

PROCEEDINGS
OF THE
SOCIETY FOR PSYCHICAL RESEARCH.

VOLUME XII.
(CONTAINING PARTS XXX—XXXI,
WITH APPENDIX.)

1896-7.

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PROCEEDINGS

OF THE

SOCIETY FOR PSYCHICAL RESEARCH.

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SOCIETY FOR PSYCHICAL RESEARCH.

PROCEEDINGS OF GENERAL MEETINGS.

The 76th General Meeting of the Society was held at the Westminster Town Hall on Friday, December 6th, at 4 p.m. ; PROFESSOR SIDGWICK in the chair.

"Miss X." read a second provisional account of her "Enquiry into Second-sight in the Highlands."

MR. F. W. H. MYERS read a case from his paper on "The Subliminal Self," which appeared in the *Proceedings*, Part XXIX.

The 77th General Meeting was held in the same place on Friday, January 31st, at 4 p.m. ; MR. H. ARTHUR SMITH in the chair.

PROFESSOR WILLIAM JAMES' "Presidential Address" was read by MR. F. W. H. MYERS, and is printed below.

The paper by MR. C. M. BARROWS on "Suggestion without Hypnotism," printed below, was also read by MR. MYERS.

The 78th General Meeting was held in the same place on Friday, March 13th, at 8.30 p.m. ; MR. R. PEARSALL SMITH in the chair.

MR. F. W. H. MYERS read a paper on "Sub-conscious Reasoning" by DR. W. ROMAINE NEWBOLD, Assistant Professor of Philosophy in the University of Pennsylvania, which is printed below.

Selections were read from DR. HODGSON'S "Notes on further Trance Phenomena with Mrs. Piper," which will, it is hoped, be published in a future number of the *Proceedings*.

The 79th General Meeting was held in the same place on Friday, April 24th, at 4 p.m. ; the President, MR. W. CROOKES, in the chair.

MR. F. PODMORE read part of his paper on "Poltergeists," printed below.

A paper communicated by PROFESSOR W. JAMES on "A case of Psychic Automatism, including 'speaking with tongues,'" was read by MR. F. W. H. MYERS, and will, it is hoped, appear in a future number of the *Proceedings*.

I.

ADDRESS BY THE PRESIDENT,

PROFESSOR WILLIAM JAMES.

The Presidency of the Society for Psychical Research resembles a mouse-trap. Broad is the path and wide is the way that leadeth thereinto. Flattering bait is spread before the entrance: the distinguished names of one's predecessors in the office; the absence of any active duties; England and America symbolically made one in that higher republic where no disputed frontiers or foreign offices exist;—and all the rest of it. But when the moment comes to retrace one's steps and go back to private life, like Cincinnatus to his plough, then comes the sorrow, then the penalty for greatness. The careless presidential mouse finds the wires all pointing now against him, and to get out there is no chance, unless he leave some portion of his fur. So in resigning my office to my worthier successor, I send this address to be read across the ocean as my ransom, not unaware, as I write it, that the few things I can say may well fall short of the dignity of the occasion and the needs of the cause for which our Society exists.

Were psychical research as well organised as the other sciences are, the plan of a presidential address would be mapped out in advance. It could be nothing but a report of progress, an account of such new observations and new conceptions as the interim might have brought forth. But our active workers are so few compared with those engaged in more familiar departments of natural learning, and the phenomena we study so fortuitous and occasional, that two years must, as a rule, prove too short an interval for regular accounts of stock to be taken. Looking back, however, on our whole dozen years or more of existence, one can appreciate what solid progress we have made. Disappointing as our career has doubtless been to those of our early members who expected definite corroboration or the final *coup de grâce* to be given in a few short months to such baffling questions as that of physical mediumship, to soberer and less enthusiastic minds the long array of our volumes of *Proceedings* must suggest a feeling of anything but discouragement. For here, for the first time in the history of these perplexing subjects, we find a large collection of records to each of which the editors and reporters have striven to

attach its own precise co-efficient of evidential value, great or small, by getting at every item of first-hand evidence that could be attained, and by systematically pointing out the gaps. Only those who have tried to reach conclusions of their own by consulting the previous literature of the occult, as vague and useless, for the most part, as it is voluminous, can fully appreciate the immense importance of the new method which we have introduced. Little by little, through consistently following this plan, our *Proceedings* are extorting respect from the most unwilling lookers-on, and I should like emphatically to express my hope that the impartiality and completeness of record which has been their distinguishing character in the past, will be held to even more rigorously in the future. It is not as a vehicle of conclusions of our own, but as a collection of documents that may hereafter be resorted to for testing the conclusions and hypotheses of *anybody*, that they will be permanently important. Candour must be their very essence, and all the hesitations and contradictions that the phenomena involve must appear unmitigatedly in their pages. Collections of this sort are usually best appreciated by the rising generation. The young anthropologists and psychologists who will soon have full occupancy of the stage will feel, as we have felt, how great a scientific scandal it has been to leave a great mass of human experience to take its chances between vague tradition and credulity on the one hand and dogmatic denial at long range on the other, with no body of persons extant who are willing and competent to study the matter with both patience and rigour. There have been isolated experts, it is true, before now. But our Society has for the first time made their abilities mutually helpful.

If I were asked to give some sort of dramatic unity to our history, I should say first that we started with high hopes that the hypnotic field would yield an important harvest, and that these hopes have subsided with the general subsidence of what may be called the hypnotic wave. Secondly, I should say that experimental thought-transference has yielded a less abundant return than that which in the first year or two seemed not unlikely to come in. Professor Richet's supposition that if the unexplained thing called thought-transference be ever real, its causes must, to some degree, work in everybody at all times (so that in any long series of card-guessings, for example, there ought always to be some excess of right answers above the chance number) is, I am inclined to think, not very well substantiated. Thought-transference may involve a critical point, as the physicists call it, which is passed only when certain psychic conditions are realized, and otherwise not reached at all—just as a big conflagration will break out at a certain temperature, below which no conflagration

whatever, whether big or little, can occur. We have published records of experiments on at least thirty subjects, roughly speaking, and many of these were strikingly successful. But their types are heterogeneous; in some cases the conditions were not faultless; in others the observations were not prolonged; and generally speaking, we must all share in a regret that the evidence, since it has reached the point it *has* reached, should not grow more voluminous still. For whilst it cannot be ignored by the candid mind, it yet, as it now stands, may fail to convince coercively the sceptic. Any day, of course, may bring in fresh experiments in successful picture-guessing. But meanwhile, and lacking that, we can only point out that our present data are strengthened in the flank, so to speak, by all observations that tend to corroborate the possibility of other kindred phenomena, such as telepathic impression, clairvoyance, or what is called "test-mediumship." The wider genus will naturally cover the narrower species with its credit.

Now, as regards the work of the Society in these latter regards, we can point to solid progress. First of all we have that masterpiece of intelligent and thorough scientific work—I use my words advisedly—the Sidgwick Report on the Census of Hallucinations. Against the conclusion of this report, that death-apparitions are 440 times more numerous than they should be according to chance, the only rational answer that I can see is that the data are still too few, that the net was not cast wide enough, and that we need, to get fair averages, far more than 17,000 answers to the Census-question. This may, of course, be true, though it seems exceedingly unlikely, and in our own 17,000 answers veridical cases may have heaped themselves unduly. So neither by this report then, taken alone, is it absolutely necessary that the sceptic be definitively convinced. But then we have, to strengthen *its* flank in turn, the carefully studied cases of "Miss X." and Mrs. Piper, two persons of the constitution now coming to be nicknamed "psychic" (a bad term, but a handy one), each person of a different psychic type, and each presenting phenomena so chronic and abundant that, to explain away the supernatural knowledge displayed, the disbeliever will certainly rather call the subjects deceivers, and their believers dupes, than resort to the theory of chance-coincidence. The same remark holds true of the extraordinary case of Stainton Moses, concerning which Mr. Myers has recently given us such interesting documents. In all these cases (as Mr. Lang has well said of the latter one) we are, it seems to me, fairly forced to choose between a physical and a moral miracle. The physical miracle is that knowledge may come to a person otherwise than by the usual use of eyes and ears. The moral miracle is a kind of deceit so perverse and successful as to find no parallel in usual

experience. But the limits of possible perversity and success in deceit are hard to draw—so here again the sceptic may fall back on his general *non possumus*, and without pretending to explain the facts in detail, say the presumption from the ordinary course of Nature still holds good against their supernormal interpretation. But the oftener one is forced to reject an alleged sort of fact by the method of falling back on the mere presumption that it can't be true because, so far as we know Nature, Nature runs altogether the other way, the weaker does the presumption itself get to be; and one might in course of time use up one's presumptive privileges in this way, even though one started (as our anti-telepathists do) with as good a case as the great induction of psychology that all our knowledge comes by the use of our eyes and ears and other senses. And we must remember also that this undermining of the strength of a presumption by reiterated report of facts to the contrary does not logically require that the facts in question should all be well proved. A lot of rumours in the air against a business man's credit, though they might all be vague, and no one of them amount to proof that he is unsound, would certainly weaken the *presumption* of his soundness. And all the more would they have this effect if they formed what our lamented Gurney called a faggot and not a chain, that is, if they were independent of each other, and came from different quarters. Now our evidence for telepathy, weak and strong, taken just as it comes, forms a faggot and not a chain. No one item cites the content of another item as part of its own proof. But, taken together, the items have a certain general consistency; there is a method in their madness, so to speak. So each of them adds presumptive value to the lot; and cumulatively, as no candid mind can fail to see, they subtract presumptive force from the orthodox belief that there can be nothing in any one's intellect that has not come in through ordinary experiences of sense.

But it is a miserable thing for a question of truth to be confined to mere presumption and counter-presumption, with no decisive thunderbolt of fact to clear the baffling darkness. And sooth to say, in talking so much of the merely presumption-weakening value of our records, I have been wilfully taking the point of view of the so-called "rigorously scientific" disbeliever, and making an *ad hominem* plea. My own point of view is different. For me the thunderbolt *has* fallen, and the orthodox belief has not merely had its presumption weakened, but the truth itself of the belief is decisively overthrown. If you will let me use the language of the professional logic-shop, a universal proposition can be made untrue by a particular instance. If you wish to upset the law that all crows are black, you mustn't seek to show that no crows are; it is enough if you prove one single crow to be white. My own white crow is Mrs. Piper. In the trances of

this medium, I cannot resist the conviction that knowledge appears which she has never gained by the ordinary waking use of her eyes and ears and wits. What the source of this knowledge may be I know not, and have not the glimmer of an explanatory suggestion to make ; but from admitting the fact of such knowledge, I can see no escape. So when I turn to the rest of our evidence, ghosts and all, I cannot carry with me the irreversibly negative bias of the rigorously scientific mind, with its presumption as to what the true order of nature ought to be. I feel as if, though the evidence be flimsy in spots, it may nevertheless collectively carry heavy weight. The rigorously scientific mind may, in truth, easily overreach itself. Science means, first of all, a certain dispassionate method. To suppose that it means a certain set of results that one should pin one's faith upon and hug forever, is sadly to mistake its genius, and degrades the scientific body to the status of a sect.

But I am devoting too many words to scientific logic, and too few to my review of our career. In the question of physical mediumship, we have left matters as baffling as we found them, neither more nor less. For if, on the one hand, we have brought out new documents concerning the physical miracles of Stainton Moses, on the other hand we have, by the Hodgson-Davey experiments, and the Paladino episode, very largely increased the probability that testimony based on certain sorts of observation may be quite valueless as proof. Eusapia Paladino has been to us both a warning and an encouragement. An encouragement to pursue unwaveringly the rigorous method in such matters from which our *Proceedings* have never departed, and a warning against drawing any prompt inference whatever from things that happen in the dark. The conclusions to which some of us had been hastily led on "the island," melted away when, in Cambridge, the opportunity for longer and more cunning observation was afforded. Some day, it is to be hoped, our *Proceedings* may be enabled to publish a complete study of this woman's life. Whatever were the upshot of such a study, few documents could be more instructive in all ways for psychical research.

It is pleasant to turn from phenomena of the dark-sitting and rat-hole type (with their tragi-comic suggestion that the whole order of nature might possibly be overturned in one's own head, by the way in which one imagined oneself, on a certain occasion, to be holding a tricky peasant woman's feet) to the "calm air of delightful studies." And on the credit-side of our Society's account a heavy entry must next be made in favour of that immense and patient collecting of miscellaneous first-hand documents that alone has enabled Mr. Myers to develop his ideas about automatism and the subliminal self. In

Mr. Myers' papers on these subjects we see, for the first time in the history of men's dealings with occult matters, the whole range of them brought together, illustrated copiously with unpublished contemporary data, and treated in a thoroughly scientific way. All constructions in this field must be provisional, and it is as something provisional that Mr. Myers offers us his attempt to put order into the tangle. But, thanks to his genius, we begin to see for the first time what a vast interlocked and graded system these phenomena, from the rudest motor automatism to the most startling sensory apparition, form. Mr. Myers' methodical treatment of them by classes and series is the first great step towards overcoming the distaste of orthodox science to look at them at all.

But our *Proceedings* contain still other veins of ore for future working. Ghosts, for example, and disturbances in haunted houses. These, whatever else may be said of them at present, are not without bearing on the common scientific presumption of which I have already perhaps said too much. Of course, one is impressed by such narratives after the mode in which one's impressibility is fashioned. I am not ashamed to confess that in my own case, although my *judgment* remains deliberately suspended, my *feeling* towards the way in which the phenomena of physical mediumship should be approached has received from ghost and disturbance-stories a distinctly charitable lurch. Science may keep saying: "such things are simply impossible;" yet, so long as the stories multiply in different lands, and so few are positively explained away, it is bad method to ignore them. They should at least accrete for future use. As I glance back at my reading of the past few years (reading accidental so far as these stories go, since I have never followed up the subject) ten cases immediately rise to my mind. The Phelps-case at Andover, recorded by one of the family, in *McClure's Magazine* for this month; a case in China, in Nevius's *Demon Possession*, published last year; the case in John Wesley's life; the "*Amherst Mystery*" in Nova Scotia, (New York, 1888); the case in Mr. Willis's house at Fitchburg, recorded in *The Atlantic Monthly* for August, 1868 (XXII., 129); the Telfair-Mackie case, in Sharpe's *History of Witchcraft* in Scotland; the Morse case, in Upham's *Salem Witchcraft*; the case recounted in the introduction of W. v. Humboldt's *Briefe an eine Freundin*; a case in the *Annales des Sciences Psychiques* for last year (p. 86); the case of the carpenter's shop at Swanland, near Hull, in our *Proceedings*, Vol. VII., Part XX., pp. 383 — 394. In all of these, if memory doesn't deceive me, material objects are said to have been witnessed by many persons moving through the air in broad daylight. Often the objects were multitudinous—in some cases they were stones showered through windows and down-chimney.

More than once it was noted that they fell gently and touched the ground without shock. Apart from the exceptionality of the reputed occurrences, their mutual resemblances suggest a natural type, and I confess that until these records, or others like them, are positively explained away, I cannot feel (in spite of such vast amounts of detected fraud) as if the case against physical mediumship itself as a freak of nature were definitively closed. But I admit that one man's psychological reaction cannot here be like unto another's; and one great duty of our Society will be to pounce upon any future case of this "disturbance" type, catch it while red-handed and nail it fast, whatever its quality be.

We must accustom ourselves more and more to playing the *rôle* of a meteorological bureau, be satisfied for many a year to go without definitive conclusions, confident that if we only keep alive and heap up data, the natural types of them (if there are any) will surely crystallize out; whilst old material that is baffling will get settled as we proceed, through its analogy with new material that will come with the baffling character removed.

But I must not weary your patience with the length of my discourse. One general reflection, however, I cannot help asking you to let me indulge in before I close. It is relative to the influence of psychical research upon our attitude towards human history. Although, as I said before, Science taken in its essence should stand only for a method, and not for any special beliefs, yet, as habitually taken by its votaries, Science has come to be identified with a certain fixed general belief, the belief that the deeper order of Nature is mechanical exclusively, and that non-mechanical categories are irrational ways of conceiving and explaining even such a thing as human life. Now this mechanical rationalism, as one may call it, makes, if it becomes one's only way of thinking, a violent breach with the ways of thinking that have, until our own time, played the greatest part in human history. Religious thinking, ethical thinking, poetical thinking, teleological, emotional, sentimental thinking, what one might call the personal view of life to distinguish it from the impersonal and mechanical view, and the romantic view of life to distinguish it from the rationalistic view, have been, and even still are, outside of well-drilled scientific circles, the dominant forms of thought. But for mechanical rationalism, personality is an insubstantial illusion; the chronic belief of mankind, that events may happen for the sake of their personal significance, is an abomination; and the notions of our grandfathers about oracles and omens, divinations and apparitions, miraculous changes of heart and wonders worked by inspired persons, answers to prayer and

providential leadings, are a fabric absolutely baseless, a mass of sheer untruth. Now, of course, we must all admit that the excesses to which the romantic and personal view of Nature may lead, if wholly unchecked by impersonal rationalism, are direful. Central African Mumbo-jumboism is one of unchecked romanticism's fruits. One ought accordingly to sympathize with that abhorrence of romanticism as a sufficient world-theory; one ought to understand that lively intolerance of the least grain of romanticism in the views of life of other people, which are such characteristic marks of those who follow the scientific professions to-day. Our debt to Science is literally boundless, and our gratitude for what is positive in her teachings must be correspondingly immense. But our own *Proceedings* and *Journals* have, it seems to me, conclusively proved one thing to the candid reader, and that is that the verdict of pure insanity, of gratuitous preference for error, of superstition without an excuse, which the scientists of our day are led by their intellectual training to pronounce upon the entire thought of the past, is a most shallow verdict. The personal and romantic view of life has other roots beside wanton exuberance of imagination and perversity of heart. It is perennially fed by *facts of experience*, whatever the ulterior interpretation of those facts may prove to be, and at no time in human history would it have been less easy than now—at most times it would have been much more easy—for advocates with a little industry to collect in its favour an array of contemporary documents as good as those which our publications present. These documents all relate to real experiences of persons. These experiences have three characters in common: they are capricious, discontinuous, and not easily controlled; they require peculiar persons for their production; their significance seems to be wholly for personal life. Those who preferentially attend to them, and still more those who are individually subject to them, not only easily *may* find but are logically bound to find in them valid arguments for their romantic and personal conception of the world's course. Through my slight participation in the investigations of the Society for Psychical Research, I have become acquainted with numbers of persons of this sort, for whom the very word Science has become a name of reproach, for reasons that I now both understand and respect. It is the intolerance of Science for such phenomena as we are studying, her peremptory denial either of their existence, or of their significance except as proofs of man's absolute innate folly, that has set Science so apart from the common sympathies of the race. I confess that it is on this, its humanizing mission, that our Society's best claim to the gratitude of our generation seems to me to depend. We have restored continuity to history. We have shown some reasonable basis for the most superstitious aberrations of the foretime. We have bridged the chasin, healed the hideous

rift that Science, taken in a certain narrow way, has shot into the human world.

I will even go one step further. When from our present advanced standpoint we look back upon the past stages of human thought, whether it be scientific thought or theological thought, we are amazed that a Universe which appears to us of so vast and mysterious a complication should ever have seemed to any one so little and plain a thing. Whether it be Descartes' world or Newton's; whether it be that of the materialists of the last century or that of the Bridgewater treatises of our own; it always looks the same to us—incredibly perspectiveless and short. Even Lyell's, Faraday's, Mill's, and Darwin's consciousness of their respective subjects are already beginning to put on an infantile and innocent look. Is it then likely that the Science of our own day will escape the common doom, that the minds of its votaries will never look old-fashioned to the grandchildren of the latter? It would be folly to suppose so. Yet, if we are to judge by the analogy of the past, when our Science once becomes old-fashioned, it will be more for its omissions of fact, for its ignorance of whole ranges and orders of complexity in the phenomena to be explained, than for any fatal lack in its spirit and principles. The spirit and principles of Science are mere affairs of method; there is nothing in them that need hinder Science from dealing successfully with a world in which personal forces are the starting-point of new effects. The only form of thing that we directly encounter, the only experience that we concretely have, is our own personal life. The only complete category of our thinking, our professors of philosophy tell us, is the category of personality, every other category being one of the abstract elements of that. And this systematic denial on Science's part of personality as a condition of events, this rigorous belief that in its own essential and innermost nature our world is a strictly impersonal world, may, conceivably, as the whirligig of time goes round, prove to be the very defect that our descendants will be most surprised at in our own boasted Science, the omission that, to their eyes, will most tend to make *it* look perspectiveless and short.

But these things lie upon the knees of the gods. I must leave them there, and close now this discourse, which I regret that *I* could not make more short. If it has made you feel that (however it turn out with modern Science) our own Society, at any rate, is not "perspectiveless," it will have amply served its purpose; and the next President's address may have more definite conquests to record.

II.

SUB-CONSCIOUS REASONING.

BY WM. ROMAINE NEWBOLD.

The three following cases may, perhaps, be as well reported under the above somewhat ambiguous caption as under any other. In all, the results obtruded upon the upper consciousness seem to pre-suppose the existence of conscious states, which, in two cases, would appear never to have existed in the upper consciousness at all, and in the third, even if they did exist, existed only in dream and were wholly forgotten. Furthermore, the results were in all three cases of such a character that they could have been attained by processes of associative reasoning analogous to those of the upper consciousness, and we are therefore not required to ascribe to the supposititious "subconscious" states any supernormal powers.

The first was given me by my friend and colleague, William A. Lamberton, Professor of Greek in the University of Pennsylvania, and I transcribe his own written statement.

"I went to the Lehigh University in the fall of 1869 as instructor in Latin and Greek. My spare time, however, partly as the result of old leanings of my undergraduate days, partly in consequence of a somewhat intimate companionship that sprang up between me and the instructor in mathematics, after a few months came to be given almost entirely to mathematics. I then made acquaintance for the first time with the pleasures of descriptive geometry; I may say here that this branch of mathematics has a more direct tendency towards quickening the power of mentally picturing bodies and lines in space than any other part of mathematics that can be called elementary. I mention this here because it may have some bearing upon the experience now to be related.

"Outside of this study of descriptive geometry, my mathematical work was entirely algebraic and analytic. I soon began to try my hand at certain problems. Somewhere in the spring, I think it was, of 1870, I attacked this problem:—Given an ellipse, to find the locus of the foot of the perpendicular let fall from either focus upon a tangent to this ellipse at any point. I endeavoured to solve this analytically, starting from the well-known equations of the tangent to an ellipse, and of a perpendicular to a given line from a given point.

No thought of attempting a geometrical solution ever entered my head. After battling with these equations for a considerable time—it was over a week and may have been two weeks—I came to the natural conclusion that I was bogged, and that all my efforts, if continued, would only sink me deeper in the bog; the proper thing to do was to call a halt, dismissing the problem as far as possible from my thoughts, and after some time, when my mind had got completely free from it, to return to it afresh, when, I had no doubt, a few minutes would put me in possession of the solution. This I did absolutely and with success. After about a week, I woke one morning and found myself in possession of the desired solution under circumstances to me strange and interesting, so much so that the impression of them has never died away, or even, so far as I can say, become dim or altered in any way. First:—the solution was entirely geometrical, whereas I had been labouring for it analytically without ever drawing or attempting to draw a single figure. Second:—it presented itself by means of a figure objectively pictured at a considerable distance from me on the opposite wall. Now although I have been able, and have been so for years, to picture to myself a geometrical figure—even moderately complicated—and use it for solution of a geometrical problem without external lines being drawn, such figures have sensationally for me a distinct location in myself, viz., in the eye itself; they are never, so far as I know, externally presented. This, however, was distinctly external. The room that I occupied had once been a recitation room. It was a long room, running east and west, with two windows on the south side, one in the south-east corner. The north wall had once been partially occupied by a long blackboard, set in the wall and surrounded by a moulding. The blackboard surface was simply a blackened—possibly slated—portion of the wall itself. This had been painted over, but the black showed through the white paint and the moulding was still there; so that, apart from the tradition, with which I was familiar, the fact of a blackboard having been there was perfectly clear and evident. My bed was so placed between the windows on the south and the north wall, that on opening my eyes in the morning the first thing I would be likely to see was the blackboard surface. On opening my eyes on the morning in question, I saw projected upon this blackboard surface a complete figure, containing not only the lines given by the problem, but also a number of auxiliary lines, and just such lines as without further thought solved the problem at once. Both foci were joined with the point of contact of the tangent; the perpendicular was prolonged beyond its point of intersection with the tangent till it met the line from the other focus through the point of contact with the ellipse; a line was drawn from the centre of the ellipse to the foot of the perpendicular, and, lastly, the locus, a circle on the major

axis of the ellipse as diameter, was drawn. I sprang from bed and drew the figure on paper; needless to say, perhaps, that the geometrical solution being thus given, only a few minutes were needed to get the analytical one.

W. A. LAMBERTON."

Professor Lambertson has showed me his note-book containing the statement of the problem and the analytical solution. He is unable to find the contemporary drawing above mentioned, and no contemporary account is forthcoming. It is possible that some of the details of the phenomenon have become obscured in the lapse of twenty-five years, but the essential points seem to me to be indubitable,—that Professor Lambertson saw that morning an externalised hallucinatory figure, and that, whatever its precise character, it suggested to him the solution which he had sought in vain by the analytical method. There is no clue to the time at which the reasoning processes necessary to attain the result were carried out, but from general considerations it seems to me most probable that they formed part of some forgotten dream and were not going on "sub-consciously" during waking life. Professor Lambertson is of Scotch-Irish descent, is a man of the most robust physical and mental health, and is of a temperament precisely the opposite of that in which traces of true "sub-conscious" processes are usually found. The function of the disused blackboard, as apparently providing a *point de repère* for the hallucination, is of interest and will suggest many analogies. This is Professor Lambertson's only hallucinatory experience. He informs me further that his colour memory is bad, although his memory for line and form is excellent. He visualises little, and it was not until some time after the above experience that he learned that it was within the power of some persons voluntarily to externalise their visual memories.

For the other two cases I am indebted to another friend and colleague, Dr. Herman V. Hilprecht, Professor of Assyrian in the University of Pennsylvania. Both occurred in his own experience, and I write the account of the first from notes made by me upon his narrative.

During the winter, 1882—1883, he was working with Professor Friedrich Delitzsch, and was preparing to publish, as his dissertation, a text, transliteration and translation of a stone of Nebuchadnezzar I. with notes. He accepted at that time the explanation given by Professor Delitzsch of the name Nebuchadnezzar—"Nabû-kudûrru-usur," "Nebo protect my mason's pad, or mortar board," i.e., "my work as a builder." One night, after working late, he went to bed about two o'clock in the morning. After a somewhat restless sleep, he awoke

with his mind full of the thought that the name should be translated "Nebo protect my boundary." He had a dim consciousness of having been working at his table in a dream, but could never recall the details of the process by which he arrived at this conclusion. Reflecting upon it when awake, however, he at once saw that *kudûrru*, "boundary", could be derived from the verb *kadûru*, to enclose. Shortly afterwards he published this translation in his dissertation, and it has since been universally adopted.

I quote this experience, in itself of a familiar type, on account of its interest when viewed in connection with the more curious dream next to be related. I was told of the latter shortly after it happened, and here translate an account written in German by Professor Hilprecht, August 8th, 1893, before the more complete confirmation was received.

"One Saturday evening about the middle of March, 1893, I had been wearying myself, as I had done so often in the weeks preceding, in the vain attempt to decipher two small fragments of agate which were supposed to belong to the finger rings of some Babylonian. The labour was much increased by the fact that the fragments presented remnants only of characters and lines, that dozens of similar small fragments had been found in the ruins of the temple of Bel at Nippur with which nothing could be done, that in this case furthermore I had never had the originals before me, but only a hasty sketch made by one of the members of the expedition sent by the University of Pennsylvania to Babylonia. I could not say more than that the fragments, taking into consideration the place in which they were found and the peculiar characteristics of the cuneiform characters preserved upon them, sprang from the Cassite period of Babylonian history (ca. 1700-1140 B.C.); moreover, as the first character of the third line of the first fragment seemed to be KU, I ascribed this fragment, with an interrogation point, to King Kurigalzu, while I placed the other fragment, as unclassifiable, with other Cassite fragments upon a page of my book where I published the unclassifiable fragments. The proofs already lay before me, but I was far from satisfied. The whole problem passed yet again through my mind that March evening before I placed my mark of approval under the last correction in the book. Even then I had come to no conclusion. About midnight, weary and exhausted, I went to bed and was soon in deep sleep. Then I dreamed the following remarkable dream. A tall, thin priest of the old pre-Christian Nippur, about forty years of age and clad in a simple abba, led me to the treasure chamber of the temple, on its south-east side. He went with me into a small, low-ceiled room without windows, in which there was a large wooden chest, while scraps of agate and lapis lazuli lay scattered on the floor. Here he addressed me as follows:—

‘The two fragments which you have published separately upon pages 22 and 26, belong together, are not finger rings, and their history is as follows. King Kurigalzu (ca. 1300 B.C.) once sent to the temple of Bel, among other articles of agate and lapis lazuli, an inscribed votive cylinder of agate. Then we priests suddenly received the command to make for the statue of the god Ninib a pair of earrings of agate. We were in great dismay, since there was no agate as raw material at hand. In order to execute the command there was nothing for us to do but cut the votive cylinder into three parts, thus making three rings, each of which contained a portion of the original inscription. The first two rings served as earrings for the statue of the god; the two fragments which have given you so much trouble are portions of them. If you will put the two together you will have confirmation of my words. But the third ring you have not yet found in the course of your excavations and you never will find it.’ With this, the priest disappeared. I awoke at once and immediately told my wife the dream that I might not forget it. Next morning—Sunday—I examined the fragments once more in the light of these disclosures, and to my astonishment found all the details of the dream precisely verified in so far as the means of verification were in my hands. The original inscription on the votive cylinder read:—‘To the god Ninib, son of Bel, his lord, has Kurigalzu, pontifex of Bel, presented this.’

“The problem was thus at last solved. I stated in the preface that I had unfortunately discovered too late that the two fragments belonged together, made the corresponding changes in the ‘Table of Contents,’ pp. 50 and 52, and, it being not possible to transpose the fragments, as the plates were already made, I put in each plate a brief reference to the other. (Cf. Hilprecht, ‘The Babylonian Expedition of the University of Pennsylvania,’ Series A, Cuneiform Texts, Vol. I., Part 1, ‘Old Babylonian Inscriptions, chiefly from Nippur.’)

“H. V. HILPRECHT.”

Upon the priest’s statement that the fragments were those of a votive cylinder, Professor Hilprecht makes the following comment:—

“There are not many of these votive cylinders. I had seen, all told, up to that evening, not more than two. They very much resemble the so-called seal cylinders, but usually have no pictorial representations upon them, and the inscription is not reversed, not being intended for use in sealing, but is written as it is read.”

The following transliteration of the inscription, in the Sumerian language, will serve to give those of us who are unlearned in cuneiform languages an idea of the material which suggested the dream. The straight vertical lines represent the cuts by which the stone-cutter divided the original cylinder into three sections. The bracketted

words are entirely lost, and have been supplied by analogy from the many similar inscriptions.

Line 1.	Dingir N	inib du	(mu)	To the god Ninib, child
„ 2.	dingir	En-	(lil)	of the god Bel
„ 3.	luga	l - a - ni	(ir)	his lord
„ 4.	Ku-r	(i- galzu)		Kurigalzu
„ 5.	pa-	(tesi dingir Enlil)		pontifex of the god Bel
„ 6.	(in- na-	ba)		has presented it.

I translate also the following statement which Mrs. Hilprecht kindly made at my request.

“I was wakened from sleep by a sigh, immediately thereafter heard a spring from the bed, and at the same moment saw Professor Hilprecht hurrying into his study. Thence came the cry ‘It is so, it is so.’ Grasping the situation, I followed him and satisfied myself in the midnight hour as to the outcome of his most interesting dream.¹

“J. C. HILPRECHT.”

At the time Professor Hilprecht told me of this curious dream, which was a few weeks after its occurrence, there remained a serious difficulty which he was not able to explain. According to the memoranda in our possession, the fragments were of different colours, and therefore could have scarcely belonged to the same object. The original fragments were in Constantinople, and it was with no little interest that I awaited Professor Hilprecht's return from the trip which he made thither in the summer of 1893. I translate again his own account of what he then ascertained.

“In August, 1893, I was sent by the Committee on the Babylonian Expedition to Constantinople, to catalogue and study the objects got from Nippur and preserved there in the Imperial Museum. It was to me a matter of the greatest interest to see for myself the objects which, according to my dream, belonged together, in order to satisfy myself that they had both originally been parts of the same votive cylinder. Halil Bey, the director of the museum, to whom I told my dream, and of whom I asked permission to see the objects, was so interested in the matter, that he at

¹ An apparent discrepancy between Professor Hilprecht's account and that of Mrs. Hilprecht calls for explanation. Professor Hilprecht states that he verified his dream on Sunday morning at the University; Mrs. Hilprecht that he verified it immediately upon awaking, in his library. Both statements are correct. He had a working copy in his library which he examined at once, but hurried to the University next morning to verify it by comparison with the authorised copy made from the originals.—W.R.N.

once opened all the cases of the Babylonian section, and requested me to search. Father Scheil, an Assyriologist from Paris, who had examined and arranged the articles excavated by us before me, had not recognised the fact that these fragments belonged together, and consequently I found one fragment in one case, and the other in a case far away from it. As soon as I found the fragments and put them together, the truth of the dream was demonstrated *ad oculos*—they had, in fact, once belonged to one and the same votive cylinder. As it had been originally of finely veined agate, the stone-cutter's saw had accidentally divided the object in such a way that the whitish vein of the stone appeared only upon the one fragment and the larger grey surface upon the other. Thus I was able to explain Dr. Peters' discordant descriptions of the two fragments.—November 10th, 1895."

Professor Hilprecht is unable to say what language the old priest used in addressing him. He is quite certain that it was not Assyrian, and thinks it was either English or German.

There are two especial points of interest in this case, the character of the information conveyed, and the dramatic form in which it was put. The apparently novel points of information given were:—

1. That the fragments belonged together.
2. That they were fragments of a votive cylinder.
3. That the cylinder was presented by King Kurigalzu.
4. That it was dedicated to Ninib.
5. That it had been made into a pair of earrings.
6. That the "treasure chamber" was located upon the south-east side of the temple.

A careful analysis reveals the fact that not one of these items was beyond the reach of the processes of associative reasoning which Professor Hilprecht daily employs. Among the possible associative consequents of the writing upon the one fragment, some of the associative consequents of the writing on the other were sub-consciously involved; the attraction of these identical elements brings the separate pieces into mental juxtaposition, precisely as the pieces of a "dissected map" find one another in thought. In waking life the dissimilarity of colour inhibited any tendency on the part of the associative processes to bring them together, but in sleep this difference of colour seems to have been forgotten—there being no mention made of it—and the assimilation took place. The second point is more curious, but is not inexplicable. For as soon as the fragments were brought into juxtaposition mentally, enough of the inscription became legible to suggest the original character of the object. This is true also of the third and fourth points. The source of the fifth is not so clear. Upon examining the originals,

Professor Hilprecht felt convinced from the size of the hole still to be seen through the fragments that they could not have been used as finger-rings, and that they had been used as earrings, but the written description which he had before him at the time of his dream did not bring these points to view. Still, such earrings are by no means uncommon objects. Such a supposition might well have occurred to Professor Hilprecht in his waking state and, in view of the lack of positive confirmation, it would be rash to ascribe it to any supernormal power. The last point is most interesting. When he told me this story, Professor Hilprecht remembered that he had heard from Dr. John P. Peters, before he had the dream, of the discovery of a room in which were remnants of a wooden box, while the floor was strewn with fragments of agate and lapis lazuli. The walls, of course, and ceiling have long since perished. The location, however, of the room he did not know, and suggested I should write to Dr. Peters and find out whether it was correctly given in his dream, and whether Dr. Peters had told him of it. Dr. Peters replied that the location given was correct, but, he adds, he told Professor Hilprecht all these facts as long ago as 1891, and thinks he provided him with a drawing of the room's relation to the temple. Of this Professor Hilprecht has no recollection. He thinks it probable that Dr. Peters told him orally of the location of the room, but feels sure that if any such plan was given him it would now be found among his papers. This is a point of no importance, however. We certainly cannot regard the location as ascertained by supernormal means.

The dramatic form of the dream is of greater interest ; yet, strange as it is, it is not without numerous analogues in the literature of dreams. M. Maury gives two cases from his own experience which are almost exactly parallel. "Recently the name *Mussidan* came suddenly to mind ; I knew at the time that it was the name of a town in France, but where it was I did not know, or, better, I had forgotten. Some while afterwards I saw in a dream a certain individual who told me he came from *Mussidan* ; I asked him where that town was. He replied that it was a place of importance in a canton of the department of the Dordogne. At the end of the dream I awoke ; it was morning ; I remembered the dream perfectly, but was in doubt as to the accuracy of what my individual had told me. The name *Mussidan* still presented itself to mind under the conditions of the preceding days, that is to say, I did not know where the town so termed was situated. I made haste to consult a geographical dictionary and, to my great surprise, discovered that the interlocutor of my dream knew more geography than I ; in other words, that I had recalled in dream a fact which I had forgotten in the waking state, and that I had put into the mouth of another what was but a recollection of my own.

Some years ago, while studying English and especially endeavouring to learn the meanings of verbs followed by prepositions, I had the following dream. I was talking English, and, desiring to tell a person that I had paid him a call the preceding day, I made use of this expression, 'I called for you yesterday.' 'That's badly put,' he replied; 'you should say, I called on you yesterday.' Next morning, on waking, the recollection of this incident of my dream was very distinct. I took a grammar lying on a table near my bed and verified it; the imaginary individual was right." (*Le Sommeil et les Rêves*, 142-3).

In these cases it is possible that the apparently foreign items of information were really accidental elements, drawn into the course of a dream which had been originated in some other way. But the case narrated by Professor Hilprecht is somewhat different. Here we are forced, I think, to assume that the logical processes had been approximately completed before the dramatic form was assumed. In the dramatic form itself there is nothing that presents any particular difficulty. All the associative material out of which it was constructed was more or less in mind, and such a dream might easily have been initiated by many slight causes. But if we assume that the conclusion was reached before the old priest, with so much ceremony, inducted the dreamer into a secret which he already knew, we fall into further trouble. It is upon such phenomena as these that some would base the conception of a sub-conscious self, who is at all times ready and anxious to make use of his supernormal powers to play practical jokes of a peculiarly mystifying, if usually kindly character, upon the more stupid upper self. According to this doctrine, Professor Hilprecht's sub-conscious self, having solved the problem by methods more or less unknown to us, deliberately resolved to present the result to Professor Hilprecht in the form of an instructive drama, with thoughts to serve as its puppets.

In this case, at least, I can see no reason for resort to such a conception. We have evidence amply sufficient to show that, at least in dreams which take their rise from sensory suggestions, the apparent flow of the dream-time may be precisely the opposite of that of real time. In other words, the dream may be dramatised *backwards*, so to speak, from its apparent conclusion to its apparent initiation. Thus when M. Maury, while tickled with a feather, dreamed that he was being tortured by having the skin of his face torn off by a mask of hot pitch, it is probable that some notion of the mask and its application preceded the sensation of pain; although, in fact, the touch sensation, of which the latter was the exaggerated representation, came first in real time. A clearer case is that related upon page 161 (*op. cit.*) A long dream of the Reign of Terror concluded with his arrest, trial,

conviction; he clearly remembered all the details of his transportation in a tumbril to the place of execution, how he was bound to the fatal plank, how the knife fell,—and with the blow he awoke to find that the curtain-pole of his bed had fallen and struck him a severe blow on the back of the neck. His mother, who was in the room, said that he awoke the instant it fell. Here we must suppose that the dream time was purely illusory and occupied only a fragment of a second of real time. A similar case was narrated by a friend of mine. She had been very ill with typhoid fever but was convalescent; she had fallen into a light doze in her chair and dreamed that she was being pursued from room to room by a savage dog. She would enter a room, close the door, hold it against him, he would make his appearance by another door and she would escape through the one she was holding and take flight to another room. This lasted, she thought, for a half-hour or so. She had been driven to the third storey and had taken refuge in a small room with but one door. That door she held against the dog's pressure until her feeble strength gave way, the brute sprang upon her with a howl,—and she awoke with a start to find that her sister had at that moment placed her hand upon her arm and had said "Boo." The character of this dream precludes, I think, the supposition that the "Boo" was merely accidentally woven into the texture of a dream already in course of progress; it must have been the generating suggestion from which the whole dream took rise.

Professor Hilprecht's dream may be interpreted in the same way. Undoubtedly the old priest's statements were attained by normal processes of associative reasoning which Professor Hilprecht has now forgotten, and upon them, as upon a logical core, the dream imagery has been superimposed, thus producing a time-hallucination.

III.

SUGGESTION WITHOUT HYPNOTISM,

*An Account of Experiments in Preventing or Suppressing Pain.*¹

BY C. M. BARROWS.

I have been asked to present a report of experiments made by myself in the use of suggestion without hypnotism. The work was begun about seven years ago, and in prosecuting it I have treated several hundred persons, afflicted with various maladies, including insomnia, rheumatism, neuralgia, intermittent headache, sore joints, hysteria, chorea, morbid phenomena left as the result of disease, functional disorders of the nervous system, dipsomania, stammering, stage-fright, excessive emotion, etc.;—affording in one sense an attractive variety.

Out of this list, I have chosen for mention in this paper cases in which pain in some form was either prevented or suppressed under conditions of nerve and tissue that would ordinarily make it inevitable. Such cases are better suited to the present purpose than the others, because in weighing the evidence they offer, there is comparatively little danger of errors due to either of the two causes which Professor Richet tells us it suffices to eliminate. Intentional fraud can scarcely be supposed to enter into these experiments, and even the liability to “unconscious” or “automatic” fraud is slight. Chance, too, “which often brings about amazing coincidences,” can by no stretch of its big cloak be made to cover the whole group.

Take toothache, for example, the kind of pain with which I first attempted to deal. If I had tried only a few cases, or if only now and then the pain had disappeared under the treatment, common sense would insist that the ache ceased by chance. But since the record shows a large number of such treatments, with no failures among them, it seems reasonable to conclude that the suggestion stopped the pain. And yet, on the strength of these results alone, I would not dare to affirm that what occurred in even a single case was an instance of cause and effect. Fortunately I am able to cite more decisive tests of the power of the agency employed.

¹ Read at the General Meeting of the Society held in the Westminster Town Hall, January 31st, 1896; also at the meetings of the American Branch held in Boston and New York, December, 1895.

A lady about to have several very sensitive teeth filled, asked if suggestion would exempt her from the torture in store for her. She explained that in all her experience of dental operations, the process had been extremely painful, and the shock brought on nervous prostration. Of course, I could promise nothing as to the result, but invited her to try it. Her dentist had his office in Boston, and on the day of her first appointment with him, she appeared at my house in Brookline at nine o'clock in the morning. I explained the nature and manner of the treatment as well as I could, and made the suggestion that she should feel no pain while in the dentist's chair that day, and no nervous prostration should ensue.

The lady left me, feeling, as I judged, very little confidence in what I had done,—indeed, she remarked that she could not see that I had done anything,—and at eleven o'clock the operator began work on her most sensitive tooth. Finding, to his surprise as well as her own, that she did not wince under the rough touch of his instruments, he worked steadily and fast for two hours, before she was released from the chair. The next day, instead of being miserable in bed, this lady called to report to me what seemed to her a wonderful deliverance from pain. Referring to the molar on which the dentist had spent so much time, she said, "Dr. ——— wanted to fill it a year ago, but it hurt so I could not bear to let him touch it; but yesterday he did not hurt me a particle, although he worked fast and did not favour me. I felt every movement and realised all he was doing, but there was no pain at all, and I have no prostration."

This patient had four subsequent appointments to keep with her dentist; and as the days arrived for the second, third, and fourth, I repeated the suggestion made in the first instance, and she passed the ordeal with a like immunity from suffering and exhaustion. Perhaps the continued successes made me over-confident; for when she called to take the fifth and last treatment, she was late, I was pressed for time, and so omitted the formal suggestion, trusting that I should be able to control her sensations when there should be need of it. But in this I reckoned without my host, and a wretched failure was the consequence. The poor victim endured severe torture, and was kept in bed for two days by the prostration. This mistake is not to be accounted an unmixed evil, however, since no one would deny that it lent an added value to the experiment.

It should be understood, of course, that in every dental case herein described, my treatment began and ended with a single suggestion. I did not accompany the patient to the office, or continue the treatment after the patient had departed. Observe also that each suggestion made was a post-suggestion; that is to say, it was not intended to take immediate effect, but to produce a specific result at a designated later

hour. Like post-hypnotic suggestion, it seemed to become available at the particular time intended when it was made, and to have no influence before the appointed hour or after it had expired. A boy who was treated to have a tooth extracted in the forenoon, finding that it had ceased to ache, postponed the operation until afternoon, and then found that the suggestion did him no good. Another case illustrating the same point is that of a young lady pianist of much talent, who during her first public performances was so overcome by stage-fright that she failed to do herself justice. One evening, when she was to play at a public entertainment, I made the suggestion that she should be perfectly at her ease, and the experiment succeeded, to her great delight. Subsequently I rendered her a like service; but owing to a change in the programme, she did not take her part as expected, but did play at a repetition of the performance given a day later; but the virtue of my suggestion was gone. It is a pleasure to add that a few more treatments permanently cured this young lady of her annoying attacks of fright.

To be able to rob the dentist's chair of any part of its terrors is indeed a gratifying achievement, but it is not after all the crucial test. The crowning triumph would be to enable a person by means of suggestion alone to have firm teeth extracted without pain. I am not prepared to say to what extent this can be done, for I have tried the experiment only seven times, and in one instance it was a failure. Four of the seven trials were made on children between the ages of eight and fifteen years, each of whom had a firm molar removed. The next trial I can refer to with confidence, because it was my own teeth that were extracted. I parted with two molars, one of which was a firm one with hooked roots, and the dentist used two different instruments before he succeeded in removing the whole. This was a case of auto-suggestion, and the operation, though prolonged, was absolutely painless. Two women took my treatment on the same day for a like purpose. One of them had four firm teeth and three loose ones taken out, and found that my suggestion did not help her at all; the other lady parted with a firm molar and pronounced the treatment a success.

A large number of test cases would be necessary to establish the practical usefulness of this form of inhibition; but as instances of local analgesia induced without hypnotism, the six successful experiments are of peculiar interest, because the operation of extracting a firm tooth is severe while it lasts, and the snapping of live nerves is painful. It would not be easy to choose six experiments of the same kind, in which the conditions of a decisive test would be more fully met: the patients were in a normal condition at the time of treatment; each must have suffered during the operation, unless the pain had been

prevented in some way ; it was averted beyond a doubt ; and this result could not reasonably be attributed to anything else than the psychical suggestion previously given.

In all cases of suggestion mentioned in this paper the mode of administration was essentially the same. When dealing with persons to whom it is new, I usually explain that the purpose of it is to render the nerves involved incapable for the time being of producing the sensation of pain. There is no hypnotism about this form of suggestion, no mesmerism, no animal-magnetism, no mind-cure. The effect does not interfere in any way with the freedom of the patient ; for I work no charm and cast no spell upon him, exert no control over his will, make no change in his thinking. My wish is to accomplish one definite result and nothing else, namely, to take away the feeling of pain from the consciousness which might otherwise suffer. If the patient is sceptical, I tell him that his doubt or faith will not alter the result, since it is not a matter of opinion, but of sensation. Confidence in the treatment is not necessary, nor will any attempt to resist vitiate the effect.

Having thus assured the patient and put him at his ease, I ask him to seat himself in a comfortable position, be quiet a few minutes, and think of anything he pleases, while I suggest to his nerves how to behave. Sometimes I show a patient what nerves are producing the sensation of pain and locate the centres by placing my hand on his head. Some action of this sort is often useful with children, as a tangible evidence to them that something is being done.

The popular impression (and this is not untrue) is that hypnotic suggestion is administered orally, in a language the patient understands. When the patient is asleep and has reached a favourable stage of the trance, Dr. Liébeault or Dr. Bernheim says in a distinct tone of voice : "You will feel no pain when you awake" ; or, "The lameness you complain of will be gone," or whatever utterance the case calls for. It is not claimed, I suppose, that the suggestions made in this way differ in kind from those a mother might make to her child who is hurt, when she says : "You will feel better in a moment" ; or, "Mother will kiss it and make it well." In other words, the value of hypnotic suggestions made for therapeutic purposes does not consist in anything peculiar about them, but their effectiveness is due to the heightened susceptibility of the patient during the trance. It is doubtful if this sort of treatment would have much effect upon disease and pain if the patients receiving it were not in a trance ; and because my patients are not so affected, as far as I can judge, at the time of treatment, I suspect that my suggestion is a different thing from that employed by the hypnotisers ; not so much in its results on patients, but as a psychical act of the operator.

Mine is a silent suggestion. I use neither voice nor other means to convey its import to the patient through sensory adits. I find it possible to affect with these unvoiced suggestions one who does not know my language, infants who have learned no language, and brute creatures. This would not be the case if communication depended on speech. More than this: I am not conscious of forming any statement of the message, even in thought, when I make the suggestion. I certainly am not then thinking about my patient, or at him. Using the term "mind" in the popular sense, it does not seem that the suggestions which I make are addressed to it at all.

My experience in sending telepathic messages to distant percipients casts some light upon this point. Whenever, acting as agent, I concentrated my thought on a formal statement of the message, the percipient failed to receive it; but when I made no thought effort,—no conscious effort of any kind,—the message reached its destination. Mark, this is not saying that the agent does not need to think of his message beforehand and decide upon its content; in all except purely spontaneous communications this preliminary step must be necessary. In some recent experiments made with a reputed "mind-reader," I found that success did not depend on my own thought being kept steadily fixed on the thing he was to do. Indeed, I have much reason to believe that he did not read my thoughts at all. The conclusion seems well nigh irresistible that therapeutic suggestion, as I use it, is not sensory but telepathic, that the communication does not require an act of thinking or willing to send it forth.

About a year ago an Irish girl of seventeen came to me to be treated for neuralgia in the left temple. She looked like an overworked, under-fed person, grown quite nervous from pain and loss of sleep. The pain and soreness were gone after the first treatment; but there was some return of the trouble next day, and I repeated the suggestion on that and the following day, producing permanent relief.

Last September I treated a Welshman, about forty years of age, who had been suffering from neuralgia for a long while, which affected the entire left side of his head and face. His ear had not been free from pain for two years, and he had several attacks daily of what he described as sharp stabs of pain. Within three weeks of the time I first saw the man, he had been complaining of his left eye, which he said pained him constantly. The eye was much inflamed, but it seemed to be only the orbit which was attacked, and after three treatments both eye and orbit were cured. After that, I was unable to see the man again until two weeks later, when I found the eye all right, but the pain in and about the ear had not abated. I then gave him three treatments, and since that time he has had no neuralgic symptoms at all.

About six years ago I treated a school teacher for neuralgia, and I think this was my first experiment with this disease. She had borne the pain for nearly two weeks, and her nerves were completely unstrung. I remember that I made the suggestion in a hesitating way, scarcely expecting the aching nerves to obey it; but the pain stopped in a few minutes, and the treatment was followed by a night of refreshing sleep. This respite was only temporary, and next morning the lady was as bad as ever. She sent for me about the middle of the forenoon, and I gave her a second treatment, after which she suffered no more for twelve hours. Again, at ten o'clock in the evening, I was summoned to repeat the suggestion; and from that time on pain ceased and the patient recovered.

