la Salpêtrière is the centre of Paris ; consequently any form of hypnotism specially connected with that Hospice is necessarily "Le Grand Hypnotisme"—broken reflections of which may be found, as "*formes frustes*," in Nancy, Germany, England, and other places. But after all, this is mainly a question of name and classification. The great thing is to get all the phenomena competently observed, wherever they occur. Our authors expressly state in their preface that their work is the product of a school—or of *the* school, as disciples of Dr. Charcot very naturally hold ; and they have done their work of observation and exposition so well that we may all be glad to be enrolled as their and his scholars.

Yet a word of warning seems needed, with respect to the unique importance claimed by them for the pronounced *physical* phenomena of hypnotism ; since to grant that claim in its full extent would not only cast doubt on scientific results which I do not gather that they themselves really question,[1] but would involve a most serious circumscription of the most promising of all fields of psychological inquiry. They contend—and with justice—that the more remarkable physical features of hypnotic trance are objective and unmistakeable ; that these afford a test of the genuineness of the condition which the rawest sceptic cannot call in question. Now in the infancy of the subject such a test is, of course, of great importance. It was a physical feature —the inability to open the eyes—which led Braid to his first epoch-

[1] See especially their remarks on the work of Dr. Liébeault, p. 57.

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making studies; and the serene immobility which Esdaile's patients and others exhibited a generation ago, when their limbs were being amputated or large tumours excised during hypnotic trance, marked another epoch of scarcely less importance. Since, however, it is possible to simulate inability to open the eyes, and since influential medical critics opined that serene immobility under the amputating knife was simply the mark of the "hardened impostor," it is satisfactory to have a number of more objective proofs accumulated. But it is one thing to see this, and to admit, besides, the high interest for the physiologist of the specialities observed at the Salpêtrière; and another thing to identify the whole scientific character of hypnotism, as matter of precise and verifiable observation, with the cases where those specialities are found. The startling objective tests still have their use; they overbear otherwise invincible prejudice; and if there were only a dozen hypnotic "subjects" in the world, they might be indispensable. But experimental research has now advanced far beyond the point where the theory of simulation could be sweepingly applied by any intelligent critic—it would be nearly as rational to suppose that everyone who complained of stomach-ache or neuralgia was shamming, on the ground that these complaints are capable of being shammed. Hypnotic science would be a reality, and its palmary interest would remain, if there were not a single hystero-epileptic patient in the world. We find plenty of healthy persons who exhibit even the bodily signs in a quite unmistakeable form. The muscular condition which enables an ordinary "subject" to hold his arm extended for many minutes without the usual physiological signs of fatigue, or, supported on two chairs by head and feet alone, to support a heavy weight for a prolonged period, are sufficiently beyond simulation; and the same may be said, taking the phenomena *en masse*, of the smiling endurance of severe bodily inflictions, of the failure of boys without pocket-money to pick up sovereigns which they might have for the stooping, and many other similar eccentricities. Even the characteristic up-rolling of the eye-balls, if simulated, would imply nothing less than a world-wide conspiracy. But we might exclude bodily symptoms altogether, and the cumulative proof, arising from the ever-growing improbability that hundreds of persons in hundreds of places, guiltless of theories and unacquainted with one another, could build up by their several acts of conscious or unconscious deceit a large and consistent body of psychological results, would still remain as complete as that afforded by the most inimitable phenomena of plastic, rigid, or irritable muscles.

Even so, our authors might urge—and in fact they have urged—that the best material for scientific study is the perfect type, and that then deviations and rudimentary forms can be readily understood. But this

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plea has not really more force than the other. It is significant that the accepted French name for a hypnotic "subject" is *la malade*. But hypnotism is not a disease, though it is often a remedy; and a picked *malade* of the Salpêtrière presents a no more perfect type—may indeed present a much less perfect type—of the psychological peculiarities connected with the state, than many a healthy man or woman, who on physical grounds might fall short of the dignity even of a *forme fruste*. Nor have the physical peculiarities, so far, in either their developed or their rudimentary forms, thrown any light whatever on the psychical; so that the view which our authors put forward, that to pass from the former to the latter is to follow the rule of Descartes and pass from the simple to the complex, specious as it looks, has in reality little meaning. They do not themselves attempt to make any such transition.

The substantial value of the work is, however, quite independent of these considerations. If the Paris specialities are somewhat of a luxury, we none the less want to know all about them; and this book supplies the want without being by any means a mere monograph.

It opens with a bird's-eye view of the hundred years' history of "animal magnetism," from the *baquet* of Mesmer to the establishment of the *trois états* by Charcot. One is surprised to find no mention of Esdaile, certainly the most important figure in mesmeric history between Braid and Liébeault; but on the whole this rapid epitome is excellent. The tentative advance of skilled observation and methodical thought into the domain of marvels so strangely opened up by charlatans and amateur healers is graphically presented; and the writers show their superiority to ordinary scientific prejudice by admitting that in this domain, as in others, scientific methods may sometimes reveal marvels as well as explode them. It is significant to find the subject of thought-transference (which, by the way, was brought to the front in England some years earlier than our authors represent) treated with reserve and respect—for the first time, perhaps, in any book of scientific pretensions, written without professed belief in the reality of the phenomenon. Here, however, I must again venture some brief comment in respect of two of the criticisms made.

Referring to the results and arguments in M. Richet's well-known paper of December, 1884, which introduced the subject to French science, our authors object that "the calculus of probabilities is not adapted to decide a question of this nature." This is true in a sense—in the same sense in which it would be true to say that an examination of a man's heart is not adapted to decide the question whether or not he is in sound health. The man's heart may be all right, but his lungs or liver may be out of order: so results of *soi-disant* "psychical"

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experiments may far surpass anything that the calculus would allow us to attribute to chance, but may still be due to something other than thought-transference—namely, to deliberate fraud, or to unconscious interpretation of physical signs. But if the physician discovers that all the other organs of his patient's body are sound, then an examination of the heart is eminently adapted to decide the question of health—we can guess what a Life-Assurance Company would say of a physician who gave his certificate without it. And in the same way, when the hypotheses of fraud and of unconscious physical signs are excluded—the first by the character of the experimenters, the second by the conditions of the experiment—the examination of probabilities, and in cases which admit of numerical measurement the application of the calculus of probabilities, is not only adapted to decide the question of thought-transference, but is the one indispensable means of deciding it. The issue being left clear between thought-transference and chance, the experimenter who should neglect to take account of chance would be on a par with the physician who forgot that his patient had a heart.

The other item of criticism on this subject is amiably meant, but none the less must be strongly demurred to. A sort of excuse is made for thought-transference and its advocates, in the last resort, on the ground that, however wrong the hypothesis may be, the facts which have led to it are likely to prove interesting physiological curiosities, showing the degree to which thought can betray itself by physical signs—as by rudimentary movements of the muscles of articulation, and by changes in the vascular and secretive systems. General suggestions of this sort are misleading, inasmuch as they have no relation to the evidence on which the hypothesis really rests. However "externally visible" people's thoughts may habitually be through unconscious movements of their lips or larynx, they cannot be thus visible to those who do not use their eyes to see them; and however much aware "subjects notoriously endowed with sensorial hyper-excitability" may be of "thermic or secretory modifications" in their own bodies, it remains to be explained how the thermic or secretory modifications of some one else's body should reveal to them whether he is thinking of the two of clubs or of the five of diamonds.

The historical chapter is followed by an account of the various means by which hypnotic trance may be produced. On this there is not much to remark. The authors point out, as I think with justice, that the analogy of hypnotic to ordinary physiological sleep must not be pressed; though they somewhat detract from the strength of their own position by a theory that all hypnogenetic processes act by nervous *fatigue*. The ultimate nervous events involved are really as unknown to us now as they were in the time of Braid; and the key, *e.g.*, to

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many cases of hypnotisation by suggestion, or to Dr. Pitres' rapid entrancements by pressure of special areas of the body, seems no more likely to be found in "fatigue" than in "instability," or "hypertrophy," or "congestion," or other supposable conditions. Even in cases where the means of entrancement is suggestive of fatigue, a difficulty would often remain in connecting the means with the result—which, as I have pointed out before (*Proceedings*, Vol. II., pp. 272-4), is often not a dulling, but a special alertness and mobility, of mental life. On the whole, however, our authors keep commendably free from premature or fanciful theories; and the emphasis which they have given to the physical aspects and forms of hypnogeny is, I think, the right corrective to the tendency of the Nancy school to recognise no other agency than suggestion.[1]

The exposition now proceeds to the actual phenomena of trance; and here we have naturally a predominance of physiological detail. The peculiarities of muscle, tendon and nerve, observed in hysterical "subjects," and the "three states" of lethargy, catalepsy, and somnambulism, are clearly described and illustrated. I find here little matter for special comment, but three remarks suggest themselves. (1) Speaking of muscular contractures due to "lethargic" hyper-excitability, the authors state that even when the excitation is applied to the body of a muscle, the contracture is *reflex—i.e.*, is produced by the ascent of a nervous current to the brain and a re-descent by the motor nerves; and they regard this as proved by the fact that contracture of one sterno-mastoid muscle, which turns the head to one side, can be corrected by excitation of the other—this being "a sort of interference which has no seat except in the nervous centres." Surely the proof is rather a lame one. If I can turn a person's head to the right by pulling the right ear, and bring it back to its normal position by pulling the left ear, without setting up any interference in his nervous centres, why should not his own mechanically stimulated muscles do the like? (2) In the account of these lethargic contractures (p. 83), it is stated that "under the influence of continuous traction, the contractured limb yields by degrees, like one which has been made rigid by an act of will." It is puzzling, therefore, to find (p. 98) this effect of continuous traction included among the physical signs which are "guarantees against simulation." (3) We are told (p. 92) that when a hallucination is imposed on a "subject" in catalepsy, the fixed attitude of the limbs "gives place to complex co-ordinated movements, harmonising with the idea

[1] See, for instance, the remarks (pp. 128-9) on the production of paralysis of the arm (1) by suggestion of the idea, (2) by the application of a vibrating diapason to certain points on the head. An identical result is produced in one case by *psychical* (which of course means psycho-physical), in the other by purely *physical*, means.