I am often asked whether the psychical treatment which relieves pain also cures the disease or hurt which occasions the pain. Evidently it does not do so in all cases, although in every instance of rheumatism or neuralgia which I have treated, the suppression of the pain insured the disappearance of the other symptoms. As exceptions to this rule, it may be mentioned that I once suppressed the pain of a big carbuncle on the back of a man's neck for three successive nights, so that he got several hours of sleep; but the ache began again each morning,—probably awoke him,—the suppurative process continued, and at the proper time the surgeon applied his knife. At another time I treated a man who suffered for months with a kidney trouble, which finally proved fatal. During the progress of the disease he was subject to spasmodic attacks with excruciating pain, and it was in one of these that I saw him, and was able to relieve his distress. In several instances of a like nature, I have suppressed pain for the time being, thus affording the patient a brief respite from suffering.

Another interesting fact in this connection is that pain may be permanently inhibited in one part of the body, and at the same time persist in another part. In October, 1894, I treated a man who had sprained his left ankle very badly about a year and a half before. Although the foot was no longer lame, and it did not hurt him to use it, there remained a constant pain just under the outer malleolus, which when the foot became tired at night was very severe. At the time this man came to me for help, he had been enduring this steady pain for more than twelve months, and his nervous system—naturally a strong one—was breaking down under the prolonged strain. This case required a series of treatments, the record of which in my notebook is as follows: Treatment began October 9th, and repeated on the 10th and 11th, with no apparent effect. On the 13th, pain ceased during treatment, but returned after two hours. On the 16th, pain ceased during treatment, but returned in one hour. On the 18th, the pain shifted during treatment to the nerve in front of the tendon of

Achilles, and returned to the original spot about two hours later. On the 19th, no treatment was given, but the man strained the foot badly in jumping out of a carriage. This brought on a severe pain which lasted until late in the evening, when it stopped, and he felt a like pain under the outer malleolus of his right foot, which did not subside until near midnight. The next treatment was given on the 20th, when the pain ceased and did not return; and now, for a continuous period of more than a year, he has been wholly free from it. All the while he was under treatment, this man was suffering with a painful lameness of the right arm, of which he made no mention at the time. Six months after the ankle was cured, I tried to help the arm by suggestion, but could produce no permanent effect upon it. The man has followed for more than thirty years a mechanical business which requires him to hold the right arm all day long in a cramped, unnatural position, in order to do his work, and to this fact the morbid condition is probably due.

About the middle of February, 1895, a poor working-woman showed me the "thimble" finger of her right hand, the second joint of which was pinched between two swinging doors, in 1886, and the ligaments broken down. It received no surgical attention at the time of the accident, and for nine years it had been painful most of the time. I gave the case one suggestion and a permanent cure resulted; but at the same time this woman had a painful lameness of the neck, a consequence of the *grippe*, which it required three subsequent treatments to remove.

In the spring of 1894, a young married lady asked to be treated for an intercostal pain which was peculiarly troublesome, and for which she said the doctors had no name or remedy. Three years before she applied to me, she was driving a pair of spirited horses which her husband had just given her, when they took fright and ran. She pulled on the reins with all her might, and while so doing felt something give way in her right side, between the six and seventh ribs, as nearly as she could locate the hurt. After a week or two the soreness passed off; but she could not wear a close-fitting garment without bringing on a hard pain, which grew more intense as long as the pressure continued. She had consulted the best surgeons to be found in this country and in Europe without getting any help, and there seemed to be no escape from the annoying pain as long as she dressed in a way to be presentable in society. I gave the case six treatments by suggestion, and the pain entirely disappeared.

But I must not forget how soon descriptions of this kind become tiresome to the listener. Suffer me, then, to refer briefly to one other class of cases, and have done with them. Rheumatic pains afford an almost inexhaustible supply of cases for experiment, and I have had

my share of them. Persons suffering in this way usually try the various medicinal remedies, and if these afford no relief, and they get desperate enough to do *anything*, they will submit to suggestion. My experience with rheumatism has been that, with few exceptions, from one to four treatments put a stop to the pain; but I can never be quite sure where the credit of such cures belongs, since, as the doctors kindly remind me, the patients have just "taken a great deal of good medicine." It will suffice, perhaps, to cite two cases as samples of the rest.

In the latter part of January, 1892, a business man, then living on West Chester Park, Boston, desired me to treat him. He had rheumatism in his shoulder and arm; the pain had been very severe for several days, the usual medicinal remedies failed to reach the case, and when I answered the call, which was in the early evening, he told me he "was in for a terrible night," and if I could help him, he wished by all that was good that I would set about it. I made such a suggestion as the case required, and left him to get to bed and make himself as comfortable as possible. The next day he sent me word that he enjoyed a long night of sound sleep, and was free from pain.

In the spring of 1894, I met an Irishman who takes care of furnaces in the winter and lawns in the summer, and found him suffering with muscular rheumatism, attended with much lameness and pain. The trouble had been so bad that he had been unable to do his work during a large part of the winter, and when I saw him he was hobbling along with a cane. This case I relieved with a single treatment, so that he declares he has not felt a touch of it since.

Before leaving this part of the subject, some reference should be made to methods of hypnotism to which my own experiments seem to be closely allied,—methods of little interest to the popular audience for which this paper was originally prepared, but having an important bearing on the issue here raised.

While it is common for hypnotised subjects to manifest certain pronounced symptoms of trance, it is claimed that true hypnosis may exist when no such signs can be detected. Instead of amnesia, hyperæsthesia, anæsthesia, etc., with suspension of the higher brain functions, there may be nothing more definite than a slight drowsiness or heaviness to show that the subject has passed into a state of "suggestibility." It is easy to conclude that, for therapeutic purposes, strongly marked signs of the trance need not be present, the essential condition being ready obedience to the suggestions made.

How subjects are brought into this condition and what is the true relation between the operator and the subject are concisely explained by Dr. Walter Leaf, in a review of Moll's *Der Rapport in der Hypnose*,

etc. He says : "These experiments [of Dessoir and Moll], and many others like them, all point convincingly to the conclusion that *rapport* is not a physical but a psychical phenomenon : that it is produced not by any action of an effluence from the operator, magnetic or otherwise, but by the action of the subject's own mind, obedient to suggestions whether received externally or spontaneously generated. It is natural to conclude that *rapport* is no more than a concentration of attention on the operator, an exaggerated case of the state of mind which in its different degrees we know in ordinary life as reverie, abstraction, 'absence of mind,' and so on."¹

Professor William James, referring to the so-called Nancy method of producing the hypnotic trance, writes : "The simplest one is to leave the subject seated by himself, telling him that if he close his eyes and relax his muscles and, as far as possible, think of vacancy, in a few minutes he will 'go off.' On returning in ten minutes you may find him effectually hypnotised."²

It would be a rare psychical event for a person, who had never been hypnotised and whose attention had not been previously called to the matter, to lapse into the trance-sleep in obedience to auto-suggestion alone. A novice seems to require something more than a spontaneously generated impulse to enable him to "go off." The operator convinces him that the proposed experiment is desirable and harmless ; his free consent is asked and obtained ; means are used to lead him to concentrate his attention on the operator. Altogether, these appeals and the action of his own mind amount to a powerful suggestion, well calculated to initiate the desired psychical phenomenon in the average subject. And it may be added that hypnosis itself is produced by suggestions received by the subject before he goes off.

If we accept Dr. Moll's definition of hypnotism, is there any evidence that it formed part of the psychical experience of the hundreds of patients whom I have treated in the manner herein described ?

It is natural to suppose that among so many cases of hypnosis (?), there would be some at least so pronounced as not to be mistaken ; especially would this be likely to happen in the case of patients who received a series of such treatments ; but I cannot recall a single instance of the kind. It may be insisted, however, that only slight manifestations were to be expected, because, like Dr. Russell Sturgis, I hypnotised only "to the first degree ;" therefore we must pursue the inquiry farther, and find out if the necessary steps were taken to produce any such results.

None of my patients expected me to hypnotise them ; nor do I

¹ *Proceedings S.P.R.*, Part XXIV., Vol. IX., p. 213.

² *The Principles of Psychology*, Vol. II., p. 593.

believe that even 5 per cent of them associated a thought of hypnotism with what I was trying to do for them. The instances were rare indeed in which a patient during treatment concentrated his (or her) attention on "vacancy," on thoughts of sleep, or on me; in many cases the indications pointed strongly the other way.

In one case the patient, a literary gentleman, wrote concerning his mental experiences during the treatments he had received: "I was never aware of the particular thing suggested each time, but only of the desired outcome of *all* the treatments. During the suggestion we [operator and patient] sat quietly without speaking, my mind being perfectly at liberty. The suggestion occupied as a rule about twenty minutes, during which time I usually repeated poetry to myself, or looked across to Boston, of which there is a fine view to be had from Mr. Barrows's windows." A lady who received six treatments for the cure of intermittent headache, read a fascinating book while I was operating. By a single suggestion I relieved a child from severe pain, who was not aware of my presence in the room. She was lying on a bed beside which sat her nurse; I entered the room noiselessly, sat down where she could not see me, and, after doing my work, went out without having attracted her notice, so that there was no chance for expectancy or attention on her part. Here is another case in which hypnotism would seem to have been impossible. In September, 1895, I became an inmate of a house occupied by a family of the name of Meyers. I had been there only a few days when Mrs. Meyers met me in the corridor one forenoon, and told me that her son, a boy of six, was troubled with very annoying facial spasms. She said that his father and herself had used every means in their power to break up and cure the habit, but with no apparent effect. I had then seen very little of the boy, but offered to try and help him by suggestion; and his mother on her part promised that Willie should not be told anything about the matter. About three o'clock in the afternoon of the same day, I looked out of the window, near which I was at work, and saw the boy playing with some other children on the lawn below. It seemed a favourable time to try the proposed suggestion, and, taking care that he should not see me, I made it then and there. It was completely successful, for all the family noticed that Willie's facial trouble ceased from that day on.

A cogent argument in support of the theory herein set forth might be based upon the striking analogy of this method of psychical treatment to that of telepathic suggestion or so-called thought-transference; for the same form of suggestion used in therapeutic experiments I have found to be most successful in the sending of telepathic messages; and there is no doubt that an agent may suggest definite sensations to a percipient, who will receive and experience them without the aid of

hypnotism ; while to assume that the agent could hypnotise a *distant* percipient, on whom he had not previously operated, would be manifestly absurd.

The analgesia or inhibition induced by suggestion is liable to be confounded with something quite different. It is not a general stupifying and deadening of all sensation, like that produced by ether or narcotics ; neither does it benumb a group of nerve-endings, or deprive a limited segment of tissue of all feeling, as cocaine does. Mr. F. W. H. Myers says : "It is by no means a mere ordinary narcotic—a fresh specimen of the methods already familiar for checking all conscious cerebration. It is a new departure ; it is the first successful attempt at dissociating forms of sensation which throughout the known history of the human organism have almost invariably been found to exist together."

There is certainly implied, in every such case of suppression or prevention of pain, a principle and power of selection intelligently exercised, by which the suggesting agent, whoever it be, singles out from the various sensations that a nerve or group of nerves may be capable of producing the one called pain, and imposes a stay-law upon it. Suggestion which cures one pain does not necessarily suppress every pain in the body, as we have seen in the case of the man whose ankle was relieved, while his arm continued to ache. It does not always remove the exciting cause of pain. The legitimate function of therapeutic suggestion seems to be to act upon a special occasion for a limited time, and such action may take place immediately, or be postponed ; or, in some instances, a permanent beneficial change is the result achieved.

I find it impossible to tell in a given case whether this psychical remedy will act quickly or slowly. I treated the Irish day labourer who had been suffering many months with general muscular rheumatism, and in five minutes all the lameness and pain were gone, and the trouble has not returned for nearly two years. I treated a girl of thirteen who had a seated pain in the fleshy part of her right shoulder, due to a sprain of the deltoid muscle which had been cured, and the suggestion was repeated twice a week for six weeks before the pain completely vanished. Some slight ailment often seems to offer greater resistance than a much graver disease. Cases of obstinate insomnia and mental depression are apt to yield more readily than headache or indigestion. Stage-fright, worry, and definite fears, are easily cured in this way ; while a fixed delusion, or other troublesome idea, may be hard to dislodge.

Any theories we may devise as to the nature and mode of this form of suggestion, based on present knowledge, must needs be provisional ;

and a wise man will hold them loosely, ready to abandon them at any time for better. In matters which continually baffle the most profound students, it certainly becomes us to speak with modesty and caution. I feel quite unable to offer an adequate solution of the problems to which I have called attention ; but I am convinced that the psychical influence employed in these and many other experiments which I have made is a form of telepathy, and ought to be studied as such. A telepathic message is a suggestion of an agent that the percipient perform an act or feel a sensation. If the percipient be suffering pain, and the agent suggests to him a feeling or state of ease, the proper response on the part of the percipient would be a sense of relief from pain. Perhaps it does not help us much to say this, for telepathy implies an agency inscrutable to us at present.

Nor can the real difficulties which confront the student be dismissed or evaded with the shallow remark : "It is only another case of the power of mind over mind." It ought to be plain enough to any one capable of grasping the situation, that the form of psychical suggestion under consideration is no more addressed to the mind of the patient than an opiate prescribed for quieting pain is addressed to the mind. Do not forget that I use "mind" in the popular sense. The patient swallows the dose as directed, but experiences no mental change in consequence ; but if the sedative eases the pain, he may then think far enough to refer the relief to the operation of the drug. If instead of an opiate a silent suggestion be made that the pain cease, the patient is not even aware that such a telepathic message has been lodged in his brain ; he does not know that anything has been done, therefore he cannot act upon it mentally ; but after the proper neural response has taken place, he may recall what has happened, and ascribe the cessation of pain to the suggestion.

If the psychical experiments which I have made, a small number of which are described in this paper, are indeed instances of telepathy, then it follows that a telepathic message may be received by a percipient, and may produce within him a definite physical change, without becoming matter of conscious thought at all. Again, admitting it to be telepathy, we may make free use of all that is known about that mysterious subject to aid us in explaining this special group of phenomena. We must also encounter the unsolved problems which lie at the very threshold of investigation,—problems so profound that one must think long and abandon many a plausible theory before one can appreciate their scope even on the hither side. For if telepathy be what the findings of scientific research foreshow, no invention, no discovery ever made by man is worthy to be compared with it. It implies nothing less than a revolution in our science of mind.

The paramount inquiry in this as in other forms of telepathic action is, How is it done? And this question naturally divides into two: first, Who is the agent? Second, By what means does the agent work?

I suppose it is not too much to claim that psychical investigation has made some definite progress towards answering these two baffling questions, has in some fashion reached a provisional hypothesis. But if any headway has been made, the light has always come by studying together many different groups of related phenomena, and never by studying a single group apart from the rest. Then if it be granted that these cases of psychical suggestion constitute a group of phenomena apparently unclassified, we shall gain much if we find that it properly belongs with some collection already made.

Scanning our group as a naturalist examines his specimens for the features common to them all, we find that in every one of these cases of inhibition of pain some other agent than ordinary mental power brought about the result. Assuming this fact as a basis of classification, we make the further discovery that the same thing is true of a large collection of psychical phenomena already made; that is to say, the distinguishing fact appearing in each member of this collection is that some other agent than ordinary mental power acted through a human organism and produced the results observed. I need only refer to a few cases of this kind to remind you of the whole class.

There are occasions, you are aware, in the lives of most people, when they are surprised out of their habitual ways of thinking and doing, and act in spontaneous obedience to irresistible promptings which come they know not whence. Such experiences are memorable because when the actor recalls what then took place, he perceives that he thought something or did something for which he could give no reason, save that one which explains everything or nothing, as you take it: "It came to me."

Examples of this kind are not far to seek. A lady said to me the other day in explanation of her absence from home, "I was busy that morning in my usual fashion, when it suddenly came to me, I can't tell how, only it seemed like a voice that said, 'Go to your sister, she needs you.' The call was as clear and imperative as though I had received a telegram or a letter, and I knew I ought to go." At the close of the Civil War, a northern gentleman with a partner established a mercantile business in a Virginia city. After being there several months, he awoke from sleep in the middle of the night with the thought impressed upon his mind, "There is something wrong at the store and I must go and see about it." He could not account for this vivid impression, for his sleep had been sound and undisturbed by dreams;

but obeying the summons he called up his partner, and together they hastened to the place, just in season to prevent their money from being carried off by a burglar. Several years ago a citizen of Brooklyn, N.Y., while on a visit to another city, dreamed one night that she saw a large block on the opposite side of the street from her own home burn down, and the accounts in the newspapers next morning proved her to have been dreaming of an actual event.

When Mr. Benjamin Blyth, one of the "arithmetical prodigies," was six years old, he asked his father, as they were taking a morning walk, "At what hour was I born?" "At four a.m.," answered his parent. "And what o'clock is it now?" "Seven fifty," said the father. After walking on in silence for a few hundred yards, Ben turned to his father and stated just how many seconds he had lived. Mr. Blyth noted down the figures given by his son, made the calculation on reaching home, and told Ben he was 172,800 seconds wrong. "Oh, papa," exclaimed the child, "you have left out the two extra days in the leap years 1820 and 1824," which was true.

Mr. Wm. J. Stillman said that Mr. Lowell once told him that he wrote "The Vision of Sir Launfal" in two evenings, and never re-touched the poem. An entry in Longfellow's diary, dated December 30th, 1839, reads: "I wrote last evening a notice of Allston's poems, after which I sat till twelve o'clock by my fire, smoking, when suddenly it came into my mind to write the 'Ballad of the Schooner Hesperus'; which I accordingly did. Then I went to bed, but could not sleep. New thoughts were running in my mind, and I got up to add them to the ballad. I feel pleased with the ballad. It hardly cost me an effort. It did not come into my mind by lines, but by stanzas." George Eliot declared that, in all she considered her best writing, there was a "not herself" which took possession of her, and that at such times she felt her own personality to be merely the instrument through which this spirit acted. George Inness, the painter, once told me that his best compositions came to him as visions; that then a power which did not move him at other times drove him to work incessantly, yet with no tiresome effort, until his concept was fixed upon the canvas.

The publications of this Society contain accounts of many similar experiences, and others more remarkable. You remember the series of articles on "The Subliminal Consciousness," in which Mr. Myers treats of such phenomena, and what he there says about the Dæmon of Socrates, the monitory voices heard by Joan of Arc, the thirteen "Arithmetical Prodigies," and the inspirations of genius in general.

You see from these few examples to what collection I assign my group of phenomena. You know also, those of you who are acquainted with the results of recent investigation, that the phenomena embraced

in this large collection are believed to have been produced by some other agency than the ordinary process of normal cerebration.

According to the most scientific opinions now held, it was the Subliminal Self that called the lady to her sister's bedside, roused the merchant from sleep, enabled the distant dreamer to see the Brooklyn fire, whispered to little Ben Blyth how old he was, indited the poems of the Cambridge bards, held the pen of Mrs. Lewes, moved the brush of George Inness, guided Socrates, commanded the Maid of Orleans, and inspired every gifted artist whose works bear the stamp of genius. Thus do the conclusions of modern science confirm the dictum of Novalis, "The art of a well developed genius is far different from the artfulness of the understanding, of the merely reasoning mind."

The common bond of relation between the form of suggestion of which this paper treats and the phenomena belonging to this great psychical class is that the source of the manifested power is the same in both. The action, subliminally initiated, produced a change in living brain, and ultimately modified certain movements in living bodies; and the evidence of this mode of action is strong enough, it seems to me, to justify the following inferences:—1. This subliminal agent, which acts directly upon brain substance to produce certain recognised effects, may also be the cause of other observed effects not now ascribed to it. 2. If this subliminal agent does sensibly affect one group of brain cells (as those immediately concerned in thinking), another group of cells may be so affected. 3. If this subliminal agent has chosen certain brains to be the immediate organs and vehicles of its power, we have no right to draw the line there, and affirm that this agent never extends that same power through these immediate organs to other living brains. 4. If this subliminal agent act through that portion of the brain assumed to be the seat of the mental faculties, then, for aught we know to the contrary, the same agent may act through other portions of the brain not concerned in thinking, to produce effects unrecognised by mind, as currents traverse the nerves which co-ordinate motility.

Considering, therefore, what deductions may easily be made in the premises, I incline to ask those who are wiser in such matters than I, if the kind of suggestion here treated of be not the power of this subliminal agent, exerted directly upon the proper nerve centres to control a particular sensation.

I said a moment ago that the question of paramount interest in this connection divides itself into two. I have tried to give in a condensed form the answer of science to the first. May I presume on your patience, and offer a word of reply to the second?

By what means does this subliminal agent work? We wish to know how this subtle energy, which acts through a particular brain,

can make itself felt in another brain, near or remote. By the conditions of the problem, the communication or message cannot traverse any recognised sensory channel on its way from one brain to another, but must be conveyed by telepathy. Very well. If telepathy be accepted as a fact in nature, just as the passage of light from distant stars is accepted as a fact, we want to know how the message is carried through space. Science has assumed a luminiferous ether through which "star to star vibrates light," and many persons seem content to believe that communications pass from brain to brain by means of the same material vehicle. But another theory is possible.

What if it should appear that this subliminal agent is simply one intelligent actor filling the universe with its presence, as the ether fills space, the common inspirer of all mankind? By what authority is it assumed that this wizard self resident in one man is related to the selves of other men merely as, in the language of theology, one personal soul is related to the rest? Are you sure that this transcendent energy is parted into numberless distinct entities, one for each human being?

Should we plunge into a darker mystery, were we to compare this subliminal agent or self to a skilled musician presiding over many pipes and keys, and playing through each what music he will? Imagine each human being one of millions of animate organs, through whose mind and body one unified, all-pervasive, immaterial self blows with the breath of energy to make the varied music we call life. If this were true, then would the subliminal self be a universal fountain of energy and each man an outlet of the stream; each man's personal self would be contained in it and thus made one with every other; and with a slight change we might adopt the quotation: "In that deep force, the last fact behind which analysis cannot go, all *psychical and bodily effects* find their common origin."

APPENDIX.

Corroborative testimony as to several of the cases mentioned above was obtained by Mr. Barrows, and sent by him to Dr. Hodgson. The letter from Dr. Burrell, however, was addressed direct to Dr. Hodgson. Mr. Barrows himself writes:—

Brookline, *January 1st, 1896.*

MY DEAR DR. HODGSON,—I have been extremely busy with some very interesting experiments, or you would have received what your letter of yesterday calls for sooner. I can now give you all I am able to get in each of the cases mentioned in my paper. Taking them in order, I think the following statement will be plain.

1. The lady who had five sittings with a Boston dentist is Mrs. C., of New York—letter enclosed.

2. Seven cases where patients had teeth extracted: in the four children's cases, all happening years ago, I can get nothing of value. My own case needs no voucher, and the failure ditto. Have a letter from Mrs. Christensen, the lady of the last experiment.

3. The Irish girl of seventeen, treated for neuralgia, was recently married, and, as Mrs. Lynch, her letter is enclosed.

4. The Welshman, cured of neuralgia in eye and ear, is Mr. Woodfin, for whom I wrote the enclosed statements, which he and his wife signed.

5. The school teacher, treated six years ago for neuralgia, went West, and I find no trace of her.

6. Man with carbuncle was a soldier, whose name, regiment, etc., I did not get at the time, for I did not then think of putting the experiment to use. He was a stranger, stopping temporarily at a hotel, and I know not what became of him.

7. Man with kidney trouble—with stricture of urethra—died years ago. He was Mr. William Willward, a teacher of Elocution, in Providence, R.I. His widow (his only family survivor) left Providence, I was told, and I do not know where she is. I may be able to get track of her in a month or two, and get a statement about the case.

8. Mr. Morse, the man with sprained ankle, contributes two letters, one about this case, another about a cure of intermittent headache.

9. Poor woman with pinched finger joint contributes statement, written and confirmed by her daughter, Mrs. Henderson.

10. Young married lady, treated in 1894, for intercostal pain, died a few months later; disease, melancholia. Her family know the facts; but, for reasons I have never been able to fathom, her husband has made a false charge of fraud against me, and will have no communication with me.

11. The business man on Chester Park, treated for rheumatism, now lives in New York, and contributes a statement.

12. The illiterate Irishman, also treated for rheumatism, signed a statement which I wrote out.

13. Can get nothing just now about the girl of thirteen, with pain in deltoid. Her aunt, who lives here, informs me that the girl with all the family (the A.'s) are in Germany, and Mrs. A. is critically ill. May get a statement when she recovers, from both mother and daughter.

These are all the cases of prevention or suppression of pain mentioned in the paper, of which a detailed statement is made. Two or three others of a somewhat different character are alluded to incidentally.

You will bear in mind that during the years in which these experiments were performed I had no motive for securing vouchers, as I did not then contemplate using any such evidence.

I do not see in what way a physician's statement would strengthen the evidence in these cases, since he could not bear witness to the treatment. In cases involving dental operations, the operator, even if he recalled the case, could not vouch for anything. In cases 3, 9, 12, no physician was employed.

Mr. Morse had three physicians during the progress of his sprain; what they could say, I do not know. Neither of them saw him while he was under my treatment. I will get their addresses if desirable. Mr. Chadwick had medical attendance before I treated him, and it might be of interest to determine the possible effect of the medicines prescribed on the subsequent cure, if the doctor could now tell what doses were taken. But we must not forget that it is the stopping of pain by suggestion which is to be proved, not whether the patient recovered. What could a doctor testify to that?

At my desire Mrs. A. took her daughter to Dr. Geo. W. Gay, of Boston, before I treated her, and he wrote me on a prescription slip, "sprain of the right deltoid muscle."—I enclose the slip. Please preserve.¹
—Very truly yours,

C. M. BARROWS.

(1) *Letter from Mrs. C.* (See p. 22.)

New York City, *November 21st, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—At the request of Mr. C. M. Barrows of Brookline, Mass., I write you my experience under psychical treatment. Several years ago while living in Brookline, I was in an extremely nervous, run-down condition, and was obliged to have several teeth filled.

I went to Mr. Barrows for treatment before going to Boston to the dentist, and I think Mr. Barrows also gave me another treatment while I was in the dentist's chair.

My teeth were particularly sensitive and I was enabled to go through the ordeal with very little pain, and when I felt pain it was as if on the outside of me. I did not mind it, and after leaving the dentist I did not feel that nervous exhaustion which I had always before experienced. Three or four times I went to the dentist's having taken treatments before going, and I felt very little pain and did not mind it; but the fifth time I neglected to have the treatment and suffered very much, showing me conclusively that the pain was very much lessened by psychical treatment.

If you wish to publish this statement, I would thank you not to use my name. While I am a firm believer in psychical treatment, I would prefer not to have my name appear publicly.—Very truly yours,

(Signed) ———

(2) *Letter from Mrs. Christensen.* (See p. 23.)

17, Harvard-street, Brookline, Mass., *November 11th, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—In September, 1894, before going to the dentist to have a very sensitive double tooth extracted, I received suggestive treatment from Mr. C. M. Barrows for the prevention of pain.

I had been dreading the extraction, and also the after-effects, which have usually been very severe in my case.

I found that I was keenly aware of the grasp of the forceps, of the force of the dentist's pull on the tooth, the tearing away, but I felt no pain during the operation or subsequently.

Although a raw, chilly, blustering day, I went at once to Boston and was exposed to the weather for some hours, but had no trouble in consequence,

¹ The slip enclosed contained the statement given above.

neither suffered at all from the pain and inflammation which usually have followed the extraction of a tooth.—Yours respectfully.

(MRS.) A. H. CHRISTENSEN.

(3) *Letter from Mrs. Lynch.* (See p. 25.)

26, Sewall-street, Brookline, *December 14th, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—In the early part of January I had a bad attack of neuralgia in my left temple, which affected my eye and the side of my face. After I had been enduring the pain for several days and grew no better, a friend took me to Mr. C. M. Barrows, who treated me by psychical suggestion. All the pain stopped while I was taking the first treatment; but the next night I had a hard headache, and he gave me two more treatments, which cured it.

Mr. Barrows did not hypnotise me or do anything which I could see or feel; he sat down beside me for about fifteen minutes without speaking and the pain was gone.—Yours respectfully,

MRS. AGNES LYNCH.

(4) *Statement of Mr. Woodfin.* (See p. 25.)

School-street, Brookline, Mass., *November 15th, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—I want to say that I have been having a great deal of trouble with my left ear and all that side of my head. When Mr. C. M. Barrows began to treat me, about the middle of last September, I had had a very hard pain in my ear for about two years. Almost every morning, when I first woke up, and at different times during the day, there would be sharp stabs of pain in my ear, very hard to bear. Besides the troubles I have now spoken of, my left eye also began to be sore and blood-shot about three weeks before Mr. Barrows took my case; and it ached hard almost all of the time.

Mr. Barrows did not give me medicine, but used what he called “psychical suggestion,” and stopped all the pain very quickly. My eye got well first, then my ear, then my head.

THOMAS H. WOODFIN.

I can testify to the truth of the above statement, and that, since my husband received treatment from Mr. Barrows, he has been free from pain and better in every way; he sleeps well and is not nervous.

MRS. LAVINIA WOODFIN.

(8) *Letters from Charles W. Morse.* (See p. 26.)

[FROM] CHARLES W. MORSE, watchmaker, jeweller, and stationer.

Brookline, Mass., *November 29th, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—At your request I send the following particulars of a cure, due, as I believe, to psychical suggestion, made by Mr. C. M. Barrows of this town.

In June, 1893, as I was hurrying to take a train at the Brookline station, I met with an accident in this wise: as I stepped from the platform upon the track which I must cross to reach the train which was on the track

beyond, having my little girl, six years old, raised in my hands, which prevented my seeing where I was to step, I suppose I stepped on the edge of a tie, which turned my foot, throwing us both to the ground. I picked up my child unhurt and hobbled into the train which was waiting; not realising the extent of my injury, and thinking the pain would soon cease. Such an occurrence was not uncommon with me, as that ankle had bothered me for years in that way, as the result of a sprain in my boyhood. On reaching Boston I took an express train for Worcester; but as the pain rapidly increased, I tried to obtain relief at the first stopping place, which was S. Framingham; as the train was late, no stop could be made, and having a brother in Ashland, the next station, I left the train there and called a surgeon, Dr. Redfern of that town; the ankle being badly swollen, it was impossible to tell whether any bones were broken or not; the Doctor bandaged the ankle and gave me a liniment, saying he would give me a year in which to get over it. I borrowed crutches and started for Brookline. On reaching home, I did not call another physician immediately, as Dr. Redfern had said "that it didn't make much difference what remedies were used, as the cure would be simply a matter of time." As time went on, my ankle improved; but for some reason, I could not put my foot to the floor without intense pain through the whole limb below the knee; it was cold, also discoloured. It was about four weeks after the accident that Dr. J. H. Woods of this town offered to take me in to Boston to consult Dr. Burrell of the Mass. Gen. Hospital. I accepted his offer and saw Dr. Burrell.

After a thorough examination, in which he found that the flat bone on the outside of the foot had been split open, (as he could feel where it had knit together) the two Doctors had a private consultation from which I was excluded. Dr. B. said that the pain and discoloration were caused by stagnation of the blood; and recommended plunging the limb into hot water and cold alternately, one minute in each; and said that when the limb resumed its normal colour, the pain would cease. This treatment I followed for several weeks, until the discoloration was nearly gone; and it certainly afforded me much relief, but did not entirely banish the pain. This continuous pain, added to worry about my business, which I was unable to follow for several months, affected my nerves and head to a very great extent; I could neither eat nor sleep, and fell unconscious two or three times. I was reduced in weight to about 100 pounds, my usual weight being from 125 to 130. I did not take any medicine to ease the pain or cause sleep. At this time Dr. F. B. Percy of Brookline sent me away [from] home, as the only thing to be done in the case; I was gone a month, and came back with my nerves somewhat steadier, and general health improved, but not rid of the pain in my ankle which seemed to puzzle the Doctors. When I first talked with Mr. Barrows in the last of September of the following year, 1894, the pain was as intense as ever with no prospect of cessation; it was continuous day and night; it was just below the outer malleolus of the left ankle. Mr. Barrows came into my store and talked with me about my health, and inquired about my ankle. I told him my ankle seemed to be all right, except the pain, which was still there; he then said, "You had better come up and see me, and let me take the pain away." I called on him by appointment October 9th, 1894, and he gave me a treatment with no

apparent result. I called again October 10th, no change. October 11th, I noticed between the two treatments that day and the day before, there were three or four hours in which I was free from pain. October 12th, the pain left for a few hours. October 16th, no apparent change. October 18th, the pain moved to the other foot. October 23rd, when I left Mr. Barrows, had no pain. October 24th, I did not call on Mr. B., but my foot ached very hard, especially on the back of the ankle. October 25th, called again, had much pain in my leg just above the ankle. October 30th, another treatment; since the 25th, have had darting pains, but on this day was nearly free from pain. The next time I called, he did not give me a treatment; since that time have been entirely free from that peculiar pain.

Now in regard to the mode of treatment; one half the time was taken up in discussing the subject; there was no laying on of hands, neither was any spell cast over me. I was absolutely free all the time Mr. Barrows was treating me; just what the treatment was, it is impossible for me to say. I will say this much, I was thoroughly prejudiced against it when I went there and had no faith whatever that Mr. Barrows would help me, but was desperate and ready to try almost anything that offered even the slightest prospect of relief.

CHAS. W. MORSE.

Brookline, Mass., *November 29th, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—I send the following particulars of a cure, due, as I believe, to psychical suggestion, made by Mr. C. M. Barrows of this town.

A few months after the treatments mentioned in a former letter to you, I went to see Mr. Barrows again, while suffering from an intense headache. I have been subject to severe headaches for years, but at this time they were more frequent than usual, occurring every week for several weeks, and lasting two or three days at a time, rendering me unfit for everything. Whether Mr. Barrows' former treatments had had any effect on my head, I cannot say; but one thing I do know, that the one special treatment he gave me at this time of which I am speaking, cured me; and I have been almost entirely free from headache since that time. Just when I received that treatment I cannot say, but it was about the last of March of the present year.

CHAS. W. MORSE.

Letter from Dr. Herbert L. Burrell.

[From Dr. H. L. Burrell, an eminent surgeon of Boston, and well known to me.—R.H.]

22, Newbury-street, Boston, Mass., *January 3rd, 1896.*

MY DEAR HODGSON,—I am very glad to give you the notes on Mr. Morse's case. The history is essentially the same as he gives; the "Physical Examination" is:—"The right foot from the middle of leg anteriorly to the middle of dorsum of foot is swollen and ecchymosed. There is no fracture, but much tenderness about the external malleolus. To try massage, passive motion and a bandage. Favourable prognosis given."

The length of time that elapsed between the injury and Mr. Barrows' treatment makes me suspect that the pain which occurred in his left ankle

was similar to that which occurred in his head, both of which were mental, and which, it is very probable, Mr. Barrows did relieve by suggestion.

I am very much obliged to you for sending me this account of the case, for I am personally strongly of the belief that suggestion will cure patients. If there is anything more that I can tell you about it, please let me know.—
Very truly yours,
HERBERT L. BURRELL.

(9) *Statement of Mrs. James Honey.* (See p. 27.)

11, Walnut-street, Brookline, Mass., November 20th, 1895.

DR. RICHARD HODGSON,—DEAR SIR,—Last February I was cured in a remarkable way of a pain from which I had suffered for nine years. In 1886, the second finger of my right hand was pinched between the edges of two swinging doors, in the dry goods store of Jordan, Marsh and Co., Boston. The second joint was badly hurt, and was very lame and sore for a long time before it seemed to heal. After it got so well that I could begin to use it, the hurt joint was still enlarged and the whole finger so stiff that I could bend it only a little. Being my thimble finger, I had to use it as I was able, and almost every day it became swollen and ached. At times the pain was severe, and, as I was obliged to work every day at washing, sewing, and other kinds of housework and could not favour it much, it ached more or less every night, and often was not free from pain for days together.

On the 4th of February, Mr. C. M. Barrows saw me while I was having an unusually bad time with this finger. He told me that he had sometimes helped such cases, and examined the joint carefully, while questioning me about it. He did nothing to the finger, but was quiet for not longer than three minutes, I should say, when all the pain stopped, and I have had none of it since. I have been able to bend the finger and use it better ever since. In two more treatments he also cured a painful lameness of my neck, which resulted from *grippe*.—Respectfully yours,
MRS. JAMES HONEY.

I can testify to the truth of above statement of my mother's, knowing how much she suffered from her finger, and being at home when Mr. Barrows helped her.—Respectfully,
MRS. A. M. HENDERSON.

(11) *Letter from Mr. Chadwick.* (See p. 28.)

HEMENWAY AND BROWNE,
New York and Boston.

BROWNE, BEECHE AND Co.,
Valparaiso.

47, Cedar-street, New York, November 20th, 1895.

DR. RICHARD HODGSON,—DEAR SIR,—I am pleased to place before you, at the request of Mr. C. M. Barrows, a certain case of sickness for which he treated me.

It was in January, 1892, when I was then living in Boston. I had been suffering for about a week with acute rheumatism, and had been unable to get much, if any, sleep at night. I was not able to get relief from any source, and decided to call in Mr. Barrows. He came in the evening, and after his

treatment I enjoyed a refreshing night's sleep; the pain entirely disappeared, and since that time I have had only infrequent returns of the rheumatism.—
Yours truly,

J. R. CHADWICK.

(12) *Letter from Mr. Harris.* (See p. 28.)

46, Morse Ave, Brookline, Mass., *December 10th, 1895.*

DR. RICHARD HODGSON,—DEAR SIR,—At the request of Mr. C. M. Barrows, I am glad to acknowledge the help I received from his method of treatment in the spring of 1894. I had been troubled with muscular rheumatism all the previous winter, and had so much lameness and pain that it was often impossible for me to attend to my work. I saw Mr. Barrows some time in May, and he offered to help me if I would call at his house. I did so; and I remember that my back and legs were aching hard, and I was so lame that it hurt me to sit down in the chair he placed for me. He sat in another chair several feet away, and asked some questions about my case; then he stopped talking for two or three minutes, and I don't know what he did, but the pain all left me. I began to move about, then stood up, and found the lameness gone too, and I have had no rheumatism since.

JAMES H. HARRIS.

The following additional corroborations have been received while this paper was passing through the press. The first refers to the case given on p. 30.

58, University-road, Brookline, Mass., *April 16th, 1896.*

DR. RICHARD HODGSON,—DEAR SIR,—I very willingly comply with the request of Mr. Barrows to corroborate his statement in regard to my son Willie. He had been troubled with a twitching of the face for several weeks. His father and I had tried to break him of the habit, but could not. I told Mr. Barrows about it, as he says, one morning last September, and Willie had no more twitching after that day.—Respectfully yours,

BERTHA MEYERS.

The next note, addressed to Dr. Hodgson, was received by him on January 20th, 1896. It will be observed that the favourable effects produced by the treatment in this case seem to have been somewhat slighter than in most of the cases described, and perhaps of a more purely mental nature.

DEAR DR. HODGSON,—I am glad to make an informal statement, to you, of Mr. Barrows' work with me; although, for several reasons, I do not think that I should care to have the same made public.

Mr. Barrows treated me last spring before an hour with the dentist, and on this occasion I experienced no pain at all; although it is but fair to say that, on my questioning the dentist, he said that he could not be sure that what he had just done, should, of necessity, have produced pain. He expected it would, but could not be certain in the matter.

This autumn and early winter Mr. Barrows has given me five or six treatments for the same reason. These operations were more serious,—a

sensitive wisdom tooth to be excavated and a large filling to be replaced in a position between the teeth which required preliminary "wedging,"—besides several minor operations. My experience with these hours in the dentist's chair have varied ;—not, I think, so much according to the gravity of the work on the teeth, as,—in so far as I can tell,—according to my receptivity toward Mr. Barrows' suggestion. At no time during these sittings has pain been totally suppressed ; although at times, I confess that I have felt as if it were decidedly *deadened*—the result seeming to me the same as that producible by an anæsthetic. The general results, however, have been : a certain relaxed feeling in place of the usual nervous tension of such times ; a certain sense of indifference to the pain—a purely mental state ; and an almost complete freedom from nervous prostration after the operations. At the time of the operations,—the time when Mr. Barrows' post-suggestion was to work,—I have felt physical drowsiness, a sense of eyelids being heavy, brain somewhat numb, etc., combined (although it may seem curious) with a sense of mental exhilaration. These, I may add, are the symptoms I experience during a treatment of Mr. Barrows' ; though there is frequently added to these a slight sense of snapping in the head, as if the nerves were, in actuality, relaxing.

As I suffer habitually from over-tension of the nerves at the back of the head and of the back, this is, perhaps, not extraordinary. This hypersensitive condition of nerves (much less than formerly with me, but still evident) should perhaps be taken into account in considering the lack of total suppression of sensation in my case ; also, probably the fact that (I think) I am very suggestible, and that, as I have always dreaded the dentist's instruments, I may make a strong auto-suggestion each time in favour of pain. I fancy this to be the case, and have in the chair, once or twice, had the sensation as if one suggestion were struggling with another,—the sense of indifference to pain with that of dread. I am afraid I do not put this into scientific language and that it is not very available as testimony. . . . Believe me, etc,

(Signed in full) — — —

Dr. Hodgson writes with reference to the case of Mr. J. R. Chadwick, see above, No. 11 :—

May, 1896.

Mr. W. L. Parker, residing in Boston, well known to me and also an Associate of the American Branch of the S.P.R., was a partner in the firm of Hemenway and Browne, in which Mr. Chadwick is an employé. At my request, Mr. Parker, on a visit recently to New York, questioned Mr. Chadwick closely about his experience, and reported that he is a man of shrewdness and intelligence, and of good judgment ; had already weighed the various other considerations offered to account for the cessation of his pain, etc., but was unable to attribute it to any other cause but the treatment of Mr. Barrows.

R. HODGSON.

IV.

POLTERGEISTS.

BY FRANK PODMORE.

Visitations of raps and loud noises, accompanied by the throwing of stones, the ringing of bells, and other disturbances of an inexplicable kind have been known for many centuries. Mr. Lang (*Cock Lane and Common Sense*, p. 170) cites a case as early as 856 A.D. In the last century there were many outbreaks of the kind, nor were the manifestations confined to any one country. There was the celebrated Cock Lane case, occurring in London in 1762; there was a tumult of bell-ringing in the Russian monastery of Tzarekonstantinoff in 1753¹; and we hear of a case, in 1750, in Saxony, of mysterious stone-throwing which lasted for some weeks, much to the annoyance of a clergyman and his two sisters who were the victims of the outbreak.² In a small and now rare book, called *Bealings Bells*, published in 1841 by Major Moor, F.R.S., for sale at a Church bazaar, accounts are given, mostly at first-hand, of some 20 cases of this kind. The disturbances described in *Bealings Bells* consisted generally of bell-ringing, but they included occasional noises of other kinds, movements of furniture, throwing of crockery and small objects. The S.P.R. has received many reports of similar disturbances. Two of the most striking have already been published by Mr. Myers in the *Proceedings*. (See *Proceedings S.P.R.*, Vol. VII., pp. 160-173, and pp. 383-394—Mr. Bristow's case.) In these two cases no opportunity was afforded of personal investigation; but in several instances Members of the Society have been able, either to be present during the actual occurrence of the disturbances, or to visit the locality and interrogate the witnesses immediately after the events. In the present paper it is proposed to deal with the results of these investigations.

I.—THE WORKSOP CASE.

The first case of the kind occurred at Worksop in 1883. Subjoined is a report, drawn up at the time, of my inquiries a few weeks after the occurrences described.

¹ *The Russian Archives*, 1878, pp. 278-9, translated and forwarded to us by T. Bruhns.

² *Annali dello Spiritismo*, quoted in *Light*, February 22nd, 1896.

REPORT ON THE WORKSOP DISTURBANCES. By F. PODMORE.

April 11th, 1883.

At the beginning of March, 1883, the *Retford and Gainsborough Times* and other local papers gave accounts of some remarkable disturbances which had occurred in the first two or three days of the month, at the house of a small horse-dealer in Worksop, named Joe White. One or two members of the Society entered into communication with the principal persons named in the newspaper reports, and with a friend in the neighbourhood, who very kindly took some trouble in inquiring into the matter for the Society. But it soon became obvious that, as nearly all the witnesses of the occurrences related were of the humbler class, and unable, therefore, to write a connected account of what had happened, the best way to arrive at the truth of the matter was for one of us to go in person to make inquiries. Accordingly, at the request of the Haunted House Committee, I went down to Worksop on the afternoon of Saturday, April 7th, with the intention of inspecting the actual scene of the occurrences, and of personally interrogating the principal witnesses; in order, if possible, to arrive at some rational explanation of the business. I spent the Saturday evening and the whole of the following day in my inquiries, and have, I think, obtained as intelligible and trustworthy a history of the matter as the lapse of time, the nature of the phenomena themselves, and the character of the witnesses will permit.

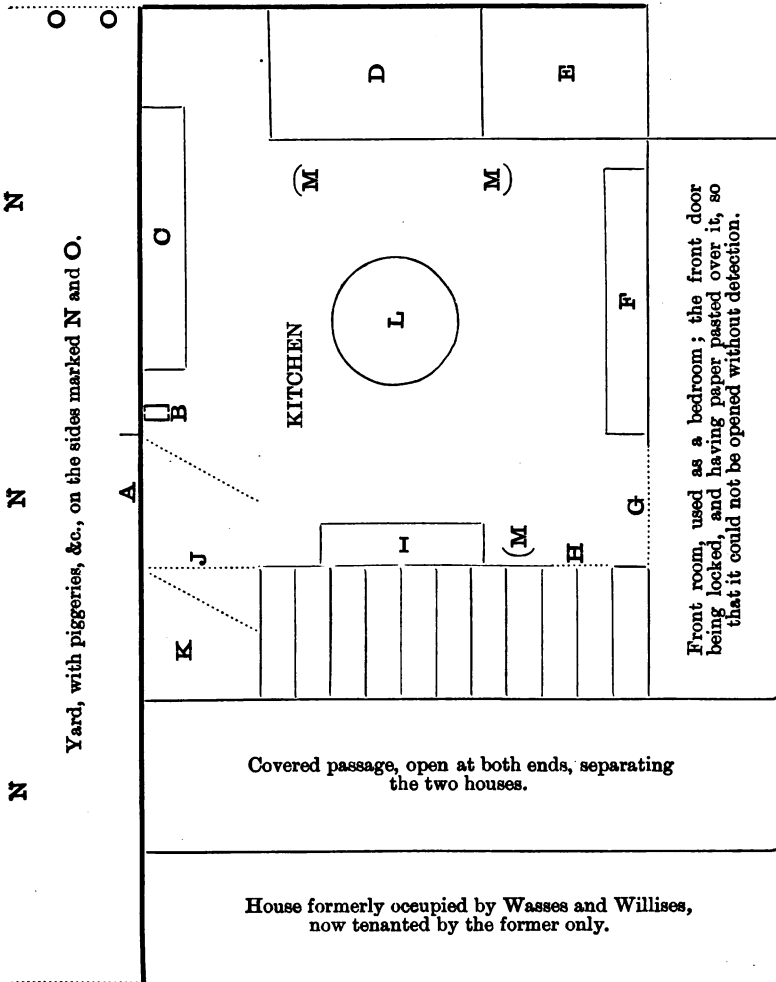
I derived my information from seven principal eye-witnesses of the disturbances, whom I interrogated, with the single exception of White himself, *separately*. I wrote out the statement of each witness in full immediately after the interview, and the three most important witnesses, Higgs, Currass, and White, subsequently read through my notes and signed them. The depositions of these three persons are printed in full below. My time was too short to allow a second interview with the four other principal witnesses, and I was unable, therefore, to obtain their signatures to the depositions; but I have incorporated the statements of all the principal witnesses in my report.

Besides the seven chiefly concerned, I questioned, in presence of White and his wife, three or four other witnesses of the disturbances, viz., White's brother Tom, a bright-looking lad of 18 or 20; Solomon Wass and his wife, next-door neighbours of the Whites, the former an ordinary North countryman of the lower class, the latter a pleasant-looking, intelligent woman; and George Ford (Buck Ford), a man of about 28. From these I obtained general confirmation of the various incidents, as described by White, Higgs, &c., at which they had themselves been present; but time did not permit of much cross-questioning, nor of taking down their evidence in full.

White's house has been built, according to his own statement, about seven years. He has only resided in it three years. I was unable to discover anything about the former occupants. The house stands at the end of a piece of waste land, called the New Building Ground, with another house or cottage attached; the nearest separate building being a public-house, about 100 yards off. With that exception, there are no other buildings within about 200 yards.

The following sketch will illustrate the general plan of the house :—

- A Outer door.
- B A cask.
- C The bin.
- D Fireplace.
- E Cupboard.
- F Squab sofa.
- G Door into inner room.
- H Door into "pantry" below stairs.
- I Chest of drawers.
- J Door on to landing.
- K at foot of stairs.
- L Table.
- M Chairs.



There is no entrance to the house by the front, the front door being locked, and the joints secured with paper from the inside. Entrance is obtained by a covered passage, open at either end, which separates the two houses, and gives access immediately to a yard, surrounded on one side by high palings, and on the other three by piggeries, stables, and the two houses. The plan of the ground-floor of White's house is apparent from the accompanying sketch. The kitchen is about 15 ft. square. The upper floor is divided into two rooms, the back one, corresponding to the kitchen, being used as a bedroom for Tom and the children; the front one as a store-house for bacon, horse-furniture, and various odds and ends. There is also a garret above this, into which I did not enter, it being at the time full of bacon in salt. The whole house, not excepting the bedrooms, is hung with bacon, the very staircase being lined with it, so that I had to draw my coat close to me in going up. A large part of the bacon, as I was told by White, had gone bad during the period of the disturbances.

The front or inner room on the ground-floor was an ordinary room, like all the rest of the house half filled with bacon, and containing, besides bedroom furniture, a large beer-barrel on trestles; everything in it filthily dirty.

I looked all over the house in daylight, but could discern no holes in the walls or ceilings, nor any trace of the extensive and elaborate machinery which would have been required to produce the movements by ordinary mechanical means.

The history of the disturbances, as gathered from the various witnesses whom I interrogated, appears to be briefly as follows:—

Nothing remarkable had been seen or heard in the house until about the 20th or 21st February, 1883, when, as Mrs. White was alone with two of the children in the kitchen one evening, washing up the tea-things at the table, the table tilted up at a considerable angle; the candle was upset, and the wash-tub only saved by Mrs. W. holding it. She positively assured me that she exerted no pressure whatever upon the table, and the whole incident struck her as very extraordinary. Her husband made light of it at the time.

On Monday, February 26th, White was absent from home until the Wednesday afternoon. On the Monday his wife allowed a girl, Eliza Rose, the child of an imbecile mother, to come into the house and share her bed at night. White returned on Wednesday night, but left on the following morning until Friday afternoon. During that one night the girl slept on the squab. On Thursday night, March 1st, at about 11 p.m., Tom White went up to bed—the children having gone up some hours before. At about 11.30, Mrs. White and Eliza Rose being then alone in the kitchen, various things, such as a corkscrew, clothes-pegs, a salt-cellar, &c., which had been in the kitchen only a few minutes before, came tumbling step by step down the kitchen stairs. Tom positively and solemnly denied having thrown the articles, and the mystery was increased when, at least 20 minutes after he had gone upstairs, no one having left the room in the interval, some *hot* coals were thrown down.

On the following night, March 2nd, at about the same hour—White, Mrs. White, and Rose being in the kitchen—a noise was heard as of some

one coming down the passage between the two houses, and stopping just outside the outer door. White told Rose to open the door, but she was too frightened to do so. Then they heard a surcingle and immediately afterwards some pieces of carpet thrown down the stairs. Then followed some knives and forks and other things. The girl picked them up; but they followed still faster. White then left the room to go up to Tom. During his absence one of the ornaments flew off the mantelpiece into the corner of the room near the door. Nothing was seen by the two women; but they heard it fall, and found it there. Their screams summoned White down; as he entered the room his candle went out, and something struck him on the forehead. The girl picked up the candle—which appears to have left the candlestick—and two new ones which had not been in the house previously, from the ground; and as soon as a candle was lit, a little china woman left the mantelpiece, and fell into the corner, where it was seen by White. As soon as it was replaced it flew across the room again, and was broken. Other things followed, and the women being very frightened, and White thinking that the disturbances presaged the death of his child, who was very ill with an abscess in the back, sent Tom (who was afraid to go alone) with Ford to fetch the doctor. Mrs. White meanwhile took one of the children next door. Rose approached the inner room to fetch another, when things immediately began to fly about and smash themselves in that room. After this all appear to have been absent from the house for a short time. White then returned, with Higgs, a policeman, and, whilst they were alone in the kitchen, standing near the door, a glass jar flew out of the cupboard into the yard; a tumbler also fell from the chest of drawers in the kitchen, when only Higgs was near it. Both then went into the inner room, and found the chest of drawers there turned up on end and smashed. On their return they found Rose, Wass, and Tom White in the kitchen [? and Mrs. Wass], and all saw a cream jug, which Rose had just placed on the bin, fly four feet up in the air and smash on the floor. Dr. Lloyd and Mrs. White then entered, and in the presence of all these witnesses, a basin was seen to rise slowly from the bin—no person being near it except Dr. Lloyd and Higgs. It touched the ceiling, and then fell suddenly to the floor, and was smashed. This was at 12 p.m. All then left except Tom White and his brother. The disturbances continued until about 2 a.m., when all grew quiet, and the Whites slept. At about 8 a.m., on Saturday, the 3rd, the disturbances began again.

White left the kitchen to attend to some pigs; and, in his absence, Mrs. White and Rose were left alone in the kitchen. A nearly empty port wine bottle leaped up from the table about four feet into the air, and fell into a bucket of milk, standing on the table, from which Mrs. White was filling some jugs, &c.

Then Currass appears to have been attracted to the scene. He entered with White, young Wass, and others, and viewed the inner room. They had but just returned to the kitchen, leaving the inner room empty, and the door of communication open, when the American clock, which hung over the bed, was heard to strike. (It had not done so for 18 months previously.) A crash was then heard, and Currass, who was nearest the door, looked in, and found that the clock had fallen over the bed—about four feet broad—

and was lying on the floor.¹ Shortly afterwards—no one being near it—a china dog flew off the mantelpiece, and smashed itself in the corner near the door. Currass and some others then left.

Some plates, a cream-jug, and other things, then flew up in the air, and smashed themselves in view of all who were in the kitchen—Rose, the Whites, and Mrs. Wass.

White then lay down on the sofa ; but disturbances continued during his siesta. In particular, some pictures on the wall next the pantry began to move, but were taken down at once by his brother. At about 2 p.m. a Salvation Army woman came in, and talked to White. Rose only was with them in the kitchen. A candlestick flew from the bin, and fell behind the Salvation Army woman, as she stood near the pantry door. She left the room in terror.

Other things then followed at intervals. A full medicine bottle fell without breaking. An empty medicine bottle and a lamp-glass fell and broke themselves. It was then about 4 p.m., and White could stand it no longer. He told the girl she must go ; she did in fact leave before 5 p.m. After her departure nothing whatever of an abnormal character took place, and the house has remained undisturbed up to the present time.

With regard to the positions of the persons present, in relation to the objects moved, it may be stated generally that there was no possibility in most cases of the objects having been thrown by hand. It will be seen, on reference to the depositions of the witnesses which are appended, that the objects were frequently moved in a remote corner of the room, or even in an adjoining room. Moreover, the character of the movements, in many cases, was such as to preclude the possibility of the objects having been thrown.

Of course the obvious explanation of these occurrences is trickery on the part of some of the persons present. In regard to this, it seems to me a matter of very little significance that most of the educated people in Worksop believe White himself to have caused the disturbance. For most educated persons, as we know, would not be ready to admit any other than a mechanical explanation, and if such an explanation be adopted, White, the owner of the house, a man of considerable intelligence, whose record was not entirely clean, and who was himself present on the occasion of nearly all the disturbances, must obviously be the agent. But whilst believing White to be at the bottom of the matter, none of the persons with whom I conversed were prepared with any explanation of his *modus operandi*. That he should have thrown the things was universally admitted to be impossible. And

¹ It will be noted that there is a discrepancy between White's and Currass' version of this incident. Mrs. White, however, confirmed her husband's account ; and I have little doubt that the statement in the text is substantially accurate. Currass is more likely than White to have been mistaken in his recollection of White's position at the time ; and Currass' account of his own position does not differ greatly from that given by White. The material point, and one on which both witnesses are agreed, is that no one *saw* the clock fall. Currass' written statement is not clear on this point, but he told me *vidé voce* that his attention was drawn to what had taken place by hearing the crash. He only then turned round and saw the clock lying on the floor.—F.P., April, 1883.

beyond this, I could discover little more than an unquestioning faith in the omnipotence of electricity. No one professed to have any idea of what mechanical means could have been employed, or how they could have been adapted to the end in view. Still less did any one pretend to have discovered any indications in the house itself of any machinery having been used. Moreover, there was a total absence of any apparent motive on White's part, supposing him to have been capable of effecting the movements himself. Whilst he was unquestionably a considerable loser—to the extent of nearly £9 as estimated by himself, though this estimate is probably exaggerated—by the articles broken, he appears to have reaped no corresponding advantage. The one motive which I heard suggested—if we disregard a report in one newspaper, subsequently contradicted in another, to the effect that White was anxious to buy the house, and to buy it cheap—was that he produced the disturbances in fulfilment of a sporting bet. But I saw no reason to regard this explanation as anything but a scholium evolved by some ingenious commentator from the facts themselves.

Again, had White himself been the principal agent in the matter, it is clear that he must have had at least two confederates, for he was not himself present during the disturbances on the Thursday night—which might, indeed, have been caused by his brother Tom—nor was either he or his brother present during some of the occurrences on the following day. Moreover, these confederates must not only have been extremely skilful, but they must have been capable of more than ordinary reticence and self-control. For it is remarkable that, with the single exception of the statements made by the girl Rose, no one professed to have heard even a hint from White himself, from his brother, or from any other, of any trickery in the matter.

Moreover, it is hard to conceive by what mechanical appliances, under the circumstances described, the movements could have been effected. The clock, for instance,—a heavy American one—was thrust out from the wall in a horizontal direction, so as apparently to clear a 4ft. bedstead which lay immediately beneath it, and the nail from which it depended remained *in situ* on the wall. The objects thrown about in the kitchen moved generally, but by no means always, in the direction of the outer door. And it is noticeable that, in most cases, they do not appear to have been thrown, but in some manner borne or wafted across the room; for, though they fell on a stone floor 15ft. or 16ft. distant, they were often unbroken, and were rarely shattered. And it is impossible to reconcile the account given of the movement of some other objects, variously described as “jerky,” “twirling,” and “turning over and over,” with the supposition that the objects depended on any fixed support, or were in any way suspended.

Lastly, to suppose that these various objects were all moved by mechanical contrivances argues incredible stupidity, amounting almost to imbecility, on the part of all the persons present who were not in the plot. That the movement of the arms necessary to set the machinery in motion should have passed unobserved on each and every occasion by all the witnesses, is almost impossible. Not only so, but Currass, Higgs, and Dr. Lloyd, all independent observers, assured me that they examined some of the objects which had been moved, immediately after the occurrence, with the express

intention of discovering, if possible, any clue to an explanation of the matter, but entirely failed to do so. These men were not over-credulous; they certainly were not wanting in intelligence; and they were not, any of them, prepossessed in favour of White. But they each admitted that they could discover no possible explanation of the disturbances, and were fairly bewildered by the whole matter.

STATEMENT OF JOE WHITE. A fair witness. I think that he always intended to speak the truth, but that occasionally his memory proved treacherous. In all important points, however, he was corroborated by his wife (an excellent witness), Higgs, and Currass.—F. P.

I returned home about 7 on the Friday night (March 2nd). I had been absent from home on Monday and Tuesday nights: and it was during my absence that my wife took in the girl Rose, who shared her bed in the front inner room. I slept at home on Wednesday, and the girl then slept on the squab in the kitchen. I left again on Thursday morning, and returned as mentioned on the Friday.

When told by my wife and Tom what had happened on Thursday night, I said some one must have been tricking, and didn't think much more about it. But I chaffed the lass (Rose) a good deal, for she was much frightened. About 11.30 on Friday evening, when my wife, the girl, and I were alone in the kitchen, just going up to bed, I heard a noise as if some one had come down the passage between the two houses, and were standing just outside our door. They didn't knock; but I said to Rose, "Go and see who's there." But she was frightened and didn't go. Then presently, a lot of things came rattling down the stairs. I don't know what came first: but a lot of things came—a surcingle, bits of carpet, knives and forks, a corkscrew, &c. The girl went to pick them up, and put them on the table, and just as fast as she put them on more things came down. Then my wife said to me, "The salt cellar came down last night, but you won't have it down to-night, for here it is on the table." She was using it at the time for salting Tom's dinner for next day. She had hardly said this, when the salt cellar flew off from the table, and into the corner near the outer door. Rose was in that corner, and not near the table: my wife was at the table, but certainly didn't touch the cellar. I saw the thing go, though I couldn't believe my eyes. My wife didn't see it go, but we both saw it as it struck the wall in the corner. All the salt was spilled out of it. I fairly couldn't believe my own eyes; but I couldn't help thinking it must be Tom. So I went upstairs to him, and told him to leave off. "Thou'lt frighten our Liz to death." He said, "It's not me, Joe. I'll take my oath it isn't. I've never thrown nowt down." Whilst I was still talking to him, I heard a crash downstairs; and the women screamed; and my wife cried, "Come down, Joe." As I was just coming into the room the candle which I held in my hand went out—I don't know how at all—and we were left in darkness, except for the firelight. Then something hit me on the forehead, and I cried out, "Who threw that?" Then there was a crash in the corner. I found out when we had a light again that the salt cellar had fallen again into the corner, and broken itself. Then I found out that the candle was not in the candlestick, and asked where it was. I told the girl to look for it, and then

she felt among the things at the bottom of the stairs and picked up *three* candles, two of them quite new. We had only had *two* candles in the house [Mrs. White expressly confirmed this.—F.P.] which had been bought just before, and both had been partly burnt. I lit the old ones and left the new ones on the table; but they disappeared afterwards, and I have never seen them since.

When the candle was lit again, I saw the little china woman jump off from the mantelpiece, and go into the same corner. It fell on its side, and then righted itself, and stood upright, unbroken. I distinctly saw it go through the air; it passed near me as I stood about the middle of the room. None of us were near the mantelpiece. I picked it up, and presently it fell into the corner again, and broke itself. Then the tea-caddy and the candlestick, all from the mantelpiece, followed. Then I went out and found George Ford ("Buck" Ford), and asked him to fetch Dr. Lloyd for the child—for they had told me that all this disturbance meant the death of the child, who was very ill with an abscess in its back.

Then I got my wife to take the little lad out, and lay him next door, he lying on the squab in the kitchen at the time. [Mrs. W. denied this, and said he was in the inner room.—F. P.] Rose went with her, and they took all the children with them. Before going, Rose had to go into the inner room, and then things began to fly about there and make a disturbance. All had been quiet there before.

I went after the others into the next house and stayed there some little time. When I came back, I found Police-constable Higgs in the kitchen. He and I were alone there. (Rose all this time was next door.) We heard a crash in the inner room, and we went in—Solomon Wass and Tom, who had just entered, with us, and Higgs with his lantern,—and we found the chest of drawers turned up on end, and the lustres and looking-glass, and everything else that had been on it, in pieces on the floor. Then we came back into the kitchen, and we saw the cupboard door open, and a big glass jar flew out, and flew into the yard and broke itself. Also some things flew off the bin at the side of the door, from the end near the fire; and they pitched in the corner, and then went out in the yard. Things often pitched on the floor by the door first, and then got up again and flew out into the yard.

Then Dr. Lloyd came in with my wife, and Higgs showed him what had happened in the inner room. Then when we had got into the kitchen again, and were all standing near the door of the inner room—Higgs, my wife, and Tom, and Wass, and Lloyd—who was about six feet from the bin, and the nearest to it of our party—we all saw a basin which was lying on the bin near the door, get up two or three times in the air, rising slowly a few inches or perhaps a foot, and then falling plump. [Mrs. W. corroborated this, and so did Mr. Wass, the next-door neighbour, who was also present.—F. P.] Then it got up higher, and went slowly, wobbling as it went, up to the ceiling, and when it reached the ceiling, it fell down all at once, and broke itself.¹ Dr. Lloyd then looked in the bin, saying the devil must be

¹ During this scene the room was lighted by one candle, Higgs's lantern, and a blazing fire; so that the light was pretty good.

in the house, and then left. All the others shortly afterwards left, Mrs. W., Rose and the children stopping in the next house. Tom and I sat in the chair on either side of the fire until the next morning at 8 a.m. Things kept on moving every now and then until about 2 a.m., and then was all quiet, and we got to sleep a bit. At about 8 a.m. I had to go out to see after a pig which had been pigging, and then things began again; and a lot of folks came in to see about it. Currass came in, and I went with him into the inner room and showed him the chest of drawers, he and I alone; we came out leaving the door open—I am quite sure it was open—and I was sitting near the fire, and Currass was just inside the kitchen, not far from the open door, when Wass's little lad, who was sitting at the table, said, "There's the clock striking," meaning the big clock which hung over our bed. I couldn't hear it, and I said it was a lie. Just then we heard a crash, and I asked what it was, and Currass looked round, and said it was the American clock had fallen right across the bed, and lay on the floor at the foot, with its bottom knocked out. Then I took it into the yard. I think—indeed, I am sure, that Coulter was *not* here when all this happened. The other clock fell and was broken, but whether before or after I cannot remember; and he may have seen that. I don't remember where the girl Rose was when the American clock fell. She may have been in the kitchen, but she certainly wasn't in the inner room; no one was in that room, I am sure. I don't remember saying just at that time, though I often did say, that wherever she went the things smashed.

After that, Currass and I and one or two others were standing near to the outer door talking, when the china dogs, or one of them, flew off the mantelpiece and smashed; and lots of things kept on flying into the corner and smashing. I saw one of the dogs leave the mantelpiece and go through the air. I don't remember exactly when Coulter came; he may have been here when the china dog was smashed, but I don't remember that he was. Then a cream jug fell off the table; it had done so four or five times without smashing. At last I filled it with milk, and had placed it on the bin, when it suddenly fell off and smashed, and the milk was all spilt.

Then I was tired, and lay down on the squab; but things kept moving. I was told some pictures on the wall began to move, but I didn't see them. At about 2 p.m., a Salvation Army woman came in and was talking to me as I lay on the squab; she stood near the inner door; Rose was near the outer door, having brought in some carpet. There were two candlesticks on the bin, at the end near the fireplace. Suddenly something dropped behind the Salvation Army woman. No one saw it going through the air; but we turned round and found that it was one of the brass candlesticks. It was half balanced on the small end where the candle goes, and was wobbling about on the end. Then the Salvation woman said, "I must go;" and she went.

Then a little after, when Rose was going to lay down the carpet, and no one else in the room, a medicine bottle, full, fell from the bin on to the roll of carpet, about three or four yards off, and was broken. A lamp-glass had fallen several times without breaking; but at last that fell and broke. Then an empty bottle flew off from the mantelpiece. That was one of the last things that happened. Well then, I couldn't stand it any longer. Wherever

the lass seemed to go, things seemed to fly about. So I said to her, "You'll have to go." She began to roar. But my wife gave her some tea, and she went. That was between 4 and 5 p.m., very soon after the last disturbance. Nothing happened after she left. We sat up in the kitchen that evening, a lot of us, as the newspapers tell; but nothing happened at all.

I have been in the house three years. I think the house had been built four or five years before that. Nothing of the kind had ever happened in it before, as far as I know, except that once I thought I heard some one moving in the yard, and fancied it might be some one after the fowls; but there was no one there; and there was that strange tilting of the table when my wife was washing up the things about a week before.

The Wasses and the Willisises [Mrs. Willis is Wass's sister] had lived together in the next house; but since all these disturbances, the Willisises have left the house; but Mr. and Mrs. Wass are still there.

(Signed) JOSEPH WHITE.

New Building Ground, Worksop.
April 8th, 1883.

STATEMENT OF POLICE CONSTABLE HIGGS. A man of good intelligence, and believed to be entirely honest. Fully alive, as becomes his official position, to White's indifferent reputation, but unable to account for what he saw.—F.P.

On the night of Friday, March 2nd, I heard of the disturbances at Joe White's house from his young brother, Tom. I went round to the house at 11.55 p.m., as near as I can judge, and found Joe White in the kitchen of his house. There was one candle lighted in the room, and a good fire burning, so that one could see things pretty clearly. The cupboard doors were open, and White went and shut them, and then came and stood against the chest of drawers. I stood near the outer door. No one else was in the room at the time. White had hardly shut the cupboard doors when they flew open, and a large glass jar came out past me, and pitched in the yard outside, smashing itself. I didn't see the jar leave the cupboard, or fly through the air; it went too quick. But I am quite sure that it wasn't thrown by White or any one else. White couldn't have done it without my seeing him. The jar couldn't go in a straight line from the cupboard out of the door; but it certainly did go.

Then White asked me to come and see the things which had been smashed in the inner room. He led the way and I followed. As I passed the chest of drawers in the kitchen I noticed a tumbler standing on it. Just after I passed I heard a crash, and looking round, I saw that the tumbler had fallen on the ground in the direction of the fireplace, and was broken. I don't know how it happened. There was no one else in the room.

I went into the inner room, and saw the bits of pots and things on the floor, and then I came back with White into the kitchen. The girl Rose had come into the kitchen during our absence. She was standing with her back against the bin near the fire. There was a cup standing on the bin, rather nearer the door. She said to me, "Cup'll go soon; it has been down three times already." She then pushed it a little farther on the bin, and turned round and stood talking to me by the fire. She had hardly done so, when

the cup jumped up suddenly about four or five feet into the air, and then fell on the floor and smashed itself. White was sitting on the other side of the fire.

Then Mrs. White came in with Dr. Lloyd ; also Tom White and Solomon Wass. After they had been in two or three minutes, something else happened. Tom White and Wass were standing with their backs to the fire, just in front of it. Eliza Rose and Dr. Lloyd were near them, with their backs turned towards the bin, the Doctor nearer to the door. I stood by the drawers, and Mrs. White was by me near the inner door. Then suddenly a basin, which stood on the end of the bin near the door, got up into the air, turning over and over as it went. It went up not very quickly, not as quickly as if it had been thrown. When it reached the ceiling it fell plump and smashed. I called Dr. Lloyd's attention to it, and we all saw it. No one was near it, and I don't know how it happened. I stayed about ten minutes more, but saw nothing else. I don't know what to make of it all. I don't think White or the girl could possibly have done the things which I saw.

(Signed) WILLIAM HIGGS, G.E. 30.

April 10th, 1883.

STATEMENT OF ARTHUR CURRASS, coal-miner ; a Methodist, and apparently a very steady, respectable man. Believed that White did it, but couldn't guess how it was done.—F.P.

I had to go out on the Saturday morning (March 3rd) to get some swill for the pig, about 8.15 a.m. I passed by White's house, and hearing a disturbance, I looked over the railings, and White said to me, "There's something in the house that's breaking all afore it." I asked him what it were, and he told me to come and see. I got over the railings, and I followed White into his own house. He took me into the front place where the clock was hanging over the bed's head, and was showing me a nest of drawers, where his suit of clothes came out of the bottom drawer into the top one but one. While I was looking at the drawer, and the broken pots there was lying there, the clock by some means came from the wall, slantingwise about seven feet, and dropped clear of the bed's foot on to the floor. It had been fastened up on the wall, near the bed's head, and it fell between the bed's foot and the door. I said, "What is that?" White said, "It's something else smashed." I turned round and saw that it was the clock. The nail still remained in the wall. The girl Rose was coming out of the kitchen towards the inner door, but had not got quite up to it. She seemed to be much frightened. White said to me, "It doesn't matter a damn where that lass goes, there's something smashes." The clock was taken right away into the yard and placed on an empty cask, and there it stayed. White and I were alone in the front room when the clock fell. White and I then went into the back kitchen, and I remained about four feet from the outer door, with my face towards the fireplace. I then saw a pot dog leap from the mantel-piece, and come within about five feet of the pantry door and break, passing close to me. There was nothing attached to it, and there was no one near it. I then began to move away, and just then Coulter appeared. This would be between 8.30 and 8.45 a.m. Coulter had not come before whilst I was there,

and certainly had not been present when the clock and the dog were broken. The clock was in the yard when he came, and I showed it him there.

John Street, Worksop,
April 8th, 1883.

(Signed) ARTHUR CURRASS.

I have given the evidence in this instance at considerable,—perhaps tedious,—length, because, of all the cases which have been investigated by representatives of the Society, it is, as it stands, one of the most difficult to harmonise with any explanation by ordinary material causes. The concordant testimony of so many honest and fairly intelligent persons certainly produced, as will have been seen from my report, a strong impression on my mind at the time. Nor do I see reason now to question my original estimate of their intelligence and good faith. If my verdict on the Worksop disturbances in 1896 differs from that which I gave in 1883, it is because many things have happened since, which have taught us to discount testimony in matters of this kind.

For it will be seen that the value of these reports, as testifying to the operation of some supernormal agency, depends wholly upon two assumptions, first, that the various witnesses—imperfectly educated persons, not skilled in accurate observation of any kind—correctly described what they saw : and, second, that after an interval of more than five weeks, during which time the experiences had been discussed and compared and gaped at by every village fireside, and in the public press, they correctly remembered what they described. But in the course of the 13 years which have passed since I wrote my report, we have received some striking object-lessons demonstrating the incapacity of the ordinary unskilled observer to detect trickery or sleight-of-hand : and we have learnt to distrust the accuracy of the unaided memory in recording feats of this kind, especially when performed under circumstances of considerable excitement.

And, indeed, if we scrutinise the account as it stands, we shall find various discrepancies and contradictions in the evidence. (1) Thus, according to White, Higgs and he went into the front room first, to see the damage done there, and on their return to the kitchen a glass jar flew out of the cupboard. But according to Higgs' version, it was after seeing the glass jar fly through the air that White and he went into the inner room. (2) White's account is that two or three witnesses were present when the glass jar flew out ; Higgs says, "that no one else was in the room at the time." (3) There seems to be a doubt as to whether Rose entered the kitchen during Higgs' visit. White does not mention her entrance at all. Higgs says they found her in the kitchen on their return from the inner room. (4) Currass says he was in the inner room on the morning of the 3rd when the clock fell. White says that Currass was in the kitchen. (5) Again, White cannot

remember where Rose was at the time of the incident ; whilst Currass says that she was near the inner door. (6) White and Currass agree that Coulter was not present when the American clock fell and was smashed. Now Coulter, whom I saw, and who impressed me favourably as an honest man, stated that he was present when the clock fell, and also during the immediately succeeding disturbances in the kitchen.¹

Such are some of the discrepancies which appear in the evidence even as prepared and taken down from the lips of the witnesses by a too sympathetic reporter. It is probable that more and more serious discrepancies and contradictions would have been found if there had been no speculation and consultation and comparison in the interval of five weeks ; and if each witness at the end of that time had written an independent account of the incidents.

It would be idle, in the circumstances and at this distance, to speculate on the real cause of these disturbances. But it is to be noted that Eliza Rose—the daughter of an imbecile mother—was present, by all accounts, at most of the disturbances ; that they began shortly after her entrance to the cottage and ceased with her departure ; and that she was regarded by White himself as the prime cause of all that happened. And if one apparently honest witness could describe himself as having seen occurrences that he knew of only by hearsay ; if others could be mistaken as to the sequence of important events, and the presence or absence at given times of particular persons ; it is perhaps not unreasonable to conjecture that the statements made by White and others that some abnormal movements took place during Rose's absence may have been incorrect, and that Rose herself, as the instrument of mysterious agencies, or simply as a half-witted girl gifted with abnormal cunning and love of mischief, may have been directly responsible for all that took place.

In the next case we have clear evidence that some, at least, of the phenomena which puzzled those who witnessed them, and gave rise to suspicions of preternatural agency, were due simply to sleight-of-hand on the part of a young uneducated village girl.

II.—THE WEM CASE.

The subjoined extract from a daily paper gives an account of some mysterious disturbances at a Shropshire village, in November, 1883.

“ A series of occurrences which have caused great excitement in the neighbourhood of Leebotwood, and no small speculation and wonder in the

¹ Coulter's evidence was omitted from the account given in the text, originally printed in the *Journal* of the Society, as I did not at the time sufficiently realise its importance, and came to the conclusion that the man was telling a deliberate falsehood.

adjacent town of Shrewsbury, have just taken place. At a secluded farm called 'The Woods,' which is about a mile and a half from Toppington and nine or ten from Shrewsbury, resides a farmer named Hampson, and about four o'clock one afternoon, at the latter end of last week, the servants were in the kitchen of the farmhouse, preparing tea. On the fire was a saucepan in which were some eggs boiling, and this 'jumped,' as the girls declared, off the fire, while the tea things were thrown from the table and smashed. Some of the hot cinders were also thrown out of the grate, and set fire to some clothes in a basket. So far, the explosion of some material in the grate might have been sufficient to account for the occurrence; but what is said to have occurred subsequently will not bear such an explanation. On the table was a paraffin lamp, with a globe, and the globe was 'lifted' off the stand and thrown across the room, the lamp itself being left on the table. A mat under the lamp took fire, and the inmates of the house becoming alarmed, then ran out for the neighbours. Among others who went to the house was a Mr. Lea, an adjacent farmer, who states that when he approached the house it seemed as if all the upstairs rooms were on fire, 'as there was such a light in the windows.' Mr. Hampson consequently went upstairs and made an examination, but everything there was safe, and in the usual order. As things were continuing to jump about the kitchen in a manner which was altogether inexplicable, and many were getting damaged, Hampson decided to remove everything that was in that apartment outside. He accordingly took down a barometer from the wall, when something struck him on the leg, and a loaf of bread which was on the table was thrown by some invisible means and hit him on the back. A volume of 'Pilgrim's Progress' was thrown or 'jumped' through the window, and a large ornamental sea-shell went through in a similar fashion. In the parlour a sewing machine was thrown about and damaged, and has had to be sent to be repaired. The nurse-girl was nursing the baby by the fire when some fire leapt from the grate, and the child's hair was singed and its arms burnt. The girl was so alarmed that she set off to a neighbour's, and on the way there her clothes took fire, and had to be torn from her body. During the evening, while the girl was at the neighbour's, a plate which she touched while having her supper was apparently thrown on the floor, and the pieces were picked up by some unseen agency, and put in the centre of the table. Other occurrences are said to have taken place in the neighbour's house while the nurse-girl was there, the whole lasting considerably over half an hour. As no one could explain the cause of what they witnessed, the police were communicated with, and made full inquiries from the inmates of the house and others, the result being that they ordered the coal to be consumed in the open air, believing it to contain some explosive substance, but it burnt quietly away. Those who witnessed these occurrences tell a marvellously straightforward story, and curiously enough none of them attributed it to any supernatural cause, as might have been expected in a quiet country locality, but they say it was 'something in the coal or in the air,' while one or two fancy it was some electrical phenomena."

Subsequently the same paper states their "Shrewsbury correspondent telegraphs that he paid another visit to Weston Lullingfield yesterday, and was informed that on Saturday and Sunday there were more extraordinary

manifestations in connection with the girl Emma Davies. Police-constable Taylor, of the Shropshire Constabulary, remained in the house until late on Saturday. During the time he was there the fender moved from the fire-place into the middle of the room, and on being replaced, came forward a second and third time. A cushion placed at the back of a chair on which the girl sat several times flew across the room, and all the stitches in her apron came undone, followed later on by the buttons upon her dress being wrenched off. Miss Maddox, the village schoolmistress, made a statement to the correspondent to the effect that she called to see the girl, a former pupil, on Saturday evening, and had not long been seated when she observed both the chair and the girl rise from the floor. She took the girl on her lap and sat in the chair herself, and immediately the girl's boots flew off, and although replaced, the circumstance was twice repeated. On Sunday a box in a bedroom was hurled across the room, and a number of cups and saucers were smashed."

REPORT BY MR. F. S. HUGHES.

December 3rd, 1883.

During the first and second weeks of November, 1883, accounts were to be seen in the London and local papers of strange phenomena stated to have taken place at Wood's Farm, near Wem, and other houses in the neighbourhood.

These phenomena could not apparently be accounted for by ordinary physical laws, and it seemed therefore very desirable that the stories should be thoroughly sifted on behalf of the Society for Psychical Research.

The scene of the first series of these phenomena was Wood's Farm, and the time, the afternoon of Thursday, November 1st. A nurse-girl at the farm, named Emma Davies, was connected in some way with the disturbances by the occupiers, and she was accordingly dismissed and sent to her home at a village called Weston Lullingfield, about five miles off. Here the singular phenomena appeared shortly after her arrival, and the affair began to attract very general attention.

On Friday, the 9th, the girl, who seems to have got into a very nervous state, was taken to a branch establishment at Wem, of Dr. Corke, of Baschurch, and kept in strict seclusion, at the same time being closely watched by the housekeeper, Miss Turner.

On the following Thursday the *Daily News* and the *Daily Telegraph* both had long reports, stating that the girl had confessed to having wrought all these wonders by very ordinary sleight-of-hand.

As, however, these accounts did little to explain away the phenomena which had taken place according to the previous newspaper reports, I was asked by the Society for Psychical Research to go down to Shropshire to investigate the evidence on which the original stories rested, and to see whether they could really be accounted for satisfactorily by the girl's alleged trickery.

On Saturday, the 17th November, I proceeded to Wem, and shortly after my arrival called at the doctor's house, and saw Miss Turner, Dr. Mackey, the assistant of Dr. Corke, not being at home.

Miss Turner is a lady of about 30 years of age, who appeared to be a practical, shrewd person, not at all excitable, and she gave her evidence in a very straightforward manner.

Calling again, later on in the evening, I saw Dr. Mackey, who is a young Scotchman, of about 27 or 28, and who seemed nervously anxious not to give any evidence about which he had any doubt.

I am quite confident that the girl was well treated while living with them, and was subjected to no undue influence.

I made notes of the evidence they were able to give me on the subject, and obtained their signatures to my account after they had heard it read to them.

Briefly their account is :—That certain manifestations took place, similar in character to those that preceded them, and for two or three days they were quite unable to detect any fraud, though no manifestation ever took place when the girl was not in such a position that she *might* have produced them by ordinary trickery.

Thus, in the presence of Dr. Mackey and Miss Turner a piece of bread jumped across the room, the girl not being actually seen to throw it. On another occasion when Miss Turner had left the room, the girl suddenly screamed, and when Miss T. returned, a pair of slippers were on the sofa which had just before been seen on the hearthrug. Again, when Miss T. had just turned her back to the girl, the usual scream was heard, and turning round Miss T. saw a bucket in the air descending to the ground. A knife on another occasion was thrown across the room, being in the air when Dr. Corke's servant was entering the room.

On Tuesday morning, however, Miss Turner was in an upper room at the back of the house, and the servant of the establishment and Emma Davies were outside, Emma having her back to the house, and unaware that she was observed. Miss Turner noticed that Emma Davies had a piece of brick in her hand held behind her back. This she threw to a distance by a turn of the wrist, and while doing so, screamed to attract the attention of the servant, who, of course, turning round, saw the brick in the air, and was very much frightened. Emma Davies, looking round, saw that she had been seen by Miss Turner, and apparently imagining that she had been found out, was very anxious to return home that night.

Miss Turner took no notice of the occurrence at the time, but the next morning (Wednesday) she asked the girl if she had been playing tricks, and the girl confessed that she had, and went through some of the performances very skilfully, according to Miss Turner's account.

Later on in the day she repeated these in the presence of the doctor, Miss Turner, and the two reporters from London, but Miss Turner said nothing like so well.

Dr. Mackey further gave me an account of a conversation which he had had with Emma Davies, chiefly with reference to some of the extraordinary stories that had appeared in the papers.

One of these stories was that after the girl's return to her father's house, she was in the habit of assisting her sister in household work. One day they were putting clothes out on the hedge to dry, but those placed by Emma Davies refused to remain on the hedge, and "jumped over into the road."

With reference to this, the statement of Emma Davies, as reported by Dr. Mackey, was as follows: "They put the clothes on the hedge, and then returned to the house, nothing unusual having occurred. On going outside again, the linen was found on the ground, two little boys being seen running away." She was quite confident that she did not see the things going off the hedge.

Several of the other stories were similarly disposed of by her. Thus, when the windows were broken at her father's cottage and the farm, there were a lot of men and boys standing about outside.

The girl always denied that she had produced the various phenomena at Wood's Farm and Weston Lullingfield, but Dr. Mackey thought that she had been carefully primed not to "let on" about this.

Dr. Mackey added that the girl's physical and mental condition was quite normal, so far as he could ascertain.

On the following morning I drove over to Wood's Farm, which is about five or six miles distant from Wem, and there obtained the evidence of the following witnesses:—

Mr. and Mrs. Hampson, their servant girl, Priscilla Evans, Mr. and Mrs. Lea, of a neighbouring farm, and the waggoner at Wood's Farm, Thomas Williams.

Mr. Hampson was a very intelligent man, who unfortunately was not at home at the time of the occurrences, and only had evidence on some minor details.

Mrs. Hampson was very diffuse in her account, and appeared rather credulous. She looks about 30 years of age.

The girl, Priscilla Evans, is about 16, very voluble, but gave her evidence in a very straightforward manner, giving me the impression that she was telling me what she believed to be the truth. She had an excellent character from Mr. and Mrs. Hampson; and it is mere justice to her to state that the charge of complicity with Emma Davies' trickery, brought against her by the reporters of the *Daily News* and the *Daily Telegraph*—on the ground of a supposed confession of the waggoner Williams, that he had taught his fellow servants "how to shift things about"—completely broke down under my examination. The waggoner denies that he ever said, or could have said, anything of the sort; and his denial was entirely confirmed by Mr. Belliss, the innkeeper, who drove the reporters over from Wem, and himself suggested the questions put to the waggoner which led to the reporters' mistake.

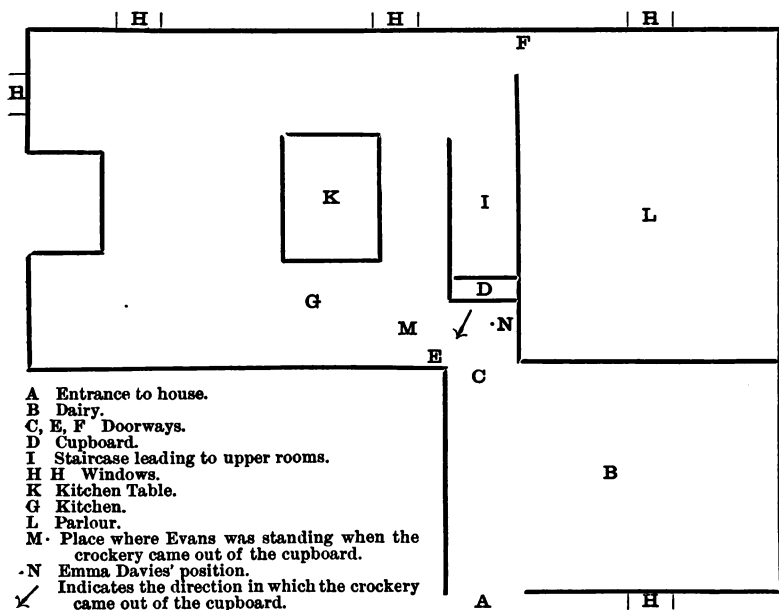
I could not regard Mr. and Mrs. Lea as good witnesses, since their firm conviction of the devil's agency in the matter rendered them too much indisposed to accept any ordinary explanation of any of the occurrences to which they referred, and they did not bring forward any cases of manifestations which took place when Emma Davies was *undeniably*, according to my opinion, in such a position that she could not have produced them.

A rough drawing of the premises will show the relative position of the parlour, kitchen, and dairy, and will be useful in estimating the value of the evidence.

According to Mrs. Hampson's account, the family, with the exception of Mr. Hampson, were occupying the parlour on Wednesday, October 31st,

when suddenly coal was seen to be "alive" in various parts of the room, apparently having flown out of the fire. Nothing unusual was observed that day in addition to this, the fire having been removed to the kitchen, and coke instead of coal being employed.

The next day, about four p.m., the family were about to sit down to tea, when the saucepan on the fire jumped off, and coal began to fly about. A cup and saucer "went off" the table, by unseen agency, and they were all so frightened that E.D. was sent off to Lea's farm for help. Mrs. H. and Priscilla retreated to the dairy, whence, it will be seen on reference to the map, they had a full view of the kitchen table. They both state that they saw the crockery rise up off the table and fall to the ground. The articles did not go off all at once, but one or two at a time. They are quite certain that this happened while Emma Davies was absent, fetching Mrs. Lea from the neighbouring farm.



Some of the crockery, on the return of Emma Davies and Mrs. Lea, was placed on the table, but again went off. Mrs. Lea and Mrs. Hampson then deemed it desirable to go for further assistance, the girls being left behind. This ends Mrs. Hampson's evidence as regards the occurrences of that evening at the farm.

Mrs. Hampson also stated that in the morning the baby was in its cradle inside the parlour, where it had been placed to be out of range of the fire. Mrs. Hampson and the girls were in the kitchen, and E. D. went in to see after the baby, returning presently, screaming, saying that the baby was on fire. On the various occasions (three or four) that the baby was on fire,

E. D. was always the one to discover it; and she always had time to cause the fire, according to Mrs. Hampson. Once she was seen to be shaking the child's pinafore, which was alight, although Mrs. H. had carefully warned her always to "crush" fire out.

Further, on one occasion when E. D. was alone in the parlour, during the manifestations, a noise as of a striking match was heard, and when Mrs. H. entered the room, there was a distinct smell of brimstone, and a used match was found at the baby's head.

Priscilla Evans added some information with regard to articles found on fire, which was corroborated by Mr. Lea. Mrs. Hampson was not present, I believe, when they were discovered.

It is well to note that E. D. was always the person to discover anything on fire, and none of the witnesses could state positively that on any single occasion was she in the company or in sight of any one when she made the discovery.

One of the baby's caps, of a kind of woollen material, and a paper mat were found in flames, the flames being very high and white, and the articles apparently burning were very little singed when the flames were extinguished. The cap and mat, which had both been exposed to the air for some time, were shown to me, and I cut off a bit of the cap, which I dipped in paraffin, which was largely used at the farm. Lighting it, she, Priscilla E., declared it presented exactly the appearance of the former blaze, and the bit of cap was of course little singed, when the flame was extinguished. Mr. Hampson stated that the cap, when shown to him on his return, had a greasy feel.

The most important piece of evidence that the girl Evans contributed is, that when Mrs. H. and Mrs. Lea had left the house, the cupboard opposite the dairy door was apparently locked by one of them, but afterwards flew open, whereupon E. D., going to close it, became, as it were, rooted to the spot. Priscilla tried to pull her away, but the girl shrieked and said she couldn't move. The cupboard was well stocked with crockery, and these things proceeded to come out of the cupboard two or three at a time, generally in the direction shown by the arrow in the diagram. The girls occupied the positions indicated in the same diagram. Priscilla states that E. D. had her arms folded all the time, and that she, Priscilla, watched her closely, and was certain that she did not pull the things out. I should, however, point out that it must have been nearly dark at the time.

With regard to the statement that E. D. was put up to these tricks by the waggoner, there appears—as I have already said—no evidence for this, and it is almost absurd to suppose a heavy rustic capable of giving lessons in legerdemain.

Priscilla and E. D. appear to have been on rather bad terms, and none of the people at the farm gave E. D. a good character.

Continuing my journey I arrived at Weston Lullingfield, a village about five miles from Wood's Farm. I first called on Miss Maddox, a woman of about 40, who had been training the youth of Weston for the last 12 years ("come December"). She is rather excitable, and a woman who would, I think, be easily imposed upon. Her evidence is a

remarkable illustration of the manner in which the sensational newspaper reports dwindle down into the commonplace.

She states that when she visited the girl, there were about 20 people standing and sitting about the room, and the girl E. D. was wriggling about on her chair in a state of great excitement. Miss M. is positive that the chair rose off the ground about a foot, but this I imagine a clever child could accomplish by a clever "kick off."

Miss M. then took the child on her lap, and the child's boots flew off, but whether they were securely fastened on her feet, or downtrodden at the heels, she cannot say.

The only further evidence that Miss M. had on the subject was that she saw a table (*up against a wooden partition*) moving up and down rather violently, without, she thought, any one being near. She added that the partition seemed "bulged in," so that somebody might have been pushing it on the other side of the partition.

She gave E. D. a good character.

I then visited the girl's home, but could not see the girl. The father, however, came out and spoke to me, but he himself had seen nothing.

The rustics of the village, whom I afterwards interviewed, were nearly all unable to sign their names, and their evidence is hardly worth recording. One man, who was present with Police-constable Taylor when the fender performed feats, states that Taylor was sitting on one side of the fire, and E. D. on the other, but he could not say how the fender "came forward," whether parallel to itself, or only in such a manner that the girl might have pushed it out with her foot.

All the other evidence at this place was of the same unsatisfactory nature.

The next day I drove over with Mr. Maitland to try and see Emma Davies, but she would not speak, and was taken upstairs. After the lapse of an hour she reappeared, but we could not get anything out of her.

Summing up, I consider that there is abundant evidence of some trickery on the part of the girl E. D., at Wood's Farm; but that some portion of the phenomena cannot be referred to this cause if the statements of Mrs. Hampson and Priscilla Evans as to what occurred in E. D.'s absence, and the description given by Priscilla Evans of the crockery coming out of the cupboard, can be at all relied on. Still, if the case were an isolated one, the evidence is not of so satisfactory a nature as to justify the assumption that phenomena unexplainable by trickery actually took place; but on the hypothesis that there are cases on record in which trickery and genuine preternatural phenomena were combined, this case might, with some degree of probability, be included amongst them.

FRANK S. HUGHES, B.A. (Cantab).

December 3rd, 1883.

As exception has been taken to Mr. Hughes' treatment of part of the evidence in this case, on the ground that he was biassed against a belief in supernormal agencies, it seems best to quote textually the two passages specially referred to.

(1) The signed statement by Miss Maddox gives the following version of the "levitation" :—"There were about 20 people standing and sitting about the room when Miss Maddox entered. The first thing Miss Maddox saw was the chair on which the girl sat wriggling about, and once rising a foot from the ground, the girl having no point of contact with the ground at the time. She was writhing about, and in a state of great nervous excitement."

(2) The following passage is from a statement signed by Henry and James Lea :—"Emma Davies was with Mrs. Lea at the gate, a long distance off, while the noises continued and things came flying out of the window. Things came out after the place had been cleared of people."

It will be admitted, I think, that the conditions described by Miss Maddox—some twenty people present in the room, and Emma Davies twisting and wriggling on her chair in a condition of great nervous excitement—were not specially favourable for observation. It may be added that under more favourable circumstances a phenomenon of the kind which Miss Maddox claims to have witnessed is not easy to observe with accuracy. As regards the Leas' statement that Emma Davies was at a distance from the house during the progress of some of the disturbances, it will be remembered that in the Worksop case it was shown that memory is apt to be treacherous on such matters as the presence or absence of particular persons at particular times, and the precise sequence of various events. A statement of this kind would no doubt be deserving of consideration if it emanated from a first-rate witness. But Mr. Hughes' estimate of the Leas as being indifferent witnesses must be allowed to have weight.

Upon the whole, after a reperusal of the documents in the case, I cannot find that Mr. Hughes has misrepresented the evidence in any material particular. As regards the two incidents upon which he lays special stress, it may be considered that if Emma Davies was able to evade detection when closely watched for two or three days by suspicious and educated witnesses, it seems not unlikely that she might have succeeded in the easier task of eluding the vigilance of Priscilla Evans, a young rustic already mystified and excited by the marvellous manifestations which she had witnessed, and that the crockery which flew out of the cupboard in the twilight was merely propelled by the hand of Emma Davies. There remains the statement of two witnesses who saw crockery fall off the table during Emma Davies' absence. This statement, if accepted literally, is hard to reconcile with the supposition of trickery. But we have no reason to suppose that Priscilla Evans and Mrs. Hampson were better observers than some of the persons who sat at séances with Mr. Eglinton, or were able to remember and describe what they saw with greater accuracy than the witnesses of Mr. Davey's sleight-of-hand.

It should be added that though Emma Davies was regarded by the doctor who examined her as being quite normal, Mr. Hughes, in the course of his enquiries, found some evidence of unusual precocity on her part. Moreover, according to her mother's statement, while she had been a healthy child before the outbreak of the disturbances, she afterwards fell into ill-health and became subject to fits. It should be added that Miss Maddox in her signed account states that, during some of the disturbances at which she was present, Emma Davies cried out that an old woman was at her, and would not let her breathe, and called to her mother to relieve her.

III.—THE ARUNDEL CASE.

The next account, by Major (now Lieutenant-Colonel) Taylor, deals with disturbances which took place in February, 1884.

REPORT ON THE ALLEGED MANIFESTATIONS AT ARUNDEL, SUSSEX. By
MAJOR G. L. LE M. TAYLOR, Royal Military College, Farnborough
Station, Hants.

Accompanied by Major King, R.M.A., I arrived at Arundel on Saturday, February 22nd, to enquire into the circumstances attending the alleged manifestations in connection with the girl Clark.

We first visited Mr. Hubbert, F.R.C.S., the medical man who had been called in to see the girl when the affair commenced; he very kindly told us what took place, his statement being in effect as follows :—

He was called in about 10.30 on the night of February 8th, to see the girl Clark, who was said to be "bewitched"; he found the household in great consternation, and persuaded that a neighbour had "bewitched" her. He asked what the symptoms were, and was told that "scratchings" took place "all about the bed" on which the girl was, that she did not make them, and that they were supernatural; he was told to listen, and shortly he heard a noise in the bedroom above, as if made by scratching the mattress with the nails of the hand. On going upstairs he found the girl in bed, and asked her "How she did it?" or "Why she did it?" but she said she had nothing to do with it. While he was in the room nothing took place, but he was told that if he left the room the noise would probably recommence. He did so, and again the scratchings were heard. He went back into the room with the girl alone, and having taken hold of her hands with one of his, he scratched the mattress with the other. The noise was at once recognised by the family outside the door as the same previously heard. The doctor now tied the girl's hands in such a way as to prevent the use of the nails, and left the room. The noise was soon repeated, but was now more like rubbing than scratching. In fact, the sound seemed muffled. Again he tied the girl's hands more securely, and balanced a woollen cuff on them, outside the bed clothes. Now no noise was heard for some time, and on re-entering the room the cuff was found unmoved. The doctor was satisfied that the noises were made by the girl herself. He then left and has had nothing more to do with the affair.

We next went to Clark's house, and found that, unfortunately, the girl's father was away, and the girl herself had been sent to Brighton. We saw, however, the girl's mother and her father's mother.

The mother is a large, flabby, sallow woman of about 40, with a narrow forehead and rather oblique eye-brows. She did not seem in good health, and was certainly nervous and frightened at the whole affair. Mr. Hubbert described her as hysterical. The grandmother is an old woman, who was not at all frightened at what had taken place, but rather liked talking about it.

The impression we received as to the evidence of these women was that they were perfectly honest witnesses, believing everything they told us; the mother being unwilling to speak of them at all, and particularly careful not to speak to anything which had not come within her own knowledge. The grandmother, though equally honest, had evidently told the story so often that she described things which, on her own showing, she could not have seen.

We gathered that the "manifestations" began on Friday evening, February 8th, and the girl was sent away on Tuesday or Wednesday, the 19th or 20th, and that nothing took place between Tuesday, the 12th, and Monday, the 18th, on which day the girl is said to have seen an apparition, which determined her people to send her to Brighton. Our two witnesses were able to speak directly to only some of the alleged manifestations, the evidence for the others resting on the testimony of the girl, her father, the girl's maternal grandmother, and a neighbour. The manifestations appear to have begun spontaneously; but afterwards to have been in a great measure sought by the father to test their reality. We ascertained pretty well in what order the different things happened, but could not quite make it clear on which days they occurred.

I will give first the substance of the statements of the two women we saw, as far as they speak from their own knowledge; and then the remainder of the story as gathered from the grandmother, but the direct evidence for which could not be obtained.

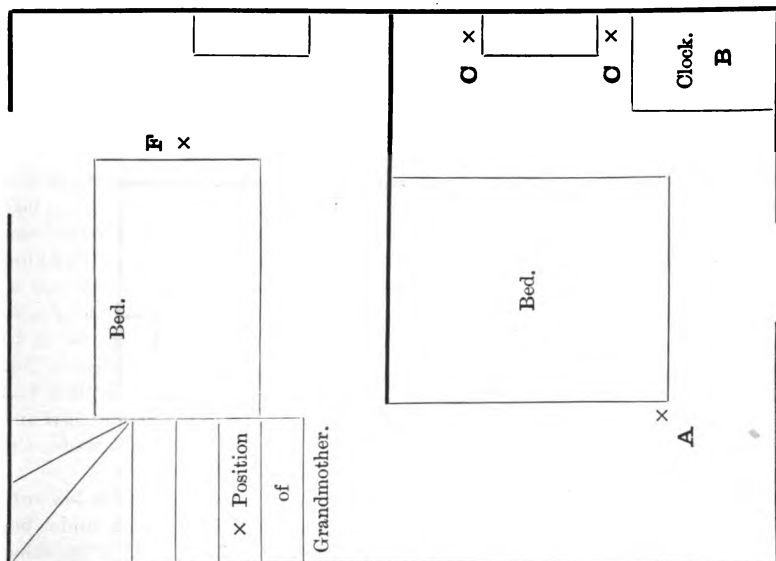
The mother states that the girl is 13, but looks older; is a good, quiet girl, about whose honesty in the present matter she has no doubt. (Major King saw the girl's photograph; it was of a girl with a sharp and rather shrewd face.) That on Friday night, a minute or two after getting into bed with her two girls (her husband being away at work), she heard a scratching noise on the mattress of the bed. She asked the girls if they were making it. They said, "No," and seemed frightened. She held the girl's hands, and yet the noise continued. She got out of bed, thinking it might be rats, lit a candle, searched the room, and re-made the bed. When they went to bed again the noise recommenced. She then went into the back room, but the noise continued on the other bed. She also states that the first bed heaved up, and that, when they went into the second room, the bed and everything in the room shook. She got so frightened that she sent for the doctor.