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suggested." This is very interesting ; and if I lived at Nancy, I should certainly fasten on the fact, as a strong support to the view that the cataleptic fixity itself is really, in a way, the result of suggestion—that there is a true psychical obedience, and not merely an idiopathic physical symptom, in the retention of the impressed attitudes.

Passing now to admitted psychical features, we have the main peculiarities—sensory anæsthesia and hyperæsthesia, extreme retentiveness of memory, extending to remote facts of normal life, general oblivion on waking, *rapport* with the hypnotiser, &c., &c.—presented with judicious comments. Some of the statements border on the marvellous. A hypnotised girl recognises and names a doctor with whom her only connection was that at the age of two she had been an inmate of an institution where he visited. "Selective sensibility" sometimes reaches such a pitch that the patient can identify "each one of a thousand operators," and sometimes "can recognise their touch through his clothes." Very curious, too, are the accounts of divided *rapport*, the "subject" welcoming A's touch on the right side and B's on the left, while resenting and resisting A's touch on the left and B's on the right ;[1] and actually reserving her right eye for hallucinations imposed by A and her left for those imposed by B. In hypnotism stranger things than this may yet be true. But as regards hypnotic *rapport* in general, I cannot think that it is rightly represented (pp. 110 and 133) as a mere exaggerated form of the normal attraction which one person often exercises on another. As a rule, of course, a person would not submit to be hypnotised, least of all frequently, by any one whose manner or person they objected to ; but there are quite enough cases to prove that personal dread and aversion form no barrier to the establishment of a peculiar influence which the "subject" in vain tries to throw off. On the subject of memory, I need only remark that our authors seem to have too readily admitted the view that the events and ideas of the trance can always be recalled, on waking, by appropriate suggestions. I have explained above (p. 281) my dissent from M Delbœuf on this head. As far as a study of the literature and my own humble dealings with *formes frustes* enable me to judge, the revivable memory is the exception rather than the rule, if any but the lightest stage of trance has been induced.

The next chapter consists chiefly of a rescript of Dr. Charcot's classical essay (*Comptes rendus de l'Académie des Sciences*, 1882) de-

[1] Through the kindness of M. Féré, Mr. Myers and I witnessed this phenomenon as exhibited by "la nommée Wit . . ." in August, 1885. In that case, however, the result was clearly due to suggestion, not to the mere contact, by which (according to our authors) anyone can "développer à son profit les phénomènes d'électivité, quand un malade est en état de somnambulisme indifférent."

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scribing the three hypnotic stages of "les grandes hystériques." The authors candidly admit that different results might be obtained by giving the subjects "a different hypnotic education"; but I do not gather that they have any doubt that Dr. Charcot's modes of procedure would produce the three stages, at any rate to some appreciable extent, in a quite fresh hystero-epileptic patient, who had never seen any other, and in whose presence the experimenters preserved absolute silence.[1] They may very likely be right; but it cannot be too completely realised—and for the best observer in the world it may require some time to realise—how subtle a thing "hypnotic education" is, and how slight are the signs by which a hypnotic "subject" will sometimes divine the operator's wishes and expectations. Nor is it easy (may I suggest?) even for a taciturn Northerner to preserve absolute silence for several minutes together, when keenly interested in what he is observing. These remarks are not made in any cavilling spirit; it is very far from my wish to question the care and sagacity of Dr. Charcot and his pupils. But it would be a legitimate satisfaction to those who live in a country where hystero-epilepsy is comparatively infrequent, and who have no opportunity for direct observation, if the full details of a few crucial experiments—carried out with quite new patients and if possible outside the walls of the Salpêtrière—could be given to the world. A similar remark applies to a topic which occurs incidentally in the chapter under review, and becomes much more prominent later in the book—the influence of a magnet on patients who are unaware of its proximity. That a magnet should produce distinct physical effects on the human organism is, if true, one of the most remarkable facts of modern science. It is a fact which French *savants* of repute assert as a matter of quite ordinary experience; yet probably not half-a-dozen physicians or physiologists out of France have either witnessed it or believe in its reality. Some years ago a committee of our own Society published some results which pointed strongly in this direction (*Proceedings*, Vol. I., p. 230, and Vol. II., p. 56); but they were too few and uncertain in their occurrence to admit of positive conclusions. With the French results it is otherwise; they seem indefinitely repeatable; and that being so, the present state of things—confident assertion on one side of the Channel, ignorant indifference or incredulity on the other—seems nothing short of a scientific scandal. I am quite disposed to lay the blame to the account of English torpor rather than of French precipitancy; but I cannot but think that our foreign *confrères* would sooner win the insular ear if they more explicitly recognised the staggering unexpectedness of the facts which they smoothly recite, as well as the magnitude of the

[1] It is only fair to state that our authors themselves, in dealing directly with the subject of suggestion, emphasise these very points (pp. 142-3).

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issues raised; and if they would make a point, as each new form of magnetic effect presents itself, of placing on record crucial experiments, in which every condition and every guarantee should be carefully detailed. It is surely too unceremonious to say, for instance, as our authors do (p. 118), "*We have ascertained* that, by bringing a magnet near the arm of a patient in natural sleep, or near the vertex of one who is in lethargy, one produces a new state, . . . in which the respiration is imperceptible, the insensibility is complete, and the appearance that of actual death." Writers who are so enamoured of "objective" experiments, and so hard on results which have to be accepted in part on the strength of the observer's experience and judgment (p. 125), may surely be expected in their own records to leave as little as possible to be taken on trust.

The chapter on Suggestion, which contains much good sense, presents also some matter for criticism. I am glad to find the authors, though they have previously seemed doubtful whether any formula can be found for the psychical phenomena of hypnotism, coming more than once to the very verge of one which I have myself suggested—"psychical reflex action." I must own, however, to sheer bewilderment at their attempted explanation of the "subject's" affection by the *idea* of something as in reality an affection by *peripheral excitation*, because forsooth an idea is built up out of remembered sensations, and "Nihil est in intellectu, &c." This is surely carrying championship of the periphery, and the war with Nancy, beyond the bounds of reason. I presume that Messrs. Binet and Féré, like everyone else, would speak of a murderer as conceiving a crime, or a hero an exploit, with his mind or with his brain, not with his skin or retina; and in this respect hypnotically-suggested ideas stand on precisely the same ground as any others. The fact adduced, that certain bodily effects which can be originated by suggestion can also be originated by direct physical stimuli (see above, p. 544, note), is wholly irrelevant; for the suggested idea which produces the effect is *of the effect*, not of the peculiar physical stimulus which may produce a similar effect on another occasion or with another "subject." The idea of a paralysed arm which paralyses an arm is not built up out of remembered sensations of a vibrating diapason. After this brief lapse, the account flows smoothly on. The various classes of suggestion are clearly indicated; and it is satisfactory to find that a special difficulty connected with "negative hallucinations" is recognised. The point of the difficulty, however, seems in this passage to have been missed; for the effect is represented as a sort of sensory paralysis, strictly parallel to motor-paralysis produced by suggestion. The two things are, of course, alike in being both effects of *inhibition*—"un mot qui n'explique rien," as our authors trenchantly observe; but they are

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surely much more markedly *un*like in fundamental character. In the first place, the arm which cannot move simply fails to do something which an act of will is normally required to bring about, whereas the eye that cannot see fails to do something which it normally cannot help doing; so that the inhibition is in the one case of an occasional action, in the other of a continuous function. But this is not all. That the idea of inability to move an arm should produce the inability is really one of the most comprehensible effects of suggestion, so far as anything can be called comprehensible of which the physical details are unknown to us; for all that happens is that the connection between a motor centre and the higher ideational centres is shut off. But that the idea of inability to see a particular person or object should produce the inability, introduces a new and complex psychological puzzle. For here there is no disconnection of the optic nerve, or of any particular fibres of the optic nerve, from the higher centres. The whole optical apparatus retains normal activity; the invisible person may occupy every portion of the field of vision in turn, and will everywhere remain invisible, while every other object in the room is clearly seen. Clearly, then, the effect is very much more than a mere sensory inhibition, parallel to the motor inhibition in the other case. As M. Féré himself and Professor William James[1] had rightly pointed out, the invisible thing must in a sense be *seen* in order to be *not* seen; it must be *recognised* as the subject of the suggestion. That is to say, perception includes it, but ignores or "cuts" it. Thus the principle of association of ideas, which our authors represent as here completely breaking down, is truly maintained; the idea of the person who it was suggested would be invisible must, in some obscure way, be represented in the mind which averts itself from regarding him.

In the account of hypnotic hallucinations, the chief feature is naturally that modification of imaginary visual objects by optical instruments—prism, spy-glass, or mirror—on which both our authors have written separately. The investigation is of great interest, if only as showing the remarkable hyperæsthesia and retentiveness which are involved in the observation of the real *points de repère* with which the imaginary object links, so to speak, its visible existence; but having discussed it elsewhere,[2] I need say no more of it here than that these special optical delusions seem as peculiar to "the atmosphere of the Salpêtrière" as *mirage* to that of the desert. Neither normal nor ordinary hysterical "subjects" are affected by them. I remark, by the way,

[1] *Proceedings of the American Society for Psychical Research*, Part II., p. 97.

[2] *Proceedings*, Vol. III., pp. 163-7, and *Phantasms of the Living*, Vol. I., pp. 469-70.

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a repetition of an old mistake as to Brewster, who is represented as having proved that a hallucinatory image could be doubled by pressure on the side of one eye-ball. What he really did was to state the exact opposite—viz., that a hallucinatory image was to be distinguished from a real object by the fact of *not* being so doubled. He, of course, could not have said this had he known of a single case where the hallucinatory image *was* doubled by pressure; but on the other hand I am not aware that he ever supported his own statement by adducing a single case of its *failing* to be doubled. Instances of the doubling have been credibly reported. Of further points discussed, special mention is due to a very interesting series of experiments carried out by MM. Marie and Azoulay (p. 176), proving the distinctly longer time which it requires to perceive a hallucinatory object, when presented afresh, than to recognise a real one. This fact seems to show, what would naturally be expected, that the recognition of the *point de repère*, and the imposition on it of the imaginary figure, is a double operation. Very interesting also are the observations as to the colourlessness of hallucinations suggested to an achromatopic eye; the production of complementary colours by hallucinatory images; the mixture of imaginary colours; and the close relation between visual activity and the general sensibility of the external tissues of the eye, exhibited when the visual activity is induced by hallucination no less than by normal excitation.