Though the mother sat by and acquiesced in all her mother-in-law subsequently related, she said nothing more than the above came under her special knowledge, except the evident distress of her daughter on other occasions.

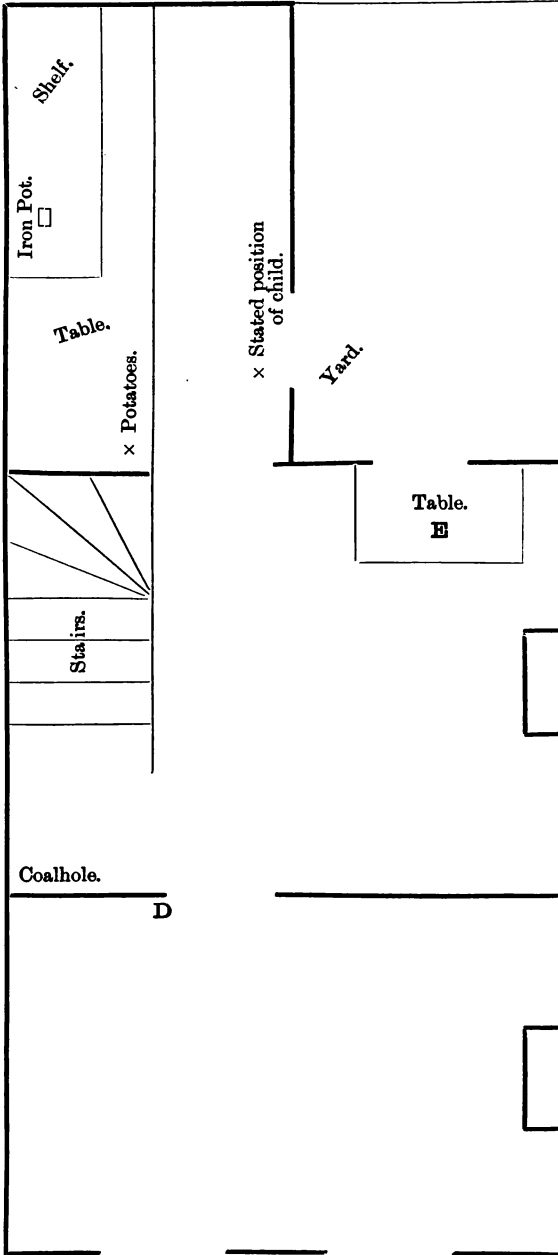
The grandmother corroborated what the mother stated about the girl's goodness and honesty, and proceeded to say that when the father returned on Saturday night (?) some attempts were made at an investigation, in the course of which the girl was sent upstairs into the room in which the noises were first observed, "to see what would happen." She was followed by her two grandmothers (the maternal grandmother, who lived in another village, having been sent for previously). The girl stood at A (see plan), in full view of the old women, who were at the head of the stairs, when in a minute three articles fell to the ground at the other end of the room at B and C, a clock from off the chest of drawers, and two ornaments from the chimney-piece, all at the same time. The girl rushed back to the stairs, and the two old women, going into the room, found the things on the floor, but not broken; there was a mat or carpet where they fell. They replaced the things, the clock on its back far back on the drawers. They again fell under similar circumstances (?); the girl described them to have turned over and over till they reached the floor. One of the things that fell was a small bell-shaped shade over a match stand.

After the above incident (on Sunday, I think), the girl was sent to her grandmother's house, not far off, "to see if anything would happen in a new place." The grandmother says that, when there and in view, things jumped up and fell down which were out of the girl's reach. I could not get a clear statement about it, but got the old woman to acknowledge that she *saw* nothing fall.

Later, again, the grandmother declares that when going upstairs in her son's house, with the girl in front of her, a dark cloud seemed to meet them and obscure the light of the candle till she lost sight of the child,



PLAN OF CLARK'S HOUSE.—1ST FLOOR PLAN.



PLAN OF CLARK'S HOUSE.—GROUND PLAN.

who shrank back to her, and said she felt it all over her ; the cloud soon passed away.

As for the rest of the story, it appears that the father sent the girl into the scullery, and watched through the door a tray of potatoes and an iron pot fall ; they were, however, scarcely beyond the girl's reach. This experiment appears to have been repeated, for on another occasion a neighbour, looking through the door, said he saw a shadowy hand stretched out from the girl to the things to upset them. On another occasion the girl, having been sent across the road to the baker's, returned with the story that immediately she entered the shop two chairs fell over of themselves, but no one else saw them fall.

Again, the girl is said to have been alone with her maternal grandmother (whom we did not see) in the lower front room, and being told to get some coal, the child opened the door at D. At this moment the grandmother and girl heard three violent knocks on table E. The girl got frightened, and the grandmother went with her to get the coal from under the stairs. Again three knocks were heard on the stairs.

After this it seems the girl never left her mother's side for a week, and nothing took place. At the end of that time her mother, thinking that perhaps it was all over, sent the girl upstairs to get a dress from the back bedroom. On entering the room the child screamed, and on her return stated to her mother that she had seen at F a figure in a white dress, with fingers very white and long, bald head, and white eyes and feet, which, when she screamed, receded and disappeared into the wall behind it.

The order in which the manifestations are said to have followed one another is as follows :—

ORDER OF MANIFESTATIONS.

OBSERVED BY.

1. Scratchings	Mother, Sister, and Doctor
2. Ditto	Mother, Sister, and Paternal Grandmother
3. Things falling	Paternal Grandmother and Maternal Grandmother
4. Ditto, Ditto	Paternal Grandmother
5. Ditto, ditto	Father and Neighbour
6. Knocks	Maternal Grandmother
7. Darkening of candle	Paternal Grandmother
8. Apparition	Child

OBSERVATIONS.

Nos. 1 and 2.—The doctor being quite unaffected by any feeling of excitement or fear, which was not the case with the family, was the best judge of the cause of these manifestations. He was convinced that they were caused by the child herself.

Nos. 3 and 4.—If the evidence of the paternal grandmother could be relied on, these could not, in my opinion, be accounted for by any physical cause, as the clock and ornaments fell simultaneously and were 9ft. from the girl, who, having been sent by her father without warning (as I understood) to the room above stairs, had no opportunity of making any arrangements for trickery.

No. 5.—In these manifestations the girl might not have been more than 4ft. from the things which fell, and the hole in the door (as tested by me) is so small that little can be seen through it, and that little in a shadowy way.

No. 6.—The girl standing where she did when the knocks “on the table” were heard, was within reach of the door of the coal-hole, knocks on which (as ascertained by Major King) sounded hollow, as if on a table, and from their sound it would not be possible to tell whence they came. When immediately afterwards, the girl was in the coal-hole, the knocks on the stairs sounded from a place within her reach.

No. 7.—The stairs are so narrow that the girl must have been in front of her grandmother, and above her ; if she had shaded the candle with her hand it might not have been observed by the old woman, and the stated effect might have been easily produced on the half-frightened grandmother.

No. 8.—The fright of the girl on seeing the appearance must have been well feigned to deceive her mother, but the girl herself was in such a condition of nervousness as to make it most probable that she was frightened at a shadow only.

CONCLUSIONS.

1.—The scratchings were perhaps done by the child at first by accident, and persisted in, when the effect was seen, for fun.

2.—That the grandmother possibly did not actually keep the girl in sight when the things fell in the bedroom ; having perhaps turned round to speak to the mother at the bottom of the stairs.

3.—That the knocks were most likely produced by the child, who at this time was getting rather frightened at her own “manifestations.”

4.—That the father and Mr. M., the neighbour, could not have watched the girl through the scullery door, and that Mr. M., from his reference to a spirit-hand, suggested a spiritual appearance to the girl.

5.—The darkening of the candle might have been done by the child accidentally, and frightened her as well as her grandmother.

6.—That the “spirit” was purely subjective.

7.—That on the whole it is most likely that the affair was begun in fun, continued in fraud, and closed in fright.

In this case also it will be seen that one of the incidents, as described, was inexplicable by trickery. But it is to be noted that none of the witnesses appear to have alleged that they actually saw objects in the act of falling under circumstances which would have made trickery out of the question. Moreover, the whole matter had been the theme of general discussion before Colonel Taylor’s visit ; and one at least of the principal witnesses described things which, on her own showing, she could not have seen. There seems to have been some exaggeration also in the account given by the father of the girl of what he saw through the scullery door. In the alleged occurrence of an apparition seen by the child alone, as well as in other points, the case presents a marked resemblance to the disturbances at Wem. The

“shadowy hand” alleged to have been seen by the neighbour stretching out from the girl recalls some of the descriptions given of séances with Eusapia and other “physical mediums.” On the whole, having regard to the doctor’s evidence, to the nature of the occurrences reported, and to the character of the principal witnesses, I am disposed to agree with the two reporters that the evidence for abnormal agency of any kind in the case is hardly worth consideration.

IV.—THE BRAMFORD DISTURBANCES.

In November and December, 1887, an account appeared in the *East Anglian Daily Times* of disturbances in a cottage at Bramford, near Ipswich. The cottage was inhabited by Mrs. Parker, a widow, Thomas Farrington, a grown-up son, by a first marriage, and two other children, Ellen Parker (11) and Cornelius Parker (10), and an old bedridden woman, Mrs. Felgate. The phenomena consisted of the throwing of stones and dirt outside the house; raps, noises, and the movement of various articles of furniture inside the house. It was alleged, for instance, that the little girl would be lifted bodily in the air; kettles, a table and sofa would be moved about; knives would fly out of the cupboard and stick in Ellen’s hair, &c., &c. Finally, the girl went for a few days to Stowmarket on a visit to a married sister of her mother’s, Mrs. Jeffery. What then ensued is thus described by Mr. Jeffery in a letter to the *East Anglian Daily Times*, dated December 14th, 1887.

“The child came to my house on Monday, November 26th, in the evening. Nothing happened till the Wednesday night following, when raps came at my front door. No one was there. Closing the front door as soon as I got in, raps came inside the house till the child went to bed, sleeping with her grandmother. As the child went upstairs, raps followed her, and went on in the room. That was all that happened that night.

“The next night, in the room where she sat, at about 7 o’clock, I was annoyed by hearing raps again in the room where the child, my wife, and the child’s grandmother were sitting. No one else was there. This went on till the child and her grandmother went to bed; raps followed them both up the stairs. I then heard a tremendous noise. Mrs. Jeffery went upstairs, saw things moving about, and called me. I went up and found them in a terrible fright. I got them both downstairs for an hour, when nothing happened but a few raps, coming from where I did not know.

“They went to bed again about 11. My wife went up, and as soon as the child and her grandmother were in bed, I went up. There was no one in the room then but my wife, myself, and those in bed. As soon as I went in, the washstand fell on to me, no one being near it but myself; next I saw a clothes chest, weighing at least seven stones with the contents, jumping about the floor. I put it in its place several times. Then the chairs and all the moveables in the room seemed alive; even the brass knob screwed on the

bedpost was taken off and dashed across the room. All this time the child was in bed, and a bright light in the room. These disturbances went on till about 12 o'clock that night, when they ceased.

"This is what I witnessed myself, but I must mention that in my absence, my wife, my two sons, and my neighbour (Mrs. Read) saw very much the same things as I did. But I leave them to speak for themselves, confining myself to what I saw and heard myself. I have been a resident of Stowmarket 32 years, and I am sure my friends will credit me as a truthful man to the best of my ability.—I am, &c.,

ROBERT JEFFERY.

In the early part of January, 1888, a member of the Society visited Bramford and Stowmarket to investigate the matter on the spot. He saw Mrs. Parker and was favourably impressed both as regards her honesty and her intelligence. He found out, however, that the phenomena occurred only in the presence of the little girl, Ellen; and that the evidence for the disturbances at Bramford rested almost exclusively on her mother's testimony.

Mrs. Parker's statements were of a very surprising kind; but he was unable to discover any motive for fraud or connivance on her part. She had, indeed, been a pecuniary loser, since the guardians had, in consequence of the disturbances, stopped an allowance for outdoor relief; and she, as a general rule, refused to take money from the newspaper reporters and others who came to see her.

Our representative ascertained from the constable who had been set to watch the house at the beginning of the disturbances, that he had seen the child producing noises and tapping the window with her hand, when she believed herself to be unobserved. Also that, some days later, the little boy, Cornelius, had confessed to him that he had produced some of the movements by trickery. The schoolmaster, who was present, gave the following account of the interview between Cornelius and the policeman. The latter asked the boy whether he caused the noises, &c, purposely. The boy was silent for some time, and at last said "Yes." On being asked who first put him up to it, the boy said "Mrs. Felgate,"—an exceedingly improbable statement on the face of it. No threats were used to induce the boy to confess. In conversation with our representative the boy denied that he ever made such a confession.

The following is our representative's account of his interview with another witness:—

Mr. Burrows is a bird fancier and has been heretofore a ghost-hunter. He is a shrewd man. He informed me that he went to the cottage one Sunday, and being slightly acquainted with Thomas Farrington obtained admittance with three friends. It was getting dark when they entered, and they all pretended to be very credulous upon the subject. The boy and his mother were sitting on the couch, and the boy had his arm behind his

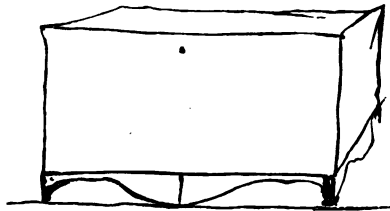
mother, with the result that first a glove and then a baby's bib were thrown out. Mr. B. saw the boy working his arm. The girl was under the table, where she could be seen however by Mr. B. He saw her kick her leg up, so as to send her boot across the room. At the same time she screamed out "They've taken my boot." He then saw the boy stoop down at the fire-place. He placed his own head low down over his knees, and presently saw the boy dart his arm backwards, with the result that the poker flew across the floor. He kept his eye on the boy, in the confusion, and saw him seize the kettle, and roll that along the floor. The boy also when sitting beside his mother on the sofa, took off his coat, and placed it under him, to see if the spirits would drag it out. While doing so and after, he managed to wriggle the cushion upon which he sat from beneath him, and threw that across the room, striking the cat.

Mr. Burrows then left with some ironical compliments. What degree of inference instead of actual sight there may be in Mr. B.'s evidence, I cannot say. He said repeatedly that he saw these acts of deception. His prejudices or convictions were evidently strong. I think it must be believed that he saw some at least of the acts of deception.

Our representative then proceeded to Stowmarket. Of Mr. Jeffery he wrote, "Simplicity and honesty are manifestly his characteristics." The grandmother was described by Mr. Jeffery himself "as not knowing quite what she said." The report continues:—

The washstand fell upon Mr. Jeffery as he entered the room. The door opens outward, the washstand therefore might be placed overlapping the door, and on Mr. Jeffery's entering, his leg might strike it, for it does not rise much higher than a man's knee, and so he might think it fell against him, under the influence of his prevailing impressions.

The chest which he saw jumping about the floor, and which he put in its place several times, he saw really jump only once and then a few inches, though it jumped several times when he was out of the room. This chest, which is a box, stood about $1\frac{1}{2}$ feet from the side of the low bed, on which the child was lying, and stands on a support which raises it about two inches from the ground thus :



By stretching out an arm quickly and getting purchase underneath the box, the child could lug it from its place. Now upon the occasion that Mr. Jeffery saw the chest move, he had just put it back in its place, and was walking away from it, with his back to it, and it was when he turned the corner of the bed that he saw it move. He must have seen it out of the right corner of his right eye. The child may have given the box a tug, and

got its arm in bed again, before the man could turn round. He may then have perceived that the box had moved, and this may have become confused in his mind with seeing it move.

Mr. Jeffery was not in the room when the brass knob was thrown.

He says that he stood at the door and watched the child for 20 minutes. During that time only two things occurred ; one was that a piece of an old bedstead leaning against the wall to his right jumped once two inches high. This phenomenon again, as he was watching the child to the left, he would see out of the right corner of the right eye. Expectation moreover could easily cause a piece of furniture to *appear* to jump two inches. I have seen the phenomenon myself. But Mr. Jeffery says he also heard it thump down again. It is possible he heard a knock which he localised to his right, and that at the same moment the old bedstead appeared to jump so as to explain the knock.

The second incident that occurred was that the table to his left, against the wall upon the the side of the bed nearest to him, and therefore with the old lady between the table and the girl, moved. He saw it move with his own eyes. It moved a foot, so that the corner of the table farthest from the girl moved through the arc of a circle towards her.

No one was near the table, except the grandmother on that side of the bed. As Mr. Jeffery firmly adhered to his statement of the time and circumstances under which this movement took place, excluding all action by the grandmother, there is only one explanation of the statement, apart from acceptance, namely that Mr. Jeffery, having shown so much confusion of statement, may here be making a confused statement which has become petrified into a mistaken belief.

Mrs. Read, who seemed an intelligent woman, though summoned to the scene, saw nothing, except the washstand fall upon Mr. Jeffery. She heard knocks, however, and seemed to believe that something very wonderful had taken place.

I did not see the boys.

The report concludes as follows :—

There is no evidence of genuineness, there is evidence of fraud.

The explanation of the occurrences which commends itself to me is as follows :—

The children one day varied their amusement of throwing things at one another, by throwing at the old lady, Mrs. Felgate. They would then deny having thrown, and Mrs. Felgate may have said something like "spirits must have done it then." They would take up this idea, and being in danger of thrashing for throwing stones in the yard, which struck the door, or dirt, which hit the windows, they would deny doing it and say it was done by the spirits, and that they saw the stones rise from the ground, and so on from lie to lie ; till they found themselves in the midst of a popular excitement, and continued their tricks from very fear. "To return were tedious as go o'er." The fact that the mother and young Farrington went to the policeman and tried to get him to enquire into it, seems to show that they were deceived by the children and that they were not parties to a fraud. Mrs. Parker's statement can hardly upon the present hypothesis be an accurate version of

the facts. But possibly she would be found to romance as much upon any other topic. She and her son both seem to me respectable, possessed of an honest pride. Their refusing money may be from the motive that their reputation is dear to them, and they wish to prove to their fellow villagers that they are not the sort of people they take them for. I call the son respectable, because he supports his mother, has been married once and is going to marry again. And there is nothing against the woman, except the prejudices of the neighbourhood. The effect which the child has produced upon the mind of Jeffrey, she might produce upon her own mother and brother. And if they found her out once or twice, that would make little difference in their belief.

It remains to add that, according to the girl's own statement—corroborated, so far as such a statement could be corroborated, by her mother—Ellen during the progress of the disturbances suffered from transient attacks of blindness (possibly of a hysterical nature). The child further said that in the course of these attacks she could see a sailor standing over her with a chain in his hands to bind her and carry her off. She would also see a white woman beckoning and hear her singing. The boy, Cornelius, also stated that he had seen an apparition, which did not, however, resemble either of the figures alleged to have been seen by his sister.

V.—THE WATERFORD CASE.

In January, 1892, the Irish papers contained accounts of disturbances in a haunted house at Waterford. Appended is an extract from a Dublin paper :—

“CURIOUS OCCURRENCE AT WATERFORD.

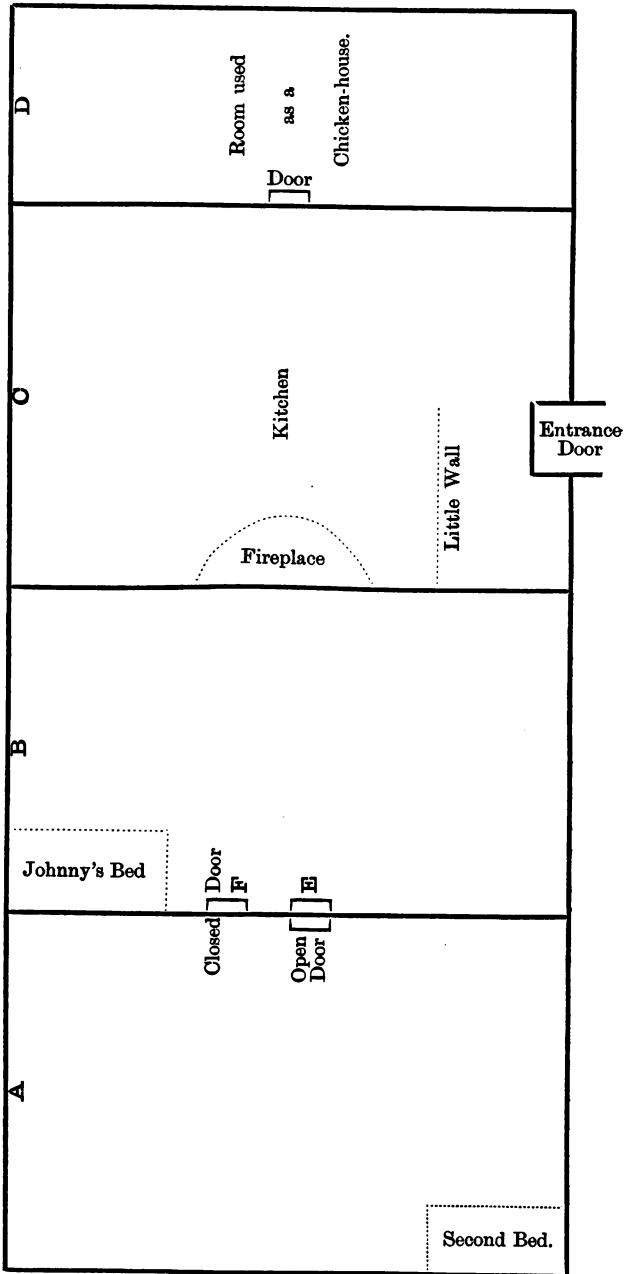
“An occurrence of a curious nature, and one which is the all-absorbing topic of city gossip, is reported from a portion of Ballybricken known as Costelloe's-lane. It appears that some three weeks ago a pensioner of the Royal Irish Constabulary, named K., with his family took up his residence there, prior to coming to Waterford. He held the position of caretaker on an evicted farm in the Passage East district. While in occupation he reported to Sergeant Murphy, of Passage East, that he and his family were disturbed at night by unearthly sounds. The sergeant, who is no believer in ghosts, commanded an escort party to the house, the approaches to which were taken possession of, and one of the men stationed in the interior. While there the sergeant and his men heard unmistakably unearthly sounds. The man on duty inside saw furniture dashed about by some invisible agency. Sergeant Murphy reported the result of his experience to his superior officer in Waterford, and Head-Constable Waters was sent out to investigate the allegation that ghosts were haunting K.'s house; but despite all entreaties, the caretaker and his family left in a state of terror, turning up, as has been stated, at Costelloe's-lane, in the city, where he seems to have lived in peace until Saturday night last, when he created quite a panic by raising the alarm that the ghosts who had

hunted him from his Passage East home had tracked him there. Some of his neighbours entered the house, and found his family in a state of the greatest possible nervous excitement. They saw articles of furniture thrown about, crockery smashed, and heard a voice quite audibly. They fled out of the house in terror and raised the alarm, with the result that the police authorities visited the house yesterday, and again to-day, as did hundreds of citizens, including several Roman Catholic clergymen. All the approaches to the house have to-day been closely guarded, but unearthly voices are still heard. At the time of telegraphing, some hundreds of people are in the vicinity waiting for the latest news regarding the action of the ghosts in K.'s house."

On February 7th, 1892, Mr. J. W. Hayes, an Honorary Associate of the Society for Psychical Research, went to Waterford to investigate the matter. K. and his family had left Waterford some days before his arrival, but Mr. Hayes saw the police and several of the neighbours. K., it appears, was an emergency caretaker, *i.e.*, a caretaker on "evicted" farms; an occupation always unpopular and occasionally hazardous. He is said to have been a nervous man, and one who would be readily imposed upon. His occupation appears to have been distasteful to his wife. The appended statements contain the evidence of the three chief witnesses interviewed by Mr. Hayes.

EVIDENCE OF HEAD CONSTABLE ELDERS. Taken February 1st, 1892, in the day-room at Lady-lane, Station, Waterford.

When Peter K. reported to Sergeant Murphy, of Passage East, that he was "tormented with supernatural noises," the sergeant and one man (not an "escort party") went and examined the place inside and outside, and satisfied themselves that there were no strangers about. This house had two bedrooms at the left of the entrance door, opening into one another, and divided by a partition wall, in which partition was a permanently closed door (marked F), and, a little lower down, another door which opened and shut (marked E). The other apartments in the house were a kitchen (just as you go in), and a room at the right used as a chicken house. On one occasion when Sergeant Murphy visited the house, K.'s boy Johnny complained of being sick, and retired to bed at three in the afternoon. The bed he occupied was in bedroom B, and his bed ran alongside the partition, the foot of the bed being only a foot or so from the closed door F. Sergeant Murphy stationed himself in the kitchen, and after a while several loud knocks (as if made with a stick) were heard proceeding from the room where the boy lay. The sergeant immediately went in and found the boy lying quietly in the bed, but not a bit frightened. The young fellow, when questioned, said the knocks came on the closed door, but no further knocking took place while the sergeant was in the room, neither did the sergeant search the bed to see whether the boy produced the knocks with a stick or not. K.—it is generally supposed, at the request of his wife—threw up this situation as caretaker, and came with his family into Waterford, taking up his residence at Costelloe's-lane. On Sunday, January 24th, 1892, he called at the police-station in Waterford, and reported that the ghost was again at work, that



MR. K.'S RESIDENCE IN C.

after going to bed on Saturday night, he heard knocks at the door, and getting up, placed himself behind the door, until his son should get up to take his place. On opening the door they found no one. He then went out to the yard, and fancied he saw three dark objects run over the wall, and when he came in he heard a voice under one of the beds saying, "This is not the ghost you heard in Carrigeigh; I'll follow you wherever you go, in spite of the police." The Waterford police called at his house at 1 o'clock on Sunday morning, January 24th, and saw one pane of glass broken, but no sound was produced while they were on the premises. They went away, but at 3 o'clock on the same day K. reported that at 3 o'clock on Sunday morning the ledges were burst off the back door of the kitchen, and the door forced open. This door was merely fastened with a small bolt, which shot into an auger hole close to the edge of the door-post. Now the side of the auger hole showed no sign of having been burst either in or out. The ledges which were stated to have been knocked off by the ghost bore marks of violence, as if they had been repeatedly and heavily struck with a blunt instrument, or were hammered off. At 4 o'clock K. stated that another pane of glass was broken. The police examined the bits of glass, which fell outside in all cases, and found traces of reddish paint on some of them, as if a piece of painted timber had been used to break the glass out. The chairs in the room were ordinary wooden ones painted a reddish colour. Some broken delf and jam pots and bottles were spread around the floor, and pointed out as having been thrown there by supernatural agency. A hatchet was found in the house, (and is still to the good), the head of which had distinct reddish paint marks, just as if it had been used to crush painted timber. Nothing supernatural occurred while the police watched. In the house in Costelloe's-lane, Johnny K. slept in a room to the left of the hall-door. The room had a window, and in this window the glass was broken outwards. Here also the voice was said to be heard.

EVIDENCE OF MRS. P. DEA, of Costelloe's-lane, Waterford. Taken February 2nd, 1892.

On Sunday week I was in K.'s house along with a young man, having gone in to see the ghost act. I distinctly saw Johnny K. roll a ball or something across the floor and it rolled in under a table. I then saw him, when he thought I was not minding him, hurl a jam pot on to the floor. Afterwards I saw him sneak round to the bellows and contrive to fling it on the floor. The father was in the room when J. flung the bellows and said "Johnny, was it you threw that?" Johnny said "No, Sir." "But you did throw it," said Mrs. Dea. "I didn't," said Johnny laughing. Mrs. D. states that she is "prepared to swear" that she saw the boy throw these things and other things too. She states that Mrs. K. did not seem the least bit alarmed at the action of the "ghosts."

EVIDENCE OF PATRICK DEA. Taken February 2nd, quite independently of what his wife stated.

I was at K.'s house at a quarter past 11 on Sunday night week. Two more fellows were with me; we went in to watch the ghosts. Peter K. was in

bed, but Johnny was at the fire. We all engaged in conversation, but at the same time I kept my eye on the boy, although I kept my head down. [It should be remarked that Dea has crooked eyes, so that in reality it would be very hard to tell when he was looking straight at a person.] I saw Johnny stand up from where he was leaning on the table or box and gradually shove a tin gallon over to himself. Originally it was at the far end of the box or table. He then a few moments after put his two hands to the back of his head as if he was tired and wanted to rest his head against them. Then leaning backwards he took up the gallon and jerked it over his head and it fell on the middle of the floor. I thereupon said to the young men with me, "Oh, come on home, lads, if that's the sort of ghosts are around." After that the father got up when he heard us going and asked me to stay with Johnny to protect him. I refused and went away disgusted. I am prepared to swear to these matters and think the boy should have been prosecuted.

Thus it would appear that no phenomena took place at any time while the police were on the spot, except that on one occasion at C. knocks occurred as if made with a stick on a door in the next room out of sight of the policeman and close to Johnny. There seems to be no evidence that phenomena ever occurred beyond the reach or the power of Johnny, and whatever agency produced the phenomena used very human means. Thus the cross pieces appear to have been knocked off the door with a hatchet, and a piece of painted wood appears to have been used to break the windows.

It seems that the neighbours were generally agreed that though the father, a timid and credulous person, was much alarmed, and believed the disturbances to be due to the spirit of a dead man named H., Johnny and his mother were not in the least nervous or frightened by the proceedings of the "ghost." Finally, we may add that the effect of the disturbances was to induce the father to give up his caretaking jobs, leave the neighbourhood, and remove with his family to—as it is believed—the part of the country where his wife's relations lived.

CASE VI.

The occurrences described in the next case took place at a post office in a town near London. The witnesses were examined by Lieutenant-Colonel Taylor, who from notes of the conversation with them drew up statements, which were afterwards corrected and signed by the persons concerned. The names and initials given are fictitious.

STATEMENT OF MISS K.

February 13th, 1895.

The mysterious manifestations about which you are interested began shortly before my mother's death on June 30th, 1893, when only she and my niece, Ellen P., who is now about 16 years old, were living in the house with me. We had been in residence about a year and a half when we began to

observe that small things were unaccountably moved, flower vases upset, etc., and for some time we thought it must be the cat (a foreign cat which came about the place.)

One Sunday morning I sent my niece off to church, locking the outside door after her ; shortly afterwards I followed her, my mother locking the door after me. On my return my mother reported that shortly after I left she went to the kitchen and found things displaced ; some chops which were for dinner and some milk, both of which had previously been placed in the cupboard and its door shut, were found upon the kitchen floor. She replaced the chops and prepared for dinner by placing some potatoes in a bowl of water to soak. She went upstairs and on her return in a few minutes found the bowl on the floor with the potatoes under it. The window (a cottage window) was open and I put the whole thing down to cats again.

Shortly after my mother's death an elderly friend and a little boy came to stay with me ; after their arrival annoyances began again. Things were moved and temporarily lost, being sometimes found on the dust heap in the yard, a bonnet and some other things put into water, hats were wetted and spoiled. At this time things became serious, for the Postal Orders in the office were interfered with ; one day Ellen was in the office when a person came in for a P. O. for 15s. ; she called out to me " Auntie, where are the 15s. P. O.'s ? I can't find them." I said they were on the counter. They were there a few minutes before, but had now disappeared. I was greatly frightened.

Fortunately, soon after, while looking for them, my eye caught sight of part of one sticking out of the door of a cupboard in the office and in this we found them uninjured, but apparently roughly placed there, some at the bottom of the cupboard and some on the middle shelf. All the P. O.'s were not interfered with on this occasion ; only those from 10s. 6d. up to 20s. were, I think, missing.

In September a servant named Alice came (age 23.) After her arrival the annoyances increased. Besides the removal of objects and their partial destruction by water, they were found now frequently in the boiler in the kitchen range as well as in the yard. Doors were found locked¹ and the keys missing, a bed was wetted, besides other things which I will now relate. Shortly after Alice came, one evening I wanted her to go out for something, and when she came downstairs with her jacket on I saw she had a peculiar white mark on the back of it. I brushed it off and told her to go upstairs again ; this she did and returned at once, when I found two white marks of the same kind as before. These I removed and again sent her upstairs ; she returned again marked as before. A third and a fourth time I tried the same experiment with the same result. The marks were on a part of her back which I don't think she could reach with her own fingers but were like marks which would be made by whitened fingers being placed on her. The girl was after this always getting marks on her back, so that at the close of a day's work her back would be covered with them ; she said she never felt herself touched. About this time one Sunday evening, at Miss Z.'s suggestion, I tied Alice's hands in front of her and sent her upstairs ; she

¹ Doors were locked also in the elderly person's time.

returned at once with the usual marks in the usual places. She said she felt no touch, but felt a cold sensation on her back while she was away. On the Tuesday following we tried the experiment again. There were present:— Mr., Mrs., and Miss Y., Mr. R., Miss Z., Miss H. (now Mrs. L.).

Mr. Y. bound Alice's hands in front of her, and secured them further by passing the cord round her waist; we sent her upstairs and on her immediate return marks as usual were found on her.

She was sent to other places besides upstairs with a similar result. She was unbound and on return from a moment spent upstairs had marks. She was again bound and the same results to our experiment were obtained. On one or two other occasions Alice's hands were bound and on returning after being sent upstairs the usual sort of white marks were found on her back. Once her own father thus bound her hands.

Just after this Alice reported one morning that about six inches of her hair had been cut off in the night; we never found this hair. Three days after this my niece's hair began to be cut off lock by lock, from three to four inches long, and thrown on the ground.

This "cutting" began early in the afternoon, continued during that day and the next morning, but not during the night which separated them. Ellen says she felt nothing, and though I was constantly on the look out, I never saw a lock being cut off but only found one on the ground now and again, till all the girl's hair was cut short and it was so hacked that the barber had to cut the remainder close to her head. I have only kept some of it.

About this time, one day I was in my room preparing to go out. Alice was also upstairs, but Ellen was below. Alice went out of her room for something, and on her return called out that Miss Ellen's bed was all wet. I went into the room, and saw this was the condition of the bed. This was the only time a bed was made wet during 1893, when Alice was with me.

The Monday after Ellen's hair was cut off, I sent her and Alice away. During the absence of both for one day, nothing, to my knowledge, took place. On Alice's return, a few things were unaccountably moved about, and on the return of my niece the following Wednesday, all abnormal manifestations ceased for a whole year. This was near the end of November, 1893.

In April, 1894, Alice left, and in September a new servant arrived (whom we always called Jane).

In November, things of an unusual kind began again—beds were continually being wetted, things moved about and lost, a door locked and a key missing on two different occasions, so that I had to have the lock taken off to be able to get about, and as a new feature in the matter, things put on the fire.

The first time anything unusual happened in connection with my servant Jane was one Saturday early in November, '94. I sent her for some soap, which she brought home and placed on the table in the kitchen and then went about her work. I was in the kitchen at the time and saw it placed on the table, but after that lost sight of it. In the afternoon this soap was wanted, but could not be found; my servant was greatly concerned about its loss and offered to buy me a new piece. I was lying down in the sitting room when the soap was missed, and said "Don't be frightened, Jane; go and look in

the boiler." The soap was found there. I mentioned the boiler as a likely place to find it, as from experience I knew that it was a favourite hiding-place. Another of the first cases of this second set of annoyances was when I was at tea one Saturday. Jane was in the room, and filled a jug with hot water, which she set on the table in front of me. When I was about to use it, I heard something metallic in the jug, and on looking found my scissors in it. The girl declared that she was sure the scissors were not in it when she filled it with hot water.

The next morning, Sunday, the servant found the door locked between the sitting-room and the office, and the key missing. I had the lock taken off. The next day the key was found, and I had the lock replaced. I put the key in my own pocket for safety, as, till now, nothing had been removed from my person. In the evening, however, I found the key was gone, and as I expected in consequence that the door would be locked, I looked at about 10.30 p.m., after supper, to see if it was so—it was not. Shortly afterwards, when I was poking the fire, Ellen and the servant heard a "click," and Jane said to my niece, "Did you hear that?" She said "Yes," and I exclaimed "Go and look at the door." Jane went and looked, saying, "Locked, miss,"—it was locked! No one had been near the door since I had looked and found it not locked. I had to take the lock off again. Next morning the key was found in a saucepan of water. The most distressing form of annoyance which has characterised these disturbances has been the repeated wetting of the beds both with clean and foul water. In 1894 this became frequent; sometimes all four beds (there are two on one bedstead) have been wetted at the same time. I have superintended the housemaid's work in the bedrooms, but still the beds have been wetted, but not so much. Ellen or Jane have always been the last upstairs on these occasions, except when sometimes they have come down together.

One Sunday (same day she found door locked first time) during November, the servant reported the teapot missing. On Thursday Miss H. was helping me to look for some stockings, which also had been lost. We had carefully gone through all three bedrooms from Ellen's to mine, but not finding them, determined to search back again before trying downstairs. We were ending our second search of the bedrooms when on opening a box situated near the top of the stairs, we found on the top of everything the missing teapot; this box had been opened and searched by us a few minutes before, at which time there was no teapot in it. I am certain that Ellen could not have come up and placed it there while we were in my room and the servant was not in the house. Going on with our search for the stockings downstairs, I put my hand into the boiler and found it empty. Ellen at that moment came out of the office, and went straight to the cupboard for the scissors, which were seen there before we went upstairs. They were not to be found. Ellen asked me if I knew where they were, I said "No." During this conversation Miss H. and I had gone into the sitting room from the kitchen and after staying for a minute or two in that room looking for the scissors, I returned to the kitchen, and again felt in the boiler, where I now found the scissors. Miss H. followed me into the kitchen and Ellen followed her. I am certain that Ellen did not go into the kitchen between the time I felt in the boiler for the stockings and the finding of the scissors. The servant was still out.

The police were called in, but could make nothing of it all.

One Wednesday in November, Jane and my niece went away from home, but before they left we missed the lamp glass from my lamp. On Friday I was sitting over the fire in an armchair when I was called into the office. On my return I found the curtains of the window behind my chair had been pulled back and hitched up over the back of my chair, and when I came to look close I found my lamp glass on the sill. Miss Jones came in just after and I showed her the state of the curtain and the position of the lamp glass. I don't know when the glass got there, it might have been there since Wednesday.

On another occasion, in November 1894, I was engaged in the office and had told Ellen to watch a garment which was drying before the fire in the sitting room (it must always be remembered that we found that as long as anything was watched it was not interfered with). Ellen was wanted in the office, and before coming removed the garment to the kitchen table for safety. On her return in a few minutes she found the garment on the fire. I took it off myself. Jane was upstairs all the time and knew nothing about it. During this month also, when alone in the house, I have heard steps in the room over the sitting room, and once when Miss H. and I were the only people at home we both heard the steps in the same room.

I also heard the nine knocks about which Miss H. speaks when she was in the cellar. I never heard similar knocks at any other time.

What I have stated is only a small part of that which has taken place. At one time things of one kind or another went on every hour of the day; they are not now so frequent. Still on Friday, January 4th, 1895, Miss B., my assistant in the post office, lost some of her things, and on Saturday, the 19th, a folded sheet was put into the water in one of the bedrooms. Ellen, who had gone upstairs for a handkerchief, says all was right when she left the room, but when I went up a quarter of an hour afterwards the sheet was in the water. Our servant had left us before this took place.

I have perfect confidence in my niece and do not think for a moment that Ellen has had any hand in producing these mysterious and annoying things. Nor can I suspect either of my servants.

I have had to search the house so many times for various things that I know every corner of it, and feel sure that when things are missing and subsequently found in the yard or house, they could not in the meantime be concealed anywhere about. I am confident that if they had been in the house I should have found them, at all events such large things as lady's hats, a teapot, etc. Small things, of course, I could not be so confident about.

I have had many people in the house who have searched it and cross-examined us for an explanation of these things, but with no result. On more than one occasion when Alice with her hands bound was sent upstairs and returned with the white marks on her back, the stairs and rooms above have been searched to discover anything by means of which she might have printed the marks on her back or otherwise caused them, but nothing has been found of this nature.

My landlord, Mr. T., a retired carpenter, has frequently been here; he speaks about the affair in a peculiar manner. He says for example that his

wife, who lived in this house with him 20 or 22 years ago, "had a devil;" that it would soon all come out now. I asked on one occasion if he could see through my affair. He assented and added, "But I have left it all to God. He has forgiven me." Another day I asked him to explain his meaning as to seeing through this affair, but he said "How can I? It is impossible for me to explain it."

I think it right to say that I think he has a kind of religious mania, and I am not altogether sure that he quite understands the significance which might be attached to his statements.

Some gentlemen came on the evening of January 5th and held a séance. They suppose themselves to have got into communication with the "spirit" who is causing all these annoyances, and to have obtained a very extraordinary account of who he had been in this life and what had become of him.

I know nothing of spiritualism and never was at a séance before, so I can offer no opinion about this one.

In a letter dated June, 1895, Miss K. stated that the disturbances still continued; the new servant's best hat had recently been found in a water-jug, and a pair of stockings, some teacups and a library book in the kitchen boiler.

Other witnesses depose to the disappearances of gloves, a hat, and various other objects; and confirm Miss K.'s account of the finding of the teapot, the chalk marks on the servant's back, and other phenomena.

Of Ellen, Colonel Taylor writes, "She is a girl of about 16 years old, very intelligent, but a cripple from her infancy. She cannot easily raise her hands to her head. She uses scissors in an imperfect and awkward manner. She limps and is not able to move about quickly, or without considerable noise."

In her signed statement Ellen corroborates generally her aunt's version of the various incidents, and denies that she herself had had any part in doing the things. The statement concludes as follows:—

STATEMENT OF ELLEN P.

February 13th, 1895.

1st Appearance.—I now come to a separate experience of mine.

On June 6th, 1893, before my grandmother died, but after a few unaccountable things had taken place in the house, I was in the office when a stranger who was well dressed and had a top hat on came in and asked for a Postal Order for 5s. I gave him one, and he paid for it in two half-crowns and a penny. I thought him an ordinary customer. He entered into conversation with me, and said he knew my grandfather and other relations, that he knew my Auntie very well, and told me her Christian name. I said, "Let me call her, she would like to see you," but he would not let me. Eventually he went out and I told Auntie about him.

2nd Appearance.—At about 4.15 the same day I was in Orchard-street when a man, like a beggar, in ragged clothes, whom I did not recognize, and

who was standing a little way down Newton-street, beckoned to me and said, "Come here, I won't hurt you. I am the gentleman who was talking to you in the office." I went up to him and did not feel afraid, nor at the time did I think how strange it was that he should be so different. He said his name was Sykes and that he lived in Lacey-street, but he carried on the thread of the conversation begun in the office, and at the time I considered him the same individual as had bought the 5s. order, in spite of his changed appearance. He also told me on this occasion that my Aunt had written a business letter, the name of the person to whom it was addressed, and its contents. He said that my Aunt had sold her earrings some time ago, and what she had got for them. He told me that Auntie had been to G.'s shop and what she had bought. He also repeated to me a conversation which had been carried on during the day in the office in my presence between my Aunt and two friends who came in. I asked him how he knew, and he answered that he was listening round the corner.

3rd Appearance.—At 5.30 about, I was in the yard when he looked over the door at the end. This time he was dressed as a parson, and had quite a different face. I only saw his head and as much of his neck as to show me his clerical collar, etc. I did not recognize him, except that he said that he was the same person who had spoken to me before, and from his conversation I believed him. He told me he was the Rev. Mr. B., who had been engaged to my aunt's sister, and added that she did not die of consumption, but that he had broken her heart. He said he had preached at St. Stephen's Church. He said he stuck on his moustache with gum, and had often tried to alter the colour of his eyes by pouring ink into them. He showed me a small hassock which he said he kept to enable him to look over the gate, and he showed me something black which he said was the pocket in which he kept it. He said lastly, "I have plenty of money, but I would rather lay it all at your feet than that your Auntie should see me."

4th Appearance.—At about 7 the same evening I was in the W. road when I saw him again. This time he was dressed as a soldier. He had on a striped coat, red and black, dark trousers with a wide red stripe down them and a round cap with a yellow band set slantways on his head. He had a gun in his hand which he held by the middle, off the ground, and with the thick end towards me. I know it was a gun because I saw the thing you pull to make it go off. He was standing on the outer edge of the pavement facing inwards. He told me that Auntie was in the habit of walking along the T. Road with a dark lady; he did not like it, and would shoot them, but would shoot the dark lady first. He said he loved Auntie, and I asked him why he wanted to shoot her, and he answered "I must do my duty." I knew him for the same person that I had spoken to before by his conversation. He had stopped me as I passed him.

5th Appearance.—Next day about 8.30 a.m. I saw him again over the yard gate, this time dressed as a sailor. He said, "Here I am again. I was in the passage when the policeman came at 12 o'clock last night. I put up my hands and disappeared. When I want to turn into a man again I put my hands down. It is your grandmother's birthday to-day, and your Aunt has just wished her 'many happy returns of the day.'" He also said that Granny had spasms that morning, which was true. It was also true about

Auntie wishing her mother many happy returns, for I had heard her do so just before the sailor appeared. He said also, "I know they are going to set the police to watch me."

6th Appearance.—About five minutes after this he again looked over the gate, this time as a woman dressed in maroon velvet with a hat just like Auntie's. She said, "Come here. I want to tell you something more." She said that Mrs. M. had come in and borrowed 2s. from Auntie, and had repaid it on Saturday morning.

7th Appearance.—Again at about 8.40 she appeared over the gate, this time dressed in dark blue velvet. Auntie had told me that if I saw him (or her) again I was to say that she wondered that he (or she) had nothing better to do. This I did. Her eyes blazed, and she said, "If she says that again I will make her life a terror to her."

8th Appearance.—Mr. F. came in during the morning, and on being told about these visits insisted on going for the police. While he was gone, and while Auntie was upstairs, I was in the office at the telegraph instrument, when "my stranger" came in as a well-dressed man and said, "The police are after me, I am going abroad." He put out his left hand to shake hands, but I could not leave the instrument. He then said, "Good-bye. I am off, you will never see me again."

9th Appearance.—I did see him again, however, in the street shortly afterwards; as I passed him he said, without turning to me, "You see I am not gone yet."

The following are some more scraps of conversation I remember, but can't quite recollect at which appearance they took place.

When he appeared as a beggar, I think, he told me that Mr. J. had come to breakfast on one occasion some years before, and had had a hard egg given to him.

He told me that he was the person who had written a letter to my Aunt asking her to meet him on the W. road.

During one of his visits he told me that Auntie had come to the N. Street window and asked Granny for Miss J.'s "register" (a book). I was asleep at the time she did so, and did not know it till he told me.

I had heard "Grandma" say to Auntie, "I wonder if the C.'s could see him in the passage." When afterwards I went into the yard and he was speaking to me, I can't remember which time, he said, "You think the C.'s can see me, but they can't; nobody can see me." I had not mentioned the C.'s to him.

The C.'s then lived opposite to us, and their "bake office" was almost opposite our passage.

From time to time I told Auntie and my grandmother what was going on. Auntie made several attempts to see him, but never could do so, and the police were unable to trace him in any way.

He told me much more during our conversations than I can now remember.

Some of the things he told me I knew before, some I remembered when he told me, but much that he said was new to me, and the pleasure of being told my Aunt's secrets had something to do with my forgetting to be frightened at his change of appearance.

It remains only to add that several witnesses had heard mysterious steps and knockings in the house; and that three persons testified to having seen, on two separate occasions, a white cloudy apparition in the parlour. On the first of these occasions the apparition was collective.

As regards the physical phenomena, Colonel Taylor remarks that "the greater number of the incidents would, if considered singly, be justly and naturally referred to the ordinary action of some one or other of the occupants of the house." After considering each incident separately and pointing out a possible explanation by normal means, he proceeds:—"As to the marks reported to have been repeatedly produced on the servant's back, if any reliance is to be placed on the accuracy of the narrators, and if the amount of evidence available is considered sufficient, these may be considered, I think, as beyond explanation by ordinary means." As regards the amount of evidence available, no less than six witnesses (exclusive of Miss K. and Alice herself) attest the appearance of the mysterious "markings" on the servant's back, after she had been sent upstairs with her hands tightly bound. One witness adds the interesting observation that when the servant was sent into the yard outside the house instead of upstairs, "a white mark of indefinite shape" was found on her back; and another states that when he accompanied Alice upstairs no marks appeared. None of the witnesses in their original statements mention the whereabouts of Ellen during these manifestations. Alice in her account of the matter does not mention Ellen; and Ellen's own signed statement contains no allusion to the chalk marks. It is true that Colonel Taylor, in his report, states that Ellen was present and witnessed the phenomenon, but he does not give his authority for this statement. One of the witnesses, Mr. R., a clerk from the head post office of the town, in a report which he was good enough to send us in March, 1896 (more than two years after the occurrence), states that Ellen was in *the parlour* on the occasion when he was present and saw the chalk marks with the others in the kitchen. His contemporary statement (unsigned), as taken down by Colonel Taylor, contains however, no reference to Ellen.

In view of the uncertainty as to the whereabouts of a person who, on any theory of the disturbances, must be regarded as the central figure in the drama, and regarding the phenomenon as one which could be readily produced by normal means, even without Ellen's intervention, I am disposed to question both the accuracy of the narrators, and the sufficiency of the evidence in this instance for abnormal agency, and if this is admitted the whole case for such agency falls to the ground.

It has been shown that Ellen was subject to hallucinations of a lively kind; also that she had by some means acquired knowledge of the contents of an anonymous letter addressed to her aunt, and of a

business letter written by her aunt, which never reached its proper destination. It will be seen, further, that if allowance is made for so much exaggeration and such lapses of memory as we have found to occur in similar cases, all the physical phenomena alleged to have taken place were well within the competence of Ellen, aided occasionally by one of the servants, to perform by perfectly normal means. It is hardly necessary to look any further for an explanation of the mystery. If this explanation has not commended itself to Miss K., it is apparently because she has implicit confidence in her niece's own statement that she didn't do the things.

CASE VII.—THE DURWESTON CASE.

In January, 1895, we received accounts of an outbreak in the West Country. The following is an extract from the *Western Gazette*, January 11th, 1895.

“The little village of Durweston, situate about three miles from Blandford, has been for some weeks past the scene of considerable excitement in consequence of the supposition that one of its cottages is haunted. The cottage in question is one of a double tenement, situate at Norton—a spot isolated from the rest of the village, some considerable distance from the highway, and on the outskirts of a wood. The cottages are owned by Viscount Portman; his keeper (named Newman) occupies one, and the other until recently has been in the occupation of a widow (named Mrs. Best), her daughter, and two little orphan girls, who were boarded out to Mrs. Best by the Honourable Misses Pitt, of Steepleton. It is in the latter house that these occurrences took place, which have caused such a scare in the village. More than a month since Mrs. Best—who it may here be stated, is a most respectable woman, of a quiet, inoffensive disposition, and on good terms with her neighbours and the village generally—became puzzled by faint knocking and scratching in various parts of the house, and could account for the same in no possible way. As days passed there was a repetition of these strange noises, which gradually increased in sound, until they could be heard by the keeper Newman in his own house. About a fortnight since these sounds—which the village blacksmith, who was an auditor of the same, described as then being as heavy as sledge hammer blows—were succeeded by still more startling events, for, according to Mrs. Best's version, stones came violently through the bedroom windows, smashing the panes, and then returned through the windows. The neighbours instituted a thorough search of the surroundings to see if there was any one in hiding who was playing a joke upon the woman, but there was not the slightest trace of a human being, nor of footsteps.”