The topic of *esthésiogènes* brings us into that region of marvels to which I have already referred—the various effects of a magnet on the human organism. "This agent has nothing mysterious about it," say our authors; "it acts on the nervous system like a weak electric current." This, of course, explains nothing; weak electric currents have never been supposed able to affect a human body across space. However, we need not chop straws as to how far the existence of a quite unguessed relation of living tissues to physical agencies is "mysterious"; it is at any rate a fact of surpassing interest; and our authors' list of precautions (p. 195) certainly conveys the impression that they have justified their own conviction of its reality. They do not perhaps exceed their rights in claiming that it would weigh nothing against the genuineness of their results if these could not be repeated with other "subjects"; since the peculiar sensibility in question is, for aught they know, a peculiarity of "les grandes hystériques." But in view of the extraordinary susceptibility of some neurotic persons to suggestion, one cannot but wish that the list of precautions included the invariable employment of an electro-magnet, of which the current could be turned on and off without the "subject's" knowledge.

The phenomena first described belong to the class of *transfers*. A unilateral hallucination of the eye or ear is transferred, by the application of a magnet, to the other side of the body; not symmetrically, how-

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ever, in the visual cases—the imaginary profile which the right eye saw as turned to the right is similarly seen by the left eye.[1] The transfer is accompanied by a pain, localised, according to our authors, in a special area which may probably be the visual or the auditory. External stimulation of the skull at the parts thus indicated, at a time when the "subject" is in catalepsy, is said to restore movement to the fixed eyes, and hearing to the deaf ears. But the more remarkable cases are those where the hallucination is bi-lateral. Here, we are told, the proximity of the magnet *annuls* the hallucination. The imaginary object disappears; and not only so, but a real object similarly disappears; the gong whose noise had just before struck a patient into catalepsy ceases to be visible to her eyes when the magnet is held near her head, and may then be struck again and again with violence without producing any effect on her. Similarly (p. 240) an object rendered invisible by suggestion becomes visible again under the influence of the magnet. The same means will suppress memory in the same way, and cause a "subject" to forget the nature of an object which she has just before been correctly describing. Our authors apply to this influence of the magnet the term *polarisation*. But besides merely replacing an activity by a paralysis, polarisation may apparently produce positive complementary results. The "subject" who has been gazing at an imaginary red cross, at the approach of the magnet begins to see green rays radiating from it; and gradually the green becomes all the colour visible, and the red cross in the middle is replaced by a white one.

A similar relation of polarisation to simple transfer is described in the next chapter, in the department of movements and acts. A patient is told to make a *pied de nez* at a bust of Gall with her left hand; a magnet is placed near her right hand, and she is woke. She makes fourteen *pieds de nez* with her left hand; then the movement gradually ceases, and is taken up by the right hand. On the withdrawal of the magnet the transfer is again produced, and the left hand recommences. Similarly the magnet will cause a series of numbers which the "subject" is writing with the right hand to be continued with the left; and while the left hand is thus employed, the right has lost all its writing faculty. And again, an order to carry out a series of actions with the one hand is executed throughout with the other hand, though the magnet has only been in the "subject's" proximity at the very beginning of the experiment. Polarisation paralyses the power of carrying out movements with either hand. The "subject" is rolling up a pellet, when a magnet is brought near the back of her neck; her hands begin to

[1] It is impossible, without great cumbrousness, to avoid speaking of hallucinations as seen *by the eye* or heard *by the ear*. Such, of course, is the "subject's" own impression, but the actual physical event corresponding with the impression takes place in central nervous centres, not in the external organ.

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tremble, she endeavours to proceed, but has to give it up. But if the suggested movement is associated with an emotion, the alleged effect is to produce the opposite emotion. A "subject" to whom it has been suggested to strike the experimenter, and who has actually aimed a blow at him, is incited by a hidden magnet at her feet to exclaim, "I want to kiss him," and can only be prevented from doing so by force! Confirmatory examples of this "psychic polarisation," or reversal of ideas and emotional impulses, have since been described by MM. Bianchi and Sommer, in the *Revue Philosophique* for February, 1887.[1]

Further topics of interest in this 10th chapter are the effects of suggestion in producing the "attitudes passionelles"; the confinement of suggested acts to one side of the body; the "echo-speaking," which Berger discovered to be producible in some hypnotic "subjects" by the application of the hand to their head or the nape of the neck; the diminished reaction-time in this echo-speaking—the results here confirming the experiments of Professor Stanley Hall (*Mind*, Vol. VIII., p. 170) in hypnotic reaction-time in general and contrasting in an interesting way with the increased time necessary for distinct psychic reactions, such as the re-establishment of a hallucinatory image in its former place (see p. 549 above); the independent reasoning, and often the ingenuity, which "subjects" will often bring to bear, in or after the execution of suggested acts; and the obstinacy with which suggestions bearing on some particular act, or class of acts, are often resisted. (Compare a case which I described in *Proceedings*, Vol. II., p. 287.) And specially I would draw attention to a certain difference between cataleptic and suggested somnambulic attitudes (p. 220), which certainly tends to suggest, as against the Nancy view, that hypnotic catalepsy is not a mere effect of suggestion. But many more experiments of a precise kind are wanted. I have certainly seen a "subject's" extended arm, stiffened by suggestion, tremble and drop in the way that our authors describe; but then the stage of trance produced was of the very lightest; and there is no doubt, I think, that in some "suggestion" cases fatigue and its physical symptoms do not supervene nearly so soon as they would in normal conditions.

The next chapter, which takes up again the subject of sensory paralyses produced by suggestion, is rich in interesting facts. For instance, a "subject" to whom a purse had been rendered invisible, will equally fail to see the money which comes out of it; one to whom a particular person had been rendered invisible could not see him for some days, and then, on regaining the power to see him, took him for a stranger visiting the hospital; one, in whom pressure of a particular

[1] See also "Nuove Ricerche nell' Ipnotismo," pel Dott. Guiseppe d'Abundo, in *La Psichiatria* for 1886, Fasc. I., p. 68.

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spot would always produce a hysterical attack, remained perfectly indifferent when the pressure was exercised by a person rendered invisible by suggestion. Colours rendered invisible by suggestion are said to have been revived in memory by the proximity of a magnet, and they also give rise to subsequent complementary images—showing that the invisible colour has affected the sensory centre in the same way as if it had been visible. This is a strong proof that the *physical* process in "negative hallucination" has its seat in some higher part of the brain than the sensory centre, and is thus in complete accordance with what was said above (p. 548) as to the complexity of the accompanying *psychical* condition. On that point, by the way, I find myself no less at variance with our authors than before; for they now describe the special peculiarity of the condition in much the same words as I have myself employed, yet attempt to give it a sort of explanation by denying it any psychical side. Not only do they illustrate the fact that there must be, in a sense, recognition, and so sight, of the invisible object, but they admit that in some cases this demands "a very delicate and a very complex operation, and a sustained effort of attention." The assumption that such an act is a piece of mere unconscious cerebration seems to me no very plausible substitute for the hypothesis, puzzling though it be, that on the mental stage recognition is compatible with aversion of attention.

We pass on in the next chapter to the effect of suggestion in producing *motor* paralyses. Here the chief points to note are the general accompaniment of the paralysis by anæsthesia; the exact correspondence of anæsthetic area with the area of the paralysis; the exaggeration of the tendon-reflexes, as in some paralyses of organic origin; the increase of force in the left arm during the paralysis of the right, and even of skill in the left hand when some particular process, such as writing, is forbidden to the right (p. 256)—facts which recall the alleged effects of the magnet, and are regarded by our authors as due to *suppléance* between the two cerebral hemispheres; the production of aphasia in conjunction with suggested paralysis of the right arm, due (they hold) to the proximity of the speech-centre to the motor-centre involved; paralysis with contracture caused by the idea of excitation at the spot where actual pressure would produce it—*e.g.*, the *griffe léthargique* following suggestion of pressure at a particular spot on the fore-arm. In their account of *partial* paralyses, which merely inhibit a particular action, our authors describe an effort made by the patient to perform the action—flexion of the thumb—as having resulted in a violent extension. This is confirmatory of a less extreme case which I described some years ago (*Proceedings*, Vol. II., pp. 288-9)—the instant contraction of the biceps muscle in opposition to slight hardenings of the triceps which the "subject" produced, with great effort,

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when offered a sovereign if he would extend his arm. But the attempted comparison between such opposition-effects, and the production of complementary images by colours the sight of which has been suppressed by suggestion, seems an unfortunate piece of ingenuity. For in the motor-cases we have simply nervous energy directed to a particular spot in the body, and taking the only alternative channel when it finds the desired one closed. In the colour-cases there is no question of any alternative channel, and the physical process at the sensory centre—fatigue of certain nervous elements, or whatever it may be—is precisely the same as if the colour had produced its normal effect in consciousness. The true sensory parallel to the motor-cases would be if the suppression of a real colour produced an impression of the complementary colour which was *not* produced where there had been no suppression; for then it might be conjectured that the central elements responded with increased force to stimulation from the one colour through their enforced blindness to the other; but our authors have not recorded any example of such an effect.[1] Of special interest are the "systematic paralyses," where some complicated set of movements, such as those of writing, or of playing the piano, are rendered impossible. The selection may be of the most arbitrary sort; for instance, a "subject" is rendered unable to write the word *non*, though he can write any number of other words containing the letters *n* and *o* (p. 254). Our authors represent this as an inhibition, not of movements, but of *co-ordination* of movements. It may be suspected, however, that the cause lies further back—that the motor energy is, so to speak, prevented at the very outset from directing itself to that particular word. The test, which does not seem to have been tried, would be to set the unsuspecting "subject" to write a number of words in one of which the syllable *non* occurred. If this word were written, the inability certainly could not be that of grouping these three letters. And, in general, it seems to me that the facts of systematic paralysis indicate something distinctly beyond mere failure in co-ordination, and *à fortiori* beyond the mere "paralysis of the motor-centre," which a few pages later (p. 258) we find represented as the "fundamental fact" in all these effects of suggestion. It is just here, in my view, that the parallel between the sensory and the motor paralyses might fairly be pressed—the physical cause in either case lying in a cerebral tract higher than the specific centres of sense or movement. Our authors, "averting their regard" from these

[1] Their language at this place (p. 249) would imply that they *had* given such an example, the "subject" seeing a green square while actually gazing at a red one, whose colour had been suppressed; but in the experiment to which they must be referring (p. 235) the complementary image is described as *consecutive*, and is just what would be produced in normal conditions.