In the latter part of January Mr. Westlake proceeded to Durweston and took down the statements of some of the principal witnesses—about 20 in all.

The disturbances, it appears, began on December 13th, 1894. On the 18th December Mr. Newman witnessed some of the phenomena.

The following is an extract from Mr. Westlake's notes of an account given to him by Mr. Newman on the 23rd January, 1895:—

On Tuesday (December 18th) between 10 and 11 a.m., Mrs. Best sent for me, and told me that Annie (the elder girl, about 13 years of age) had seen a boot come out of the garden plot and strike the back door, leaving a muddy mark. I went into Mrs. Best's, and I saw a bead strike the window; and then soon after a big blue bead struck the window and broke it, and fell back. Then a little toy-whistle struck the window, but did not break it. Then I sat down in the chair, and said, "You're a coward, you're a coward; why don't you throw money?" I was looking at the door opening into the garden, it was wide open, leaving a space of 15 inches between it and the inner wall, when I saw coming from behind the door, a quantity of little shells. They came round the door from a height of about 5 feet. They came one at a time, at intervals varying from half-a-minute to a minute. They came very slowly, and when they hit me I could hardly feel them. With the shells came two thimbles. They came so slowly, that in the ordinary way they would have dropped long before they reached me. They came from a point, some, I think, a trifle higher, and some no higher, than my head. Both the thimbles struck my hat. Some missed my head and went just past, and fell down slantingwise (*not* as if suddenly dropped). Those that struck me fell straight down.

The two children were all the time in the same room with me.

Then right from behind me a slate pencil came as if from the copper. The pencil was about 2½ inches long, and went slowly on a slant to a bowl on the floor in the pantry; and another piece went just in the same direction just over the bowl, and went into a pot of dirty water.

And a hasp, like the hasp of a glove, was dropped into my lap from a point above the level of my head.

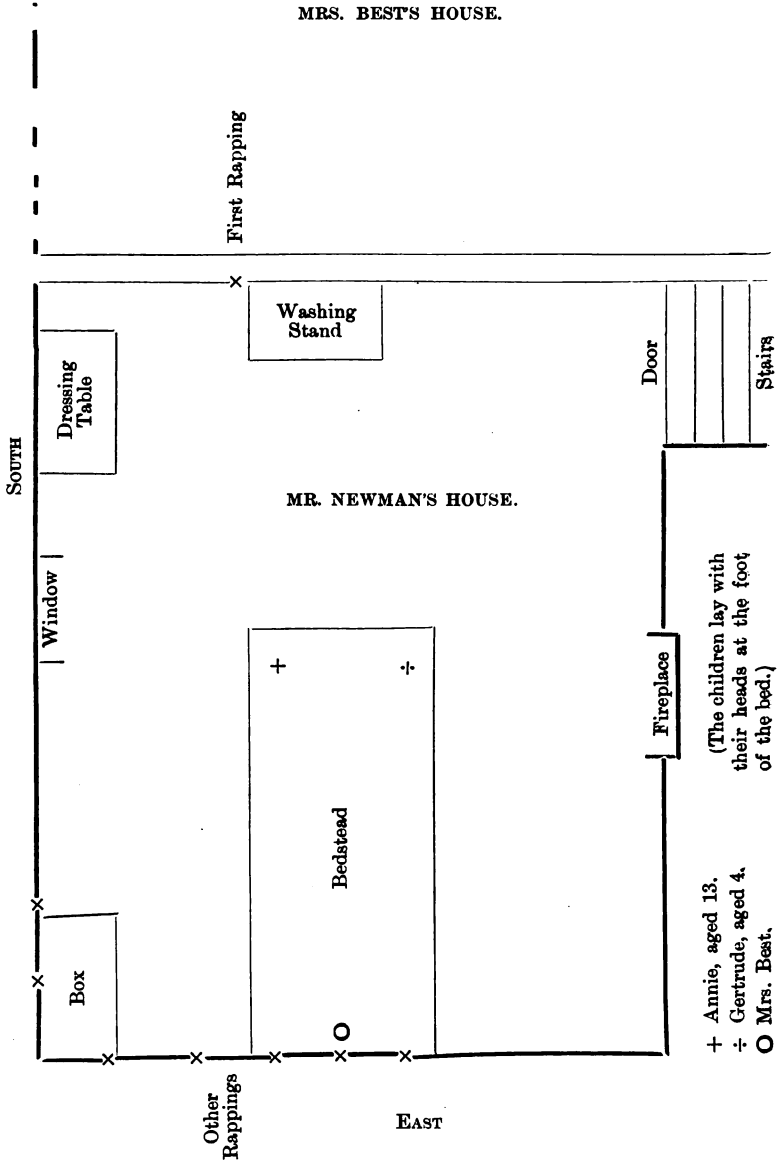
I never saw any of the things begin to move. I saw some of them just after they were started. Time was somewhere between 10 and 11 a.m.—a nice clear day; don't remember whether there was sunlight.

A boot came then in from outside the door. It came in moving along a foot above the ground, and pitched down. The boot had been lying right in front of the door, where it had previously fallen. This boot came towards me, and fell down just at my side. Mrs. Best took it and threw it out—it was an old dirty boot from off the garden plot (it was a woman's boot). I think the boot moved about as slow as the others, but cannot quite remember. It finally fell softly.

After the boot was thrown out into the garden, I went out and put my foot on it, and said, "I defy anything to move this boot." Just as I stepped off, it rose up behind me and knocked my hat off; there was no one behind me. The boot and the hat fell down together.

A few days later the two children, with their foster-mother, Mrs. Best—a woman, it should be said, of about 60 years—went to stay in Mr. Newman's cottage for some days. Whilst they were there the Rector of Durweston, the Rev. W. M. Anderson, came to witness the phenomena. On his first visit (Friday, the 4th January, 1895) nothing

took place. On Thursday, January 10th, he went again, accompanied by Mr. Sheppard, the schoolmaster. Mrs. Best took the two children upstairs and put them to bed, herself lying down in the bed with them. The subjoined chart shows the disposition of the furniture:—



Loud rappings were heard, apparently on the walls in different parts of the room. Mr. Sheppard went outside the house to see that no one was playing tricks from outside, whilst the Rector remained within, the noises still continuing. Subjoined is an extract from Mr. Anderson's account, written on the 25th January, 1895, of the events of that evening:—

I put my ear and hand to the wall, but could not detect any vibration ; but when resting my hand on the rail at the bottom of the bed, I could distinctly feel a vibration varying according to the loudness of the knocking. It is, perhaps, needless to say that I searched the room and the house, also Mrs. Best's house from top to bottom. Occasionally there was a noise in the wall, as if some one were scratching with their nails. This scratching also appeared to be going on in the mattress of the bed, although I am sure it was not produced by any of the three occupants of the bed, as I could see their hands, and watched them very closely all the time.

There was a lighted lamp, a small hand lamp giving a good light, on the washstand the whole time. When the rapping first began, I noticed that it frequently ceased when I came into the room, but after a short time it made no difference, and was loud and continuous when every inmate of the house was in the room. About 2.15 a.m. it was suggested by some one, I believe Mr. Sheppard, that the "Agency" should be asked whether it would write any communication on a slate ; the number of raps requested for an affirmative were given. There was no slate in the Newmans' house, but Mrs. Best told us where we should find one in her house. Newman Mr. Sheppard, and myself went into her house, found the slate and a piece of pencil, and returned. In reply to several questions as to where the slate was to be placed, the number of knocks asked for was given for the window-sill (inside, of course), the sill being some 9 or 10 inches wide. I may mention that every conceivable place in the room was suggested one after the other, but the right number of raps was not given, but a short, sharp knock which seemed always to be given for a negative. We almost gave up at this point, until as an afterthought I suggested the window-sill, which was at once accepted. The next question was as to who was to remain in the room, and according to the knocks every one was to leave, except the two children and Mrs. Best ; the light was also to be removed. The sign to be given when the writing was finished was four raps. We all retired down the stairs, which are about ten in number and straight. I remained at the bottom of the stairs, with the bedroom door wide open, it was very dark at the time. Some 15 seconds elapsed, and amid perfect silence we all heard the pencil scratching on the slate. Mrs. Best gave a suppressed groan, which I could distinctly hear. Four sharp raps were given almost simultaneously with the dropping of the pencil on the slate, and Mrs. Best gave a loud, screaming call, "Come." I was in the room instantly ; the whole thing taking less time than it would take to read this description. The light showed some unmeaning scratches on the slate. We asked for something legible, which was promised in the usual way. It was with the greatest difficulty that we could persuade Mrs. Best to remain in the room

a second time, but we prevailed on her to do so, I promising to remain on the stairs. The second time a flourish [something like this] was on the slate—



Only the curves were beautifully drawn with firm bold lines, such as no child could produce. The same proceedings took place a third time, when

M
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was found on the slate. The fourth time

MONY

and the fifth time

O
GARDEN
O

Every time I was nearer to the bedroom door, which was wide open and opposite the window. The last two or three times I was so close that I could almost hear Mrs. Best breathe, the silence being death-like. The *slightest* movement by any one in the bed would have been detected by me in a moment, and I am absolutely certain that the writing could not have been done by any one in the room without my knowing it. On one occasion the pencil rolled off on to the floor, and was broken in two pieces.

Mrs. Best cannot write; the younger child cannot, she was asleep; Annie Cleave can. I told Mrs. Best that I was myself convinced that no one had moved in the bed, much less left it, but I said people would say such had been the case. She said she was prepared to take a solemn oath that none of them had moved or left the bed, which was some 4 ft. or more from the window.

We could get no more replies in the way of raps, and nothing more was heard that night. Mr. Sheppard and I left at ten minutes to three.

I should like to say a word about the *characters* of those who have witnessed and heard these abnormal phenomena. With one exception (Spinney) they are all known to me personally, and the veracity and honesty of them all is beyond question. Mrs. Best is an earnest Christian woman, who bears perhaps the highest character in the village.

Later, the children were taken to another house in the village, where raps and other noises were heard; and were finally separated. The elder child, Annie, being removed to another village, Iwerne Minster, to the house of a single woman. There the disturbance still

continued: noises were heard, generally on the outer walls of the house; a big stone was flung on the roof of the porch; and snowdrops were dug up out of the garden and flung about. On March 7th, Miss M. H. Mason, Local Government Board Inspector of Boarded-out children, came down and took the child Annie to stay in her flat in London for a week. No disturbance worth recording occurred during her stay in London.

Miss Mason had the child examined by a doctor, who pronounced her of a markedly consumptive tendency, and apparently hysterical. A sister two years older than herself, has since died from consumption. According to another witness, Annie, during the earlier disturbances, saw a queer animal with green head and green eyes, and a big bushy tail, sitting up and pulling her doll to pieces with its paws. Gertie, the younger girl, she added, saw the same apparition when Annie called to her.

It will be observed that the account given by the educated witness, Mr. Anderson, of the phenomena observed by himself is quite compatible with trickery on the part of the children. But this supposition implies in Mrs. Best either connivance or, in the alternative, a degree of stupidity which it is difficult to credit. This is a real difficulty; since Mrs. Best, a Nonconformist, was by all her fellow-villagers, even including the Rector, looked upon as a thoroughly respectable woman; and the sequel of the outbreak, at any rate, was most detrimental to her interests, since she lost in the girl Annie a lucrative lodger, who had been with her for nearly four years.

As regards the things vouched for by Newman, it should be observed that the account was not committed to writing until 5 weeks after the events.

On the whole I think it would be difficult, on the evidence obtainable, to substantiate in this case a theory of supernormal agency.¹

CASE VIII.—THE HAM CASE.

Early in February, 1895, we received intelligence of a Poltergeist at Ham, a little village near Hungerford, in Berkshire. The following extract from a letter written by a local clergyman will give some idea of how the matter was regarded in the neighbourhood.

“Froxfield Vicarage, Hungerford, Berks.

“January 31st, 1895.

“There is a veritable ghost at Ham; it has overturned boots and shoes from the slab of an oven on to the hob—overturned a stool, and pitched the

¹ Mr. Westlake proposes to give a fuller account of his investigations in this case in an early number of the *Journal*.

cat on it into the fire—upset tables and all sorts of things. The tenant's name is Turner, and he works for Mr. Woodman. Woodman has put the man into an adjacent, but not adjoining, house, and has had the floor of the house taken up, but has not discovered the cause, and now the same pranks are going on in the house into which the people have removed. It is no delusion—it takes place in broad daylight before people's eyes, and Edith Woodman saw a table overturned on Tuesday. No one can explain it—it is quite a mystery, and is causing great excitement through the country-side; people from Marlborough, Hungerford and Froxfield visit the scene of these operations. They say that the people have a daughter who is eccentric and deformed."

The ghost appears to have been particularly active on the evening of January 24th. Appended are extracts from two letters chronicling the events of this remarkable evening. The first witness is the local constable; he appends to his letter a plan of the room.

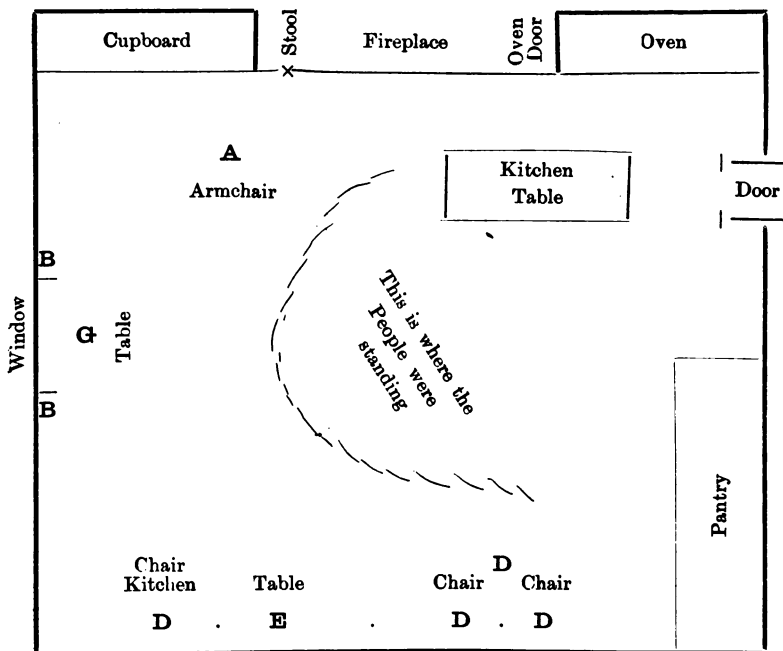
FROM POLICE CONSTABLE H. KING.

County Police, Ham, Hungerford.

February 14th, 1895.

With reference to what I saw at Thomas Turner's cottage on Thursday, January 24th, I respectfully beg to inform you that about 11 p.m. on the

PLAN OF ROOM.



date named above, I went into Turner's cottage. The first thing I saw was the armchair fall over on its side. After a few minutes I saw one of the kitchen chairs fall forwards. The next I saw was a four-legged stool which was standing in the chimney corner that fell over on its side into the fire. No one was near enough to touch either when it fell. I saw the things when [they ?] were falling, and [they ?] came over with great force. Polly Turner was at this time with her father the other side of the house by the oven. Some time after this Polly Turner came out into the middle of the room near where I was, (there were two kitchen chairs standing about 2 yards from me, [near the pantry] one had books and a workbox on it). Polly went near the chair, and put out her hand to take a book, but before she could take it, over went the chair and nearly fell on the girl. It fell towards her, but so as to just miss her, and she ran away apparently frightened. The armchair fell away from the girl, but the other three kitchen chairs came towards her. The only time that I saw her anywhere near the chairs was, as I said, when she went to get a book, and the chair fell before she could reach it. I should say that during the time I was there, Polly was three yards away from the chairs when they fell down, except the time I mentioned. I saw them go down several times; they simply fell down, and there remained till one of the party put them up again. The persons present in the room were P.C. H. King, Mr. Thos. Martin, Mr. F. H. Grist, Mr. Thos. Frances, Ed. Stockwell, Simon Cook, Wm. Whiter, Abel Cumings, Jesse Rolfe, and Mr. Maggs, and Turner's family.

FROM MR. J. ROLFE.

Ham, Hungerford. *February 14th, 1895.*

I am writing to give you all information of what I saw on January 24th, between a quarter past nine o'clock and twelve o'clock p.m., in Mr. Turner's house. The first thing I saw was the oven's lid fall, and then the stool with two cats sat upon it, and it threw the cats into the fire. There was not much fire. The next thing that went over was one of the chairs against the pantry. They both went over, but it was about five minutes between. Then I saw the armchair go over, and I saw the oven's lid fall several times, and the stool and chairs when no one was near them. They went over with great force, no one could throw them over so swift. The things went straight over. I did not see them start, for when I was looking at one thing to see it go over, one of the others went over. The little girl Polly was not close to throw it over. Her father or her brother was nursing her most of the time I was there. Mr. Turner was sitting in the chair close to the oven most of the time, and the other people were standing round by the table, and sometimes one or two were around by the armchair, but not [so] close but what it could fall. I have made a \times as near as I could where the people stood when the things went over. It could not have been possible for the little girl Polly to have thrown it over.

We have received similar accounts of the disturbances on that evening from Mr. Cumings and Mr. Stockwell. Another witness, Mr. Martin, saw the furniture moving on two occasions. He writes:—
 "There were other persons present, standing all about the room,

but not very near the chairs. I am quite sure the child did not touch them, they seemed to fall as she passed them. The armchair fell on its side, the others forward. It was between 10 and 11 o'clock in the evening." Another witness, Mr. James Kavanagh, describes some movements which he saw after the Turner family had moved to another house. He writes—

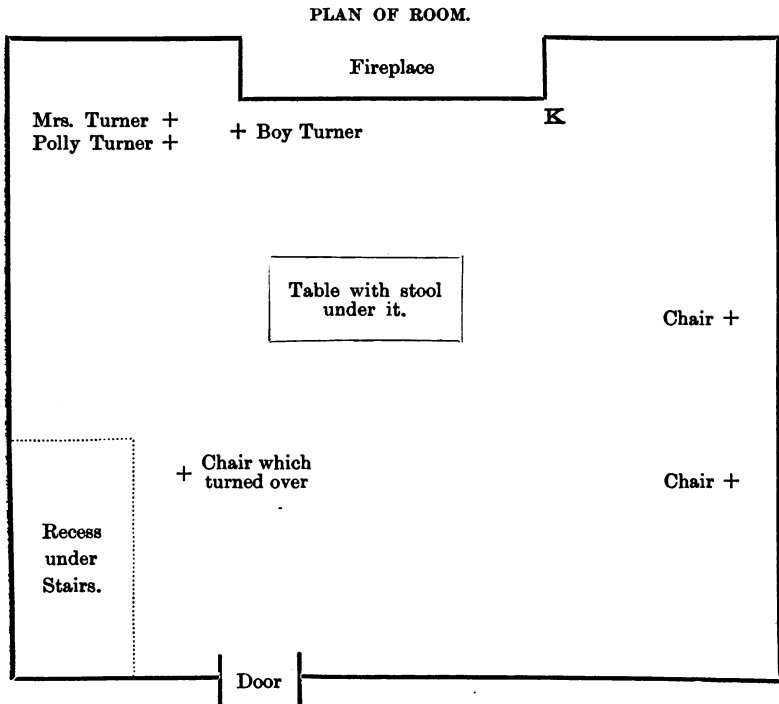
Ham N. School, Hungerford, Berks.

February 14th, 1895.

Having heard so many reports of table and chairs turning over, I determined to visit and so satisfy my curiosity.

About a fortnight ago I went to the house at 4.30 p.m. and stood at place marked K. Nothing occurred for about ten minutes, when I heard the stool under the table turn over. The boy Turner replaced it. In a few minutes it toppled over again. A third time it did the same, and each time towards the door. In a short time I observed the chair (marked in plan) turn over, likewise towards the door. The chair was fully 5 or 6 feet from me.

I am confident no one moved it. I examined the chair well to see if there was any trickery, as I have always been averse to anything of the sort.



Early in February Mr. Westlake went to Ham. On the morning following his arrival he wrote as follows :—

Letter I.

Post Office, Ham, Hungerford, Berks, *February 9th*, 1895.

Nothing is alleged in this case but the frequent movements of objects (except that Mrs. Turner says that once she saw a woman's face in the oven). It is one of those baffling cases where the thing won't work, or only inconclusively, in the presence of strangers. At least that was my experience last evening ; some local observers have had better success, I hear. Nevertheless I think it to be genuine from the hundred and one indications which one gathers when talking with the folks around their hearth—the primitive séance. Polly, a little dwarfed black-haired girl, turning 12, sits in the chimney corner and nurses the cats Topsy and Titit—she is the centre of force—then (in the absence of strangers) the coals fly about and all moveable objects are thrown down *ad libitum*, and *ad nauseam* according to their account.

It has been a nine days' wonder, and local interest (all unintelligent) is dying.

The Turners, however, say that things are as active as ever (last evening, e.g.) The report that they have made money out of it seems to be untrue.

On the same day, a few hours later, Mr. Westlake writes as follows :—

Letter II.

The "Ham Ghost" is a humbug *now*, whatever it may have been. I made friends with the cats, and their mistress, poor child, gave me a private sitting of some 2 or 3 hours, in the course of which she moved between 40 and 50 objects when she thought I wasn't looking (her plan being to watch me till I looked away.) However, I saw her in contact with the objects with every degree of distinctness, and on seven (at least) occasions by simple devices I had a clear view of her hands in contact with the objects and saw them quickly moved. I entered into the spirit of the thing, and said nothing to any one, beyond suggesting to the lady (Miss Woodman) at the Manor House that the affair would probably cease if no further attention were paid to it, and that some one would do well to watch the child.

She is a dwarf, aged 12, who has only lately learned to walk, pale, with long, black hair and eyes, very sharp, and watches one like a cat a mouse. Her mother is said never to leave the house or to allow the child to do so.

But it is curious that a little child should succeed in deceiving a whole country side, and especially in deceiving her parents (for I do not think they are implicated ;—if they have suspicions, they smother them ; they appear genuinely worried.) The mother would sometimes ask the child, after a particularly barefaced "upset," whether she did it, and she always denied.

Mr. Westlake has kindly furnished the following additional particulars of what he observed :—"After posting my first letter, I went to the Turners' and sat on a bench in front of the fire. No one else was present

besides the child. She sat on a low stool in the chimney on the right of the fire. On the other side of the hearth there was a brick oven in which, much to Polly's interest, I placed a dish of flour, arguing that a power capable of discharging the contents of the oven (one of the first disturbances) might be able to impress the flour. After a time I went to the oven to see how the flour was getting on, stooping slightly to look in, but kept my eyes on the child's hands, looking at them under my right arm. I saw her hand stealing down towards a stick that was projecting from the fire; I moved slightly and the hand was withdrawn. Next time I was careful to make no movement and saw her hand jerk the brand out on to the floor. She cried out. I expressed interest and astonishment; and her mother came in and cleared up the débris. This was repeated several times, and one or two large sticks ready for burning which stood near the child were thrown down. Then a kettle which was hanging on a hook and chain was jerked off the hook on to the fire. This was repeated. As the kettle refused to stay on its hook, the mother placed it on the hearth, but it was soon overturned on to the floor and upset. After this I was sitting on the bench which stood facing the fire in front of the table. I had placed my hat on the table behind me. The little girl was standing near me on my right hand. Presently the hat was thrown down on the ground. I did not on the first occasion see the girl's movements, but later, by seeming to look in another direction, I saw her hand sweep the hat off on to the floor. This I saw at least twice. A Windsor chair near the girl was then upset more than once, falling away from her. On one occasion I saw her push the chair over with both hands. As she was looking away from me, I got a nearly complete view. After one of these performances the mother came in and asked the girl if she had done it, but she denied it."

With Mr. Westlake's observations it is interesting to compare the following account by Mr. E. N. Bennett, of Hertford College, Oxford :—

A week after Mr. Westlake's visit to Ham, I went over from Oxford and stayed for nearly five hours in the Turners' cottage, viz., from 5 to 9.50 p.m. During this time certain phenomena occurred. A table moved some 4 inches along the floor; a stool, upon which a little girl (the supposed medium) sat, was repeatedly jerked about and on one occasion so completely as to upset her upon the floor; a teapot full of tea fell forward violently upon the floor from a raised, but firm and level, hearth; and, finally, a chair placed by myself some 10 or 12 inches from the child in question moved towards her four times.

With respect to the above phenomena, I noticed—*a.* That whenever they occurred the child was in very close proximity to the material objects affected. *β.* That none of these movements were *initiated* when I was looking directly at the child and the furniture near her.

During the latter part of my time in the cottage, I placed the child quite apart from the rest of the family, upon a stool, and made her clasp her hands before her, and also put her feet upon one of mine. Two movements of furniture then took place, but in one case, her hands, I noticed, were momentarily unclasped, and in the other, one of her feet left my boot for an instant.

My own impression is, certainly, that the movements I witnessed were produced by trickery, although I was unable to actually detect the fraudulent means employed. The child seems to combine with a defective intelligence a considerable amount of cunning, while the garrulity and exaggerated statements of the mother deprive her testimony of any value.

In the three cases which follow, the "medium" or person through whose agency, physical or psychical, the manifestations were brought about, was of superior education and social position to the little rustics with whom we have chiefly been concerned hitherto. In the first case, which I abridge from my own fuller statement written at the time, we have direct confessions of trickery from two persons: and there is no reason to doubt that the whole of the phenomena attested were due to trickery. Indeed, no one in the house seems to have been deceived in the matter, except the lady upon whose credulity her guests appear to have practised.

CASE IX.

In the autumn of 1894, Mrs. B., a lady living in a provincial town, gave me an account of certain curious incidents which had recently taken place in her house. The occupants of the house—an old one—consisted, besides Mrs. B. and her family, of a widow lady, Mrs. D., and her two children—a girl of about 20, C. D., and a boy of 15, E. D.

Mrs. B., C. D., and E. D. had been in the habit of trying experiments with planchette in the evening. Planchette had given them to understand that the house was haunted by four spirits, a wicked marquis, a wicked monk, a lay desperado, and a virtuous and beautiful young lady. These had, all four, met with violent deaths (minutely described by planchette) at one another's hands in the house. These spirits wrote, through planchette, of treasure concealed in the house; of a hidden chamber; and many other matters. They also promised through planchette, and ultimately gave, objective proofs of their presence. Amongst other proofs were the following:—(1) One evening after dark Mrs. B., in accordance with directions received through planchette, went with C. D. and E. D. to the old oak tree in the garden, and standing with the girl and boy on either side, holding a hand of each, she distinctly heard a stone strike the garden-roller a few feet off. The phenomenon was repeated twice; and her companions solemnly assured her that they had no part in the performance.

(2) On another occasion, sitting up in a bedroom (her son's) at the top of the house in the dark, with only E. D. in the room, Mrs. B. was struck by a stone on the temple, heard objects thrown about the room, felt an arm put through hers, and so on. Some of these phenomena also occurred when she was alone in the room—but with the door, I gathered, not shut.

(3) Mrs. B. one morning placed a white chrysanthemum bouquet on the boughs of the oak tree. It disappeared shortly afterwards; and on the next morning two other small bouquets were found there. Mrs. B. asked for whom these were intended, and went away, leaving pencil and paper. On her return she found the paper torn in half, and the initials of her own Christian name, and that of C. D., written on the two halves respectively, with a bouquet on each half.

(4) About this time a new secret chamber was discovered, with the skeleton of a cat crouching in act to spring, and the skeleton of a woman. Asked more particularly about the latter, Mrs. B. said: "Well, at least, a skull and some bones—but it was a woman's skull."

A few days after receiving this account, I went down by invitation to the house. I saw Mrs. D. and her two children, and received from them ungrudging corroboration of Mrs. B.'s marvellous story. In E. D.'s company I penetrated the secret chamber, and found there the mummified skeleton of what might have been a cat—but nothing else. In removing the stains left by this exploit from my person, I contrived a *tête-à-tête* interview with E. D. I at once asked him, "How much did you do of all these things?" He replied, "Oh, not much; I only did a few little things." Pressed on particular points, he admitted having thrown *one* stone at the garden-roller, and having also thrown a trouser-button against the wall when sitting alone in the bedroom with Mrs. B. He denied having produced the other phenomena on those occasions. Asked as to the bouquets, he said he had not placed them on the tree. Pressed a little more, he said, "If I did it, it must have been without knowing it." (This without any suggestion from me as to possible somnambulism, or unconscious action.) He assured me that his sister had had no hand in this matter. I could not get any more out of him, as he was shortly after called away.

I subsequently learnt from his mother that E. D. was so nervous and delicate that he slept in her room at night; that he was not allowed to do much mental work; that he was subject to attacks of somnambulism; and had, indeed, fallen into a semi-conscious state only a few days before, during a lesson in carpentry.

Subsequently Miss C. D., whilst denying any complicity with her brother in the "physical phenomena," admitted having deliberately co-operated with him in working planchette, and writing answers of their own invention to Mrs. B.'s questions.

These things may seem too foolish to be worth recording. I have recorded them because—incredible as it must seem—Mrs. B., an educated woman, did unquestionably believe that she was in communication, through planchette, with four spirits, who looked to her for help and guidance; and saw in a schoolboy's silly tricks special manifestations of spirit power vouchsafed for her enlightenment. On the whole, Mrs. B. was, perhaps, only a little more credulous than some of the other witnesses to the doings of Poltergeists.

CASE X.

The house in which the phenomena to be described took place is a small terrace-house in a town in the south of England, occupied by Mr. and Mrs. B. and their family. The younger daughter, Alice, is barely 12. She is very tall and pale, and has apparently outgrown her strength; and is compelled, under medical advice, to lie down on her bed for an hour or two every afternoon. She impressed me, on my visit to the house, as being very intelligent, energetic and clever beyond her years.

In the summer of 18—— the servant complained of hearing strange noises in the house, and shadows behind her, and occasionally of being touched. In the course of the same year Mrs. B. on one occasion heard a tremendous blow on the door of a room in which she was sitting; and on another occasion saw part of a figure clothed in a print dress through the half-open door of the dining-room.

In the autumn of the following year, however, the phenomena were very frequent and striking. The manifestations were of two kinds: (1) physical disturbances, (2) auditory and visual phenomena, which may have been hallucinations. It will be convenient first to consider the physical phenomena. If we omit such matters as blows on doors, the violent slamming of half-opened doors, and the fall of a picture from its nail, the most striking physical phenomena are the following:—

I cite these in the order in which they are given in the narrative furnished by Mr. B. and other members of the family. (1) Alice, when alone in her room, found some newly-shed blood on the floor. (2) Alice, entering her bedroom, closely followed by Miss K., an inmate of the house, found that her water-jug had been quite recently upset on the floor. (3) A water-jug was again found upset in the same bedroom, Alice being in the room alone at the time. (4) Mrs. B., in stooping down to kiss her daughter Alice good-night, felt distinctly a hand laid on her back. (5) A charwoman complained that a saucepan was dragged from her hand and dashed down on the stove. (6) A chair was moved in Mrs. B's room, Alice being the only other person present. (7) A picture was seen to move from its

position on the wall of the dining room to the extent of about 4 inches. It then, when commanded by Mrs. B., in the name of the Trinity, returned slowly to its original position. The witnesses to this phenomenon were Mrs. B., Alice, and Miss K. (8) A card-table, at which Mrs. B., Miss K., Miss B., and Alice were seated, moved sharply and struck Miss K. on the arm. (9) Two little boys were having tea with Alice in the dining-room. One of the little boys had first his leg and then his throat sharply pinched.

It is, perhaps, not uncharitable to suggest that the fall of the saucepan may have been due to the clumsiness of the charwoman, and that the other disturbances were caused by Alice, by ordinary physical means. The only incident which, on this interpretation, offers any difficulty is the movement of the picture on the wall of the dining-room. This may have been moved by a string; though I could find no trace either on the picture itself or on the adjacent wall of any such means having been used. Mrs. B. could not remember in what part of the room Alice was standing during the phenomenon; and Miss K. and Mrs. B. assigned different positions to Mrs. B. herself. I think it not impossible that the whole movement was imaginary.

The visual and auditory phenomena were very curious and interesting. Mrs. B. and Miss K. at various times—sometimes together—heard voices speaking, moans, cries, rappings, footsteps, and loud noises. Some of these noises—the sounds of articulate sentences, for instance—were apparently hallucinatory. There were also many visual hallucinations. Miss K., on two occasions, saw a hand—in one case, on the glass of a bookcase. Mrs. B., besides the hallucination of a woman's dress already referred to, saw, when in bed, a brilliant disc of white light and a dazzling white garment; she also saw a shadowy black form on suddenly entering a dark room. She saw, in the middle of the afternoon, a lovely white bird, larger than a dove, gliding across the upper hall. Going up the stairs shortly after the vision, Mrs. B. saw a shower of gold and silver flakes. Alice, who accompanied her, saw them too, and went to fetch the charwoman. The charwoman "thought it rather pretty, and supposed it was motes." Perhaps it was.

Alice also recited several experiences of her own, which may, perhaps, be classed as hallucinations; she was thumped on the back; she felt something push against her in going upstairs; she heard moans, voices and other noises; and once, when lying down on her bed in the afternoon, she heard the sound of paper scraping on the wall, and, looking up, saw a coloured ball of paper fall from the ceiling and disappear in the basin. No such ball could be found.

It should be added that the B. family regard the phenomena as inexplicable.

CASE XI.

In this case I am precluded from giving full details of the various incidents. Lest, however, it should be thought that the brief summary which follows presents an *ex parte* statement of the circumstances, I am permitted to say that Professor and Mrs. Sidgwick, who are acquainted with the case, agree with my general conclusions. The occupants of the house, which was the scene of these incidents, were a family whom I will call Z. The family included a grown-up son, Y. Z. The disturbances, which were very frequent, and extended with uneven intervals over a period of about twelve months, began soon after the appearance in the house of a young lady visitor, Miss Q. The first outbreak lasted for some weeks, and ceased on the day of Miss Q.'s departure. The disturbances were striking and various. They included, besides loud noises, slamming of doors, and sound of footsteps, &c., frequent physical movements, such as the displacement of furniture, occasional breakage of crockery, the throwing about of boots, toilet necessaries, and articles of clothing.

We have been furnished with a long series of letters and documents written by members of the family, minutely describing the earlier disturbances. I have analysed the record of the events which took place during Miss Q.'s first visit. I find that there were sixty-six disturbances involving movements of material objects during the period of a fortnight. On thirty-four of the sixty-six occasions, Y. Z. and Q., either together or separately, were the first to arrive on the scene of the disturbance; and in most of the thirty-four cases, they were the sole witnesses that any movements had taken place, the rest of the household being generally contented to accept their report. In the remaining thirty-two instances, in which the movements were testified to by other members of the household, the disturbances consisted sometimes of furniture being found by the servant in the morning displaced, Y. Z. himself having found it similarly displaced on the previous evening and having, according to his own statement, replaced it; in other cases furniture was displaced in rooms which Y. Z. or Q. had recently passed through; or objects were thrown from, or from the direction of, Q.'s bedroom when she was in the room alone. In a few cases the description of the occurrence is not sufficiently detailed to enable one to judge of the positions and movements of the persons concerned. On two occasions only are movements recorded as actually taking place in the presence of other members of the household. Thus, on one occasion a small object was thrown across the room, in which all the household except the servants were seated. It is not stated that any one saw it in the air. On two or three other occasions movements of small objects are reported to have taken place when Y. Z.

and Q. were in remote parts of the house. But the evidence for these movements is by no means clear; and as Y. Z. or Q., and possibly both, appear to have assisted in drawing up the reports, little reliance can be placed upon the accounts given. Nothing is reported as taking place when both Q. and Y. Z. were absent from the house—except a few noises, and the opening of a cupboard door. With the trifling exceptions mentioned above, nothing seems to have occurred during the fourteen days which, even as described by the family, could not readily have been produced by Q. or Y. Z. by very simple means.

Some time after Q.'s departure, the phenomena recommenced. But they now centred round Y. Z. exclusively, and nothing is recorded which could not readily have been produced through his agency. As the phenomena still continued at intervals, various members of the Society—of whom I was one—went to investigate the case. My own visit was unfruitful. But one of my colleagues, Mr. T., was more fortunate. His visit happened to coincide with a visit from Miss Q. After Miss Q. had retired to her room, various articles were thrown from the direction of her door when no one was watching; and various small pieces of furniture were displaced immediately outside her room; her door was heard to open several times and various objects were thrown out. Miss Q. professed to have had no hand in these doings, and not even to know when they took place. Nothing whatever occurred when Mr. T. was watching the door.

Finally, Q. professed that she was too disturbed to keep in her room, and went downstairs. Various articles of furniture were then moved in the ground-floor rooms, some in the immediate vicinity of Q., others in more remote rooms, to which, however, she could readily have had access undetected. Similar phenomena were repeated on the following night. It was observed that in no single instance did any disturbances take place which could not readily have been produced by Q. Moreover, certain curious limitations to the phenomena were observed. Miss Q.'s room had two doors. The one was locked on *the outside* through the greater part of the disturbances; of the other she herself had the key. Nothing took place outside the locked door; but many objects were moved outside the other door. Finally, on the second night, after many things had been thrown out from the unlocked door, and many movements had taken place in its vicinity, Miss Q. was requested to stand close to the locked door. The lights were put out, and the request was then made that some movement should take place in the neighbourhood of the other door, *i.e.*, at a distance of some yards from Q. The investigators waited twenty minutes, but nothing more took place. Q. left the house the next day, the phenomena ceasing with her departure.

One other series of disturbances may perhaps be referred to, since the manifestations exhibited a marked and most instructive change of character. When Q. or Y. Z. were staying in the house, the disturbances had taken the form of violent banging of doors, displacement of furniture and throwing about of small objects, generally accompanied with a good deal of noise. During the period now under consideration, Y. Z. was away, and Q., though apparently about the house nearly every day, was not sleeping there; and the disturbances were of a much milder type. They consisted, in fact, almost exclusively of the noiseless displacement and stealthy disappearance of small objects, their hiding place being often discovered by Q. herself.

With one exception, which, it may be suggested, was possibly due to mal-observation on the part of the reporter, there was nothing to indicate at what time the movements took place, or to forbid the supposition that they actually occurred in Miss Q.'s presence, though the fact of the movement was not in some cases discovered for hours or days afterwards.

After these occurrences, the phenomena ceased almost entirely, and did not recommence until some months later, when there were again a few disturbances of the same general character, *i.e.*, movements of furniture, and throwing about of small objects in the immediate neighbourhood of Y. Z. (Q. was not at that time in the house.)

From first to last, with a few insignificant exceptions, the whole of the disturbances could readily have been produced by Miss Q. or Y. Z., acting sometimes singly and sometimes in concert. The belief of the Z. family and their friends that they were not so produced rests almost exclusively on their conviction of the good faith of Miss Q. and of Y. Z.

Mr. T. writes:—

The disturbances (about 70?) which occurred while I was in the house could all have been done by Miss Q. or Y. Z.—and that without any particular skill or artifice—but as I obtained no direct evidence as to how they were produced, I have no belief one way or the other. If genuine, they simply rest on the word of those persons. If fraudulent, I would suggest that they probably grew from an undesigned beginning into a hoax, exciting to the youthful authors, whose success encouraged them to push it as far as possible, regardless of the serious trouble and worry to Mrs. Z.

It may be added that, so far as I am aware, no signs of abnormality have been detected in either of these two persons; and that, on the assumption that they were the authors of these disturbances, no adequate motive has been suggested for their conduct, unless, indeed, the alleged desire of Y. Z. to transport the family to a more congenial neighbourhood can be held to constitute such a motive.

These eleven cases are the only instances in which we have full reports of personal investigation by representatives of the Society since its foundation in 1882. Other cases have indeed from time to time been brought to our notice, and enquiries have in some cases been made, but no report has been presented to the Society. Accounts have been sent to us, however, of a few other cases, in which fraud has been detected or inferred with some degree of probability. Thus a lady writes to us from Bournemouth, in November, 1889, that a fortnight after the appearance in her house—a small private boarding-house—of a new cook, disturbances of various kinds took place. Bells were mysteriously rung; a heavy cellar-grating was several times thrown down; a leg of mutton made its appearance in inappropriate situations; the kitchen clock stopped; bedsteads, a chest of drawers, tin cans, a waste paper basket, and other articles of furniture were repeatedly displaced. The servants' bedrooms, in particular, were the scene of many disturbances. This state of things continued for a week. During all this time the lady of the house and her fellow inmates took various precautions, and kept a close watch on the servants, without being able to discover any suspicious movements. Finally, on the eighth day, their patience was rewarded. One of the daughters of the house, after having ascertained that the furniture in the upper rooms was undisturbed and in its proper position, kept a close watch upon the stairs leading up to the servants' quarters. Looking through a keyhole she saw the new cook, Mary, go stealthily upstairs, and heard various movements in the room overhead. When Mary had retreated, Miss Lucy B. went upstairs and found the furniture disarranged in precisely the same way as it had been many times before during the previous week. Asked whether she had been upstairs during the morning, Mary said no. She further denied all knowledge of the whereabouts of a key belonging to a bedroom door which had been found in the course of the day to be locked. Under a threat of police, however, she revealed the hiding-place of the key. Mrs. B. states that it was never discovered by what means Mary succeeded in ringing the bells without detection. Mary is described as a girl of about 17; very pretty, pleasant and quiet in manner and speech. In the next case, also, a servant who is described "as rather smarter and sharper than the average country girl," was caught in the act of causing disturbances.

Mr. James Gardner writes to us:—

January 25th, 1896.

In reply to your letter respecting noises at Edgeworth Rectory, I shall be pleased to tell you all I know, although it must be nearly 20 years ago. Mr. and Mrs. Shaw were away from home, and during their absence strange noises, such as scraping and moaning, were heard at the Rectory, which

frightened the servants in the house, and they told the gardener, who stayed in the house the next night and was equally puzzled as to cause of noise. The next night when the policeman came round on his beat, he was told of it, and they searched inside and out the house with no result. As you may easily imagine, the story of a ghost at the Rectory soon spread over the little village, and not a few believed it. I was living very near the Rectory at the time, and Mr. Shaw was most kind to me, so I told the confidential servant who was left in charge that I would stay a night in the house and try and solve the mystery ; which I did by secreting myself where I had a chance of looking into the bedroom of a fresh servant that had recently been taken into the house, and by means of a dark lantern suddenly flashed on the girl when the noises commenced, I was quite satisfied that she was the author of them, and told Mrs. Shaw so when she returned home. The girl was started at once, and the house was perfectly quiet afterwards.

In a later letter Mr. Gardner explains that he saw the girl striking the wall with her hand, just after the old housekeeper had pronounced her to be fast asleep. He adds that he thinks some of the noises heard were probably produced by the aid of some instrument in her mouth.

We have also three cases strongly resembling in their details the Cock Lane case, reported within the last 10 years from Cradock, South Australia, East Lothian, and Perth respectively. In each case the only phenomena were raps. The raps occurred only when the medium—a little girl in each case—was in bed, and ceased altogether when both the girl's hands were under observation. In one case the medical man who reported the case to us states that no rapping was ever heard when the girl's hands were kept above the bedclothes : and that a board was indispensable. In another case the raps would only occur when the lights were turned out, and even under these conditions failed to manifest when the girl was placed in a hammock. In the third case—reported to us by the Rev. Robert Nicol, of Perth—a witness is stated to have seen the movements of the girl's arm under the bedclothes during the occurrence of raps, which appeared to proceed from a part of the wall within reach of her right hand under cover of the clothes. In none of the three cases is there evidence that any sounds were heard which were beyond the girl's power to produce by ordinary means.

It is noteworthy that in two out of the three cases, as well in the case which follows, the child's parents appear to have connived at the trickery.

In the next case our informant is General Pitt Rivers, who writes on November 16th, 1886 :—

Rushmore, Salisbury.

There is absolutely nothing to investigate in the Woodcuts imposture. I was asked by the man N., who has since been turned off for misconduct, to

go and investigate the rapping in his house. I have no doubt he thought it would be an advertisement. Finding that all the people about were agog with this ghost, I went, and Mrs. Rivers and myself, and several others, went up into the room. I said, "now let us hear some rapping," and the father said, "You must all go out of the room except the girl [his daughter], and must stand so that no one can see into the room," so I complied. The girl asked some stupid question in the room, and immediately there were loud raps; this was repeated once or twice. I then said to the girl, "Now stand at the door where I can see you," and she did so. No raps. I then said, "It is evident there will be no raps unless you are in the room by yourself out of sight." So I paced across the room from the door, and found it six and a-half short paces, and told the girl to take three paces into the room and stand there, where I knew she could touch nothing. I made her pace it before me to make sure that she understood. "Now," I said, "you must stand there and not move, and ask your questions and hear your raps from that spot," and I then went downstairs to the bottom of the stairs where I was told to stand. I heard her take three paces, then a very slight movement, and after that three or four loud raps. I stepped up the stairs two pair at a time, and found her off her post. Meanwhile Mrs. Rivers, instead of going downstairs with the others, had put herself, unknown to the girl, in the opposite room where she could see the girl plainly. She saw her, after taking the three paces, look over her shoulder towards the door, then run quickly, and give the three loud raps on the back board of the bed. Mrs. R. then came out and told the girl what she had seen. She immediately burst into tears, put her apron over her face and said, crying, "I only knocked to see if he was coming." I then knocked on the bed myself, where she had knocked, and found it made exactly the same noise that we had heard downstairs. I have told the police that if anything was done to make it an indictable offence, Mrs. R. and myself would give evidence, but the man is careful, charges nothing, and only receives gifts to the extent of three and four shillings a day from sympathising idiots.

A. PITT RIVERS.

Reverting now to the 11 cases investigated by representatives of the Society, we may note that there is a general resemblance throughout. These cases, pretty obviously, belong to the same class; and it is *primâ facie* probable that an explanation which fits one case will fit all. An exception should perhaps be made in case IX., since it seems doubtful whether any one was deceived by the manifestations in this case except the lady of the house. But in the other cases most of those who witnessed the disturbances, whether inmates of the house or neighbours, appear to have regarded them as inexplicable.

Now the only explanation for which we have valid evidence at all is trickery. Trickery was actually detected by one or more witnesses in four cases (II., IV., V., VIII.). In two of these cases (II. and IV.) and in case IX., there was a confession of trickery. There is, therefore, strong ground for believing in trickery as the true and

sufficient explanation in all these 11 cases. In the first place we may note that the phenomena described in the Wem and Ham cases for instance (II. and VIII.) were *prima facie* as inexplicable as those testified to in other instances. But in these two cases we know that trickery was employed. It is to be noted also that in the Wem case the child was so skilful that though she was under the close observation of several pairs of eyes in Dr. Corke's house, and though she brought off many "phenomena," it was not until the fifth day that she was actually detected in her performances, and then only through a surreptitious entry on the theatre. In the Ham case Mr. Westlake was able to detect the actual movements of the child only when the repetition of the performance taught him what to look for, and Mr. Bennett, despite his strong suspicions, failed altogether to obtain conclusive proof of fraud. And if we remember how many and how great were the errors in observation demonstrated by Dr. Hodgson in the records given by educated persons of séances with Mr. Davey, we shall find it not unreasonable to infer, even when direct evidence is wanting, like errors in the testimony, mostly of uneducated persons, now under consideration. We have some indirect proof of the justice of this inference. It will be noted that in cases such as VI., IX., X. and XI., where the witnesses were for the most part educated persons, and the record in some instances almost contemporaneous with the event, it is not difficult to explain all that took place—with a few trifling exceptions—as due to trickery. The proof of abnormal agency in these cases rests almost entirely on moral considerations. But in cases like I., II., III., and VII., where the chief witnesses were persons of limited education, the phenomena attested are of a much more surprising kind; and at Worksop and Durweston especially, where the witnesses were not only imperfectly educated, but did not give their testimony until some weeks after the event, the things described seem wholly inexplicable by normal agencies. [Contrast, for instance, Mr. Anderson's and Mr. Newman's evidence in the Durweston case, p. 93 and 91].

One other feature in these records should be noticed in this connection. Many of the witnesses described the articles as moving slowly through the air, or exhibiting some peculiarity of flight. (See my report on the Worksop case, also case VII.). Similar peculiarities are noted by Mr. Bristow (*Proceedings S.P.R.*, Vol. VII., pp. 383-394). In describing the movement of pieces of wood in a carpenter's shop, he writes of them as now moving in a straight line and striking a door "noiselessly as a feather," and again "as though borne along on gently heaving waves." In a case which was investigated by one of our corresponding members, Herr Hans Natge, an account of which was published in Berlin in 1889, under the title *Der Spuk von Resau*,

a similar phenomenon is described by the witnesses. Thus a frying pan in the air is described as having the appearance not of a thing thrown, but of a thing flying; and the witnesses are said to have noticed the absence of any curve of projection in the articles. In default of any sufficient evidence that the disturbances in question were due to abnormal agency, I am disposed to explain the appearance of moving slowly or flying as a sensory illusion, conditioned by the excited state of the percipients.

But if the assumption of errors of observation of various kinds in these records is necessarily supported by little direct evidence, we have proofs of serious errors of memory. Thus, in several instances we find that the various witnesses to a phenomenon differed amongst themselves as to the position, or even the presence or absence of particular persons; or failed to mention at all the whereabouts of the presumed agent; or imagined that they had been present at manifestations of which—according to other witnesses—they knew only by hearsay. (See for instance the discussion on cases I., III., VI., XI.). There is an account contributed to our records by the Rev. H. H. Jeaffreson of movements of small objects, which may perhaps be accounted for by occasional lapses of memory of a rather unusual kind.

Mr. Jeaffreson writes on May 27th, 1883:—

I do not know when we first began to notice anything strange about the house, but after no very long time we began to miss little things of no value (and therefore not likely to have been stolen), which mostly, though not invariably, were found in places where a few minutes before we had searched for them. This took place in every part of the house, but chiefly in my study. There I had a small round table (perhaps 30in. in diameter), which was seldom used for anything but a cup of coffee, or a few books when I was sorting them for the shelves. For the most part this table was clear, and therefore there was no chance of small articles being covered up accidentally, and as accidentally discovered. I do not think that things disappeared more from this table than any other; but the circumstances I have mentioned made the occurrence more conspicuous in the case of this table and less open to accident.

If I put down, say, a bunch of keys on this table, they frequently disappeared. At first I used to search for them in vain, and come back to find them where I thought I had placed them, on the little table. At last, when we missed anything from the place where we thought we had placed it, we (my wife and I) used to sit still, and after a time, the things would usually reappear. We never saw any article coming or going. The length of time varied. Perhaps the longest interval was in the case of a bracelet, which disappeared one night as my wife was dressing for a party, and reappeared about the same time the next night lying in the middle of a doorway through which we had passed many times, and in which I had carefully searched with a candle the first night, and the servants the next morning.

Mr. Jeaffreson adds, "similar removals have in our opinion taken place since we left H. in the houses we have since occupied, but less frequently and less conspicuously."

Of the errors of narration perpetrated by journalists in search of sensational copy (see cases II. and V.), it is hardly necessary to speak, except to point out that the dramatic and exaggerated accounts of the disturbances given in the newspapers inevitably react upon the memories of those who read them, and so tend still further to vitiate testimony.