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higher tracts (without the excuse of hypnotic suggestion!) are led to treat any psychical facts connected with them as secondary and insignificant. Thus they end the discussion on "paralyses of will," in the chapter now under review, by saying that it matters little whether a person's own account of an inability is that he *cannot* do the thing, or that he *does not wish* to do it, or that he *does not know how* to do it; because all three cases involve some functional disturbance of the motor-centres. So may excess alike of pleasure and of pain involve some functional disturbance of the heart. Such treatment of fundamental psychological distinctions is hardly of a piece with the immediately succeeding paragraphs (p. 262), in which the long neglect of hypnotism by psychologists is deplored, and its claim to a foremost place in the study of mind is strongly enforced.

The following chapter, on the therapeutical applications of hypnotism and the "medicine of the imagination," though eminently sensible as far as it goes, is short, and calls for little comment. I must remark, however, that the dogmatic assertion that "suggestion only cures affections which are capable of being modified spontaneously, or by the influence of various external agents," seems decidedly premature. The agency which can produce a blister in a few hours—a result which our authors accept (p. 146), but which a few years ago scarcely any instructed physiologist would have believed—is not one whose physiological limits can be laid down in a single trenchant phrase.

The final chapter, "Hypnotism and Responsibility," gives a sketch of the various ways in which hypnotism might come into contact with the criminal law. These may be epitomised as follows. (1) Someone may profess to have been subjected to injury while in the hypnotic trance—a profession which may be true, or deliberately false, or due to a deluded imagination, or the result of hypnotic suggestion, which has either caused him to see something which was not fact, or to fail to see something which was fact. (2) Someone may have been subjected to injury in the hypnotic trance, but, owing to post-hypnotic oblivion, may be unable, in a normal state, to bear witness to the fact. (3) Someone may have been instigated to commit a crime, either during the hypnotic trance or afterwards, by a command impressed during trance. (4) Someone may make a false confession of a crime, under the influence of a previous hypnotic command. The difficulties and pitfalls which would await the "expert" witness in such cases are set forth with due caution; and here the stress laid on the value of objective physical signs, when it is a question of whether a person is hypnotisable or not, seems quite in place. The treatise concludes with two very sound principles;—that attempts to extort truth by hypnotising suspected or accused persons against their will are illegitimate; and

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that experimentation on human material must be pursued with the utmost caution, and must never be prostituted to the gratification of vulgar curiosity.

I am sorry to part with so interesting a book. If I have seemed to dwell principally on disputable points, this has been in some measure forced on me by the nature of my task. The authors themselves expressly state that they consider the subject not ripe for general conclusions; consequently their work contains no broad views or sweeping hypotheses of which a popular outline might have been presented at second-hand. The book is eminently one of special facts and special discussions; and in such a case the reviewer's most instructive course seems to be to deal with points of difference—to criticise, in fact, rather than to seek to reproduce, and to alight where the path is tangled, rather than to retrace it where it is clear. The reader who desires to master the facts in detail will naturally go to the original; of many of them the account hardly admits of being shortened; but even a brief critical survey of the manner in which they have been presented and interpreted may suggest the nature of the problems involved to some who can forego the minutiæ of muscular contractions or complementary images. My only regret would be if this treatment seemed to any one incompatible with a genuine sense of the high qualities—the care, the candour, and the ingenuity—which the work displays. Though modest alike in its form and in its claims, it worthily sustains the high scientific reputation of its authors and their school.

EDMUND GURNEY.

L'Hypnotisme et les Etats Analogues au Point de Vue Médico-légal, par le DR. GILLES DE LA TOURETTE, Préparateur du Cours de Médecine Légale à la Faculté. Préface de M. LE DR. P. BROUARDEL. Paris: Librairie Plon, 1887.

That a treatise more than 500 pages long should discuss, and treat as a pressing need, the recognition of hypnotism by the French code, certainly shows that the subject is in a very advanced stage, inasmuch as the law of the land is usually the very last stronghold into which a new conclusion of science forces a passage. As in all the English annals of mesmerism there seems to be no case betokening any necessity for legislation, and as, if any danger existed, legislation in this country could only be got either by a popular agitation, which is unlikely, or

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by an agitation of medical experts in the subject, who hardly here exist at all, it is fair to say that the question to which Dr. Gilles de la Tourette voluminously devotes himself is not yet a British interest. Of such a question it is natural that a Frenchman should work out the theoretical possibilities before the mass of English people are alive to the bare facts. Bare, indeed, the facts themselves are so far from being, that I shall have to criticise Dr. Gilles de la Tourette closely upon his version of them. His book is in effect, if not in purpose, a counterstroke of optimism from Paris against the warnings of danger published from time to time by Dr. Liégeois, of Nancy, referred to in Mr. F. Myers' first article in *Proceedings* X., and best summarised in the *Revue de l'Hypnotisme*, No. 3, p. 82, September, 1886. Another treatment of the question on the same side is to be found in the first number of the same journal, by Dr. Ladame, of Geneva. A main purpose of Dr. de la Tourette is to reassure the world against the fear of crimes, committed in real life and out of the human laboratories of the hospitals, under the influence of hypnotic or post-hypnotic suggestion. The force of his reassurance depends almost entirely on a proposition which he shares with the rest of the Paris school, and which vitiates, if false, nearly the whole of his optimism. Briefly stated, it is that all these artificially produced mental and bodily states are "névroses," or as we should say, pathological: that a hypnotic subject is a "malade," and generally has either hysteria or its germs, which renewed hypnotising tends to bring out; and that the phenomena of natural somnambulism, of hypnotism provoked on persons apparently robust, and of the confessed "névropathes" of the Salpêtrière, are all branches of the same fatal tree, hysteria. It would follow that the symptoms and stages of hypnotism in the hysterical patients of MM. Charcot, Richer, Dumontpallier, and Magnin, so far as they—imperfect as the agreement on them is [1]—are to be expected and similarly tested for in the case of persons apparently robust. Now the doctor's true and secondary proposition, that all the cases which have *yet* come before the French Courts have involved hysteria, is not to be confounded with his untrue fundamental proposition, which sometimes appears in the form that "sujets sains" do really exist, but are to be judged by rules based on the observation of "hystériques," and sometimes apparently in the form that hypnotism appears "chez les seuls névropathes." The evidence he adduces in proof of this is worth examining as a bad case of scientific prejudice. On p. 57 he quotes from Dr. Liébeault's first work (p. 344), in order to confute the Nancy school out of its master's mouth. Dr. Liébeault says first that the bilious-nervous tempera-

[1] See *Société de Biologie*, 7 Jan., 1882, p. 5; and id. *Mémoires of* 1885, p. 50. Also *Revue de l' Hypnotisme*, No. 6, p. 77.

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ments, then the nervous, then the nervous-lymphatic temperaments furnish his best sleepers; that the disposition to put oneself in the requisite "passivity of mind" is hereditary. Then he admits that "people affected with strabismus, quivering of eyeballs, or 'tics convulsifs', and vapourish women, hysterical and some epileptic people, nervous sufferers, and sufferers from anæmia, are usually disposed to become somnambules." He adds to this list persons who dream and move about in sleep. But the last part of the quotation from Dr. Liébeault runs :—"Si l'on rencontre surtout des sujets à endormir parmi des malades, ce n'est pas une raison pour croire que les états de charme et de somnambulisme sont morbides, comme on est porté à le penser: nous avons endormi des femmes et des hommes d'une constitution robuste et qui n'avaient jamais été souffrants, pour ainsi dire, des paysans vigoureux ayant servi dans des corps d'élite et fait des campagnes pénibles sans qu'ils soient jamais entrés dans un hôpital." Dr. de la Tourette makes the astonishing comment: "On nous accordera sans conteste que l'opinion de M. de Liébeault n'a *rien de défavorable* à la thèse de la production de l'hypnotisme chez les seuls névropathes, qui est celle que nous soutenons." If we pass over the calculation of M. Bottey that 30 per cent. of absolutely healthy persons can be hypnotised, which is quoted as also favourable to "la thèse," we come to a more serious argument, quoted from M. Paul Janet (de l' Institut), who urges that though healthy persons can be hypnotised, yet hysteria is the stem on which it is best to graft hypnotism, and presents it in its fullest, purest, most classic form. M. Janet also criticises the paucity of detail upon the pathological history of the Nancy patients, and M. Paul Magnin [1] asks in wonder how the feature so well-known in the Salpêtrière, and the most important symptom in detecting fraud, namely, the excitability of nerves and muscles *otherwise than by suggestion*, can have escaped M. Bernheim's notice. Possibly the answer to this question is: "Just because there *are* so many non-hysterical patients at Nancy. It may be true that M. Magnin has shown the presence of surface and deep contractions in all three states of hysterical hypnotism; but if we cannot really argue from that to non-hysterical hypnotism, it will be necessary definitely to prove hysteria before the medical expert, re-hypnotising, can point to the absence of muscular contraction as an evidence of feigned hypnotism."

One more specimen of Dr. de la Tourette's incompleteness on this point. On p. 442, he speaks of the public mesmerisers who fix on anæmic "névropathes" in their audience to begin upon. It is a pity that he has never been a witness of Mme. Card's exhibitions at

[1] *Revue de l' Hypnotisme*, No. 6, p. 177, in review of Dr. de la Tourette's book.

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Oxford or Cambridge. It is well known that Hansen preferred robust young students, ignorant of the existence of nerves,[1] and that flighty persons of weak concentrative power are bad subjects.