But it is much easier to infer that trickery has been practised in these cases than to find a plausible motive for trickery. In one or two instances, indeed, intelligible motives have been suggested for the fraud. (See, for instance, cases V. and XI., and the account given by General Pitt Rivers on p. 109). But in most cases it is difficult to conceive that any adequate or even rational end was aimed at by the authors of the disturbance. A considerable amount of labour, extending in some cases over months or years, has been voluntarily undertaken by the agent; much annoyance, expense, and occasionally severe distress has been inflicted on other persons; and a lively sensation has been caused in the neighbourhood. But there has been apparently no revenge to satisfy, and such fame as lies in the mouths of rustics, and in occasional paragraphs in provincial newspapers, would hardly constitute for normal persons—even for children—a sufficient recompense for the labour incurred. And yet it is, in fact, in the desire to cause a sensation that the working motive is probably to be found. The reader must have been struck by the fact that the agent—or central figure—in the great majority of the cases quoted is a young girl, roughly between the ages of 12 and 16, though one or two may have been a little older. The agent in each of the six cases last cited was a young girl; and in the 11 cases given at length, a young girl appears in eight cases and a young boy in three (in one of which—case IV.—he is apparently associated with his young sister). But a further peculiarity is to be noted beside the youth of the agents, to wit, their mental and physical abnormality. In the Worksop case, the presumed agent was a half-witted girl, child of an imbecile mother. In the Wem case, Emma Davies was stated by her mother to be subject to fits. In the Bramford case, the girl appears to have suffered from attacks of hysterical blindness. In cases VI. and VIII., the girl was deformed, in case VII. hysterical and consumptive. In case IX. the boy was delicate and liable to attacks of spontaneous somnambulism; and in case X. the girl is delicate and has outgrown her strength. Thus in eight out of the 11 cases we have evidence of ill-health or abnormality more or less pronounced. This evidence is strengthened if we accept the agent's own testimony for the occurrence

of hallucinations. Thus, in cases II., III., IV., VI., VII. and X., the agent was the subject of hallucinations, which in case VI. were frequent and prolonged.

It may be suggested then that, in the majority of these cases, the real motive which impelled these children to a long series of apparently meaningless acts of mischief, was the excessive love of notoriety which is occasionally associated with other morbid conditions, especially in young girls. Case XI., on this view, remains unaccounted for, since the agents in this instance were educated adults, apparently free from morbid influences.

To sum up : (1) In the eleven cases which we have investigated in detail, direct proofs of trickery have been obtained in several instances. (2) Where the phenomena have been recorded shortly after their occurrence by educated persons, trickery is found—moral considerations apart—to be an adequate explanation. (3) Where the phenomena have been described by illiterate persons, or recorded some time after the event, this explanation becomes difficult ; and the difficulty is found to increase directly with the length of the interval and inversely with the education of the witness. (4) But these eleven cases are fairly representative of their class. A certain number of such cases are brought to our notice each year. These eleven cases were selected for investigation, mainly because from the accounts in the press, or from reports received from trustworthy private sources, they seemed to present a *prima facie* case for abnormal agency. It is difficult to resist the conclusion that if the opportunity had been given to us, with the experience which we have now obtained, to undertake an equally full and searching inquiry into the cases of this kind which figure so largely in the literature of the subject, the evidence for abnormal agency would have been found as little calculated to convince. Take, for instance, the movement of pieces of wood in a carpenter's shop already referred to. It is one of the most striking cases ever published, and as described by an honest and intelligent witness, the phenomena seem perfectly inexplicable. But the account printed at length in the *Proceedings* (Vol. VII., p. 383), was written 42 years after the events recorded. It is, indeed, based on some earlier notes ; but these notes themselves were not committed to writing until five years after the events. That some movements of the kind described did occur in 1849 we can well believe ; indeed we have corroboration of the fact from at least one other living witness. But the most we seem entitled to conclude from their reports is that Mr. Bristow and his friends did not at the time discover how the movements were caused, and that their later recollections afford us no clue.

The case given in the same volume, pp. 160-173, is evidentially stronger, inasmuch as the events were recorded within a few weeks or

days of their occurrence. But it will be observed in this case that much of the evidence on which the narrator relies is second-hand ; that we have practically only one account of the incidents, since Mrs. K., the housekeeper, merely confirms the account written by the master of the house, and does not give an independent version ; that the disturbances were unquestionably connected with the presence of a young and new servant, and ceased when she left the house temporarily ; and that this young servant became delirious towards the end of the manifestations. We have only to assume—what experience entitles us to assume—slight defects of observation on the part of the witnesses, and slight errors on the part of the narrator, to place the case on the level of the eleven which we have already investigated. It is suggested that to establish even a *prima facie* case for abnormal agency in such cases, we need evidence of quite another kind from any which has yet been brought forward.

Before the subject is dismissed, attention may be directed to two points. The first is that the moral presumption, upon which the evidence for abnormal physical phenomena occurring in the presence of private persons mainly depends, is seriously weakened by this demonstration of frequent, elaborate and long-continued trickery, practised occasionally even by educated persons, without apparent recompense or adequate motive. The second point is that genuine hallucinations may apparently be associated with fraudulent physical phenomena. Leaving on one side the hallucinations alleged to have been experienced by the agents in many of these cases—though these are not without interest—we find hallucinations reported by the witnesses in several instances. Thus at Ham, case IX., one witness is recorded to have seen a woman's face in the oven ; and in cases VI. and X. several credible witnesses give accounts of hallucinatory experiences. Many of the auditory experiences, and at least two of the visual hallucinations, appear to have been collective.

These facts are of special interest in their bearing on the phenomena of collective hallucination, and on the genesis of hallucinatory disturbances—auditory and visual—in so-called “haunted houses.”

V.

A CASE OF INFORMATION SUPERNORMALLY
ACQUIRED.

BY MISS ALICE JOHNSON.

I have been asked by Professor Sidgwick to put together and comment on the evidence in the case here printed, since it seems of sufficient interest to be worth discussing at somewhat greater length than is usually, in these *Proceedings*, afforded to single cases. The most important and instructive details have only been brought out, as will be seen, by prolonged and careful enquiry on the part of the Russian investigators to whom we are indebted for the collection of the evidence. The printed selections from their correspondence will give some idea of the amount of labour they have spent on the investigation. Most of the information was obtained through the kindness of Mr. Joseph Kronhelm, while the energy and perseverance of Mr. M. Petrovo-Solovovo—whose name is well-known to all members of the S.P.R.—in collecting and transcribing it, has made the full presentation of the case possible.

The main incidents are given in the following narrative,—a translation of a letter from Mr. Kronhelm in the *Revue Spirite* for July, 1895.

June 10th, 1895.

. . . The following is an account of an apparition seen by my engineer, Mr. Vincent Idanowicz, here at Crezelowka, District Gajsin, Podolia, Russia.

On November 10th, 1894, Mr. Idanowicz went to Gajsin to order a fur cloak from the tailor, Izloma Sierota. While he was looking at the material, Sierota showed him an almost new fur cloak, and induced him to purchase it at the price of forty-five roubles, saying that he had bought it from a Mr. Lassota. Mr. Idanowicz agreed to take the cloak. . . . He returned home pleased with his bargain, went to bed and slept profoundly. (Mr. Idanowicz and his brother Ivan occupy a room on my premises.) After midnight he was awakened by a gentleman dressed in black. He was not alarmed in any way, but considerably surprised to see a man whom he did not know and had never seen before, knowing, besides, that the room door was locked, and he asked, "Who are you, sir, and what do you want?" The apparition replied, "I am called Wisznicoski, and I come to advise you to return, as quickly as possible, this fur which you have just bought from Izloma Sierota for forty-five roubles, since it did not belong to Mr. Lassota, but to a judge at Gajsin, who has just died of phthisis. The fur is

infected by phthisic bacilli." Thereupon the vision disappeared, and Mr. Idanowicz got up in order to see how Mr. Wiszniewski could have got out, as the only entrance to the room was double-locked as usual. Understanding nothing of what he had seen and believing it to be a hallucination—all the more because his brother, who had awakened after the apparition had vanished and had heard and seen nothing, laughed at him—Mr. Idanowicz went to bed again and next day resumed his ordinary work, without saying a word to any one about what he had seen and heard. On the following night, the two brothers retired to bed as usual, but, as they could not sleep, they talked over their affairs, and chiefly about Mr. Vincent's *fiancée* and her family. Suddenly they heard steps approaching their chamber, and the door, which was locked, opened smartly. Greatly astonished, they saw a gentleman in black enter, who said to them, "You are both awake. Well, this time, Mr. Vincent, you will not say that my appearance yesterday was a hallucination. I come, therefore, to repeat to you: Go and ask Mr. Kronhelm to allow you to go to Gajsin to-morrow, and return the fur to Izloma Sierota, who is deceiving you in saying that it belonged to Mr. Lassota. I repeat that it belonged to a judge, who died of phthisis at Gajsin. It is infected with phthisic bacilli. I was a Government official at Lipowice (in the Kieff district), and died there in 1892; but as my mission is to watch over you, I warn you of what will happen if you do not follow my advice." So saying, the apparition vanished.

At five o'clock the same morning I was awakened by my valet, who said that the Idanowicz's insisted on seeing me, having an urgent affair to communicate; I got up and saw the two brothers, pale and frightened, and they told me the story of the apparition. Being myself a convinced Spiritualist, . . . I decided to go with Mr. Vincent Idanowicz to Gajsin, in order to examine into the assertions made by the "guardian angel," as Mr. Idanowicz justly calls him.

The Jew Sierota denied it flatly and maintained that what he had said about buying the cloak from Mr. Lassota was strictly accurate. I then called on the judge at Gajsin, who confirmed the statement that his predecessor had died of phthisis, but knew nothing about his effects, which had probably been taken possession of by his heirs. Finally, he advised me to consult the second-hand dealer, Boruch Fonkonogi; the latter told me that he had bought all the effects of the late judge, except a fur cloak, which had been bought by Izloma Sierota. We showed him the fur cloak and he recognised it at once and said that he was ready to swear to the truth of what he affirmed.

JOSEPH DE KRONHELM.

Mr. Solovovo wrote to Mr. Kronhelm, asking him for further particulars of the case, and forwarded to Professor Sidgwick the reply received, with his own translation of it, part of which is here printed.

Tchetcheliowka, August 3rd/15th, 1895.

SIR,—Much to my regret it is but with one half of your request that I am able to comply. I have not got all the proofs you are asking for of the reality of the apparition of the late Wischnewsky's ghost to Mr. Zdanovitch;

as for making inquiries, it would be for me a great inconvenience, owing to the absence of the persons required. I am able to give a satisfactory reply only to the first point of your letter, as I append to this letter Mr. Zdanovitch's attestation of the truth of the fact he had communicated to me, viz., as to his having bought of Sirota a fur cloak, and as to the ghost of the deceased Wischnevsky having appeared to him twice; also a statement by Zdanovitch's brother that he really saw one night a man who appeared to him through a closed door and called himself Wischnevsky. . . .
—I am, etc.,

J. KRONHELM.

The statements enclosed by Mr. Kronhelm were also forwarded to Professor Sidgwick. Mr. Solovovo translates them as follows:—

ATTESTATION.

Tchetcheliovka, August 4th/16th, 1895.

The fact of my having bought of the Jew Schlioma Sirota a fur cloak and of the ghost of the deceased Wischnevsky having appeared to me twice in order to warn me against the danger of catching consumption is absolutely true. I certify its truth with my signature.

VINCENT OSIPOVITCH ZDANOVITCH.

STATEMENT.

Tchetcheliovka, August 4th/16th, 1895.

When spending the night in the same room with my brother Vincent Zdanovitch on the 12th/24th of November, 1894, I really saw, at 11 p.m., a man come in, dressed in black, who called himself Wischnevsky, and talked to my brother about his giving away the fur cloak he had bought of Sirota. The door was locked, so that it was impossible for a living man to come into the room without unlocking the door. I append my signature.

IVAN OSIPOVITCH ZDANOVITCH.

N.B.—The names "Tchetcheliovka" and "Zdanovitch" may also be written "Czczelowka" and "Zdanowicz" if we adopt the *Polish* orthography.

M. P. S.

Mr. Kronhelm in the letter above quoted had confused "Wischnevsky" with the deceased owner of the fur cloak, although in his original narrative it seemed clear that they were two distinct persons, and a good deal of correspondence took place before this mistake was cleared up. In a letter written on November 17th/29th, 1895, Mr. Solovovo informed us that Mr. Zdanovitch's attestation applied to the narrative given in the *Revue Spirite*, in which, as he remarked, though it was not expressly stated, it was certainly implied that Mr. Zdanovitch was not acquainted either with Wischnevsky or the deceased judge. Mr. Solovovo had meanwhile written to Lipovetz (the town where Wischnevsky was stated to have died—spelt "Lipowice" in the *Revue Spirite*) to make enquiries, but had received

a reply that no Government official of that name had died there at the date mentioned. He then wrote again to Mr. Kronhelm and his next letter contains further information.

December 26th/January 7th [1896].

DEAR MR. SIDGWICK,—It gives me much pleasure to be at last able to send you a good deal of additional evidence concerning the Wischnevsky case. I received Mr. Kronhelm's letter on December 21st (January 2nd), but owing to an attack of influenza, was unable to translate its contents at once.

1. You will perceive on reading Mr. Kronhelm's letter that one particularly puzzling point in the whole story has at last been cleared up. We now know that Wischnevsky and the proprietor of the fur cloak or overcoat were not one and the same person; Mr. K. states this most categorically. I suppose in his former letter to me he had merely mixed up two similar names,—Wischnevsky and Nevsky. At any rate there is no such confusion in the printed narrative.

2. The name of the locality where W. died, stated to be "Lipowice" in the *Revue Spirite*, appears to be now "Ilyintzy" or "Lintzy" (the latter being the popular form); this [is] in accordance with Mr. Kronhelm's first letter to me. The *Revue Spirite* article is full of such extraordinary misprints that we may well suppose "Lipowice" to have been one of them. Moreover, almost every name cited admits of at least two ways of being written.¹ Thus Mr. Kronhelm spells the name of his estate, "Czczelowka," whilst I have adopted for it the form "Tchetcheliowka," which is more correct so far as pronunciation is concerned. Besides, as it now appears, Mr. Kronhelm has never had much information about Wischnevsky, and Mr. Zdanovitch (alias Zdanowicz or Sdanowitsch) none at all before the apparition; both may therefore have confounded the little-known name "Lintzy" with the much better known "Lipowice" or "Lipovetz" in the same province (Kieff).

I therefore think that we need not trouble ourselves about these two points. And as you asked me last time my opinion of Mr. Kronhelm, I may say now that—so far as one may judge him by his letters—he must be a thoroughly trustworthy (morally) and painstaking gentleman. His good faith is for me above doubt.

With regard to the examining magistrate's mortal illness, it is certainly unfortunate that phthisis is not mentioned as the cause of his death in the official document. But I think we may safely rely on the priest's evidence. Last of all, if you think it necessary to have some official document about *Wischnevsky's* death, I shall try to get it; but in that case directly, not through Mr. Kronhelm. I am afraid, however, it will be difficult, as we know so little about him.

Extract from Mr. Kronhelm's letter to me (received on December 21st/January 2nd, '95/'96).—M. P. S.

The fur cloak had not belonged to Wischnevsky (whose ghost twice appeared), but to the examining magistrate, Nevsky, who died of phthisis at

¹ Of course if letters of the *Latin* alphabet be used.—M.P.S.

Gaysin. . . . Nevsky, though called a "judge" in the *Revue Spirite*, was no judge, but an examining magistrate. He lived in the town of Gaysin, where he died of phthisis. A certificate of his death is recorded in the registers of the Gaysin Cathedral, of which the Very Rev.¹ Nicander Mikhnevitch is at present the overseer; he must be applied to for an official statement. I enclose, however, with this an extract from these church registers with the Very Rev. Mikhnevitch's signature.

I enclose with this Boruch Tonkonogy's original attestation as to the fur cloak having belonged to Nevsky.

Messrs. Zdanovitch themselves knew positively nothing about Wischnevsky. The statements made by the ghost were also unknown to them. It is true that a certain Wischnevsky had been known to Mr. Domansky, my steward, who has become related to Mr. Zdanovitch (Z. married D.'s sister last year). As for myself, the information I have about Wischnevsky is very scanty. He is said to have lived at Ilyintzy (or, as the people say, Lintzy), Government of Kieff, and to have served in the Excise Department or to have been a private solicitor. I have been unable to collect more information. . . .

J. KRONHELM.

Translation of the documents annexed to Mr. Kronhelm's letter.

(1)

The overcoat which Zdanovitch bought of the Jew Schlioma Sirota had really belonged to Nevsky, who died of phthisis; and to this I append my signature.

BORUCH TONKONOGY.

(2)

Granov, *December 12th.*

I was really acquainted with Mr. Wischnevsky. I made his acquaintance at Zaslav, Government of Volhynia, and Mr. Wischnevsky told me he served [in some official institution] at Ilyintzy, Government of Kieff.—I append my signature.

ALEXANDER DOMANSKY.

(3)

Gaysin, *December 14th/28th, 1895.*

MOST HONOURABLE JOSEPH VALENTINOVITCH,²—It is very pleasant to know that there are in the district of Gaysin persons so highly educated as to carry on a correspondence for scientific purposes with Paris and London. I send you an extract from the Cathedral registers concerning Nevsky's death, who before dying had spent together with his wife two or three months at Algiers,—a French colony.

"On June 28th [July 10th], 1893, there died of an aneurism, and was buried on the 30th [12th] of the same month in the Gaysin churchyard the examining magistrate of the first district, Alexander Ivanovitch Nevsky, aged 32."

¹ Archpriest.—M.P.S.

² Mr. Kronhelm's patronymic name.—M.P.S.

In fact, however, he died of consumption; blood began to flow out of his throat.—Accept, etc.

VERY REV. NICANDER MIKHNEVITCH.

[The words in brackets are mine.—M.P.S.]

The only point now remaining on which further evidence seemed required was the death of Mr. Wischnevsky, and Mr. Solovovo continued his exertions in this direction with, as will be seen, a somewhat surprising result. He writes:—

January 6th/18th, 1896.

DEAR MR. SIDGWICK,—I wrote about a week ago to the police authorities at Lipovetz, Kieff, asking for information about Wischnevsky's death, and will probably get a reply before long.

I have ascertained that *Ilintzy*, where W. is said to have died, is situated very near the town of Lipovetz—something like twelve English miles, I think; so that there is no discrepancy on this point between the printed narrative and Mr. Kronhelm's present statements.

M. PETROVO-SOLOVOVO.

St. Petersburg, *January 24th/February 5th [1896].*

DEAR MR. SIDGWICK,—It is only to-day that I am in receipt of an official reply from the police authorities of Lipovetz, Government of Kieff, stating that a certain N. F. Wischnevsky, a private solicitor, is living at present at *Ilintzy*, district of Lipovetz, and that there has been at *Ilintzy* no other person of the same name.

I shall write to this Mr. Wischnevsky, stating the case in full, etc., and will also inform Mr. Kronhelm of this strange discovery. I doubt, however, whether Mr. Wischnevsky will be able to clear up the matter.

If you can suggest anything else, I shall comply at once with your advice.

M. PETROVO-SOLOVOVO.

The next letters give the results of Mr. Solovovo's correspondence with Mr. Wischnevsky, and some further remarks by Mr. Kronhelm.

38, *Sergievskaja*, St. Petersburg, *February 4th/16th [1896].*

DEAR MR. SIDGWICK,—I have received to-day an answer from Mr. Wischnevsky (whom we had supposed to be dead!): and I am sorry to say that his letter cannot throw any light on the subject of our inquiry.

He says that he has lived for 25 years at *Ilintzy*; and that during this interval two persons of the name of Wischnevsky¹ did live there too; but one of them left *Ilintzy* 20 years ago, and the other lives at present at *Winnitza*, *Podolia*. He also says there certainly was no Wischnevsky at *Lipovetz* in 1892.

He is not acquainted either with Mr. Kronhelm or with Mr. Zdanovitch. He met a Mr. Domansky thirty years ago, but it was not at *Zaslav*, since he

¹ Not a very uncommon name in general.—M.P.S.

has not been there since 1853; and he lived then at Jitomiz. As you see, the identity of this Domansky with Mr. Zdanovitch's brother-in-law is doubtful. He has never heard the story before, etc.

I will write again as soon as I receive a reply from Mr. Kronhelm. In my opinion, however, the absence of any positive information about the Wischnevsky of Mr. Kronhelm's narrative does not invalidate the case.

M. PETROVO-SOLOVOVO.

St. Petersburg, *March 9th/21st* [1896].

DEAR MR. SIDGWICK,—I have at last received a reply from Mr. Kronhelm, who now lives at Kieff, which explains why he did not reply to me before. He says, "I have several times written to Lipovetz, but have not learned anything; as I lived far from Lipovetz, I did not go there myself in order to find out the above-mentioned Wischnevsky, but only learnt certain details from a former inhabitant of Lipovetz, M. A. A. Domansky [which details we possess already]. . . . I did all I could to find out the truth."

Mr. Kronhelm further says there is nothing extraordinary in the fact that there lives now at Lintzy a Mr. Wischnevsky, seeing that the name is very common in the south of Russia, and is borne both by Catholics and by members of the Orthodox Church. He will ascertain, he says, to what Catholic parish Lipovetz belongs, and will then ask a Catholic priest to clear up the matter. Mr. Vincent Zdanovitch and his brother are no more in Mr. Kronhelm's service, having left him at Christmas. He has given V. Z. a certificate of good behaviour, but has not heard from him and his brother since.

M. PETROVO-SOLOVOVO.

Perhaps the most remarkable feature in this curious case is the mixture of truth and probable falsehood in the information given by the apparition. The percipient is instructed on two quite distinct subjects:—(1) the history of the cloak,—afterwards fully verified; and (2) the supposed history of the phantasmal "Wischnevsky," who, according to the evidence in our possession, is most probably a purely fictitious personage.

With regard to the first subject,—the history of the cloak,—three possible sources of the information may be suggested. First, it may have come from the deceased owner of the cloak. This hypothesis does not seem to have occurred to any of the persons concerned, and indeed has little to recommend it. If it was the magistrate Nevsky who was communicating, why did he give a wrong name and address? His words would have carried greater weight if he had announced himself frankly as the owner of the cloak.

The second hypothesis is that the information was obtained through some kind of clairvoyance on the part of Mr. Zdanovitch. It may have been telepathic clairvoyance, the agent being the Jew dealer, whose guilty conscience—shown apparently by his telling a

falsehood about the cloak—may have been the exciting cause of the telepathic impact. Two cases of veridical, possibly telepathic, impressions with regard to criminal actions of a more serious kind are given by Mrs. McCall Black in the *Journal S.P.R.*, Vol. V., pp. 270 and 272. In the first, Mrs. Black, discovering her purse stolen, had an impression that it had been taken by a certain person, whom she had no reason for suspecting, and that it was then in a certain place. Immediate search was made and the purse found. On another occasion, after a burglary in her house, she dreamt that two persons were concerned in it, one known to her and the other not, and directions were given how to treat each of them. She was told the name and address of the unknown thief in her dream, and she wrote to him next day and finally recovered all her property. In another case given in Mr. Myers' paper on *The Subliminal Self* in the *Proceedings S.P.R.*, Vol. XI., Part XXIX., p. 459, Dr. D. J. Parsons, going to his office with his nephew to consult a book, was prevented by a sudden and unaccountable impulse from going in himself. His nephew went in alone and was shot at, but not injured, by a man who was hiding near by with the intention of murdering Dr. Parsons.

The third hypothesis is that the facts given were subconsciously known to Mr. Zdanovitch beforehand. It must be remembered that he lived near the town of Gaysin, to which the deceased magistrate belonged, and may have been in the habit of going there frequently. Nevsky, being probably a somewhat important personage in the town, may have been pointed out to him once or twice, and may then have been wearing the cloak. He may easily have forgotten this encounter; but if it ever took place, he might then have noticed some mark on the cloak by which he afterwards subconsciously recognized it. Something in the Jew's manner, again, may have led him to suspect some nefarious dealing. Possibly the subliminal self of the average half-educated Russian lives in a chronic state of suspicion of the average Jew.

We have abundant evidence of the superior acuteness of the subliminal to the supraliminal self, both in making observations and in drawing conclusions from them, and though this does not explain why the conclusions should be presented in an elaborate dramatic form rather than in a plain straightforward manner, there are numerous instances in which it actually is so,—*e.g.* the well-known case of "Miss X."'s recalling the forgotten date of Ptolemy Philadelphus by means of a crystal-vision of a Jewish Elder at work on the Septuagint (*Proceedings*, Vol. V., p. 512), and Professor Hilprecht's dream of the Assyrian inscription, given above in Professor Newbold's paper (see ante, p. 14). At the same time, it must be observed that while all the facts given in Professor Hilprecht's dream could have been deduced

from information already in his possession,—although some of it had been, as was proved, once known to him and subsequently forgotten,—there is no proof that any of the facts about the cloak had ever been known to Mr. Zdanovitch, or could have been deduced from anything within his knowledge. The case merely shares in the weakness inherent in all cases of apparently supernormal knowledge of past events,—the difficulty, namely, of completely excluding the explanation suggested. Even if this be the true explanation, however, it does not, of course, account for the apparition having been seen by both the brothers collectively; but this point will be dealt with later.

We have next to consider the significance of the personality “Wischnevsky.” Mr. Zdanovitch may possibly have heard through his future brother-in-law, Mr. Domansky, of the Mr. Wischnevsky¹ whom the latter had met at Zaslav. The town of Gaysin, near which they lived, is about 34 (English) miles from Lipovetz, near which Wischnevsky is said to have lived. Zaslav is about 120 miles from Lipovetz, and the Mr. Wischnevsky whom Mr. Domansky met there told him that he was a government official at Ilyintzy (or, Lintzy) about 12 miles from Lipovetz. They appear to have been merely casual acquaintances. It is assumed at first that the apparition represents this Wischnevsky, and that he died, as stated, in 1892. One would naturally suppose that a spirit so well acquainted with the affairs of the Gaysin magistrate would have at least an equally accurate knowledge of his own name and former occupation, and the place and date of his death. However, the police authorities at Lipovetz, who must no doubt know of all the government officials in the neighbourhood, state that the only person of this name recently inhabiting Ilyintzy is still living there, and there is no ground for connecting this living Wischnevsky with the apparition, while his identity with the Wischnevsky formerly known to Mr. Domansky is very doubtful.

We are told, moreover, that Wischnevsky is a very common name in the south of Russia; but, since all the facts given about the phantasmal Wischnevsky are entirely unsupported by the evidence, the

¹ Mrs. Verrall writes to me with regard to this case :—

“5, Selwyn Gardens, Cambridge, *May 14th*, [1896].

“One small point occurs to me as favouring your ‘third hypothesis,’ viz., that the facts were known subconsciously to the percipient. It is the undoubtedly curious resemblance in sound between the names of the apparition and the deceased owner. Had the apparition been what he described himself, I suppose we should have regarded the resemblance as merely ‘odd,’ but under the circumstances, . . . it seems to me that if Mr. Vincent Z. did, as you suggest, know subconsciously the facts about Nevsky, and had heard the name Wischnevsky, it is exceedingly likely that his subliminal self would give one name while announcing the facts known to the other person. At least this is the way, as we all know from personal experience, in which a half-remembered fact connects itself with similar facts or words.”

commonness of the name only reduces still further any force that there might have been in the "identity test." Wischnesky, in fact, plays in the story the part of a hallucinatory "Mrs. Harris," and we are led seriously to doubt whether there is any such person.

If we now compare this case with the ordinary experiences of mediums, we find that it almost always appears to them that their "communications" come from some definite personal source or sources, and it often seems purely accidental whether the person conceived of as the source is a real or an imaginary person. There is, so far as I am aware, no objective evidence whatever of the real existence of "Phinuit," or of the less well-known "Elvira," described in Dr. Ermacora's paper in the *Proceedings S.P.R.*, Part XXVIII. (Vol. XI.), p. 235. On the other hand, the utterances given in Mrs. Piper's trance constantly refer themselves to definite individuals, while her "controls" other than Phinuit are occasionally recognised by her sitters as real persons known to them. The case here under discussion seems transitional between these cases and the hallucinations of the ordinary non-mediumistic person, which are generally of a much less complicated type, affecting one sense only at a time.

Every one, however, is accustomed to meeting with the more complicated and dramatic element in his dream-conceptions, and Professor Hilprecht's dream, already referred to, of the Assyrian priest who explained to him how to decipher the inscription, is a noteworthy case in point. The conception of the priest arises naturally,—one might almost say, inevitably—out of the circumstances of the dream. But while we can see the probable causes at work in his construction, Wischnesky seems a purely fancy sketch.

His being represented as a deceased person is another point of resemblance to the mediumistic type. For in accordance with their preconceived ideas, mediums constantly regard their "communications" as coming from such spirits, and the element sometimes obtrudes itself into the midst of a partially veridical communication. Two instances of this are given in Mr. Myers' paper on "The Subliminal Consciousness: Motor Automatism," in the *Proceedings S.P.R.*, Vol. IX., pp. 65 and 67. In the first, the medium gives some correct information about an early friend of the sitter's, but states incorrectly that he is dead at the time. In the second, after some rather striking statements about the sitter's deceased father, the medium gives the name, and date and cause of death—by accident—of a former pupil of his, the name of the clergyman who preached the funeral sermon, and the text from which he preached. The names were those of real persons known to the sitter, and the accident was one which he had feared might take place, but it had never actually occurred. Later on in the same paper, among the experiences of "Miss A.," is given the curious case of "John Black"

(loc. cit., p. 84), who on his first appearance announces himself as dead, but is found afterwards to be alive.

There remains one more remarkable feature in the case, viz., that the apparition was seen and heard by Mr. Zdanovitch's brother as well as by himself. The impressions of Mr. Ivan Zdanovitch, however, cannot be considered independent of those of his brother. It was only after hearing of his brother's experience of the preceding night that he himself saw the apparition. If he was sufficiently impressionable to experience anything, it would be likely to take the form already suggested to him, and accordingly the second experience is hardly more than a mere repetition of the first. The only additional points are the statements relating to the former occupation and death of Wischnevsky, and these are just the details which investigation has shown to be probably erroneous.

The significance of collective hallucinations is discussed in the "Report on the Census of Hallucinations," in the *Proceedings S.P.R.*, Vol. X., pp. 319-326, where it is maintained that hallucinations,—whether veridical or falsidical,—may be transmitted from one person to another by verbal or telepathic suggestion, or by both kinds of suggestion acting together, and that it is generally unnecessary to assume any agency external to the minds of the two percipients. This theory explains the cases where the hallucination represents some inanimate object or animal, and brings collective hallucinations under the same category as "simultaneous dreams," such as those given in *Phantasms of the Living*, Vol. I., pp. 314 to 316, or that narrated by Miss Bidder (see *Journal S.P.R.*, Vol. IV, p. 344), in which she and her sister dreamt at the same time of a pre-historic human skeleton with a long snout.

As the conception of telepathy was deduced from a large number of experiments, in the great majority of which the ideas transferred were trivial in the extreme, so these trivial spontaneous cases may give us the clue to the true explanation of cases whose psychological significance is apt to be obscured by emotional considerations. For any one who admits the possibility of telepathy, it would be not only unnecessary but absurd, to maintain that these dreams of the Miss Bidders were caused by an external agent; and it seems to me equally unnecessary—though not, of course, equally absurd—to assume an external agent in the present case. We know that verbal suggestion may occasionally produce hallucinations and there was undoubtedly verbal suggestion here, while this may have been supplemented at the moment by telepathic suggestion from one percipient to the other.

SUPPLEMENT.

JAMES BRAID ; HIS WORK AND WRITINGS.

BY DR. J. MILNE BRAMWELL.

The following are all the books and articles by Braid on the subject of hypnotism which I have been able to trace :—

1. *Satanic Agency and Mesmerism reviewed, in a letter to the Rev. H. McNeile, A.M., in Reply to a Sermon preached by him.* [1842, 12mo.]
2. *Neurypnology, or the Rationale of Nervous Sleep, considered in Relation to Animal Magnetism, illustrated by numerous cases of successful application in the Relief and Cure of Disease.* [1843, 12mo, pp. 281.]
3. *The Power of the Mind over the Body, an Experimental Inquiry into the Nature and Cause of the Phenomena attributed by Baron Reichenbach and others to a "New Imponderable."* [1846.]
4. *Observations on Trance or Human Hybernation.* [1850.]
5. *Electro-Biological Phenomena, considered physiologically and psychologically, from the Monthly Journal of Medical Science for June, 1851, with Appendix.*
6. *Magic, Witchcraft, Animal Magnetism, Hypnotism and Electro-Biology ; being a Digest of the latest Views of the Author on these Subjects.* Third Edition, greatly enlarged, embracing observations on J. C. Colquhoun's *History of Magnetism.* [1852.]
7. *Hypnotic Therapeutics, Illustrated by Cases, with an Appendix on Table-Turning and Spirit-Rapping.* Reprinted from the *Monthly Journal of Medical Science* for July, 1853.
8. *The Physiology of Fascination, and the Critics Criticised.* [1855.] The second part is a reply to the attacks made in the *Zoist.*
9. *Observations on the Nature and Treatment of Certain Forms of Paralysis.* [1855.]

Articles in the *Medical Times* :—

10. "Animal Magnetism." Vol. V., 1841-42, p. 283.
11. "Animal Magnetism." Vol. V., p. 308.
12. "Neuro-Hypnotism." Vol. VI., 1842, p. 230.
13. "Phreno-Mesmerism." Vol. IX., 1843-44, p. 74.
14. "Mr. Braid on Mesmerism." Vol. IX., p. 203.
15. "Observations on some Mesmeric Phenomena." Vol. IX., p. 225.
16. "Observations on Mesmeric and Hypnotic Phenomena." Vol. X., 1844, pp. 31 and 47.

17. "Case of Natural Somnambulism and Catalepsy, treated by Hypnotism ; with remarks on the Phenomena presented during Spontaneous Somnambulism, as well as that produced by various Artificial Processes." Vol. XI., 1844-45, pp. 77, 95, and 134.
18. "Experimental Inquiry whether Hypnotic and Mesmeric Manifestations can be adduced in Proof of Phrenology." Vol. XI., p. 181.
19. "Magic, Mesmerism, Hypnotism, &c., Historically and Physiologically considered." Vol. XI., pp. 201, 224, 270, 296, 399, and 439.
20. "Case of Natural Somnambulism," &c. Vol. XII., 1845, p. 117. [Article giving further history of case already reported.]
21. "The Fakirs of India." Vol. XII., p. 437.
22. "Dr. Elliotson and Mr. Braid." Vol. XIII., 1845-46, pp. 99, 120, and 141.
23. "On the Power of the Mind over the Body ; an Experimental Inquiry into the Nature and Cause of the Phenomena attributed by Baron Reichenbach and others to a 'New Imponderable.'" Vol. XIV., 1846, pp. 214, 252, and 273.
24. "Facts and Observations as to the Relative Value of Mesmeric and Hypnotic Coma and Ethereal Narcotism, for the Mitigation or entire Prevention of Pain during Surgical Operations." Vol. XV., 1846-47, p. 381 ; continued : Vol. XVI., 1847, p. 10.
25. "Observations on the Use of Ether for Preventing Pain during Surgical Operations, and the Moral Abuse it is capable of being converted to." Vol. XVI., p. 130.
26. "Mr. Braid and Dr. Elliotson." Vol. XVII., 1847-48, p. 106.
27. "Mr. Braid and Mr. Wakley." Vol. XVII., p. 163.
28. "Observations on Trance or Human Hibernation." Vol. XXI., 1850, pp. 351, 401, and 416.

In the *Lancet* :—

29. "Queries respecting the Alleged Voluntary Trance of Fakirs in India." Vol. II., 1845, p. 325.

In the *Monthly Journal of Medical Science* :—

30. "Hypnotic Therapeutics, Illustrated by Cases." Vol. VIII., third series, 1853, p. 14.

In the *Edinburgh Medical and Surgical Journal* :—

31. "The Power of the Mind over the Body ; an Experimental Inquiry into the Nature and Cause of the Phenomena attributed by Baron Reichenbach and others to a 'New Imponderable.'" Vol. LXVI., 1846, p. 286.
32. "Facts and Observations as to the relative Value of Mesmeric and Hypnotic Coma, and Ethereal Narcotism, for the Mitigation or entire Prevention of Pain during Surgical Operations." Vol. LXVII., 1847, p. 588.
33. "On the Use and Abuse of Anæsthetic Agents, and the best Modes of Rousing Patients who have been too intensely affected by them." Vol. LXX., 1848, p. 486.

The name of James Braid is familiar to all students of hypnotism and is rarely mentioned by them without due credit being given to the important part he played in rescuing that science from ignorance and superstition. Regret is usually expressed, however, that he held many erroneous views, which it is claimed the researches of more recent investigators have disproved. The following, as far as I can gather from hypnotic works and from conversation with those interested in hypnotism, are the almost universally adopted opinions in reference to Braid. (1) He was an English surgeon. (2) He believed in phrenology. (3) He was the discoverer or rediscoverer of the subjective origin of hypnotic phenomena. (4) He knew nothing of suggestion. In all this, one thing, and one alone, is correct, namely, that Braid was the rediscoverer of the subjective nature of hypnotic phenomena. This estimate of Braid has arisen from imperfect knowledge of his writings. Few seem to be acquainted with any of his works except "*Neurypnology*," or with the fact that this was only one of a long series on the subject of hypnotism, and that in the later ones his views completely changed. The necessarily limited length of this article will prevent my dealing with each of these separately and in detail. I propose, therefore, first to refer shortly to his earliest publication, then to give an account of the theories which are found in "*Neurypnology*" alone, and finally to present a general picture of his later opinions.

Meanwhile, a word as to Braid's nationality and to the events which led to his hypnotic researches. The names of Elliotson, Esdaile and Braid stand out prominently in the history of mesmerism and hypnotism in this country, and it is not without interest to note that all of them studied at Edinburgh University, and that both Esdaile and Braid were of Scotch birth and parentage, the latter being born at Rylaw House, Fifeshire, about 1795.

On November 13th, 1841, Braid, for the first time, was present at a mesmeric séance, the operator being Lafontaine. At this time mesmeric phenomena were believed to be due either to mysterious force or fluid, self-deception or trickery. Braid held the latter theory and, on the first occasion, saw nothing to cause him to alter his views. At the next séance, six days later, he noticed that one subject was unable to open his eyes. Braid regarded this as a real phenomenon and was anxious to discover its physiological cause; and the following evening, when the case was again operated on, he believed he had done so. After making a series of experiments, chiefly on personal friends and relatives, he expressed his conviction that the phenomena he had witnessed were purely subjective, and began almost immediately to place these views before the public, his first lecture being delivered on December 27th, 1841.

In 1842, Braid offered a paper on the subject of hypnotism to the Medical Section of the British Association. This was refused, whereupon he gave a *conversazione* at which many members of the Association were present, read his paper and showed cases. His first work on mesmerism was entitled "*Satanic Agency and Mesmerism* reviewed, in a letter to the Rev. H. McNeile, A.M., of Liverpool, in Reply to a Sermon preached by him at St. Jude's Church, Liverpool, on Sunday, April 10th, 1842." McNeile had charged Braid with "refusing to state the laws of nature by the uniform

action of which mesmeric phenomena were produced." To this Braid replied that he had always explained the phenomena on physiological and psychological principles, but that McNeile had refused to attend his lectures or to read any account of them. Braid at this time believed in the physical origin of hypnotic phenomena, and referred to the theory by which he attempted to explain certain changes in the central nervous system, more particularly decreased functional activity, as the result of the exhaustion of other nerve centres from continued monotonous stimulation. "But," he said, "even supposing my theories did not explain the whole of the phenomena, surely, when beneficial application could be made of the extent of the knowledge we had acquired, we ought to be at liberty to do so without being stigmatised from the pulpit as necromancers, or producing our effects by 'Satanic agency.' Supposing a hundred passengers start in one of your packets, and 20 or 30 of them become sea-sick, and the others escape, would it be fair to implicate the captain in a charge of acting by Satanic agency because the *whole* were not sick, and because, according to McNeile, 'if it be in nature, it will operate uniformly and not capriciously? . . . If it operate capriciously, then there is some mischievous agent at work; and we are not ignorant of the devices of the devil.' Would any man but Mr. McNeile say that, because the captain gave the signal to heave anchor, to spread the sails, and other 'talismanic tokens' for steering the vessel, and because only *part* of the passengers became sick, he was consequently affecting *them* through Satanic agency;—or that it would alter the matter one whit because medical men could not assign the true cause of this, or why any one should be so affected?"

"NEURYPNOLOGY."

"Neurypnology, or the Rationale of Nervous Sleep," was published by Braid in 1843, and 800 copies were sold in a few months.

At the séance already referred to, Braid had observed that the mesmeric condition was induced by fixed staring, and concluded that the inability to open the eyes arose from paralysis of certain nerve centres and exhaustion of the levator muscles. "I expressed," he said, "my entire conviction that the phenomena of mesmerism were to be accounted for on the principle of the derangement of the state of the cerebral spinal centres, and of the circulatory, respiratory and muscular systems, induced by a fixed stare, absolute repose of body, fixed attention and suppressed respiration, concomitant with that fixity of attention. That the whole depended on the physical and psychical condition of the patient, arising from the causes referred to, and not at all on the volition, or passes of the operator throwing out magnetic fluid, or exciting to activity some mystical, universal fluid or medium."

Braid induced hypnosis by making the subject look at a bright object, held in such a position above the forehead as was calculated to produce the greatest possible strain upon the eyes and eyelids, while at the same time the mind was to be riveted on the idea of that one object. Braid not only maintained that the condition was a purely subjective one, produced in this mechanical way, but also claimed to have successfully demonstrated that it could be induced in like manner in persons who had never heard of mesmerism and who were ignorant of what was expected of them. In illustration of

this, he mentioned that he had hypnotised one of his servants, who knew nothing of mesmerism, by giving him such directions as were calculated to impress his mind with the idea that his fixed attention was required merely for the purpose of watching a chemical experiment with which he was already familiar.

After having established the subjective origin of the phenonema, Braid proposed that they should be called hypnotic, instead of mesmeric, and invented the following terminology :—

Neurypnology, the rationale or doctrine of nervous sleep.

Neuro-hypnotism, or nervous sleep, a peculiar condition of the nervous system produced by artificial contrivance.

Then, for the sake of brevity, suppressing the prefix “neuro,” he gave the following terms :—

Hypnotic, the state or condition of nervous sleep.

Hypnotise, to induce nervous sleep.

Hypnotised, put into the condition of nervous sleep.

Hypnotism, nervous sleep.

Dehypnotise, to restore from the state of nervous sleep.

Hypnotist, one who practises neuro-hypnotism.

This terminology is closely followed at the present day, the main difference being that one now speaks of the science of hypnotism, instead of that of neurypnology, applying the term hypnosis to the artificial sleep, and hypnotic both to the phenomena and to the subject in whom they are induced.

Braid at this date came to the following general conclusions :—

1. “That the effect of a continued fixation of the mental and visual eye, in the manner and with the concomitant circumstances pointed out, is to throw the nervous system into a new condition, accompanied with a state of somnolence, and of a tendency, according to the mode of management, of exciting a variety of phenomena different from those we obtain either in the ordinary sleep, or during the waking condition.

2. “That there is at first a state of high excitement of all the organs of special sense, sight excepted, and a great increase of muscular power; and that the senses afterwards become torpid in a much greater degree than what occurs in natural sleep.

3. “That in this condition we have the power of directing or concentrating nervous energy, raising or depressing it in a remarkable degree at will, locally or generally.

4. “That in this state, we have the power of exciting the force and frequency of the heart’s action, and the state of the circulation, locally or generally, in a surprising degree.

5. “That whilst in this peculiar condition, we have the power of regulating and controlling muscular tone and energy in a remarkable manner and degree.

6. “That we also acquire the power of producing rapid and important changes in the state of the capillary circulation, and on the whole of the secretions and excretions of the body, as proved by the application of chemical tests.

7. "That this power can be beneficially directed to the cure of a variety of diseases which were most intractable, or altogether incurable, by ordinary treatment.

8. "That this agency may be rendered available in moderating, or entirely preventing, the pain incident to patients while undergoing surgical operations.

9. "That during hypnotism, by manipulating the cranium and face, we can excite certain mental and bodily manifestations, according to the part touched."

After hypnotising his patients, Braid manipulated them in various ways, with a view of producing changes in the muscular and circulatory systems, believing that this excited the different hypnotic phenomena and played an important part in the cure of disease. He also held that cures could sometimes be effected by similar methods in the waking condition. From the description of his manner of inducing hypnosis, it is evident that he employed verbal suggestion, but, at this time, this was apparently done unconsciously and in ignorance of its value.

Braid found that he could terminate the hypnotic condition by means of a current of cold air. He also noticed that he could make a rigid limb flexible by blowing on it; that he could restore the sight to one eye by the same means and leave the other insensible; excite one half of the body to action, while the other remained rigid and torpid, or make the patient pass from a general state of inactivity of the organs of special sense and tonic muscular rigidity to the opposite condition of extreme mobility and excited sensibility. He acknowledged that he was unable to explain these extraordinary phenomena, but stated that he had no difficulty in reproducing them, that they were independent of any "rapport" between operator and patient and invariably appeared, no matter whether the current of air came from the lips, a pair of bellows, the motion of the hand, or any inanimate object.

The subjective explanation of the origin of mesmeric phenomena was not a new one, and had already been given both by the Abbé Faria and Bertrand. Their views, however, if not entirely forgotten, exercised no practical influence on mesmeric theory, and Braid evidently was unacquainted with them when he commenced his mesmeric researches; thus, his conclusions were arrived at independently, and successfully substituted for those universally held in his day. At a later date, when his opponents pointed out the similarity between the theories, Braid asserted that this was more apparent than real, as Faria had attributed everything to the effect of the imagination; on this point they differed, but were alike in asserting that neither contact nor magnetic fluid was necessary.

At this time Braid did not believe that the phenomena of hypnotism were the result of attention, for, in speaking of some articles on animal magnetism which had appeared in the *Medical Gazette* in 1833, he said: "In the writer's opinion, the phenomena are the result of attention strongly directly to different parts of the body, whereas, by my method, the attention is riveted to something outside the body."

In opposition to the theory that hypnotism resembled reverie, Braid said: "Reverie proceeds from an unusual quiescence of the brain, and inability of the mind to direct itself strongly to any one point. There is

defect in the attention, which instead of being fixed on one subject, wanders over a thousand, and even on these is feebly and ineffectively directed. This is the very reverse of what is induced by my plan, because I rivet the attention to one idea, and the eyes to one point, as the primary and imperative condition."

Some experiments which Braid made as to the methods of inducing hypnosis appear to have first suggested alterations in his hypnotic theory and shaken his faith in the purely physical explanation of hypnotic phenomena. At first he had required his patients to look for a considerable time at some inanimate object, until the eyelids closed involuntarily. He frequently found, however, that this was followed by pain and slight conjunctivitis, and, in order to avoid this, he closed the patient's eyes at a much earlier stage. Despite this, he was able to hypnotise as easily as before and without subsequent unpleasant sensations. This led to further experiment, when he found he could induce hypnosis as readily in the dark, or with the eyes bandaged, as in the light and with the eyes uncovered; it being only necessary to keep the eyes fixed and the body and mind at absolute rest. He always failed, however, in young children and in persons of weak intellect, or of restless and excitable minds, who were unable to comply with these simple rules. As he succeeded with the blind, Braid concluded that the impression was made through the mind and not through the optic nerve. "It is important to remark," he said, "that the oftener patients are hypnotised, from association of ideas and habits, the more susceptible they become; and in this way they are liable to be affected *entirely through the imagination*. Thus if they consider or imagine there is something doing, although they do not see it, from which they are to be affected, they will become affected; but on the contrary, the most expert hypnotist in the world may exert all his efforts in vain, if the party does not expect it, and mentally and bodily comply, and thus yield to it."

Braid at first was inclined to believe in phrenology and considered it possible that the passions, emotions and intellectual faculties could be excited during hypnosis by simple contact or friction over certain sympathetic points of the head and face. He cited 12 cases in which he thought he had observed these phenomena in subjects who were ignorant of phrenology, and who were not influenced by previous training, or by leading questions and suggestions on the part of the operator. He was not satisfied with these results, however, and stated that it was his intention to conduct a new series of experiments on fresh patients in order to ascertain to what extent it might be practicable, by arbitrary associations, to excite the opposite tendencies from the same point. He also thought it probable that errors might have arisen through the remarkable docility of hypnotic subjects, which made them anxious to comply with every suggestion or indication given by the operator. In reference to the proposed further experiments, he said, "There will thus be both positive and negative proof to aid us in determining whether there is any natural and necessary connection existing between the points manipulated and the manifestations excited; whether it may depend entirely upon associations which have originated from some partial knowledge of phrenology, from arbitrary arrangement, or accidental circumstances or causes which have been entirely overlooked or forgotten;

and which afterwards produce the result from that ultimate law of the mind, which ordains that the repetition of a definite sensation shall be followed by a renovation of the past feelings with which it was before associated. I am inclined to adopt this course, from my anxiety to remove every possible source of error, my object being neither to prove nor disprove the truth of phrenology. That during the nervous sleep, there is a power of exciting patients to manifest the passions and emotions, and certain mental functions, in a more striking manner than the same individuals are capable of in the waking condition, no one can doubt who has seen much of these experiments. And it can in no way alter the importance of hypnotism as a curative power and extraordinary means of controlling and directing mental functions in a peculiar manner, by a simple association of impressions, whether we thus act on the brain as a single organ, or as a combination of separate organs; or whether the primary associations have originated from a special organic connection, or from some accidental and unknown cause, or from preconsulted arrangement and arbitrary association."

The following account of some hypnotic phenomena is drawn partly from "Neurypnology," and partly from other sources.

Braid recognised two distinct hypnotic conditions, which correspond practically with the late Mr. Edmund Gurney's "alert" and "deep" stages, also intermediate states between the two, one frequently gliding imperceptibly into the other. The deep stage was characterised by a condition of torpor more profound than that of natural sleep; the alert by exaltation of the special senses, increase in muscular sense and power, and exaltation of certain mental faculties. By the sense of smell, some patients were able to detect any person known to them, or to find the owner of any glove. They first smelt the glove and then unhesitatingly presented it to its owner, choosing him from amongst a large company. If the nostrils were stopped, however, the apparent clairvoyant faculty instantly disappeared. The sense of touch and the muscular sense were sometimes so remarkably increased that some subjects were able to write with great accuracy during hypnosis, when effectual precautions were taken to prevent their being able to see. They crossed the t's and dotted the i's and could even go back a line, strike out a letter and put it in its proper place. One patient could correct the writing on a whole page of note-paper, but if the relative positions of the table and paper were changed, the alterations ceased to be placed correctly. The following is an interesting account, published in the *Medical Times* for September, 1847, by an independent observer, of the power possessed by certain somnambules of imitating language and song.

"On Tuesday last, the 3rd inst., Mlle. Jenny Lind, accompanied by Mr. and Mrs. Schwabe, and a few of their friends, attended a séance at Mr. Braid's for the purpose of witnessing some of the extraordinary phenomena of hypnotism. There were two girls who work in a warehouse, and who had just come in their working attire. Having thrown them into the sleep, Mr. Braid sat down to the piano, and the moment he began playing, both somnambules arose and approached the instrument, when they joined him in a trio. Having awoke one of the girls, Mr. Braid said, although she was ignorant of the grammar of her own language when awake, that when in the sleep she would prove herself competent to accompany

any one in the room in singing songs in any language, giving both notes and words correctly—a feat which she was quite incompetent to perform in the waking condition. He then requested any one in the room to put her to the test, when Mr. Schwabe sat down to the instrument, and played and sang a German song, in which she accompanied him correctly, giving both notes and words simultaneously with Mr. Schwabe. Another gentleman then tried her with one in Swedish, in which she succeeded. Next the queen of song, the far-famed Jenny Lind, sat down to the instrument and sang most beautifully a slow air, with Swedish words, which the somnambulist accompanied her in, in the most perfect manner both as regards words and music. Jenny now seemed resolved to test the powers of the somnambulist to the utmost by a continued strain of the most difficult roudades and cadenzas, for which she is so famous, including some of her extraordinary sostenuto notes, with all their inflections from pianissimo to forte crescendo, and again diminishing to thread-like pianissimo, but in all these fantastic tricks and displays of genius by the Swedish nightingale, even to the shake, she was so closely and accurately tracked by the somnambulist, that several in the room occasionally could not have told, merely by hearing, that there were two individuals singing—so instantaneously did she catch the notes, and so perfectly did their voices blend and accord. Next, Jenny having been told by Mr. Braid that she might be tested in some other language, this charming songstress commenced ‘*Casta Diva*,’ and the ‘*A la Bell a mi Ritornella*,’ in which the fidelity of the somnambulist’s performance, both in words and music, was most perfect, and fully justified all Mr. Braid had alleged regarding her powers. She was also tested by Mlle. Lind in merely imitating language, when she gave most exact imitations; and Mr. Schwabe also tried her by some most difficult combinations of sound, which he said he knew no one was capable of imitating correctly without much practice, but the somnambulist imitated them correctly at once, and that whether spoken slowly or quickly. When the girl was aroused, she had no recollection of anything which had been done by her, or that she had afforded such a high gratification to all present, by proving the wonderful powers of imitation which are acquired by some patients during a state of artificial somnambulism; she said she merely felt somewhat out of breath, as if she had been running.”

Despite long perseverance, Braid never succeeded in hypnotising idiots, and he found that one patient, who had been easily hypnotised when well, became refractory during the delirium of fever. With the majority of his patients there was no loss of consciousness; they simply became lethargic and retained complete recollection of all that had occurred; with others many hypnotic phenomena could be produced without their having previously passed through a condition in any way resembling sleep. This state was popularly described as the “electro-biological,” a name which Braid justly termed ridiculous. In some instances hypnotised patients, even after having undergone surgical operations, remembered nothing, while others, to whom he had taught Greek, Latin, French, and Italian during hypnosis, forgot it all when awake. When rehypnotised the lost memory frequently returned spontaneously, but if it did not do so, the operator could revive it by placing his hand on any part of the patient’s body and thus giving a physical aid to the concentration of attention. Suggestions made to these patients during

hypnosis were fulfilled in the waking state, despite the fact that they had apparently been entirely forgotten.

ANALOGOUS STATES.

In hypnotism, Braid found an explanation of the prolonged trance of the fakirs and of the voluntary suspended animation of Colonel Townsend ; some instances of the former being remarkably well authenticated by the evidence of English officers of position. On one occasion a fakir was buried at a depth of four feet ; it was arranged that the experiment should last nine days and an English officer had the grave constantly watched by sentinels. At the end of the third day, the officer, fearing the fakir might be dead, and that this would be the cause of trouble to himself, insisted on the termination of the experiment. When the man was dug up he was as stiff and cold as a mummy and apparently lifeless ; he revived, however, after being manipulated for about a quarter of an hour.

Braid considered that there was a marked resemblance between the condition produced by hashisch and certain hypnotic states, and in support of this, quoted the following experiments made by Dr. O'Shaughnessy at Calcutta, and published in Pereira's "Elements of Materia Medica";— "At 2 p.m. a grain of the resin of hemp was given to a rheumatic patient. At 4 p.m. he was very talkative, sang, called loudly for an extra supply of food and declared himself in perfect health. At 6 p.m. he was asleep. At 8 p.m. he was found insensible, but breathing with perfect regularity, the pulse and skin natural, and the pupils freely contractile on the approach of light. Happening by chance to lift up the patient's arm, the professional reader will judge of my astonishment," observes Dr. O., "when I found it remained in the posture in which I had placed it. The patient had become cataleptic. We raised him to a sitting posture, and placed his arms and limbs in every imaginable attitude. A waxen figure could not be more pliant. He continued in this state till 1 a.m., when consciousness and voluntary motion quickly returned." A similar experiment was made with another patient with like results.

Before considering the later works, it will be well to examine some of the opinions expressed in reference to Braid, which apparently indicate that the writers were acquainted with "Neurypnology" alone. Dr. Bastian, in his article on Braidism in Quain's *Dictionary of Medicine*, expressed his regret that Braid did not reject all the so-called phenomena of phrenohypnotism. Professor Romanes also appears to have been only acquainted with "Neurypnology," and mentions it alone in his article on Hypnotism in the *Nineteenth Century* for September, 1880. He refers to the fact that Heidenhain omits all reference to Braid and maintains that it would be doing scant justice to Neurypnology to say that all Heidenhain's results had been anticipated. For, "in the vast number of careful experiments which it [Neurypnology] records—all undertaken and prosecuted in a manner strictly scientific—it carried the inquiry into various provinces which have not been entered by Heidenhain. No one can read Braid's work without being impressed by the care and candour with which, amid violent opposition from all quarters, his investigations were pursued ; and now, when after the lapse of nearly 40 years, his results are beginning to receive the confirmation

which they deserve, the physiologists who yield it ought not to forget the credit that is due to the earliest, the most laborious, and the hitherto most extensive investigator of the phenomena of what he calls hypnotism."

The following passage in "Suggestive Therapeutics," published in 1890, shows that, at that date at all events, Bernheim was unacquainted with Braid's advanced theories:—"Braid made use of suggestion without knowing it. We must come down to 1860 to find the doctrine of suggestion freed from all the elements that falsified it, even in the hands of Braid himself, and applied in the simplest manner to therapeutics. The patient is put to sleep by means of suggestion. He is treated by means of suggestion. The subject being hypnotised, Liébeault's method consists in affirming in a loud voice the disappearance of his symptoms. Such is the method of therapeutic suggestion of which M. Liébeault is the founder. He was the first to clearly establish that the cures of pain by the old magnetisers, and even by Braid's hypnotic operations, are not the work either of a mysterious fluid or of physiological modifications due to special manipulations, but the work of suggestion alone."

In the *Journal of the Society for Psychical Research* for March, 1896, M. Boirac, in replying to Dr. Walter Leaf's criticism of "L'Hypothèse du Magnétisme Animal," which appeared in the number of the *Proceedings* for December, 1895 (Part XXIX.), states that he associates Braid with the Paris School (hypnotism) and Faria with the Nancy School (suggestion).

GENERAL THEORY.

In the commencement of "Neurypnology," as we have seen, Braid explained hypnotic phenomena mainly from the physical standpoint, and held that they could be induced by fixed staring at an inanimate object, even in persons who had heard nothing of hypnotism or mesmerism, and who were ignorant of what was required of them. In the later chapters, however, these views were considerably modified and he talks of persons being hypnotised entirely through their imagination, and also of the uselessness of the efforts of the most expert mesmeriser if the patient were ignorant of his aims. In his other works the physical theory is entirely abandoned in favour of a purely psychical one. After explaining what induced him to adopt the term hypnotism in preference to that of mesmerism, he stated that the word hypnotism was liable to grave objections, as under it had been comprised, not a single state, but a series of stages or conditions varying in every conceivable degree, and that:—"In correct phraseology, the term hypnotism ought to be restricted to the phenomena manifested in patients who actually pass into a state of sleep, and who remember nothing on awakening of what has transpired. Of those who may be relieved or cured by hypnotic processes, perhaps not more than one in ten ever passes into the state of oblivious sleep. The term hypnotism, therefore, is apt to confuse them and lead them to suspect that they cannot be benefited by processes which fail to produce the most obvious indication which their name imports." Braid, therefore, proposed to alone call hypnotic those cases of artificial sleep followed by amnesia on awakening, but in which there is perfect recollection of what has happened when the patient is again hypnotised. Hypnotic coma he described as that deeper stage in which the lost memory

is not revived in subsequent hypnoses. "I became satisfied," he said, "that the hypnotic state was essentially a state of mental concentration, during which the faculties of the mind of the patient were so engrossed with a single idea or train of thought as, for the nonce, to render it dead or indifferent to all other considerations and influences. The consequence of this concentrated attention, again, to the subject in hand, intensified, in a correspondingly greater degree, whatever influence the mind of the individual could produce upon his physical functions during the waking condition, when his attention was so much more diffused and distracted by other impressions. Moreover, inasmuch as words spoken, or various sensible impressions made on the body of an individual by a second party, act as suggestions of thought and action to the person impressed, so as to draw and fix his attention to one part or function of his body, and withdraw it from others,—whatever influence suggestions and impressions are capable of producing during the ordinary waking condition, should naturally be expected to act with correspondingly greater effect during the *nervous sleep*, when the attention is so much more concentrated, and the imagination, faith, and expectant ideas in the mind of the patient are so much more intense than in the ordinary waking condition. Now, this is precisely what happens; and I am persuaded that this is the most philosophical mode of viewing the subject; and it renders the whole clear, simple, and intelligible to the apprehension of the unprejudiced person, who may at once perceive that the real object and tendency of the various processes for inducing a state of hypnotism or mesmerism is obviously to induce a state of abstraction or concentration of attention—that is, a state of monoideism, whether that may be by requesting the subject to look steadfastly at some unexciting, and empty inanimate thing, or ideal object, or inducing him to watch the fixed gaze of the operator's eyes, his pointed fingers, or other manœuvres of the mesmeriser. . . . Then, inasmuch as I feel satisfied that the mental and physical phenomena which flow from the said processes result entirely from the mental impressions or dominant ideas, excited thereby in the minds of the subjects, changing or modifying the previously existing physical action, and the peculiar physical action thus superinduced reacting on their minds—and that, whether these dominant expectant ideas existed in the minds of the subjects previously, or were suggested to them after passing into the impressible condition, by audible suggestions or sensible impressions excited by manipulations of a second party—under these circumstances, I consider the following terms calculated to realise all the precision which we may desire on this point.

"Let Mono-ideology indicate the doctrine of the influence of dominant ideas in controlling mental and physical actions.

"Then Monoideism will indicate the condition resulting from the mind being possessed by dominant ideas.

"To monoideise will indicate the act of performing processes for inducing the act of monoideism.

"Monoideiser will indicate the person who monoideises.

"Monoideised will indicate the condition of the person who is in a state of monoideism.

“And Monoideo-Dynamics will indicate the mental and physical changes, whether of excitement or depression, which result from the influence of monoideism.

“And, finally, as a generic term, comprising the whole of these phenomena which result from the reciprocal actions of mind and matter upon each other, I think no term could be more appropriate than Psycho-Physiology.”

This theory was first published by Braid in 1847. The fascination of birds by serpents, the phenomena of electro-biology, of table-turning, the gyrations of the odometer of Dr. Mayo, the magnetometer of Mr. Rutter, the movements of the divining rod, the supposed levity of the human body when lifted on the tips of the fingers of four individuals, were all, according to Braid, examples of unconscious or involuntary muscular action resulting from dominant ideas. When the attention of man or animal, he said, is absorbed by an idea associated with movement, a current of nervous force is sent into the muscles and a corresponding motion produced, not only without conscious effort, but even in many instances in opposition to the volition. The subject loses the power of neutralizing the dominant idea and is irresistibly drawn or spellbound according to the nature of the impression produced, and may, in this way, be brought under the control of others by means of audible, visible, and tangible suggestions.

The mental and physical phenomena, no matter what processes were employed to induce hypnosis, resulted entirely from the mental impressions, or dominant ideas, thereby excited in the minds of the subjects. It was a matter of indifference whether these ideas existed in the subject's mind previously, or were afterwards suggested by audible suggestions or sensory impressions created by the manipulations of the operator.

Braid held that the operator acted like an engineer and called into action the forces in the patient's own organism, and controlled and directed them in accordance with the laws which governed the action of the mind upon the body.

In reference to “Electro-Biological Phenomena, considered physiologically and psychologically,” published in 1851, Braid stated that its object was to prove the subjectivity of the hypnotic and mesmeric condition, and to show that the phenomena resulted from the concentrated mental attention of the patient acting on his own physical organism, and of the changed condition of the physical action thus induced reacting on the mind of the patient. That the changed physical condition arose from the action of predominant ideas, and that these ideas might arise in the minds of the patients, and become operative on them, through their own unaided acts—or from the mere remembrance of past feelings, without any co-operation or act of a second party; and that, in certain subjects, they might also be excited by audible, visible, or tangible suggestions from another person, to any extent whatever,—even before they passed into a state of sleep. Braid stated that he had held and endeavoured to prove this theory *more than five years previously*.

In reply to a writer who had adopted in a modified form the objective theory of mesmeric phenomena, Braid says:—“If Mr. Newnham would only condescend to consider the simple subjective theory which I have ventured to propound, I think he might readily comprehend how the new modes of

excitement, or depression, or peculiar distribution of the nervous or vital influence *within the patient's own body* might arise through the influence of *his own mind acting on his physical organism*, and might thus account for all which is realised without the transmission of any occult influence from one human being to another. I readily grant, however, that the looks, words and actions of a second party may furnish suggestions influential upon others—just as a word of encouragement, spoken or written by a friend, may nerve our arm with greater power, and inspire our tongue with greater eloquence—and that a lively companion, or encouraging expression may excite us; whilst a grave companion or doubtful expression would chill and depress—and that hope and confidence, or the contrary, in the means used, may modify, to a remarkable extent, the results under *any* mode of treatment. Still, I believe that there is no positive interchange or transference of *nervous or vital force from the operator to the patient as the actual cause of these results*, as has been alleged by the mesmerists. I do *not* believe that, in such instances, A loses an amount of power equivalent to what B gains; I do *not* believe that a preacher, an orator, or an author loses an amount of vital force in *exact ratio* to the *numbers* influenced by his spoken or printed ideas, sentiments and illustrations,—which would necessarily be the case were the magnetic theory true. On the contrary, *I do believe* that the perusal of a posthumous work might be equally influential as if the book had been printed when the author was alive—and that the simple suggestion of new ideas to the mind of the reader, through the printed symbols of thought, is the real efficient cause of the future results.”

In “Neurypnology,” Braid stated that he was unable to account for the action of a current of air upon hypnotised subjects; at a later date he gave the following theory. In hypnosis the attention is concentrated upon the particular function called into action, while the others merge into a state of torpor; thus, only one function is active at any one time and hence intensely so. The arousing of any dormant function is equivalent to superseding the one in action, and he explained, therefore, the termination of a state of muscular rigidity when a current of cold air is directed to the skin, by suggesting that this called the attention to the skin, and withdrew it from the muscular sense.

Braid considered the following to be the chief points of difference between spontaneous and induced somnambulism. Spontaneous somnambulists are impelled to certain trains of action by internal impulses, while the induced tend to remain at absolute rest and to lapse into a state of profound sleep, unless excited by some impression from without.

Natural and artificial sleep were not regarded by Braid as identical, and the following are further points of contrast in addition to those already mentioned (pp. 131–2). The pupils are dilated in hypnosis and the eyelids either quiver continuously, or are firmly closed by spasmodic contractions. In passing into hypnosis, anything held in the hand is grasped still more firmly. There is an increase of the muscular sense, and hypnotic subjects possess an extraordinary power of balancing themselves. Chronic rigidity of the muscles is not followed by corresponding exhaustion. Sometimes in the hypnotic state there is excitement, similar to that produced by

wines and spirits, at others there is muscular quiescence, with acute hearing and dreamy, glowing imagination, closely resembling the condition induced by Conium. "The principal difference," he said, "between the hypnotic or nervous sleep and common sleep consists in the state or condition of the mind. In passing into common sleep, the mind is diffusive or passive, flitting from one idea to another indifferently, thereby rendering the subject unable to fix his attention on any regular train of thought, or to perform any acts requiring much effort of will. The consequence of this is that a state of passiveness is manifested during the sleep, so that audible suggestions and sensible impressions addressed to the sleeper, if not intense enough to wake him entirely, seldom do more than excite a dream, in which ideas pass through his mind without exciting definite physical acts; but, on the other hand, the active and concentrated state of the mind engendered by the processes for inducing the nervous sleep, are carried into the sleep, and, in many instances, excite the sleeper, without awaking, to speak or to exhibit physical manifestations of the suggestions received through words audibly uttered in his hearing, or ideas previously existing in his mind, or excited by sensible impressions made by touches or passes of the operator, which direct the attention of the sleeper to different parts, or excite into action certain combinations of muscles, and thereby direct his current of thought." Another difference is the wonderful power of hypnosis in curing many diseases, which had resisted natural sleep and every known agency for years. For instance, a few hypnotic sances of ten minutes each cured a patient who must have had during his long illness at least eight years' sleep.

MAGNETS, ETC.

In Braid's time the mesmerists held that magnets, certain metals, crystals, etc., possessed a peculiar power and, with sensitive subjects, were capable of producing attraction and other remarkable phenomena. Some experienced an unpleasant sensation like an aura, others got headache, or attacks of fainting or catalepsy, with spasms so violent that they apparently endangered life. Frequently there was hyperæsthesia of the special senses. Many also fancied they saw fiery bundles of light stream from the poles of the magnet. All this was said to happen even when the subjects did not see the magnets and did not know what was being done. Braid performed many experiments in order to test these statements, with the following results:—the phenomena appeared when the patients had preconceived ideas on the subject, or when these were excited by leading questions, but were invariably absent when they were ignorant of what was being done. Pretended magnets also produced the phenomena when the patients knew what was expected to occur. Reichenbach recorded an instance where, by the mere exposure of a sensitive plate in a box with a magnet, an impression had been made, as if it had been exposed to the full influence of the light. Braid repeated the experiment, and also had similar ones performed for him by an expert photographer and, when all sources of fallacy were guarded against, the results were invariably negative. According to Braid, the mind of the patient alone was sufficient to produce the effects attributed to magnetic or odyllic force and suggested ideas were capable of exciting a great variety of physical sensations and mental conditions.

The following is an account of an experiment of Braid's to show that suggestion was the true explanation of the supposed mesmeric powers of magnets and certain metals:—"When in London lately," he said, "I had the pleasure of calling upon an eminent and excellent physician, who is in the habit of using mesmerism in his practice, in suitable cases, just as he uses any other remedy. He spoke of the extraordinary effects he had experienced from the use of magnets applied during the mesmeric state, and kindly offered to illustrate the fact on a patient who had been asleep all the time I was in the room, and in that state during which I felt assured she could overhear every word of our conversation. He told me that when he put the magnet into her hands, it would produce catalepsy of the hands and arms, and such was the result. He wafted the hands and the catalepsy ceased. He said that the mere touch of a magnet on a limb would stiffen it, and such he proved to be the fact.

"I now told him that I had got a little instrument in my pocket, which although far less than his, I felt assured would prove quite as powerful, and I offered to prove this by operating on the same patient, whom I had never seen before, and who was in the mesmeric state when I entered the room. My instrument was about three inches long, the thickness of a quill, with a ring attached to the end of it. I told him that when put into her hands, he would find it catalepsy both hands and arms, as his had done, and such was the result. Having reduced this by wafting, I took the instrument from her, and again returned it, in another position, and told him it would now have the very reverse effect,—that she would not be able to hold it, and that although I closed her hands on it, they would open and that it would drop out of them, and such was the case,—to the great surprise of my worthy friend, who now desired to be informed what I had done to the instrument to invest it with such new and opposite power. This I declined doing for the present; but I promised to do so when he had seen some further proofs of its remarkable powers. I now told him that a touch with it, on either extremity, would cause the extremity to rise and become cataleptic, and such was the result; that a second touch on the same part would reduce the rigidity, and cause it to fall, and such again was proved to be the fact. After a variety of other experiments, every one of which proved precisely as I had predicted, she was aroused.

"I now applied the ring of my instrument on the third finger of the right hand, from which it was suspended, and told the doctor, when it was so suspended, it would send her to sleep. [To this he replied, 'It never will,' but I again told him that I felt confident that it would send her to sleep.] We then were silent, and very speedily she was once more asleep. Having aroused her, I put the instrument on the second finger of her left hand, and told the doctor it would be found she could not go to sleep when it was placed there. He said he thought she would, and he sat steadily gazing at her, but I said firmly and confidently that she would not. After a considerable time, the doctor asked her if she did not feel sleepy, to which she replied, 'Not at all.' 'Could you rise and walk?' When she told him she could, I then requested her to look at the point of the forefinger of her right hand, which I told the doctor would send her to sleep, and such was the result; after being aroused, I desired her to keep a steady gaze at the

nail of the thumb of the left hand, which would send her to sleep in like manner, and such proved to be the fact.

“Having repaired to another room, I explained to the doctor the real nature and powers of my little and apparently magical instrument, that it was nothing more than my portmanteau key and ring, and that what had imparted to it such apparently varied powers was merely the predictions which the patient had overheard me make to him, acting upon her in the peculiar state of the nervous sleep, as irresistible impulses to be effected, according to the results she had heard me predict. Had I predicted that she would see any flame, or colour, or form, or substance, animate or inanimate, I knew from experience that such would have been realised, and responded to by her; and that, not from any desire on her part to impose upon others, but because she was self-deceived, the vividness of her imagination in that state inducing her to believe, as real, what were only the figments of fancy, suggested to her mind by the remarks of others. The power of suggestions of this sort also in paralysing or energising muscular power is truly astonishing; and may all arise in perfect good faith with almost all patients who have passed into the second conscious state and with some during the first conscious state.”

In 1843, Braid referred to Elliotson's belief in the powers of certain metals, and to Wakley's experiments. The latter, operating with a non-mesmerising metal, made the patient believe he was using a mesmerising one, whereupon she fell asleep; and he concluded that all the subjects were impostors. Braid denied this, asserting that the active agent was simply the imagination, and that the metals were neither mesmeric nor non-mesmeric. In the same way, he explained the action of the wooden tractors which Dr. Hayarth, in 1799, successfully substituted for the metal ones of Mr. Perkins. The latter consisted of two pieces of metal, one apparently of iron and the other of brass, about three inches long, blunt at one end and pointed at the other. They were invented by Dr. Elisha Perkins, of Norwich, Connecticut, who in 1796 took out a patent for them, and were applied by drawing them lightly over the part affected for about 20 minutes. This method of treatment, which was very fashionable at one time, was termed Perkinism, in honour of its inventor.

According to Braid, it had long been recognised that various anomalous sensations followed the prolonged direction of the attention to any part of the body; but notwithstanding the fact that remarkable cures had occasionally been caused by mental excitement, and severe illness and even death had resulted from fear, it was usually supposed that these anomalous sensations were unaccompanied by physical change. With the exception of Dr. Holland, who wrote on the influence of attention on the bodily organs in his “*Medical Notes and Reflections*,” no one, Braid said, entertained the idea that definite and special physical changes could be excited, regulated, and controlled at will by the voluntary mental efforts of a healthy individual directed towards his own body; or that the same results might be produced involuntarily, by the suggestions of another person conveyed directly, verbally, or indirectly, by means of passes, etc.

The following are examples of the power of suggestion in causing alterations in bodily function:—“I had told a friend,” Braid said, “that

it sufficed to arouse certain ideas as to her condition in the patient's mind in order to produce the corresponding alterations in the functions of the organ or part of the body referred to; as he was not inclined to believe in any statement, I told him I could increase the secretion of milk in one of his wife's breasts (she happened to be nursing a child at the time), by calling her attention to the breast during hypnosis. Eight months previously I had hypnotised this lady and cured her of severe headache. She was a good somnambule." After obtaining the patient's consent, but without telling her of the proposed experiment, Braid hypnotised her and drew her attention to her breast. On being awakened, she remembered nothing of what had been said or done, but complained of a feeling of tightness and tension in the breast. Her husband then told her that Braid had been trying to increase the secretion of milk. She replied, "That would be no light matter, for my child is 14 months old, and I have hardly any milk." Braid asked her to send for the child and to put it to the breast, when it got so much milk that it was nearly choked. A few days later the patient complained that her figure was deformed in consequence of the swelling of the left breast. Braid hypnotised her again and repeated the experiment with the right breast. The result was precisely the same, and both breasts now secreted so much milk that the lady was able to suckle her child for six months longer, whereas before she had always complained of lack of milk.

The value of the hypnotic mode of treatment was best shown, according to Braid, by "cases of hysterical paralysis, in which, without organic lesion, the patient may have remained for a considerable length of time perfectly powerless of a part, or of the whole body, from a dominant idea which has paralysed or misdirected his volition. In such cases, by altering the state of the circulation, and breaking down the previous idea, and substituting a salutary idea of vigour and self-confidence in its place, *which can be done by audible suggestions addressed to the patient, in a confident tone of voice, as to what must and shall be realised by the processes he has been subjected to,*—on being aroused a few minutes afterwards, with such dominant idea in their minds, to the astonishment of themselves as well as of others, the patients are found to have acquired vigour and voluntary power over their hitherto paralysed limbs, as by a magical spell of witchcraft."

The power of imagination and excited attention, in producing a specific influence in a healthy person, was beautifully illustrated, he said, in the following case: "Having heard an account of some extraordinary discovery in America, of certain medicines which could manifest their influence through glass, that is, that by taking hold of a phial in which the medicine was contained, it would impart its peculiar medicinal virtue through the closed phial;—having read this account, I named it to certain parties, who scouted the idea as preposterous. I told them I did not doubt the fact of such physical effects resulting from such means, but added that I very strongly suspected the correctness of the physiology of the explanation. I was inclined to believe it quite possible that it arose from vivid imagination, attention and expectation, exciting the particular function to be acted upon. This they scouted as equally preposterous, which induced me to repeat my conviction of the possibility of such a result taking place [although I had never tried it], and I also proposed to test it forthwith, in their presence."

With this view, I requested an ounce phial to be brought to me, filled with common water, coloured with syrup of poppies, which I meant to use for the purpose of acting as an emetic. We then repaired to a room, where there was a female friend, who knew nothing of our intentions. I then commenced talking to the gentlemen, but so that she could hear the conversation, about the remarkable discovery of this extraordinary medium, which could act as an emetic through the glass. I then requested this lady to oblige me by trying its effects. She was very unwilling to encounter it, but at length was prevailed upon to do so, by my assuring her it would much oblige me, and we could all place the most implicit confidence in her veracity. She very soon stated that it gave her an unpleasant feeling extending up the arm. I encouraged her to persevere, assuring her it would only make her sick, and added that when it got as high as the shoulder it would suddenly dart across the chest, when it would induce vomiting. When the feeling had extended as far as the elbow, we observed her become as pale as ashes, and from this it speedily mounted to the shoulder and across the chest, and was evidently about to be followed by vomiting had I not suddenly put an end to the experiment. This I did by desiring her to take another phial into the other hand, which would neutralise the effects of the emetic phial. The result was equally successful. The experiment did not last more than two or three minutes. I repeated the experiment a second time with the same patient, with like effect." . . . "A consideration of these facts," Braid said, "renders it easy to understand how hypnotism may become available for the relief and cure of various diseases. By various modes of *suggestion*, either by audible language, spoken within the hearing of the patient, or by definite physical impressions, certain ideas are fixed strongly and involuntarily in the mind of the patient. These act as stimulants or sedatives, according to the nature of the expectant idea, and either direct attention to, or withdraw it from, particular organs or functions. Similar results are effected in ordinary practice, by prescribing medicines which stimulate or irritate these organs, thereby directly increasing their functions, or which produce the reverse effect, either by direct sedative action on the organs, or by diminishing the heart's action, or by stimulating some distant part, and thereby producing revulsion. The great object of all treatment is either to excite or to depress function, or to increase or to diminish the existing state of sensibility and circulation locally or generally, with the necessary attendant changes in the general, and more especially in the capillary, circulation. For this purpose I feel convinced that hypnotism may be applied in the cure of some forms of disease, with the same ease and certainty as our most approved methods of treatment."

Braid cited the alteration in the capillary circulation which takes place in the phenomenon of blushing and which may appear immediately as the result of a mental impression. "Where then," he asks, "is the difficulty in comprehending why a dominant expectant idea in the mind of the patient should be adequate to produce effects equally potent on other parts of the body, and in special organs, when strongly concentrated on such organs or parts? The same effects are produced then by hypnotism as are produced by various drugs which depress or excite the circulation. In other cases hypnotism may be supposed to act as an alterative, producing a new action

or counter impression, during which the morbid action is suspended, which affords an opportunity for a natural and healthy action to be resumed when the influence of hypnotism is suspended." In support of this theory. Braid called attention to the number of recoveries which took place during the use of infinitesimally small doses of medicine in homœopathic practice. These, he said, benefited the patient, not by their physical or chemical qualities, but as suggestions, and quoted Professor Simpson, who had proved that in one homœopathic dilution a patient would have to take a dose every second of time, night and day, for 30,000 years before he consumed one grain of the original drug, while another was so attenuated that it would require a mass of the dilution equal to 61 times the size of the earth, to contain a single grain of the medicine.

While, according to Braid, the action of homœopathic remedies was a purely subjective one, he also thought that the mental element associated with the administration of drugs in general had been far too much ignored, and said, "It is worthy of inquiry how much of the benefits derived during ordinary treatment may be due entirely to the effects of the medicine, and how much indirectly by its directing attention to, or withdrawing it from the seat of morbid action. . . . A mental impression is necessarily brought into operation whenever any substance is taken, supposed to be of a medical quality, and it will either excite or depress the functions of the morbid part [to or from which the mind is naturally directed] according to circumstances, independently of the mere physical influence which would otherwise ensue from the particular medicine, supposing the patient had not been aware he had taken any medical substance." This mental impression, Braid thought, accounted for the remarkable revolutions which have taken place at different times as to the estimate of the virtues and powers of particular medicines. "At one period a universal favourite appeared to be possessed of every valuable quality; anon, discarded and forgotten as utterly worthless; again, arising into meridian power and splendour, to be followed by another decadence in due course. All this arises very naturally in the following manner. A zealous and sanguine professor prescribes it with high confidence of its potency for good, and patients, who are generally acute physiognomists as regards their medical attendants, catch the inspiration and the results are most propitious. Every successful result exalts the confidence of the physician and patient; and others, prescribing with confidence, realise equally favourable results, and thus the remedy attains the culminating point of its fame and favour. Others, however, follow in their wake, but neither with the same hopes nor desire that they should find the discovery of some rival practitioner deserving such laudation. The patients discern the doubtful omen portrayed in the words, looks and manner of the attendant; the effects are correspondingly less salutary, and every succeeding case makes a decadence in the reputation of the once fashionable and omnipotent remedy. Others espouse this view, and thus, through their combined moral impressions, they subvert the natural tendency of the remedy, and prevent the good which should legitimately have attached to it, independently of either enthusiasm, or envy or caprice. It thus slumbers for a time in forgetfulness, to give place to another rival, which is now in the ascendant, until some other zealous patron at length takes the former

under his special favour, and by a similar process as at first, it once more rises to the highest honours, but only to sink again, in its turn, to unmerited neglect."

CLAIRVOYANCE, ETC.

In Braid's opinion, much of the reluctance to accept the genuine phenomena of mesmerism and hypnotism arose from the extravagant assertions of the mesmerists in reference to clairvoyance—assertions which he described as being opposed to all the known laws of physical science and a mockery of the human understanding. As the result of frequent experiments made, not only on his own patients, but also upon many of the renowned clairvoyants of the day, Braid was able to find nothing but hypnotic exaggeration of natural powers. The following sources of error, he said, ought always to be kept in mind :—1. The hyperæsthesia of the organs of special sense, which enables impressions to be perceived through the ordinary media that would pass unrecognised in the waking condition. 2. The docility and sympathy of the subjects, which tend to make them imitate the actions of others. 3. The extraordinary revival of memory by which they can recall things long forgotten in the waking state. 4. The remarkable effect of contact in arousing memory. 5. The condition of double consciousness or double personality. 6. The vivid state of the imagination, which instantly invests every suggested idea, or remembrance of past impressions, with the attributes of present realities. 7. The tendency of the human mind, in those with a great love of the marvellous, to erroneously interpret the subject's replies in accordance with their own desires. 8. Deductions rapidly drawn by the subject from unintentional suggestions given by the operator. Braid considered that the belief in thought-transference arose from the failure to guard against sources of error similar to those just described, and stated that he had never met with any case where the subjects could correctly interpret his unexpressed desires, without some sensible indication of them. In reference to the alleged intuitive powers of certain mesmeric subjects, Braid held that, whereas with animals instinct was usually right, with somnambules it was generally wrong. It was true that certain patients could successfully predict their own hysterical attacks, but here the prophecy produced its own fulfilment through self-suggestion.

PHRENOLOGY.

Braid's increased knowledge of the power of mental influences in provoking the various phenomena of the hypnotic state soon led him to discard even the slightest belief in phrenological phenomena. He complained that the author of an article in the *North British Review* for November, 1854, confounded him with the Phreno-Mesmerists and attributed to him the belief that touching particular parts of the head would make a hypnotised patient laugh, pray, sing, steal, and fight, etc. "Now," said Braid, "the fact is that I never adduced the said manifestations as a proof of the organology of phrenology. I exhibited the phenomena and explained how they were to be accounted for upon totally different principles, so that they neither proved nor disproved the doctrine of phrenology, but left that precisely where they found it. These manifestations may arise either from

a previous knowledge of phrenology, or from a system of training during the sleep, so that they may come out subsequently as acts of memory, when corresponding points are touched, with which particular ideas have been associated through audible suggestion—which arbitrary association may be equally readily established by touching other parts of the body as by touching different parts of the head—or they may arise from the touch calling into action certain muscles of expression of mental conditions, exciting in the mind of the subject the ideas with which they were usually associated in the waking condition. This latter mode I consider the only natural mode of exciting these manifestations, and it is a mere inversion of the sequence which ordinarily obtains between mental and muscular excitation; viz., firstly, the touch calls into play the muscles constituting the ‘Anatomy of expression’ of any given passion or emotion, idea or train of thought; and, secondly, this physical expression suggests or excites in the mind of the subject the corresponding idea, passion or emotion with which it is usually associated in the waking condition; i.e. under ordinary circumstances, the mental impression precedes and acts as the exciting cause of physical manifestations of different mental conditions, but here the physical condition precedes and acts as the exciting cause of the mental condition. . . . It is well known, however, that so long ago as December, 1841, I particularly pointed out the remarkable docility of patients during hypnosis, which made them most anxious to comply with every proper request or supposed wish of others. I have, therefore, no doubt that they might be trained to manifest, during hypnotism, the opposite tendencies, in accordance with conventional arrangements.”

As early as 1843, Braid had adopted the view that the supposed phrenological manifestations were due to muscular expression exciting corresponding mental conditions, and in 1844 he showed that he was able to induce all the phenomena by verbal suggestion, no matter what part of the head was touched.

SUGGESTION, PASSES, ETC.

At first Braid employed mechanical methods alone, both for the induction of hypnosis and its phenomena. But when he abandoned his physical theory, his views as to the value of passes, etc., naturally changed, and he soon regarded them as only of secondary importance, and attached most value to suggestion. With certain impressionable subjects, hypnosis might be caused by self-suggestion; if they believed that something was taking place at a distance, capable of putting them to sleep, they would fall asleep even if nothing was happening. Direct verbal suggestion, however, was best both for the production of hypnotic phenomena and for the cure of disease. After hypnotising his patients, Braid stated in a confident manner the results he wished to obtain and, in certain subjects, found that these could be varied by simple change in the voice. Thus, if he made a patient see an imaginary sheep, and then asked him in a cheerful manner what colour it was, this tone usually elicited the reply “White,” or some light colour. If he then asked “What colour is it *now*?” giving a sad intonation to the word *now*, the reply would usually be “Black.”

The action of passes, etc., is explained by Braid in the following manner. Everything which produces a new impression will modify or change existing

functions, whether the new impression be of a mental or physical nature. The brain receives many impressions, which subsequently influence the mind, although they were not perceived when conveyed to it by the organs of sense ; and others, too slight ever to become conscious, may nevertheless be sufficient to produce a local influence on the nerves and capillaries. Thus, a person may be engaged in reading, so as not to notice he is sitting in a draught, and yet this may cause rheumatism. Passes may have a mechanical action through the agitation of the air, or by touch, or they may produce changes in temperature and electrical states. They are most powerful, however, when they directly excite mental action, either by fixing the attention on one part or function of the body and withdrawing it from others, or by arousing ideas previously associated with the physical impression. All these effects may be neutralised by direct suggestion, and it is quite possible, by a system of training, to make passes, etc., produce the opposite of the result attributed to them. Thus, "supposing that, with each touch or agitation of the air the operator speaks aloud and predicts what shall happen, the auricular suggestion may be so strong as to cause the predicted manifestation to be realised instead of what otherwise would have been the case ; and thus, from this time forward, through the double conscious memory, the like impression on that part or organ of sense will recall the previously associated idea and manifestations." Some sort of material combination may be sufficient to produce hypnosis when it is positively affirmed that it will do so, while a moment later the same method will produce nothing, when it is suggested it will be a failure. "All these phenomena may be realised without the patient intending to play off any deception on others, or having any remembrance of the fact on coming out of the sleep." Braid also stated that the entire value of passes and various other mechanical methods, was altogether a suggestive one and that he used them just as he would use audible suggestion.

DANGERS.

In passing into the hypnotic state, Braid held that reason and will were the first mental powers to wane ; thus the imagination gained the ascendancy, and the cerebro-spinal functions became more excitable, as the controlling powers of the will were withdrawn. This interference with the volition, however, had its limits, and in an unpublished letter in my possession, in which he replied to some questions regarding the dangers of hypnotism, Braid stated "that the Almighty would never have delegated to man such a dangerous influence over his fellow-man as to have given him such irresistible power over his volition. . . . While under the hypnotic influence, the patients evince great docility, but there is, however, such a state of the perceptive faculties and judgment that they will be quite as fastidious of correct conduct as when in the natural state. So far as I know, there is no more, or not so much, chance of gaining a knowledge of the thoughts of others than might be attained by giving the patient a glass or two of wine. And I have no experience of any such irresistible influence over individuals for producing those malign effects you refer to. I strongly suspect they only exist in the imagination of the parties operating or operated on. At all events, no such effects result from my operations,

although undoubtedly I have been able to produce the most wonderful effects in many instances where ordinary treatment had been unavailing." Braid also asserted that he could give instructions to those who had been successfully hypnotised, no matter how often, by means of which they could completely resist the influence of any one afterwards.

In 1847, Braid contrasted the dangers of ether with those of hypnotism, from a moral point of view, and concluded in favour of hypnotism. He referred to the moral abuse to which ethereal narcotism is capable of being turned by cruel and unprincipled individuals. The opponents of mesmerism and hypnotism had asserted that their employment was calculated to excite the animal passions and that virtuous women might be victimised by unprincipled men, even without their consciousness of the fact when restored to the waking state, or their possessing any mode of bringing home to the culprits a charge of their villainy, while there was not a whisper against the use of ether as liable to be converted to such unholy purposes. Braid's experience of both ether and hypnotism enabled him to confidently state that ether was much the more dangerous of the two. He had never seen a hypnotised patient who did not strenuously resist any attempt at taking a liberty with her. Such patients could not be induced to take off their stockings, for example, or to give a kiss to a gentleman, even should he be a hallucinatory one. On the contrary, they would repel such suggestions with more energy than in the waking condition. "What might be achieved," he said, "by systematic and persevering attempts to corrupt a virtuous person during that state, I do not pretend to tell; I should never condescend to witness such attempts being systematically made; but my present convictions are that the same individual might be more readily demoralised when awake, than when in the second conscious state of nervous sleep, which evidently has a tendency with virtuous people to quicken their perceptions and heighten their notions of what would be immoral or highly indecorous, whilst at the same time it renders them most docile and obliging in all which is reasonable and seemly in their estimation. Thus, while they still indignantly repel the proposal to kiss an imaginary gentleman, they will be quite willing to do so to an imaginary child. A libidinous manifestation I have never seen during hypnotism, but I have witnessed the most intense manifestations of erotism arise spontaneously on several occasions during the primary or exciting state of etherisation, and that even in a patient of high respectability and of the most modest and virtuous conduct and pious disposition in her general deportment when awake."

Again, he said, supposing an unprincipled person were placed in the most favourable circumstances for perpetrating a hypnotic crime and succeeded, after systematic and persevering attempts, in doing so, and that, on awaking, the patient had no remembrance whatever of the injury inflicted on her,—“let not the criminal indulge in a delusive hope that he could not possibly be inculpated. From the well-established and most beneficent law of double consciousness, it is quite certain that, however completely the transactions which occurred during the sleep may be forgotten on awaking, she has only to be hypnotised or mesmerised when put into the witness box, to render her as competent to give accurate

testimony of all which occurred in her former state of nervous sleep, as in the waking state she could testify to the facts which occurred in her waking condition. Now, I maintain there is not a like security for the person who might be victimised during ethereal narcotism. By this means patients might be rendered speedily entirely oblivious of what was occurring, and that without the benefit and security of the double-conscious memory to be summoned to the conviction of the perpetrators of their wrongs." . . . "I have proved by experiments, both in public and private, that during the state of excitement the judgment is sufficiently active to make the patient, if possible, even more fastidious, as regards the propriety of conduct, than in the waking condition; and from the state of rigidity and sensibility, they can be aroused to a state of mobility, and exalted sensibility, either by being rudely handled, or even by a breath of air. Nor is it requisite that it should be done by the person who put them in the hypnotic state. It will follow equally from the manipulations of any one else, or a current of cold air impinging against the body, or from any mechanical contrivance whatever. And, finally, the state cannot be induced, in any stage, unless with the knowledge and consent of the party operated on. In this, hypnotism has an advantage over medicine, for many powerful medicines have been used for criminal purposes and can be administered without the knowledge of the intended victim. I have vindicated hypnotism against the erroneous prejudices cited against it as having an immoral tendency; I did not, and do not, claim for it the power of emplanting a principle. I do not say it will make a vicious person virtuous; but I am most confident it will not make a virtuous person vicious. On the contrary, I feel assured that a person of habitually correct feelings will, during the somnambulistic condition, while consciousness lasts, manifest fully as much delicacy and circumspection of conduct as in the waking state. Moreover, I have proved that no one can be affected at all *unless by voluntary compliance*, and consequently it has no right to be held as an agency which could be converted to immoral purposes, as many have supposed. If any one would say it may have this tendency, because in a state of torpor, insensibility, and cataleptiform rigidity, the party is unconscious, immovable, and incapable of self-defence, I beg to remind such individuals that the same argument might be urged against the proper use of wine, spirits, or opium, because excess in the use of either might be followed by like results. I am quite certain no one can be affected by it, in any stage of the process, unless by the free will and consent of the patient, which is at once sufficient to exonerate the practice from the imputations of being capable of being converted to immoral purposes, which has been so much insisted on to the prejudice of animal magnetism. This has arisen from the mesmerisers asserting that they have the power of overmastering patients irresistibly, even whilst at a distance, by mere volitions and secret passes." Braid stated that he had been careful in hypnotic experiments and had neither met with accidents, nor seen a single case which he could not awaken in two minutes.

MEDICAL AND SURGICAL CASES.

Braid records a good many minor surgical operations, performed painlessly during hypnosis. He mentions the fact that in some instances

general consciousness was unimpaired, and the patients remembered afterwards all that had been done, although they had experienced no pain during or after the operation. He also records an immense number of medical cases which were cured or relieved by hypnotism. The majority of these were functional nervous disorders, but remarkable results were also obtained in many cases of organic disease. The clearing up of a long-standing corneal opacity, in a patient who was being hypnotised for the relief of a rheumatic affection, is one of the most interesting. He also obtained marked improvement in many cases of organic paralysis. In one instance, the patient afterwards died from another apoplectic seizure, and post-mortem examination revealed evidence of the earlier organic mischief. In this case, the symptoms had improved greatly under hypnotic treatment. "It is of importance beforehand to inform the patient," he said, "that it is not necessary for him to become unconscious in order to obtain the beneficial effects of the nervous sleep. Many believe that a favourable result can only be obtained if the consciousness has been completely lost, whereas, in numerous cases, where the usual internal and external treatment has been quite in vain, the most favourable results have been obtained by the impression on the nervous system, even if the patient has noticed everything that has taken place and upon awaking from the nervous sleep has remembered everything which occurred during its duration." Braid stated he had experienced this himself, when, on account of a severe attack of rheumatism, he had hypnotised himself for eight or nine minutes and awoke completely free from pain, although he had not lost consciousness in the least during the so-called sleep.

GENERAL OBSERVATIONS.

Braid desired to place all his results and methods before his medical brethren; insisted that they alone ought to use hypnotism, and warned the ignorant against tampering with such a powerful agency, which might produce either good or evil according to the manner in which it was managed and applied. "Hypnotism is capable," he said, "of curing many diseases for which hitherto we knew of no remedy; but none but a professional man, well versed in anatomy, physiology and pathology, is competent to apply it with general advantage to the patient, or credit to himself, or the agency he employs. I must beg, however, that it be particularly understood that I by no means hold up this agency as a universal remedy. Whoever talks of a universal remedy, I consider must either be a fool or a knave; for, as diseases arise from totally opposite pathological conditions, all rational treatment ought to be varied accordingly." In reference to the successful therapeutic results that he had obtained by hypnotism, Braid asserted that he could teach any intelligent medical man to do what he had done, and that his object had always been not to mystify, but to dispel all mystery. He also claimed that he was able to hypnotise a larger percentage by his mechanical methods, than the mesmerisers could do with the supposed aid of mysterious agencies. Hypnotism could be applied with the greatest confidence by those who understood it, and benefit might be derived from it, even in incurable cases; neither pain, discomfort, nor dangers being associated with it. In doubtful cases, it was sometimes of service in obtaining a correct diagnosis.

Braid stated that he had taken every care to avoid deception in his experiments, but did not expect, on this account, that his conclusions would be accepted by others. He hoped, however, that his professional brethren would investigate the subject coolly, with an honest desire to arrive at truth. "Having myself been sceptical," he said, "I can make every reasonable allowance for others. Every one should examine the phenomena for themselves, but at the same time they should know something about them." In illustration of the importance of this, he referred to the fact that different subjects showed varying susceptibility and that many people, even professional men, expected that all should present uniform hypnotic phenomena. "It must be borne in mind," he said, "that the opposite mental conditions may glide into each other by the most imperceptible degrees, or by the most abrupt transitions, according to the modes of management; and thus consciousness or unconsciousness, sound sleep, dreaming, or somnambulism, will result, according as sensations or ideas predominate, or are equally vivid. It is no unusual thing for different parties to be testing, or calling for tests, for the opposite conditions, at the same instant of time."

In many instances, Braid published the written testimony of others in support of his alleged successful treatment of different patients by hypnotism, and explained that he did this because "most unwarrantable interferences had been resorted to by several medical men, in order to misrepresent some of them. In one instance, in order to obtain an attested erroneous document, the case was read to the patient, and others present, the very reverse of what was written. However extraordinary such conduct may appear, the fact of its occurrence was publicly proved, and borne testimony to by the patient and other parties present on the occasion when the document was obtained."

He referred again and again to the almost incredible opposition which he had to combat, at the hands both of the orthodox medical practitioner and of the mesmerist, and complained that having been attacked in the *Zoist*, the editors of that journal would not permit him to reply in their pages. He sent his answer to the *Association Medical Journal*, as he considered that the most natural medium for a member of the Provincial Association to publish his defence in, but it was also refused there.

"Throughout the whole of my inquiries," he said, "my chief desire has been to arrive at what could be rendered most practically useful for the relief and cure of disease; and I hesitate not to say that, in the hands of a skilful medical man, who thoroughly understands the peculiar modes which I have devised for varying the effects in a manner applicable to different cases, hypnotism, besides being the speediest method for inducing the condition is, moreover, capable of achieving *all the good* to be attained by the *ordinary mesmerising processes and much more.*" . . . "Of course there is one point which renders hypnotism less an object of approbation with a certain class of society, viz., that I lay no claim for it to produce the marvellous or transcendental phenomena; nor do I believe that the phenomena manifested have any relation to a magnetic temperament, or some peculiar or occult power, possessed in an extraordinary degree by the operator. These are all circumstances which appeal powerfully to the feelings

of the lovers of the marvellous, and therefore tell in favour of mesmerism ; and, moreover, seeing that, for conducting the hypnotic processes with any degree of certainty and success, I contend that, in many cases, a knowledge of anatomy, physiology, pathology, and therapeutics are all requisite, it is obvious that such requirements must be less calculated to secure the approbation of *non-professional* mesmerists and amateurs, whose magnetic creed taught them to believe that the mere possession by them of the magnetic temperament,—of a surcharge by nature, within their own bodies, of a magnetic fluid or odyle,—is quite sufficient to enable them to treat any case as efficiently as the most skilful medical man in the universe, simply by walking up to the patient with the *will* and *good intention* of doing him service, or by adding thereto, occasionally, the efficacy of mesmeric touches, passes or manipulations.” . . . “Like the originators of all new views, however, hypnotism has subjected me to much contention ; for the sceptics, from not perceiving the difference between my method and that of the mesmerists, and the limited extent of my pretensions, were equally hostile to hypnotism as they had been to mesmerism ; and the mesmerists, thinking their craft was in danger—that their mystical idol was threatening to be shorn of some of its glory by the advent of a new rival—buckled on their armour, and soon proved that the *odium mesmericum* was as inveterate as the *odium theologicum*.”

HISTORICAL.

Braid died suddenly on March 25th, 1860, according to some accounts from apoplexy, according to others from heart disease ; he left a widow, son and daughter. He maintained his active interest in hypnotism up to the end, and three days before his death sent his last MS. to Dr. Azam, with the following inscription :—“Presented to M. Azam, as a mark of esteem and regard, by James Braid, Surgeon, Manchester, March 22nd, 1860.” Sympathetic notices of Braid’s death appeared in the local papers and different medical journals, all of which bore warm testimony to his professional skill and high personal character. The *Lancet* drew attention to the fact that, though he was best known in the medical world by his theory and practice of hypnotism, he had also obtained wonderfully successful results by operations in cases of club foot and other deformities, which brought him patients from every part of the kingdom. Up to 1841 he had operated on 262 cases of Talipes, 700 cases of Strabismus, and 23 cases of spinal curvature.

In 1852, in the Preface to the Third Edition of “Magic, Witchcraft, etc.,” Braid stated that he now gave his view of all important hypnotic and mesmeric theories, and hoped, by this means, to make up in some measure for the delay in the publication of another edition of his work on Hypnotism, which had long been out of print, and was frequently called for. “That call,” he said, “I hope shortly to be able to respond to, with such fulness of detail as the importance of the subject merits ; more particularly with regard to its practical application for the relief and cure of some forms of disease, of which numerous interesting examples will be adduced.” At the conclusion of “The Physiology of Fascination, etc.,” he also said :—“It is my intention shortly to publish a volume entitled, ‘Psycho-Physiology ; embracing Hypnotism, Monoideism and Mesmerism.’”