But many English readers will be asking, "Who would ever feign hypnotism at all? How does the question come before the law, and how do the scientific issues affect the law?" It will be most convenient to take the divisions of Dr. Ladame in the article mentioned above. The first deals with the danger of the methods of hypnotising, especially the violent ones practised in public shows. Dr. de la Tourette's most valuable chapters deal with the "exploitation" of magnetism. The prohibition of Donato in Italy, of Hansen in Germany, and of performers at the English Universities, shows how practical the point is. Nothing could better play into the hands of the believers in the "névrose" than the deranging effect of public exhibitions undertaken for commercial motives, and of private and blundering attempts by the inexpert. The more practised and more gentle the manipulation is, the less of a "névrose" is hypnotism, and the world can read the confessions of Dr. Liébeault (*Revue*, Nos. 4 and 5), who has hypnotised thousands, and learn how slight have been his errors, and how largely they vanished the more he employed gentle suggestion.

The next division of Ladame deals with unlawful acts committed spontaneously by natural somnambulists, and the sensible conclusion of Dr. Gilles de la Tourette is that they should be acquitted, but also watched, as irresponsible, since they recollect their act, if at all, only as a dream. A more complicated difficulty arises with persons afflicted with an "état second." Are they accountable in one state for what they do in another? Hysteria must not be reckoned to destroy responsibility, or its slightest symptom would be an excuse; but it would be hard to punish a person during one *état* for the misdoings of his other personality, and the utmost that can be laid at the door of the patient is a limited responsibility *during* the same section of his life. The case of Dr. Dufay, who by inducing artificial somnambulism found where an article had been hid in natural somnambulism, suggests the grave question of what may be termed judicial re-hypnotising. By this is meant an effort to reproduce by new hypnotism the memories of old hypnotism, in order to examine the chances of the subject having been an irresponsible instrument of crime. But before discussing this a word is due on Dr. Ladame's third division, which deals with crimes committed on hypnotised persons. Dr. de la Tourette has many hints of value on this head, but they are too frequently based on the assumption of a hysterical constitution in every possible

[1] Fischer, *Der Sogenannte Lebens-Magnetismus* (Mainz, 1883), p. 82; and see Mr. E. Gurney's letter to the *Medical Times* of Oct. 27, 1883.

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victim. The two questions then to be settled are first, how far was will abolished; and, secondly, how far was consciousness abolished? As to the first question, the doctor thinks that in lethargy there is certainly no power of resistance, the victim being a mere "*pâte molle*," and that in somnambulism there is more, as certain subjects are incapable of suggestion in that state. Consequently if a subject be re-hypnotised by the medico-legal expert, and found incapable both of lethargy and of suggestion in somnambulism, the case will not come under this class. As to the question of consciousness, on which the power of giving evidence depends, he thinks that if the crime was committed in lethargy, there is no memory at all; if in "lethargie lucide," that there is memory on waking; and if in somnambulism, that there is memory in the corresponding state of re-hypnotisation. But while he recognises the fickleness of such evidence, I do not find him laying down the obvious canon that it never ought to tell *against* anybody without independent corroboration. Now the doctor's restricted and pathological view of hypnotism matters in this connection the less, that probably in most *healthy* subjects there would be a very large power of resistance, at any rate during the "alert" stage, and probably well on into the deep stage, to any improper suggestion or attempt: while in a hysterical person there would be a smaller fund of instinctive moral resistance both in hypnotism and out of it. Therefore we may accept the Doctor's rules on this head provisionally,—always bearing in mind his radical assumption,—and cheerfully subscribe to his proposal to protect "l'inconscient" from outrage by the code of France, just as it is protected by the codes of Belgium, Germany, and Spain. Before gratefully leaving this section, I may remark how irresistibly the "Castellan case," quoted by so many authors, strikes one as having a fine incrustation of myth. Too long to cite, it is so much in danger of becoming classic that I may notice the unjudicial, the professionally literary style, in which it is always presented, and the strange trust accorded to the detailed evidence of all the witnesses, who refrained without apparent motive from interfering with what they make out as a weird and dreadful outrage.

On the next head Dr. de la Tourette is decidedly too roseate in his assurances, and Mr. Myers is perhaps too easily comforted. Dr. Liégeois took pains to show that persons can be made, under the influence of suggestion, to commit, both during or after hypnotism, crimes, to forget both who the suggester was and their own act, and even sincerely to throw suspicion on some third person. Dr. de la Tourette dismisses all these experiments as "purely of the laboratory," and points to the manifold chances of frustration in real life through some slip in the programme enjoined by the hypnotiser, or through the subject managing to resist,

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evade, or disclose the injunction. In *Jean Mornas*, M. Claretie's inadequate and crudely wrought story (said to have been transcribed from a laboratory experiment), the subject commits theft and murder at the suggestion of her guilty lover, and will not reveal his name to justice until re-hypnotised and made to re-live the experience, somewhat like the somnambulist in *The Moonstone*. It is not clear whether the suggestion is executed in or after the hypnotic state, and (as far as my memory goes) the process of extracting the name is not described. Again the comment occurs, that no man should be considered guilty when thus denounced without almost as strong independent evidence as would be needed if he had not been thus denounced at all. It would be quite easy for the guilty hypnotiser to have foreseen this procedure, and to have instilled a suggestion to denounce an innocent person in case of justice adopting it. Theoretically, indeed, there is no limit to the duel fought between justice and the criminal in the soul of the unwitting accomplice, but practically justice having the last word would imperil the criminal considerably. One point to settle would be the extent to which subsequent counter-suggestion by justice could annul a forgetfulness suggested by the criminal. How little the rules for hysterical hypnotism might hold in such a case, may be seen from the account of Professor Liégeois' demonstrations at the Congress of the "Association Française" at Nancy, on August 18th, 1886. "M. Liégeois propose, pour donner une confirmation de ce qu'il a avancé sur la possibilité de faire, pendant le somnambulisme, des suggestions qui se réaliseront fatalement au reveil, d'hypnotiser en présence des membres de la section plusieurs hommes, *non hystériques*, qu'il a amenés. A l'un de ses sujets plongé dans l'état de somnambulisme, il suggère l'accomplissement de divers actes que celui-çi doit exécuter en certain laps de temps après son reveil. *L'injonction est irresistiblement accomplie.*"[1]

Therefore, at least with some French temperaments, even if hysteria is absent, the risk of suggested crime is quite serious. One point important to clear up and not named by the doctor is the limits of moral resistance in the person for whom "suggestion" is pleaded. Most healthy subjects draw the line fairly on the right side of impropriety or misdoing, but we do not know how far this resistance could be ordered down by the hypnotiser insisting. Probably it would require much less force to make such a subject sign a receipt than commit a misdemeanour. But in the hysterical subject it might be hard to distinguish between suggestion commonly called hypnotic and the ordinary suggestion of the real principal and stronger spirit in a crime to his loyal tool. And if any person, hysterical or not, after re-hypnotisation, should be pronounced to have irresponsibly committed

[1] *Revue*, No. 3, p. 82 (italics mine throughout).

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a crime, they should of course suffer all the restrictions of the irresponsible.

As precautions against risking such a fate, Professor Liégeois recommends everyone to refuse to be hypnotised except by a trustworthy friend. Mr. Myers quotes the further precaution of the friend suggesting to the subject—"You will not be able to be hypnotised by anyone else." Of course, the criminal on his side might suggest this too: but the experiments I have read do not decisively show that this injunction cannot be ordered down in both cases. Professor Beaunis [1] goes so far as to say that no suggestion should be offered without the previous waking consent of the patient.

Another question justice might have to face is, "Could this person have been hypnotised for the first time against his will?" The doctor suggests that by a *ruse* he might. Now the methods for turning common into hypnotic sleep bear on the point, and are discussed by the German writers, with whose researches (with the exception of Heidenhain's) Dr. de la Tourette betrays no acquaintance. Rumpf,[2] Malten [3] (quoting Gscheidlen), and Börner, [4] agree that this is feasible, and Gscheidlen, by putting his hand on the heads of five workmen sleeping normally, developed hypnotic symptoms. Börner says, curiously, that if consciousness persists after the passage into abnormal sleep, the sleeper wakes, when let alone, from normal into hypnotic sleep; but if consciousness has not persisted, wakes into normal life. It is right to add that at the Breslau debate, cited by Malten, it was suggested that putting the hand on the head merely produced insensibility by deepening the common sleep. The point is not settled, but it is evident how it might arise in the judicial inquiry whether a person could have unwittingly been made irresponsible.

Lastly, it should be remembered that throughout Dr. de la Tourette refuses to admit any evidence either for a special mesmeric influence, or for mental suggestion, or for any form of experimental thought-transference. He never faces—yet can hardly not have heard of—the evidence to be found in the *Proceedings* of the Society for Psychical Research, especially that of the Havre case, which also appears in *La Suggestion Mentale*, by Dr. Ochorowicz. Yet, if true, that evidence transforms the whole medico-legal theory of hypnotism. Till it is more definitely established, it would not be much use to try to work out the practical consequences before the law. Nevertheless, Dr. Gilles de la Tourette owes more respect to the evidence than he gives.

O. Elton.

[1] *Le Somnambulisme Provoqué*, p. 39.
[2] *Deutsche Med. Wochenschrift*, 1880, p. 280.
[3] *Der Magnetische Schlaf* (Berlin, 1880), p. 19.
[4] *Deutsche Med. Wochenschrift*, 1880, p. 94.

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De la Suggestion Mentale, par le Dr. J. OCHOROWICZ, ex-Professeur Agrégé de Psychologie et de la Philosophie de la Nature à l'Université de Lemberg. Préface de M. CHARLES RICHET. Paris: Octave Doin, 1887.

We welcome this book as the first serious attempt made, out of England, to present and arrange a considerable mass of evidence for the phenomena of thought-transference. It is disappointing, however, to find that M. Ochorowicz has so few experiments of his own to record. Of the 540 pages of which this book consists, nearly 300 are occupied with excerpts from the already published experiments of other investigators, from Puységur and Deleuze down to M. Liébeault and the Society for Psychical Research. And of the remainder of the book the greater part is devoted to a discussion of rival hypotheses, and to the dissection of inconclusive experiments. But his industry and perseverance appear to be in no way to blame for this somewhat meagre result. He has been investigating the phenomena of hypnotism and its allied states for many years, and has always had in view the possibility of the supersensory communication alleged to have been observed by other workers in the same field. Under the headings "De la Suggestion Mentale Apparente" and "De la Suggestion Mentale Probable," he gives the results of his earlier researches in this direction. These two chapters are perhaps the most interesting in the book. They prove not merely that M. Ochorowicz is a painstaking and indefatigable experimenter, but that he is ingenious and subtle to a high degree in analysing the causes of miraculous-seeming manifestations. Too subtle, perhaps, on occasion. It is difficult, for instance, to believe, if the experiment is accurately recorded, that his explanation is entirely adequate in the following case. M. Ochorowicz took up a novel by Kraszewski, *Le Monde et le Poète*, opened it at random out of sight of the subject, and requested him to read it. He could, at first, see nothing. M. Ochorowicz then prompted him with the *first two or three words of the page*, and the young man at once named correctly the chapter and volume, and recited the entire page, almost without a mistake. When M. Ochorowicz put down the book, the subject stopped his recitation; but he would go on, on a fresh page, if prompted, so long as M. Ochorowicz kept his eyes on the text.

Voici l'explication du mystère :

Le jeune homme en question a lu dernièrement, "deux fois de suite," le roman mentionné de Kraszewski; il l'avait lu, comme on le lisait dans le temps en Pologne, surtout à l'âge de six-sept ans. Il le savait presque par cœur. Evidemment il ne saurait pas réciter, à l'état de veille, des pages

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entières textuellement, mais, en somme, notre expérience n'a prouvé qu'une seule chose : une "vivacité étonnante des souvenirs en sonnambulisme." Et quant à l'influence de ma pensée, la cause en était bien simple : il *voyait* mieux quand je regardais dans le livre, parce que machinalement je corrigeais ses petites erreurs. Ce sont même ces erreurs-là qui m'ont suggéré l'explication vraie de l'expérience ; car, au lieu de lire mal un mot écrit, il le remplaçait par un autre, analogue comme sens, mais tout-à-fait différent comme forme. Ayant été entraîné en dehors des associations exactes, par une erreur semblable, il s'arrêtait si je fermais le livre, parce que je ne pouvais plus lui venir en aide.

Moreover, it appeared subsequently that the young man could "read," though less correctly, even when the book was closed. No doubt M. Ochorowicz is right in refusing to regard this as even a proof presumptive of thought-transference: though, to those who admit thought-transference as a fact in nature, it might not appear out of the question that the memory of the subject to some extent should be revivified and supplemented by that agency. But the simpler and more probable explanation of the "subject's" failure to read when the book was closed appears to me to be that his capacity for "reading" depended upon his belief that he was reading through the eyes of the operator. To accept his own explanation would argue a want of care on the part of M. Ochorowicz of which, on the evidence supplied by this book, he may reasonably be acquitted.

Elsewhere, however, his comments are eminently just. Here, for instance, is an account of an experiment conducted by himself in waking a hypnotised subject by mental suggestion. The experiment succeeded perfectly on the first trial ; the subject awoke as soon as the mental command was formulated. An equal measure of success attended his subsequent experiments of the same kind ; but he found himself unable to compel the subject to execute his commands when he willed that she should perform certain movements. Why, then, he asks, did she obey my commands in the one case and remain insensitive in the other?

En voici la raison ; il y avait là deux habitudes, qui avaient passé inaperçues. Continuant le traitement depuis plusieurs semaines, j'avais pris l'habitude de la réveiller juste une demi-heure après la déclaration du sommeil ; je ne regardais pas la montre, mais je venais toujours à l'heure fixe, et, comme c'était une heure avant le dîner, mon estomac remplaçait parfaitement ma montre.

Quant à la malade, elle a pris également l'habitude de se réveiller presque exactement à la minute—phénomène bien connu des hypnotiseurs. Cela n'arrive pas toujours, mais cela arrive très souvent.

He then verifies this hypothesis by ascertaining that he could not awaken the subject by mental command, 10, 15, or 20 minutes after the commencement of the sleep, and that she invariably awoke of her

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own accord after a sleep of 30 to 35 minutes' duration. After considering this and other similar experiences, he makes the suggestive remark: "Il y a toujours deux questions à élucider. La question, Comment le sujet a-t-il pu deviner la pensée? n'est que la seconde; tandis que la première consiste à savoir: Comment l'expérimentateur est arrivé à choisir une pensée plutôt qu'une autre?" (p. 17.) He applies this canon to the noteworthy series of experiments with Madame D. The subject was in a normal state, with her back turned towards the two experimenters, who were in contact (the exact nature of the contact is not stated) with her throughout the experiment, although out of her sight. Under these conditions the names of cards, imaginary colours and tastes, objects in the room, &c., were correctly named in a considerable proportion of the trials. (A full record of these experiments was sent to us by M. Ochorowicz in the spring of last year, and will be found quoted in *Phantasms of the Living*, Vol. II., pp. 661-4.) M. Ochorowicz hesitates to regard these experiments as conclusive. He thinks them to a certain extent invalidated by the circumstances of what he calls "le milieu psychique." All the objects thought of (except the cards, which were drawn at random from a full pack) were chosen at the time by one or other of the experimenters. The laws of the association of ideas, he explains, are very obscure: the links of connection are frequently automatic and unconscious, and spring from the sensation of the moment. A conjurer takes advantage of this fact to force upon his audience the choice which he wishes them to make, by creating, so to speak, the appropriate psychical environment. But in the experiments described, the psychical environment was ready made; the mental furniture of the three persons present must have been to a great extent common; and it is probable, therefore, unless special precautions were taken to prevent it (*e.g.*, by selecting the tests before the commencement of the experiments), that the trains of association leading them to think of one object rather than another would also be common in many cases to both operators and subject. The experimenters themselves, who can alone know the principles, if any, which guided their selection of the objects thought of, can best judge how far the force of this series of experiments is really impaired by these considerations. A more serious evidential defect—as Mr. Gurney has already pointed out—is that in many cases the object chosen was actually in the room, and that it is not stated what precautions were taken to prevent the attention of the "subject" from being directed to it by normal means.

It is only within the last 15 months that M. Ochorowicz has succeeded in obtaining conclusive proof of the possibility of supersensuous communication. M. Richet's results—an account of which was published in the *Revue Philosophique* in December, 1884—appear to

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have given him the first impetus towards definite experiment. As, however, immediately after describing M. Richet's experiments, he goes on to preface a recital of his own preliminary attempts with the words, "J'entrepris une série d'expériences dans le but de vérifier celles qui ont été faites par la *Society for Psychical Researches*," we may infer that he became acquainted with the work of the preceding few years in England at about the same period. The experiments of Messrs. Gibert and Pierre Janet, in inducing sleep by mental suggestion at a distance, were the first undoubted proofs which he received. These experiments have been fully described by Mr. F. W. H. Myers (who was present with Dr. A. T. Myers throughout M. Ochorowicz's visit to Havre) in the *Proceedings*, Part X., pp. 127 *et seq.*, and need not be further dwelt on here.

M. Ochorowicz returned from Havre eager to follow up the clue which had been given him; and he did, in fact, succeed in impressing commands upon certain hypnotised subjects by mental suggestion. The actions prescribed were, however, as a rule of a comparatively simple kind; and the operator was, in many cases, in actual contact with the subject, or at least was in her immediate vicinity. It is difficult, therefore, without a much fuller description of the precautions taken, to feel confident that no hint of the act to be performed could have been derived from gestures or other indications of a normal kind. The following spontaneous experience seems to be free from any objection on this score, though standing alone it cannot have much weight, as lucky guessing would be a quite possible explanation. After describing two or three observations on a subject whom he was hypnotising therapeutically, and who seemed to be occasionally aware in the hypnotic sleep of the operator's mental state, M. Ochorowicz proceeds to relate the following experience:—

J'arrive chez Mlle. S. . . .

"Qu'avez-vous fait hier soir à 11 heures?" me demande-t-elle *ex abrupto*.

Devinant une excentricité somnambulique quelconque, je lui dis:—

"Ah, non! vous me raconterez d'abord ce que vous savez, et puis moi je vous dirai si c'est exact."

"Soit. Vous avez écrit toute la soirée; ce n'etait pas des lettres, car j'ai vu de grandes feuilles; vous n'avez lu aucun livre, mais vous écriviez tout le temps; puis à 11 heures vous vous êtes couché, mais vous n'avez pas pu dormir et vous êtes levé encore une fois, et vous vous promeniez dans la chambre, en fumant une cigarette. . . . ."

Ici une personne qui était à côté de Mlle. S. hier soir, affirme qu'après s'être couchée elle ne faisait que répéter tout le temps:—

"Ah! mon Dieu, quand est-ce qu'il va dormir enfin . . . . il m'empêche de me reposer. . . ."

Je ne dis rien, et Mlle. S. continue son récit:—

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"Puis enfin, vers une heure, vous vous êtes endormi et vous vous êtes réveillé juste à 7 heures du matin. Est-ce vrai?"

Tout cela était exact, sauf "un retard constant" de plusieurs minutes dans les heures. C'est-à-dire qu'elle me *voyait* écrire encore à 11 heures, tandis que je me suis levé á 10h. 45 à peu près, etc.

The scantiness of our author's positive results is probably to be explained, in part, by the fact of his having hitherto almost exclusively confined his experiments to persons actually in the hypnotic trance. As he himself points out, the precise stage at which the hypnotised subject is most amenable to mental suggestion is in the brief period of transition between two well-marked phases of the trance —the deep lethargic sleep (état aïdéique), in which the subject is incapable of originating speech or motion of any kind, and the lucid somnambulic state (état polyidéique), in which the activity of his own mind overpowers the comparatively feeble suggestions received from without. In our own experiments in thought-transference with hypnotised subjects, we found great difficulty in preventing the percipient from relapsing in the middle of the experiment into a deep speechless slumber, from which no hint of mental suggestion could be extracted. If the waking state is not always so favourable to the reception of telepathic suggestions, the conditions are, at any rate, more stable and of longer duration. Now, not only does M. Ochorowicz seem rarely to have experimented with persons in the normal state, but it has not even occurred to him to try with persons who have not beeen proved to be readily susceptible of hypnotisation. If the truth must be told, his parental partiality for that rather dubious little toy, the hypnoscope, seems to have been somewhat of a snare to him; for indirectly it has led on to a partiality, which the results in no way justify, for the particular class of sensitives that his talisman reveals to him. And whilst he has thus neglected a wide field of experiment, he has been led into what seems to be an over hasty generalisation. For he lays it down more than once as an undoubted canon that, for mental suggestion to be effective, a special *rapport* is necessary between the operator and subject. We know so little of the conditions under which such transference of ideas takes place that we cannot deny that there may be a sense in which this is true; but apparently M. Ochorowicz connotes by the word *rapport* some previously established and cognisable bond between the two parties; and in that case his assertion is certainly misleading, as he would have been willing to admit if he had been present at some of the experiments conducted at Dean's-yard, or with Mr. Guthrie's percipients at Liverpool and elsewhere. It has happened on more than one occasion that a complete stranger to the percipient has met with startling and immediate success, where failure has rewarded the efforts of the rest

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of the investigators. Nor do the records of spontaneous telepathy support so sweeping a generalisation. Out of 830 cases recorded in *Phantasms of the Living* we find that in 36 the action took place between strangers; the only traceable *rapport* being the fact of the two persons having a common friend, or such common associations as may be presumed to exist between inhabitants of the same town.

Of the second section of the work it is not necessary to say much. It consists of copious citations from the works of the earlier French investigators, and of such later writers as Professor Beaunis and Dr. Liébeault, designed to illustrate various phases of the subject.

The last 100 pages of the book are devoted to a discussion of the various hypotheses which have been put forward from time to time to account for the phenomena. When M. Cousin asked Hegel for a succinct statement of his views, the German philosopher is said to have replied, "Ces choses-ci ne se disent ni succinctement, ni en français." We may doubt, in turn, whether it would be possible to compress within a few pages of intelligible English the gist of these rival theories, and whether the result, if attained, would be commensurate with the labour. One comment, on the hypothesis of a universal fluid which serves as the intermediary of the brain-waves, is, perhaps, worth quoting:—

> M. Despine attribue à l'éther la chaleur, la lumière, l'electricité, le magnétisme terrestre, la gravitation, l'attraction moléculaire, les affinités chemiques, les fonctions de la vie organique, celles de l'automatisme, et enfin celle du cerveau. Je crois qu'il ne reste plus grand chose à distribuer. Si, reste la Providence! (p. 483.)

Our author's own theory depends upon the supposition that electrical and nervous energy are to a certain extent reciprocally convertible. He illustrates his view by the analogy of the photophone—an instrument in which a mirror is made to vibrate to the human voice. The mirror reflects a ray of light, which, vibrating in its turn, falls upon a plate of selenium, modifying its electric conductivity. The intermittent current so produced is transmitted through a telephone—and the original articulate sound is reproduced. Now in hypnotised subjects—and M. Ochorowicz never treats of thought-transference between persons in the normal state—the equilibrium of the nervous system, he sees reason to believe, is profoundly affected. He supposes then that the electric currents of the atmosphere are modified by the nervous energy of the agent; that the disturbance so produced is transmitted to the nervous system of the percipient, already in a state of tension, and there reproduces a corresponding modification of the nerve-elements.

In the present state of our knowledge, it would be premature to discuss the theory here very briefly and inadequately summarised.

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But it may be worth while to point out that our own conception of telepathy involves, strictly speaking, no theory at all. It involves as little of pure theory as Newton's conception of the law of gravitation. What Newton did was to find the simplest general expression for the observed facts by saying that the heavenly bodies acted upon each other with a certain measurable force. He did not attempt to explain the mode of the action; he contented himself with asserting its existence, and defining its limits. And whilst succeeding astronomers have for the most part been content to follow his example, the Science has nevertheless advanced in a steady and continuous progression. So the conception of telepathy simply colligates the observed facts of spontaneous and experimental thought-transference, as instances of the action of one mind upon another. The nature of that action the theory does not discuss: it merely defines it negatively, as being outside the normal sensory channels. Nor is there any reason to suppose that the further advancement of the subject at the present time is dependent on the discovery of physical correlates for the alleged psychical action.

In conclusion, it must be said that the zeal and industry shown by M. Ochorowicz are deserving of a fuller measure of success: and I have little doubt that he will meet with it. In some departments of psychical research, at any rate, he would appear to have no lack of material, if his estimate is correct, that 30 per cent. of his fellow-countrymen are easily susceptible of hypnotisation.

FRANK PODMORE.

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INDEX TO VOL. IV.

A.

A., Mr. *See under Davey, S. J.*
Automatic Writing, F. W. H. Myers on 209
,, Instances of ... 210, 216, 234, 236, 239, 240, 246, 292
,, by Hypnotised Subjects 236, 239, 240, 246
,, Post-Hypnotic 293-323
Azam, Dr., Case recorded by 496, 503

B.

B., Madame, Case of ... 128, 143, 149, 174, 175, 177, 182-84, 246, 506, 535
Babinski, Dr., Hypnotic Researches and Experiments of 209
Baréty, Dr., Theory of Neuric Rays 173, 178
Barrett, Mrs., Evidence on Mr. Davey's "Slate-writing Phenomena" ... 417
Barrett, Professor, Case contributed by 230
,, On some Physical Phenomena commonly called Spiritualistic 25
Beaunis, Professor, Hypnotic Researches and Experiments of 5, 6, 7, 12, 14, 15, 159, 167, 169, 175, 180, 277, 288, 540
Bergson, M., Hypnotic Experiments in Hypnotic Hyperæsthesia ... 532
Berjon, Dr., Hypnotic Researches and Experiments of... 21, 151, 152, 154, 166
Bernheim, Professor, Hypnotic Researches and Experiments of, 6, 7, 9, 158, 540, 557
Biltz, H., Thought-transference Experiments with 112, 113, 114, 115, 124
Binet, A., Hypnotic Researches and Experiments of ... 236, 320, 540
,, Review of *Le Magnétisme Animal*, par A. Binet et Ch. Féré ... 540
Block, A. J., Evidence on Mr. Davey's "Slate-writing" 445
Bourru and Bourot, Drs., Hypnotic Researches and Experiments of 21, 128, 151, 166, 167, 169, 176, 181, 497
Braid's Hypnotic Experiments 145-147
Brown-Séquard, Researches and Experiments of 148, 149
Brüggenkate, B. J. Ten., Evidence on Mr. Davey's "Slate-writing" ... 448
Bullock, E., Alleged Mediumship of 54

C.

C., Miss, Case of 29

Digitized by Google

Cataleptic Hallucination, Case of 230
Chambard, Dr., Table of Hypnogenous Processes 185
Charcot, Dr., Hypnotic Researches and Experiments of 6, 147, 180, 183, 540, 545-546
Clifford, David. *See under Davey, S. J.*
Council of the Society, List of Members 587

D.

DAVEY, S. J., Experimental Investigation of, as to the Possibilities of Mal-observation and Lapse of Memory from a Practical Point of View 405-495
,, Slate-writing and other alleged Spiritualistic Phenomena obtained by Normal Means 67, 384, 389, 390, 401, 408, 419, 487
Delbœuf, Professor, Hypnotic Researches and Experiments of 274, 277, 278-282, 286, 287-89
Despine, Dr., Hypnotic Researches and Experiments of 6, 18, 144, 161, 171
Dessoir, Max, Experiments in Thought-transference 111
Dodds, J. M., Evidence on Mr. Davey's "Slate-writing" Phenomena 398, 457, 493
Dreams... ... ... 226, 241, 517
Dufay, Dr., Case recorded by 228
Du Prel, Baron, on "Slate-writing" Phenomena 375
Dusart, Dr., Hypnotic Researches and Experiments of 128, 137

E.

E., MDLLE. A. E., Case of 9, 14, 15, 17, 167, 175
Edgworth, F. Y., The Calculus of Probabilities as applied to Psychical Research 189
Eglinton, W., Alleged Mediumship of 36, 38, 60, 71, 72, 82, 83, 338, 382, 383, 391-396, 399, 406, 411
Elliotson, Dr., Hypnotic Researches of 17, 139, 161
Ellis, S., on Mr. Davey's "Slate-writing" Phenomena 417
Elton, O., Review of *L'Hypnotisme et les Etats Analogues*, par Dr. Gilles de la Tourette 555
Esdaile, Dr., Hypnotic Experiments of 173

F.

FAY, MRS., Alleged Mediumship of 48
Fairlamb, Miss, Alleged Mediumship of 48
Féré, Dr., Hypnotic Researches and Experiments of... 6, 128, 236, 320, 540
,, Review of *Le Magnétisme Animal*, par A. Binet et Ch. Féré 540
Firman, E., Alleged Mediumship of 62, 389
Fox Family, Alleged Mediumship of 46

G.

GIBERT, DR., Hypnotic Researches and Experiments of 127, 175, 177, 506, 535
Gillis, Herr, Evidence on "Slate-writing" Phenomena 372

Digitized by Google

Gurney, Edmund, Eglinton's Professed Mediumship 338, 349, 379
,, ,, Peculiarities of Certain Post-Hypnotic States 268
,, ,, Review of *Le Magnétisme Animal*, par A. Binet et Ch. Féré 540
,, ,, Stages of Hypnotic Memory 515

H.

Havre, Case, The ... 128, 143, 149, 174, 175, 177, 182, 183, 184, 246, 506, 535
Hayman, H., Evidence on Mr. Davey's "Slate-writing" Phenomena ... 470
Haxby, W., Alleged Mediumship of 60
Héricourt, M., Hypnotic Researches and Experiments of ... 128, 137, 236
Herschell, Dr., Evidence on "Slate-writing" Phenomena 97
Hodgson, R., Evidence on "Slate-writing" Phenomena 372, 379
,, On Possibilities of Mal-observation and Lapse of Memory from a Practical Point of View 381
,, Notes on Mr. Davey's "Slate-writing" Phenomena 488, 490, 493, 494
Hyperæsthesia, Hypnotic, Note on Certain Reported Cases 532
Hypnotism—
Experimental Evidence 6, 20, 127, 228, 236, 268, 496, 503, 505, 506 515, 544-555, 561, 563-566
Automatic Writing by Hypnotised Subjects ... 236, 239, 240, 246, 292
Commands, Execution of 269
Hypnotic Hyperæsthesia, Cases of 532
,, Memory, Stages of 515
,, Stigmata and Hæmorrhage 166
,, Suggestion, Human Personality in the Light of 1
Modes of Induction of Hypnotic Phenomena, Tabulated ... 181, 185
Personality in the Light of Hypnotic Research 1, 20, 237-252, 292, 314, 496
Post-Hypnotic States, Peculiarities of Certain 268
Telepathic Hypnotism 127

I.

I. Miss., Case of 33

J.

Janet, Dr. H., Hypnotic Researches and Experiments of 127, 174, 177, 182, 183, 184, 236. 237, 246, 285, 289, 506, 535, 557
Johnson, Mrs., on Mr. Davey's "Materialisation and Slate-writing" Phenomena 416, 482
Jones, Stanley, Evidence on Mr. Davey's "Slate-writing" 471

K.

Kellar, H., Evidence on "Slate-writing" Phenomena 411
Keulemans, J. G., Cases contributed by 226, 228

L.

Legge, J. G., Evidence on Mr. Davey's "Slate-writing" Phenomena 435, 490

Digitized by Google

Lewis, Angelo, Evidence on Mr. Davey's "Slate-writing" Phenomena 400, 485
Lewis, Professor H. Carvill, Accounts of some so-called "Spiritualistic" Séances 338, 352
Library Catalogue 569
,, Rules 586
Liébeault, Dr., Hypnotic Researches and Experiments of 6, 7, 9, 14, 15, 18, 148, 167, 170, 172, 556, 557, 558
Liégeois, Professor, Hypnotic Researches and Experiments of 2, 6, 9, 556, 560, 561
Limmer, H. J., Evidence on Mr. Davey's "Slate-writing" ... 419, 423
Louise, Case of 237
Loudun, Psychical Phenomena connected with the Ursuline Convent of 232

M.

M., ALBERTINE, Case of 142, 170
"M.A., Oxon," Evidence on "Slate-writing" Phenomena 339
Mabille, Dr., Hypnotic Researches and Experiments of 151, 153, 166, 167, 181, 497
Mabire, E., Thought-transference Experiments with 324
Mal-Observation, the Possibilities of, in connection with Spiritualistic Phenomena—
Davey, S. J., on 405
Hodgson, R., on 381
Massey, C. C. M., on 75, 408
Manville, E., Evidence on Mr. Davey's "Slate-writing" 449, 454
Massey, C. C., Evidence on Slate-writing Phenomena ... 80, 87, 382, 391
,, ,, On the Possibilities of Mal-Observation in Relation to the Evidence for the Phenomena of Spiritualism 75, 408
,, ,, ,, Discussion on, with Professor Sidgwick ... 99, 101, 107
Meetings of the Society 1, 24, 25, 45, 75, 209, 262
Mesmerism, ... *See Hypnotism*
Mesnet, Dr., Case recorded by 234
Monck, "Dr.," Alleged Mediumship of 84
Multiplex Personality, F. W. H. Myers on 496
Muscle Reading, Experiments in 111
Myers, F. W. H., Automatic Writing 209
,, ,, Human Personality in the light of Hypnotic Suggestion ... 1
,, ,, Multiplex Personality 496
,, ,, Note on certain alleged cases of Hypnotic Hyperæsthesia 532
,, ,, Telepathic Hypnotism 127

N.

NETHERCLIFT, F. G., Report on Handwriting in certain "Slate-writing" Phenomena 370, 373, 376

O.

OCHOROWICZ, DR. J., Hypnotic Experiments of 562-566
,, ,, Review of *De la Suggestion Mentale* par 562

Digitized by Google

Officers and Council of the Society 587

P.

PADSHAH, B. J., Evidence on "Slate-writing" Phenomena... 377, 398, 402
,, ,, Mr. Davey's "Slate-writing" Phenomena 398, 402, 437, 490
Percival, F. W., Evidence on "Slate-writing" Phenomena... 344
Perronet, Dr., Hypnotic Researches and Experiments of 17, 18, 178
Physical Phenomena Some, commonly called Spiritualistic—
Professor Barrett on 25
,, Balfour Stewart on 42
Pitres, Dr., Hypnotic Researches and Experiments of 7, 142, 147, 149, 157, 170, 508, 509
Podmore, Austin, Evidence on Mr. Davey's "Slate-writing" ... 69, 416
Podmore, Frank, Review of *De la Suggestion Mentale*, par Dr. J. Ochorowicz 562
Post-Hypnotic States, Edmund Gurney on the Peculiarities of certain ... 268
,, ,, Automatic Execution of slight Physical Movements 282
,, ,, Execution of Hypnotic Commands 269
,, ,, Reckoning of Time and Counting of Signals 286
,, ,, Secondary Intelligence, Exhibitions of ... 292, 314
Presidential Address... 262
Probabilities, F. Y. Edgworth on the Calculus of, as applied to Psychical Research 189

Q

Q., DR., Evidence on Mr. Davey's "Slate-writing" Phenomena ... 473, 494

R.

RAIT, J. H., Evidence on Mr. Davey's "Materialisation," and "Slate-writing" 419, 423, 484, 487
Ravensburg, Baroness, Thought-transference Experiments with 124
Reviews 540, 555, 562
Richer, Dr. P., Hypnotic Researches and Experiments of 6, 7, 143, 144-49, 244, 507
Richet, M. Ch., Hypnotic Researches and Experiments of 6, 7, 18, 151, 181, 236, 506, 542
Rochas, Commandant de, Case recorded by 251, 537
Russell, Mr. and Mrs., Evidence on Mr. Davey's "Slate-writing" 398, 437, 490

S.

S., H. W., Evidence on Mr. Davey's "Slate-writing" 468
Sachse, W., Thought-transference Experiments with 115, 124
Sauvaire, Dr., Case recorded by 536
Schiller, F. C. S., Case contributed by 216
Schmoll, Anton, Thought-transference Experiments of 324
Scobell, R. W., Evidence on Mr. Davey's "Slate-writing" 417
Secondary Intelligence, Post-Hypnotic Exhibitions of 292, 314

Digitized by Google

Sidgwick, Mrs., Evidence on Mr. Davey's "Slate-writing" 67, 413, 475, 494
,, Notes on two accounts of Séances 494
,, Results of a Personal Investigation into the "Physical Phenomena of Spiritualism" 45
Sidgwick, Professor, Evidence on Mr. Davey's Slate-writing Phenomena 413
,, ,, Note and Discussion with Mr. C. C. Massey on the Possibilities of Mal-Observation ... 99, 103, 109
Slade, Dr., Alleged Mediumship of 56, 65, 79, 85, 410, 411
"Slate-writing," Mr. Davey's 67, 384, 389, 390, 401, 408, 419, 487
,, ,, Facsimile of 466
,, "Spiritualistic" 56,65, 79, 85,338,387, 388,391-96, 406,407, 408
,, ,, Expert's report on handwriting in certain cases of... ... ... 370, 373, 376
,, ,, Facsimiles of ... 358, 359, 363, 366, 374
Smith, G. A., Hypnotic Experiments of 174, 271, 517, 538
Society for Psychical Research—
General Meetings (ordinary) 1, 24, 25, 45, 75, 209, 262
Library Catalogue 569
,, Rules 586
Members, Associates, and Honorary Members, List of 587
Officers and Council 587
Spiritualistic Séances, Account of some so-called, by Prof. Carvill Lewis and others 338
Spiritualism, Physical Phenomena of so-called ... 25, 42, 45, 75, 338, 381
,, Mal-Observation possibilities of in connection with 25, 45, 75, 338, 381
,, *See also "Slate-writing" Phenomena*
Stewart, D., Case contributed by 517
Stewart, Prof. Balfour, Note on "Some Physical Phenomena commonly called Spiritualistic" 42
,, Presidential Address 262
Stidolph, Miss, Evidence on Mr. Davey's "Slate-writing" Phenomena 418
Symons, Miss, Evidence on Mr. Davey's "Slate-writing" Phenomena 402, 475, 480, 494

T.

T., Mr. and Miss A. B., Evidence on Mr. Davey's "Slate-writing" ... 461
T., Marquis, Evidence on Mr. Davey's "Slate-writing" 464
Taylor, Major, Evidence on 'Slate-writing" Phenomena 82
Telepathic Hypnotism, F. W. H. Myers on 127
Thought-transference—
Experimental Evidence--
With Colours 564
,, Numbers 113
,, Objects... ... ... 326, 334, 335, 564
,, Playing-cards 114, 115, 564
,, Pictures... .. .. 115, 327
,, Reproductions (plates of) made by Sensitives 116, 126,328-335
,, Tastes 564
,, Words and Sentences 114, 562
Spontaneous, possible case of 412

Digitized by Google

Time, Reckoning of, in Post-Hypnotic States 286
Tourette, Dr. Gilles de la, Review of *L'Hypnotisme et les Etats Anologues* par 555
Truesdell, J. W., on "Slate-writing" Phenomena 414

V.

V., LOUIS, Case of 18, 21, 148, 151, 152, 153, 160, 166, 176, 496, 531
Venner, R., Evidence on Mr. Davey's "Slate-writing" Phenomena ... 449
Voisin, Dr. A., Hypnotic Experiments of 505, 506, 509

W.

WALLACE, A. R., Evidence on "Slate-writing" Phenomena 84
,, on the Phenomena of Spiritualism 84, 381, 504
Webb, G., Evidence on "Slate-writing" Phenomena 352
Wedgwood, Hensleigh, Evidence on "Slate-writing" Phenomena ... 71
Weiss, E., Thought-transference Experiments with ... 111-115, 124
Wheeler, Mrs., Case contributed by 154
Willson, Mrs., Evidence on Mr. Davey's "Materialisation" Phenomena 483
Wilson, D. H., Evidence on "Slate-writing" Phenomena 82
Wingfield, H., Case contributed by 236
Wood, Miss, Alleged Mediumship of 48

X.

X., FELIDA, Case of 496, 503

Y.

Y., MR., MRS., AND MISS, Evidence on Mr. Davey's "Slate-writing" Phenomena 426, 488

Z.

ZÖLLNER, PROF., Evidence on "Slate-writing" Phenomena ... 65, 79, 85

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