This work will comprise, in a connected and condensed form, the results of the whole of my researches in this department of science ; and it will, moreover, be illustrated by cases in which hypnotism has been proved particularly efficacious in the relief and cure of disease, with special directions how to regulate the processes so as to adapt them to different cases and circumstances." Shortly before his death, Braid contemplating publishing a second edition of "Neurypnology," in France ; this was never done, nor did the two proposed works above referred to ever see the light. All Braid's books and articles are out of print, and of the former, Nos. 2, 3, 4, 6, and 7 (See list, pp. 127 and 128), are alone to be found in the Library of the British Museum. I possess Nos. 1, 2, 4, 5, 6, and 8, as well as most of his articles and two long MS. letters addressed to M. Highfield, Esq., Surgeon, dated respectively 28th October, and 16th November, 1842. These letters contain an interesting résumé of Braid's views on the subjective nature of hypnotic phenomena ; some account of the hyperæsthesia of the special senses and reference to successful medical cases, together with the denial of the alleged dangers of hypnotism and of the supposed automatism of the subject.

In 1859, Dr. Azam, of Bordeaux, became acquainted with Braid's hypnotic work, and commenced to investigate the subject for himself ; an account of his experiments, with much reference to Braid, appeared in the *Archives de Médecine* in 1860. About the same time Broca, who had obtained marvellous results with Braid's methods, read a paper on Hypnotism before the Académie des Sciences, which attracted much attention, and Velpeau presented a copy of "Neurypnology" to the same Society. A commission, composed of members of the four sections of the Institute, was then formed to report on the subject. On hearing of this, Braid wrote to the Académie to say how much pleasure Azam's brilliant results, and the action of the Society, had given him.

From this date, the subject of hypnotism was never lost sight of in France ; but it was not until 40 years after its original publication that "Neurypnology" was translated by Dr. Jules Simon, who stated that "Braid's researches procured for him numerous enemies ; but despite this he pursued them with the precision of genius, and was able to add artificial somnambulism to the pathology of the nervous system—a chapter which the investigations of the greater number of modern neuro-pathologists have confirmed."

Braid's first translator was W. Preyer, Professor of Physiology at the University of Jena, who in 1881 published "The Discovery of Hypnotism." This was a condensation of "Neurypnology," together with the translation of the pamphlet sent by Braid to Azam in 1860, which had passed into the possession of Dr. Beard of New York, who lent it to Preyer. The same pamphlet is also translated into French and forms an appendix to Dr. Jules Simon's "Neurypnology," published in 1883. In 1882, Preyer published "Hypnotism," which consisted of a translation of all Braid's works, with the exception of "Neurypnology," and "Satanic Agency."

I do not propose in this article to examine Braid's views critically, but desire briefly to compare them with those of later workers in the same field.

At first Braid believed in the purely physical origin of hypnotic phenomena, and held that they could be induced by mechanical means in subjects who were ignorant of hypnotism or mesmerism. This doctrine is still held by Heidenhain and by certain members of the Salpêtrière School. The former says :—“People who have heard nothing about hypnotism, and who do not know for what purpose they are being experimented on, can be hypnotised. The hypnotic condition can be brought about without the instrumentality of a living being, simply by certain definite physical stimuli.” Charcot and Gilles de la Tourette say, “Hypnotism can be induced by purely physical means, and a person can be hypnotised, so to speak, unknown to himself.” Before Braid appreciated the mental influence in hypnosis, he was inclined to believe in phrenology, and the same cause seems to have led the Salpêtrière School into error as to the action of magnets, metals and medicines in sealed tubes. That all these owed their virtue to suggestion was clearly demonstrated by Braid ; yet, despite this fact, the metallo-therapeutics of Burq were revived by Charcot and his disciples, and Dr. Luys still plays with his india-rubber dolls and Professor Benedikt with his magnets. An account, by Dr. F. Peterson and others, of Professor Benedikt’s theory of the action of magnets, and of the experimental exposure of its fallacious nature, read before the New York Academy of Medicine, closely resembles what was said and done by Braid on the same subject. According to Professor Benedikt, “certain forms of hysteria are better treated by the magnet than by electricity, hydrotherapy or drugs. When a magnet is applied to the sensitive vertebræ without removal of the dress, the irritable patient soon becomes quiet and even quasi paralysed, the muscles gradually relax, the respiration becomes sighing, consciousness slowly disappears ; the resistance to conduction in motor nerves could easily become absolute. The two poles have different effects, the magnet must be employed with caution, patients may be injured by it.” These statements were tested in America ; magnets of enormous power were used and experiments made on human subjects and lower animals. A young dog was subjected to magnetic influence for five hours ; but, instead of being paralysed from “increased resistance to conduction in motor nerves,” on being liberated, it was more lively than before. The experimenters conclude “that the human organism is in no wise appreciably affected by the most powerful magnets known to modern science ; that neither direct nor reversed magnetism exerts any perceptible influence upon the iron contained in the blood, upon the circulation, upon ciliary or protoplasmic movements, upon sensory or motor nerves, or upon the brain. The ordinary magnets used in medicine,” they say, “have a purely suggestive or psychic effect, and would in all probability be quite as useful if made of wood.”

The theories of the School of Nancy closely resemble Braid’s later ones, in which he regarded hypnotic phenomena from a psychological standpoint. They are not alike, however, on all points. For, while both attach much importance to “dominant ideas” and “suggestion,” Braid regards the latter simply as a method of inducing the phenomena, and lays stress on the preliminary change which must be brought about in the nervous system, while the Nancy School hold that suggestion explains all the phenomena of hypnosis. Bernheim, for example, considers that there is nothing in

hypnotism but the name, and says, "hypnotism does not really create a new condition; there is nothing in induced sleep which may not occur in the waking condition." In this Mr. Frederic Myers agrees with Braid, and has clearly pointed out that suggestion does not explain the phenomena of hypnosis, but is merely the artifice used by the operator in order to evoke them.

Braid is in opposition to the Nancy School in reference to suggested crimes and to what has been called the automatism of the hypnotised subject. On this point he is more in accordance with the Salpêtrière School and his position has recently been greatly strengthened by the observations of Delboeuf and others. With regard to this question, Mr. Frederic Myers says, "Let us first observe what is the moral tone of the somnambule when left to himself, as far as possible, without suggestion. In some important points it is the precise opposite of the drunken condition. Alcohol, apparently by paralysing first the higher inhibitory centres, makes men boastful, impure, and quarrelsome. Hypnotism, apparently by a tendency to paralyse lower appetitive centres, produces a contrary effect. The increased refinement and increased cheerfulness of the developed somnambule is constantly noticed. It is a moot point whether any sleep-walker has ever told an untruth; and, so far as I know, no angry or impure gesture has ever shown itself spontaneously in the hypnotic state."

My own observations on this question have led me to conclusions even more pronounced than Braid's. For while I am convinced that it is impossible to commit or suggest crime during the alert stage of hypnosis, nothing that I have seen has afforded me any ground for supposing that a crime could be committed during the deep stage. As early as 1890, in an account of some dental operations, performed during hypnotic anaesthesia, I drew attention to the fact that there was no interference with the volition of the subject.

Braid, as we have seen, drew important distinctions between natural and induced sleep. These are not recognised by the Nancy School. Bernheim says, "In my opinion nothing, absolutely nothing, differentiates natural and artificial sleep." He admits, however, one point of difference, namely, that "in ordinary sleep, as soon as consciousness is lost, the subject is only in relationship with himself. In induced sleep, the subject's mind retains the memory of the person who has put him to sleep, whence the hypnotiser's power of playing upon his imagination, or of suggesting dreams, and of directing the acts which are no longer controlled by the weakened or absent will." With regard to the relationship between hysteria and hypnotism, Braid agrees with the Nancy and is opposed to the Salpêtrière School.

Braid and the Nancy School differ in reference to *rapport*. According to Carpenter, who explained Braid's views in an article in the *Quarterly Review*, *rapport* could be entirely explained on the principle of "dominant ideas." The subject believed that the operator alone had power over him, or could communicate with him; this established the *rapport*. *Rapport* was not discovered until long after the practice of mesmerism had come into vogue, having been unknown to Mesmer and his immediate disciples; and its phenomena only acquired constancy and fixity, in proportion as its laws were announced and received. Mesmerists, ignorant of *rapport*, produced a great variety of remarkable phenomena, and yet never detected this *rapport*;

although they obtained immediate evidence of it, when once the idea had been put into their own minds and thence transferred to their subjects. In all the experiments Dr. Carpenter witnessed which seemed to indicate its existence, the previous idea had either been present, or had obviously been suggested by the methods employed to induce the mesmeric somnambulism; whilst in a large number of other cases, in which the subjects were not *habitués* of the mesmeric séances, their consciousness was not confined to the mesmeriser, or to those whom he placed *en rapport* with them, but was equally extended to all around.

Braid, as we have already seen, observed that a somnambule, supposed only to be *en rapport* with the hypnotiser, heard and obeyed the predictions made by a third person. At a much later date, Liégeois drew attention to the fact that when you had suggested to a somnambule that he could not hear you, he was still able to do so. "If," he said, "you address him directly, he will neither reply nor carry out your suggestion; but if you speak impersonally, speaking not in your own name, but as if with an internal voice, then the subject will execute the suggestion. Under such circumstances, if I said in reference to Camille, 'Camille is thirsty, Camille will go to the kitchen and ask for a glass of water,' the order was obeyed."

The following is Liébeault's view:—"It is observed that nearly all artificial somnambules are in relation by their senses with those who put them to sleep, but only with them. The subject hears everything that the operator says to him, but him only, provided the sleep is sufficiently deep. He only hears the operator when he is addressed directly by him and not when a third person is spoken to. This *rapport* extends to the other senses." According to Liébeault, the subject remains *en rapport* with the hypnotiser because he goes to sleep in thinking of him, and this does not differ from what happens in ordinary sleep. A mother who goes to sleep close to the cradle of her child, does not cease to watch over him during her sleep, but watches only for him, and while she hears his slightest cry is insensible to other louder sounds. The concentration of the subject's attention upon the operator, and his mental retention of the idea of the one who put him to sleep, is the cause of *rapport*.

From this it is evident that Braid believed *rapport* to be entirely the result of suggestion, while Liébeault considers it to be due to a concentration of attention which resulted naturally from the induction of hypnosis. My own observations have led me to conclusions similar to those of Braid. In subjects who did not know what was expected of them, and to whom neither direct nor indirect suggestions of *rapport* were made, this condition did not appear. On the contrary, they heard and obeyed any one who might address them. In several instances, similar conditions were observed in the subjects experimented on by the Hypnotic Committee of the Society for Psychical Research. These facts apparently disprove Bernheim's conclusion that the only difference which exists between natural and induced sleep is the concentration of the subject's mind upon the operator,—a condition which, he holds, not only explains *rapport*, but also the power of the operator to influence the subject.

It is interesting to note that Braid, like Esdaile, recognised the analogy between hypnosis and certain states produced by *Cannabis Indica*. No

reference to these observations is to be found in Schrenck-Notzing's monograph, "Die Bedeutung narcotischer Mittel für den Hypnotismus." He refers, however, to O'Shaughnessy's experiments.

Some slight difference exists between Braid's view of the value of passes, etc., and that of Professor Forel. While Braid believed that their influence was mainly suggestive, he still held that they were capable of producing some physical effect, though this might be destroyed or reversed by direct suggestion. Forel, on the other hand, denies the physical influence of mechanical processes on the ground that suggestion is capable of altering their supposed action. He says, "The action of blowing upon the face no longer awakens my subjects, because I suggested this would remove pain, in place of awakening them." From this he argues that the act of blowing produces no result; but would it not be equally logical to contend that the prick of a pin produced no physical effect, because by suggestion the patient, rendered insensible to pain, had been taught to regard the pin prick as the signal to evoke some other condition?

Braid forestalled Bernheim in discovering the value of hypnotic treatment in organic paralysis and the power of the operator's touch to assist the patient's mental concentration and thus recall lost memory. Bernheim says, "If necessary, I lay my hand on the subject's forehead to concentrate his attention; he thinks deeply for an instant, without falling asleep, and all the latent memories arise with great precision." This, both as to the observed fact and its explanation, is an almost exact reproduction of the words of Braid. Bernheim's views, as to the part played by suggestion in ordinary medicine, were long ago expressed by Braid clearly and at great length. Similar opinions have recently been advanced by Dr. Wilks, the newly-elected President of the Royal College of Physicians, and one of the ablest thinkers in the medical profession. According to him, "To sit down in one's chair daily and write on a piece of paper the name of some drug for every ailment without exception which comes under our observation is in the present state of medicine an absurdity, and simply a pandering to human weakness. I do not say that drugs are not useful in a moral sense, I am merely contending that the method is not scientific, as we usually apply this term. I know of no more successful practitioner than the late Sir William Gull, and his treatment was rational, but he did not credit any particular drug with the properties ascribed to it by the patient. His prescription very often consisted of nothing but coloured water." Dr. Wilks describes a "sixpenny doctor," at a cheap dispensary, who saw on an average 70 patients during one evening, and whose almost universal medicine was a mixture composed of sulphate of magnesia, burnt sugar and infusion of quassia, and who said, "Always give medicines which produce appreciable effects; then also the mixture must taste like medicine, and if it have a bad smell, the patient will be better satisfied." Dr. Wilks objects "to the attempt to treat cases of disease on principle, when we possess no principles; we do not know sufficiently the action of drugs to do this, and we know less of the meaning or significance of symptoms which we treat." With change of the pathological views of disease, he says, the whole method of its treatment is changed again and again, and further chemical knowledge frequently shows that the drugs we employ do not possess the qualities we

have been in the habit of attributing to them. "Medicine began as a superstition, covered and surmounted by fancies and crude theories. By getting rid of these, advance has been made; but the fact is not yet sufficiently realised that many of the old fancies still remain in the profession."

Dr. Hack Tuke, in speaking of Sir Andrew Clark, said, "His favourite drugs were Bicarbonate of Potash and a vegetable bitter; but neither drugs nor diet formed the central factors of his treatment, or explained his success. 'Suggestion' lay at the root of it all. The term, however, is too mild, unless understood in the technical sense in which it has been employed in recent times. In short, Sir Andrew out-Bernheimed Bernheim; he was, in a word, the most successful hypnotist of his day."

In reference to the many important differences between the theories of Braid and those just referred to, my own observations, I may state, accord on most points with those of the earlier investigator. A careful study of all Braid's writings has led me to the conclusion that, while much has been lost by their neglect, little or no advance has been made upon them until quite recent times. Where progress has been made, and made alone, it has been in the development of the views already expressed by Braid as regards the individuality, in opposition to the automatism, of the hypnotised subject, and in a clearer estimate of what he recognised as double-consciousness. Above everything, it is worthy of note how Braid at once, by his early experiments, exploded the fallacies of the mesmerists, which, till then, had flourished successfully, despite the abusive and absolutely unscientific attacks of the combined medical press. In the writings of Mr. Frederic Myers, more especially in "The Subliminal Consciousness," are to be found the ablest and clearest expression of these later views. In reference to hypnotism, he justly says, "It is something more and other than the mere production of trance that we have to deal with—something more and other than the mere phenomena of fascination, mimicry, rigidity, which are to be seen on every itinerant mesmeriser's platform. Discussions on cerebral circulation, on inhibition and dynamogenesis, are useful and needful on the outskirts of the problem; they may give precision to our conception of the condition in which the deeper phenomena begin; but they cannot explain the novel powers to which those phenomena introduce us,—the increased, the penetrating control of the brain over the organism."

How is it that Braid's later theories have been almost entirely ignored? The answer is a difficult one. It is true that all his works have long been out of print in this country, and are not to be found in their entirety, even in the British Museum. On the other hand, his conclusions were largely adopted by the scientists of his day. In illustration of this, it is only necessary to refer to the works of the late Drs. Carpenter and John Hughes Bennett. The former gives a full exposition of Braid's views in his "Principles of Mental Physiology," Sixth Edition, London, 1881, "Mesmerism, Spiritualism, etc.," and elsewhere. The following passage, from an article in the *Quarterly Review* for September, 1853, shows how thoroughly Dr. Carpenter understood the importance attached by Braid to suggestion. "The clue to the marvel [mesmerism] was soon found by Mr.

Braid, in the concentrated operation of the principle of *suggestion*; [the italics are Dr. Carpenter's] . . . and under the guidance of this idea, he has subsequently followed up the investigation with great intelligence, making no mystery of his proceedings, but courting investigation in every possible way." Professor Bennett, in his "Textbook of Physiology," reproduced the explanation of "Braidism," both from the physiological and psychological side, first given by him in 1851. This formed a part of the lecture on hypnotism he gave annually to his students, in which he urged them to investigate a subject destined to revolutionise the theory and practice of medicine.

The only recent English writer, as far as I know, who refers to Braid's later works, is C. W. Sutton in the "Dictionary of National Biography," where he states that some of them have been translated into French and German. Despite Preyer's translations, Braid's advanced theories seem to be little recognised in Germany and, as far as I have observed, Moll alone refers to them, and in the *Zeitschrift für Hypnotismus*, for December, 1892, he warmly acknowledges Germany's indebtedness to Preyer for his translations and states that the later works are a distinct advance upon "Neurypnology," especially in their psychological explanation of hypnotic phenomena. At the same time, he evidently does not realise how entirely Braid had forestalled the "Suggestion" theory of the Nancy School. He admits, however, that "notwithstanding that many researchers have referred to and valued Braid's writings, the modern works are only in the smallest degree a continuation of his."

In France, Braid's later theories are equally ignored, which is all the more surprising when one remembers that a translation of his last MS. was published in 1883 as a supplement to "Neurypnology." This gives many of his advanced views, and clearly states his reasons for substituting them for his earlier ones and for changing the term hypnotism into that of monoideism. It also contains numerous references to verbal suggestion. Bernheim refers to it, but has evidently entirely failed to grasp its importance, and merely says that he agrees with Brown-Séquard that Braid did not guard sufficiently against suggestion and that "it seems that at the end of his life, Braid felt some doubt about his experiments relative to phreno-hypnotism. In his last memoir, a remarkable *résumé* of his work, addressed to the Academy of Science in 1860, at the time of the experiments of Azam and Broca, he passes by his phreno-hypnotic researches in silence." Bernheim also mentions Braid's work, "The Power of the Mind over the Body," but only in connection with Grimes' "electro-biological researches."

While I have tried to show, both as a point of historical interest and in justice to Braid, how he had anticipated many of the most important observations of the School of Nancy, I do not wish to undervalue the services of that School, and more especially those of its founder. Braid's researches were undoubtedly the exciting cause of the hypnotic revival in France, but at that time little or nothing was known of any of his works, except "Neurypnology," and his last MS. was not published in France until 1883. To Liébeault we owe practically the entire development of modern hypnotism. Independently he arrived at the conclusion that the mental

condition was the important one in hypnosis, and suggestion the main factor in producing its phenomena, and successfully combated the errors of the Salpêtrière School. Another point in reference to their career is worthy of note. Braid's views at once brought him fame. His books sold rapidly, the demand for them exceeding his power of supply. The medical journals were open to him, to an extent which may well excite envy in those interested in the subject at the present day. When Liébeault published his classical work, "*Du Sommeil et des Etats analogues*," six copies alone were sold. His statements only found sceptics, his methods of treatment were rejected without examination, and he was laughed at and despised by all. For many years he devoted himself entirely to the poor, and long refused to accept a fee, lest he should be regarded as attempting to make money by unrecognised methods. Even in his later days, fortune never came to him, and his services—services, which he himself, with true modesty, described as the contribution of a single brick to the edifice many were trying to build—only began to be appreciated when old age compelled him to retire from active work. Though his researches have been recognised, it is certain that they have not been estimated at their true value, and that members of a younger generation have reaped the reward which his devotion of a lifetime failed to obtain.

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18. *The British and Foreign Medico-Chirurgical Review*, Vol. VIII., July to October, 1851, Article V., p. 378. An article on Mesmerism, Magnetism, and Hypnotism, with favourable reference to Braid and his views.

19. "Electro-Biology and Mesmerism," *The Quarterly Review*, Vol. XCIII., 1853. Article VI., p. 501. This article, which is unsigned, is believed to be by Dr. Carpenter, and gives an interesting account of Braid's work and theories.

20. Death of Mr. Braid, Surgeon. *The Manchester Courier*, Saturday, March 31st, 1860. This article gives an account of Braid's life and writings.

21. "Observations on Animal Magnetism." By M. Andral. *London Medical Gazette*, Vol. II., 1832-33, p. 792.

22. "Effects of Mental Attention on Bodily Organs." *Medical Notes and Reflections*. By Henry Holland, M.D., London, 1839, p. 64.

23. "Chapters on Mental Physiology." By Sir H. Holland, Bart. Second Edition, revised and enlarged, London, 1858.

24. "The Elements of Materia Medica and Therapeutics." By Jonathan Pereira, M.D., F.R.S., and L.S. Second Edition, enlarged and improved. Vol. II. London, 1842, p. 1097.

25. "Electrical Psychology ; or the electrical philosophy of mental impressions, including a new philosophy of sleep and of consciousness," from the works of the Rev. John Bovee Dods and Prof. J. S. Grimes. Revised and edited by H. G. Darling, etc. London, Glasgow, printed 1851.

26. "Spirit Manifestations examined and explained ; Judge Edwards refuted ; or an exposition of the involuntary powers and instincts of the human mind." By J. B. Dods, New York, 1854.

27. "The Philosophy of Mesmerism and Electrical Psychology . . . comprised in two courses of lectures." By J. B. Dods. Edited by J. Burns. London, 1876.

28. "Monoideism." *Text-book of Physiology*, etc. By John Hughes Bennett, M.D., etc., 1871, part II., pages 357 to 361.

29. "Mesmerism, Spiritualism, etc." By William B. Carpenter, M.D., etc., 1877.

30. "Principles of Mental Physiology, etc." By William B. Carpenter, M.D., etc., Sixth Edition, 1881. Both these works contain much reference to Braid's experiments and theories.

31. "Hypnotism." By G. J. Romanes. *Nineteenth Century*, September, 1880, p. 474.

32. "Braid, James." By C. W. Sutton. *Dictionary of National Biography*. Vol. VI., p. 198. London, 1886.

33. "Hypnotism or Animal Magnetism." By Rudolph Heidenhain, M.D. Translated from the Fourth German Edition by L. C. Wooldridge, M.D., D.Sc. With a Preface by G. J. Romanes, M.A., F.R.S. Second Edition, London, 1888.

34. "Suggestive Therapeutics ; A Treatise on the Nature and Uses of Hypnotism." By H. Bernheim, M.D. Translated from the Second and Revised Edition by Christian A. Herter, M.D. Second Edition. Edinburgh and London, 1890.

35. "Braidism." By H. Charlton Bastian. "A Dictionary of Medicine." Edited by Richard Quain, M.D. London, 1882. Vol. I., p. 131. "Mesmerism." By H. Charlton Bastian, 1882. Vol. II., p. 972.

36. "Stray Thoughts on some Medical Subjects." By Samuel Wilks, M.D., F.R.S. *The Lancet*, November 24th, 1894.

37. "Extractions under Hypnotism." By J. Milne Bramwell, M.B., and W. Arthur Turner, L.D.S. *The Journal of the British Dental Association*. March, 1890, p. 153.

38. "The Stages of Hypnotism." By Edmund Gurney. *Proceedings of the Society for Psychological Research*. Vol. II., 1884, p. 61.

39. "L'Hypothèse du Magnétisme Animal." *Proceedings of the Society for Psychological Research*. Vol. XI., December, 1895, p. 599.

40. "L'Hypothèse du Magnétisme Animal." *Journal of the Society for Psychological Research*, March, 1896, p. 221.

41. "Hypnotism in the Hysterical." By J. M. Charcot and Gilles de la Tourette. *A Dictionary of Psychological Medicine*. Edited by D. Hack Tuke, M.D., 1892. Vol. I., p. 606.

42. "Some Physiological Experiments with Magnets at the Edison Laboratory." By Frederick Peterson, M.D., and A. E. Kennelly, Chief Electrician, Edison Laboratory, Vice-President American Institute of Electrical Engineers. Read before the Section in Neurology of the New York Academy of Medicine, October 14, 1892.

43. "The Subliminal Consciousness." By F. W. H. Myers. *Proceedings of the Society for Psychological Research*. Vol. VII., February, 1892, p. 298.

44. "On Criminal Suggestion." By Professor J. Delbœuf. *The Monist*, April, 1892, p. 363.

45. "Human Personality in the Light of Hypnotic Suggestion." By F. W. H. Myers. *Proceedings of the Society for Psychological Research*. Vol. IV., 1887, p. 1.

46. "Journal du Magnétisme." Rédigé par une Société de Magnétiseurs et de Médecins. Sous la direction de M. le Baron du Potet. Vol. IV., 1847, p. 209; Vol. VIII., 1849, p. 66; Vol. X., 1851, p. 510; Vol. XIV., 1855, p. 400; Vol. XIX., 1860, pp. 62, 105. Du Potet refers to Braid's methods and theories, and also gives an account of a somnambule in Paris who could imitate languages and song.

47. "Note sur le sommeil nerveux ou hypnotisme." Par le Dr. Azam de Bordeaux, *Archives générales de médecine*, cinquième série, Tome XV., p. 5. Paris, 1860.

48. "Memoirs d'un Magnétiseur." Par Ch. Lafontaine. Tome Premier. Paris, 1860, pp. 311-314.

49. "Neurypnologie; Traité du sommeil nerveux ou hypnotisme." Par James Braid. Traduit de l'anglais par le Dr. Jules Simon. Avec Préface de C. E. Brown-Séguard. Paris, 1883.

50. "De la suggestion et du somnambulisme dans leurs rapports avec la jurisprudence et la médecine légale." Par Jules Liégeois, Professeur à la Faculté de Droit de Nancy. Paris, 1889.

51. "Mystères des sciences occultes." Par un Initié. Paris [no date]. [A short account of Braid is given, pp. 296-300, and at p. 289 is to found the only portrait of Braid with which I am acquainted.] Facsimile d'une lithographie d'après nature, imprimée à Liverpool en 1854.

52. "Cours théorique et pratique du Braidisme ou hypnotisme nerveux." Par M. le Dr. Phillips [Durand de Gros] 1860.

53. "Suggestions Criminelles Hypnotiques; Arguments et faits à l'appui." Par M. le Dr. Liébeault. *Revue de l'Hypnotisme*, Avril, 1895, p. 289.

54. "De la suggestion envisagée au point de vue pédagogique." Par le Dr. Bernheim. *Revue de l'Hypnotisme*. Vol. I., 1887, p. 129.

55. "Ephémérides de l'Hypnotisme." This contains an account of Braid without reference to his later works. *Revue de l'Hypnotisme*. Vol. II., 1888, p. 276.

56. "Le Sommeil provoqué et les Etats analogues." Par le Dr. A. A. Liébeault. Paris, 1889.

57. "Suggestions Hypnotiques Criminelles." Lettre au Docteur Liébeault, par M. le Dr. Durand [de Gros], p. 8. *Revue de l'Hypnotisme*, Juillet, 1895.

58. "L'Hypnose et les Suggestions criminelles." Par J. Delboeuf. *Revue de l'Hypnotisme*. Février, 1895, p. 225. Mars, 1895, p. 260.

59. "Die Entdeckung des Hypnotismus." Von W. Preyer. Berlin, 1881.

60. "Der Hypnotismus." Ausgewählte Schriften von J. Braid. Deutsch herausgegeben von W. Preyer. Berlin, 1882.

61. "Literaturbericht," von Dr. med. Albert Moll in Berlin. *Zeitschrift für Hypnotismus*, December, 1892, p. 107.

62. "Die Bedeutung narcotischer Mittel für den Hypnotismus, mit besonderer Berücksichtigung des indischen Hanfes." Von Dr. Frh. von Schrenck-Notzing. *Schriften der Gesellschaft für psychologische Forschung*. Heft 1. Leipzig, 1891.

GLOSSARY OF TERMS USED IN PSYCHICAL RESEARCH.

BY F. W. H. MYERS.

It has been often explained in these *Proceedings* that the success or otherwise of our investigations must necessarily depend largely upon the amount of first-hand testimony which we receive from voluntary correspondents. These correspondents are not all of them equally familiar with philosophical and medical terms; nor are they all of them of English-speaking nationality. It is important, nevertheless, that they should readily and exactly understand the drift of our inquiries; and we have been repeatedly asked to furnish a Glossary of the unfamiliar words which those inquiries oblige us to use. I have here attempted to comply with that request, and have explained some words and phrases which fall under three main heads.

1. Words in common philosophical or medical use, to which no new shade of meaning is given in this inquiry, *e.g.* *ecmnesia*. Introducing a few of these words for the ordinary reader's convenience, I have generally taken the definition from Hack Tuke's *Dictionary of Psychological Medicine* (London: Churchill, 1892), which is the most authoritative—almost the only—English work of its kind.

2. Words or phrases in themselves not new, but used in these studies with some special significance;—as for instance "systematised anæsthesia," "negative hallucination." These two phrases are constantly used by French writers on hypnotism; but mere familiarity with the words themselves would not explain their meaning in that context to a reader fresh to hypnotic discussions.

3. A few words, distinguished by an asterisk, for which I am myself responsible. I must leave it to my readers to judge how far these words are

likely to be useful. But I would suggest that when a subject so novel as ours is made the subject of discussion in many countries, there is a convenience in using words of Greek or Latin derivation, which can be adapted to all languages, and can be made to bear a clearly defined signification.

GLOSSARY.

Aboulia.—Loss of power of willing. I have used the word *hyperboulia* to express that increased power over the organism, resembling the power which we call *will* when it is exercised over the voluntary muscles, which is seen in the bodily changes effected by self-suggestion.

After-image.—The picture seen as though in the eye itself after looking at a bright object. It is called *positive* when it reproduces, *negative* when it reverses the true illumination or colours of the actual object. After-images are regarded as *retinal* or *entoptic*, belonging to the interior of the eye. After-images must be distinguished from *memory-images*, which may appear spontaneously, or may be summoned by an effort of will, long after the original sight of the object.

Agent.—The person on whose condition a telepathic impression seems to be dependent; who seems to initiate the telepathic transmission.

Alternation of personality.—See *Disintegration of personality*.

Anæsthesia, or the loss of sensation generally, must be distinguished from *analgesia*, or the loss of the sense of pain alone. Many hypnotic subjects are analgesic but not anæsthetic. *Systematised anæsthesia* or *negative hallucination* signifies the condition of an entranced subject who has been told (for instance) that Mr. A. is not in the room, while he is in reality present. The subject may thus be said to have a *negative* hallucination, or to have been deprived of a certain group or *system* of perceptions, in that he fails to see Mr. A. Other words descriptive of the general sensory condition are *dysæsthesia*, impaired or painful sensation, *paræsthesia*, erroneous or morbid sensation, *hyperæsthesia*, unusually keen sensation, which may or may not be a morbid symptom. Hyperæsthesia may be *peripheral*, when it affects nerve-endings near the surface of the body, or *central*, when the excessive sensitiveness belongs to the central *sensorium*;—such parts, namely, of the brain as are concerned in receiving or generating sensory images and impressions. *Hemi-anæsthesia* means anæsthesia of half the body, the median line (down the middle of the body) separating normal sensation from absence of sensation. Anæsthetic *zones* or *patches* (formerly deemed characteristic of witches) are common in hysteria. *Cenæsthesia* means that consensus or agreement of many organic sensations which is a fundamental element in our conception of personal identity. Finally I have suggested the word **panæsthesia* to express the undifferentiated sensory capacity of the supposed primal germ.

Aphasia.—Incapacity of coherent utterance, not caused by structural impairment of the vocal organs, but by lesion of the cerebral centres for speech. Distinguished from congenital or acquired *aphonia*, due to paralysis or imperfect approximation of the vocal cords, and also from *hysterical mutism*, when the patient is obstinately and involuntarily silent, although the vocal organs are uninjured and the cerebral centres of speech are only

functionally affected, with no visible lesion. All the four forms of *verbalisation* are subject to separate disorders of the type of aphasia. Lack of power to write words is called *agraphia* or *agraphy*; lack of power to understand words written, *alexia* or *word-blindness*; lack of power to understand words uttered, *word-deafness*. In each case the trouble may lie in the brain and not in the organ of sense or other organs. For instance, a man's sight even for printed musical notes may be unimpaired, while yet he is unable to understand printed words.

Attaque de sommeil.—This French term is more correct than the word "trance," to express those spontaneous lapses into prolonged and profound sleep which sometimes occur in hysterical subjects.

Automatism.—The words *automatism* and *automatic* are used in somewhat different senses by physiologists and psychologists. Thus Professor Foster says, (*Foster's Physiology*, 5th Edition, p. 920) "We speak of an action of an organ or of a living body as being spontaneous or automatic when it appears to be not immediately due to any changes in the circumstances in which the organ or body is placed, but to be the result of changes arising in the organ or body itself and determined by causes other than the influences of the circumstances of the moment. The most striking automatic actions of the living body [are] those which we attribute to the working of the will and which we call voluntary or volitional." That is to say, to the physiologist an action is "self-moved" when it is determined, not by the environment, but by the organism itself. The word thus becomes hardly more than a synonym for *spontaneous*. The psychologist, on the other hand, regards an action as "self-moved" when it is determined in an organism apart from the central will or control of that organism. Thus when an act at first needing voluntary guidance, by practice comes to need such guidance no longer, it is called "secondarily automatic." I have used the word in a wider sense, as expressing such images as arise, as well as such movements as are made, without the initiation, and generally without the concurrence, of conscious thought and will. *Sensory automatism* will thus include visual and auditory hallucinations; *motor automatism* will include messages written without intention (automatic script) or words uttered without intention (as in "speaking with tongues," trance-utterances, etc.). I ascribe these processes to the action of submerged or subliminal elements in the man's being. Such phrases as "reflex cerebral action," or "unconscious cerebration," give therefore, in my view, a very imperfect conception of the facts.

Catalepsy.—"An intermittent neurosis, characterised by the patient's inability to change the position of a limb, while another person can place the muscles in a state of flexion or contraction as he will."—Tuke's *Dict.* Catalepsy may also be induced as a stage of hypnotism; although Charcot's view which erected catalepsy, lethargy, somnambulism (their relative positions sometimes varied) into three typical or necessary stages in a hypnotic trance is now commonly considered to have been a too hasty generalisation from the habits—largely imitative—of the group of hypnotic patients at the Salpêtrière, (a hospital in Paris.)

Census of hallucinations.—An inquiry undertaken to determine the frequency of hallucinations in sane and healthy persons; described in S. P. R. *Proceedings*, Vol. X.

Centre of consciousness.—The place where a percipient imagines himself to be. The point from which he seems to himself to be surveying some phantasmal scene.

Clairvoyance (Lucidité).—The faculty or act of perceiving, as though visually, with some coincidental truth, some distant scene, used sometimes, but hardly properly, for *transcendental vision*, or the perception of beings regarded as on another plane of existence. *Clairaudience* is generally used of the sensation of hearing an internal (but in some way veridical) voice. I have preferred to use the term **telæsthesia* for distant perception. For the faculty has seldom any close analogy with an extension of *sight*; the perception of distant scenes being often more or less symbolical and in other ways out of accord with what actual sight would show in the locality of the vision. On the other hand, *telæsthesia* merges into *telepathy*, since we cannot say how far the perception of a distant *scene* may in essential be the perception of the content of a distant *mind*.

Coincidental.—This word is used when there is some degree of coincidence in time of occurrence between a supernormal incident and an event at a distance, which makes it seem probable that some causal connection exists between the two. An apparition, for instance, seen at or about the time when the person whose phantasm is seen dies, is a *coincidental* apparition.

Collective.—Applied to cases where several persons together perceive a hallucination or phantasm.

Control.—This word is used of the intelligence which purports to communicate messages which are written or uttered by the *automatist*, *sensitive*, or *medium*. The word is used for convenience' sake, but should not imply that the source of the messages need be other than the automatist's own subliminal intelligence.

**Cosmopathic.*—Open to the access of supernormal knowledge or emotion, apparently from the transcendental world, but whose precise source we have no means of defining.

Crystal-gazing.—The act of looking into a crystal, glass ball, or other *speculum*, or reflecting surface, with the object of inducing hallucinatory pictures. The person doing this is called a *seer* or *scryer*. The pictures of course exist in the mind and not in the crystal. See *Shell-hearing*.

Delusion and Delusive.—Applied generally to all cases whether of hallucination or illusion, when there is no corresponding reality whatever;—*i.e.*, when the case is not coincidental or in any other way veridical.

**Dextro-cerebral* (opposed to **Sinistro-cerebral*); of left-handed persons, as employing preferentially the *right* hemisphere of the brain.

Dimorphism.—In crystals, the property of assuming two incompatible forms; in plants and animals, difference of form between members of the same species. Used of a condition of alternating personalities; a kind of *psychical dimorphism* in which memory, character, faculty, etc., present themselves at different times in different forms in the same person. Similarly, *polymorphism* is the property of assuming many forms.

Discarnate.—Disembodied, opposed to *incarnate*. Used of that part of man which still subsists after bodily death.

Disintegration of personality.—Used of any condition where the sense of personality is not unitary and continuous; especially when secondary and transitory personalities intervene; as for instance when a hysterical subject calls herself at one time *Rose*, at another *Adrienne*, etc., with separate chains of memory for each condition.

Dissolutive.—Opposed to *Evolutione*, of changes which tend not towards progress but towards decay.

Dynamogeny.—The increase of nervous energy by appropriate stimuli; often opposed to *inhibition*.

Ecmnesia.—A gap in memory: “a form of amnesia [forgetfulness] in which there is a normal memory of occurrences prior to a given date, with loss of memory of what happened for a certain time after that date.”—*Tuke's Dict.* It should be added that the gap of memory may include some period of time *previous* to the shock or accident which caused it.

**Entencephalic.*—On the analogy of *entoptic*; of sensations, etc., which have their origin within the brain, not in the external world.

Externalise.—This word is used to represent the process by which an idea or impression on the percipient's mind is transformed into a phantasm apparently outside him.

Hallucination.—Any supposed sensory perception which has no objective counterpart within the field of vision, hearing, etc., is termed a hallucination. Hallucinations may be *delusive* or *falsidical*, when there is nothing whatever to which they correspond; or *veridical*, when they correspond (as those of which we treat generally correspond) to real events happening elsewhere. A *pseudo-hallucination* is a quasi-percept not sufficiently externalised to rank as a “full-blown” hallucination. Contrast with *illusion* and *delusion*.

Hyperboulia.—See *Aboulia*.

Hypermnnesia.—Defined in *Tuke's Dict.* as “over-activity of the memory, a condition in which past acts, feelings, or ideas, are brought vividly to the mind, which, in its natural condition, has wholly lost the remembrance of them.” In my view the subliminal memory retains these remembrances throughout, and their supraliminal evocation implies an increased grasp of natural faculty. **Panmnnesia* would imply a potential recollection of all impressions.

**Hyperpromethia.*—Supernormal power of foresight; attributed to the subliminal self as a hypothesis by which to explain premonitions without assuming either that the future scene is shown to the percipient by any mind external to his own, or that circumstances which we regard as future are in any sense already existent.

Hypnagogic. *Illusions hypnagogiques* (Maury) are the vivid illusions of sight or sound—“faces in the dark,” etc.—which sometimes accompany the oncoming of sleep. To similar illusions accompanying the *departure* of sleep, as when a dream-figure persists for a few moments into waking life, I have given the name **hypnopompic*.

Hypnotism.—See *Mesmerism*.

Hysteria.—“A disordered condition of the nervous system, the anatomical seat and nature of which are unknown to medical science, but of which the symptoms consist in well-marked and very varied disturbances of

nerve-function."—*Encyc. Brit.* For further definition the reader must be referred to various papers shown in the indices to these *Proceedings*.

Hysterical blindness, contractures, mutism, œdema, paralysis, etc., signify affections not dependent on any discoverable lesion, but on the defects of nervous co-ordination characteristic of hysteria. Such affections, even when of long standing, may quite suddenly disappear.

Hystero-genous zones.—Points or tracts on the skin of a hysterical person pressure on which will induce a hysterical attack. Similarly, *hypno-genous zones* are regions by pressure on which sleep is induced.

Ideational.—Used of impressions which convey some distinct notion, but not of sensory nature.

Illusion.—The misinterpretation of some object actually present to sight or hearing, as when a hanging coat is taken for a man, a ringing in the ears for the sound of a bell, etc.

Imaginal.—A word used of characteristics belonging to the perfect insect or *imago*;—and thus opposed to *larval*;—metaphorically applied to transcendental faculties shown in rudiment in ordinary life.

Induced.—Of phantasms, etc., intentionally produced.

Levitation.—A raising of objects from the ground by supposed supernormal means: especially of living persons, asserted in the case of S. Joseph of Copertino, and many other saints; of D. D. Home, and of W. Stainton Moses.

Medium.—A person through whom communication is deemed to be carried on between living men and spirits of the departed. As commonly used in spiritist literature, this word is liable to the objection that it assumes a particular theory for phenomena which admit of explanation in various ways. It is often better replaced by *automatist* or *sensitive*.

Mesmerism.—This is the oldest widely-recognised word for a large group of phenomena discussed in many papers in these *Proceedings*. The name need imply nothing more than the fact that Mesmer was the conspicuous introducer of many of the phenomena to the European public. But it is also specially used to imply something of his *theory* of their production, by a vital effluence from the mesmeriser, conveyed partly by *mesmeric passes*, or wavings of the hands. The term *Animal Magnetism* implies a somewhat different theory. The term *Hypnotism*, when first started by Braid, was again meant to imply a theory of the genesis of these phenomena, but it is now generally used with no theoretical implication.

Message.—Used for any communication, not necessarily verbal, from one to another stratum of the automatist's personality, or from an external intelligence to one or other stratum of the automatist. Thus any automatic script may be called a *message*, even if incoherent.

Metallæsthesia.—A form of sensibility alleged to exist which enables some hypnotised or hysterical subjects to discriminate between the contacts of various metals by sensations not derived from their ordinary properties of weight, etc.

**Methectic.*—Of communications between one stratum of a man's intelligence and another; as when he writes messages whose origin is in

his own subliminal self. Some word is needed to express this novel conception ; and Plato's use of the word *μέθεξις*, participation, (Parm. 132D) suggests methectic as the most appropriate term of Greek origin.

Mirror-writing (*écriture renversée*, *Spiegel-schrift*). Writing so inverted, or, more exactly, *perverted*, as to resemble writing reflected in a mirror, or blotted off on to a sheet of blotting paper. This form of writing is natural to some left-handed persons. It also frequently appears in automatic script.

Mnemonic chain.—A continuous series of memories, especially when the continuity persists after an interruption. See *Disintegration of personality*.

Monition.—A message involving counsel or warning, when that counsel is based upon facts already in existence, but not normally known to the person who receives the monition.

Motor.—Used of an impulse to action not carrying with it any definite idea or sensory impression.

Negative hallucination.—See *Anæsthesia*.

Objectify.—To externalise a phantom in three dimensions ; to see it as a solid object fitted into the waking world.

Percipient.—The correlative term to Agent ; the person on whose mind the telepathic impact falls ; or more generally, the person who perceives any motor or sensory impression.

Phantasm and *Phantom*.—Phantasm and phantom are, of course, mere variants of the same word ; but since phantom has become generally restricted to *visual* hallucinations, it is convenient to take phantasm to cover a wider range, and to signify any hallucinatory sensory impression, whatever sense—whether sight, hearing, touch, smell, taste, or diffused sensibility—may happen to be affected.

Point de repère.—Guiding mark. Used of some (generally inconspicuous) real object which a hallucinated subject sees along with his hallucination, and whose behaviour under magnification, etc., suggests to him similar changes in the hallucinatory figure.

Polyzoism.—The property, in a complex organism, of being composed of minor and quasi-independent organisms (like the *polyzoa* or “sea-mats”). This is sometimes called “colonial constitution,” from animal *colonies* ; but the metaphor implied is not always suitable. The word *polypsychism* is sometimes used to express the psychical aspect of polyzoism.

Post-hypnotic.—Used of a suggestion given during the hypnotic trance, but intended to operate after that trance has ceased.

Precognition.—A knowledge of impending events supernormally acquired.

Premonition.—A supernormal indication of any kind of event still in the future.

**Preversion*.—A tendency to characteristics assumed to lie at a further point of the evolutionary progress of a species than has yet been reached ; opposed to reversion.

Proleptic.—Anticipatory ; assuming a knowledge of a fact not yet communicated. A dream is called proleptic when it assumes some fact which is only made known to the dreamer later in the dream. For instance, a person in one's dream may ask one a riddle, and not tell one the answer for

some time ; yet a knowledge of that answer must have existed in one's mind all the time, since one did in fact ask the riddle oneself.

**Promnesia.*—The paradoxical sensation of recollecting a scene which is only now occurring for the first time ; the sense of the *déjà vu*. The term *paramnesia*, which is sometimes given to this sensation, should, I think, cover all forms of erroneous memory, and cannot without confusion be used to express specifically this one anomalous sensation.

Psycho-therapeutics.—“Treatment of disease by the influence of the mind on the body.”—Tuke's *Dict.* All *suggestion* of course comes under this head.

Quasi-percept.—The more or less objectified phantasm, which the percipient does, in a certain sense, perceive.

Reciprocal.—Used of cases where there is both agency and percipience at each end of the telepathic chain, so that (in a complete or developed case) A perceives P, and P perceives A also.

**Retrocognition.*—Knowledge of the Past, supernormally acquired.

Secondary personality.—It sometimes happens, as the result of shock, disease, or unknown causes, that a man or woman experiences an alteration of memory and character, amounting to a change of personality, which generally seems to have come on during sleep. The new personality is in that case termed *secondary*. It generally disappears after a time, or alternates with the original, or *primary*, personality.

Secondary sensations (*Secundärempfindungen, audition colorée, sound-seeing, synæsthesiæ, etc.*).—With some persons every sensation of one type is accompanied by a sensation of another type ; as for instance a special sound may be accompanied by a special sensation of colour or light (*chromatisms* or *photisms*). This phenomenon is analogous to that of *number-forms*,—a kind of diagrammatic mental pictures which accompany the conception of a progression of numbers. See Galton's *Inquiries into Human Faculty*.

Shell-hearing.—The induction of hallucinatory voices, etc., by listening to a shell. Analogous to crystal-gazing.

Spectrum of consciousness.—A comparison of man's range of consciousness or faculty to the solar spectrum, as seen by us after passing through a prism or as examined in a spectroscope.

Spiritualism or *Spiritism.*—A religion, philosophy, or mode of thinking, based on the belief that the spirits of the dead communicate with living men. Since the words *spiritualisme* and *spiritualiste* have long been used in France for a school of philosophy opposed to materialism, there is some advantage in choosing the word *Spiritism* for the belief in spirit-intercourse.

Stigmatisation.—The production of blisters or other cutaneous changes on the hands, feet, or elsewhere, by self-suggestion or meditation. These marks were said to have been produced on S. Francis of Assisi, on Louise Lateau, etc., by meditation on the sufferings of Christ. Similar marks are producible by suggestion in some hypnotic subjects, and even *vesication* (the formation of blisters) seems to have been thus induced.

Subliminal.—Of thoughts, feelings, etc., lying beneath the ordinary *threshold* (limen) of consciousness, as opposed to *supraliminal*, lying *above*

the threshold. Excitations are termed *subliminal* when they are too weak to rise into direct notice ; and I have extended the application of the term to feeling, thought, or faculty, which is kept thus submerged, not by its own weakness, but by the constitution of man's personality. The threshold (Schwelle) must be regarded as a level above which waves may rise,—like a slab washed by the sea,—rather than as an entrance into a chamber.

Suggestion.—The process of effectively impressing upon the subliminal intelligence the wishes of the man's own supraliminal self or of some other person. The mechanism of this process is obscure, nor is it known why some persons are much more *suggestible* than others. *Self-suggestion* (sometimes called *auto-suggestion* by a barbarism easily avoidable in English) means a suggestion conveyed by the subject himself from one stratum of his personality to another, without external intervention.

**Supernormal*.—Of a faculty or phenomenon which goes beyond the level of ordinary experience, in the direction of evolution, or as pertaining to a transcendental world. The word *supernatural* is open to grave objections ; it assumes that there is something outside nature, and it has become associated with arbitrary interference with law. Now there is no reason to suppose that the psychical phenomena with which we deal are less a part of nature, or less subject to fixed and definite law, than any other phenomena. Some of them appear to indicate a higher evolutionary level than the mass of men have yet attained, and some of them appear to be governed by laws of such a kind that they may hold good in a transcendental world as fully as in the world of sense. In either case they are above the norm of man rather than outside his nature.

Supraliminal.—See *Subliminal*.

Telekinesis.—Used of alleged supernormal movements of objects, not due to any known force.

**Telepathy* and **telesthesia*.—It has become possible, I think, to discriminate between these two words somewhat more sharply than when I first suggested them in 1882. Telepathy may still be defined as “the communication of impressions of any kind from one mind to another, independently of the recognised channels of sense.” The *distance* between agent and percipient which the derivation of the word, “feeling at a distance” implies, need, in fact, only be such that no known operation of the senses can bridge it. Telepathy may thus exist between two men in the same room as truly as between one man in England and another in Australia, or between one man still living on earth and another man long since departed. *Telesthesia*—perception at a distance—may conveniently be interpreted in a similar way, as implying any direct sensation or perception of objects or conditions independently of the recognised channels of sense, and also under such circumstances that no known mind external to the percipient's can be suggested as the source of the knowledge thus gained.

**Telergy*.—A name for a hypothetical force or mode of action, concerned with the conveyance of telepathic impressions, and perhaps with other supernormal operation.

Veridical.—See *Hallucination*.

PROCEEDINGS OF GENERAL MEETINGS.

The 80th General Meeting of the Society was held at the Westminster Town Hall on Friday, June 5th, at 8.30 p.m.; PROFESSOR BARRETT in the chair.

DR. J. MILNE BRAMWELL read the paper on "Personally observed Hypnotic Phenomena," printed below.

The 81st General Meeting was held in the same place on Friday, July 10th, at 4 p.m.; the President, MR. W. CROOKES, in the chair.

DR. J. MILNE BRAMWELL read a paper, entitled "What is Hypnotism?" also printed below.

The 82nd General Meeting was held in the same place on Friday, October 30th, at 8.30 p.m.; PROFESSOR SIDGWICK in the chair.

PROFESSOR W. F. BARRETT read a further paper on the Dowsing or Divining Rod, which it is hoped will appear in a future number of the *Proceedings*.

The 83rd General Meeting was held in the same place on Friday, December 4th, at 4 p.m.; the President, MR. W. CROOKES, in the chair.

"Miss X." read a paper on "Some Recent Experiences, apparently Supernormal," which it is hoped will appear in a future number of the *Proceedings*.

I.

PERSONALLY OBSERVED HYPNOTIC PHENOMENA.

BY DR. J. MILNE BRAMWELL.

During the last few years, I have occasionally been asked to give an account of my hypnotic experiences to this Society, on the ground that, as I was constantly employed in hypnotic work at home, and had frequently visited hypnotic centres abroad, I must have something interesting to relate. I have hitherto refrained from doing so, chiefly because my researches have been almost entirely of a medical nature, and have contained little of general scientific interest. I have observed, however, certain facts which are not without importance in reference to hypnotic theory. These, I think, tend to show that the hypnotised subject has a higher mental life than he is usually credited with, and possesses considerable selective power in reference to the commands of the operator. These facts, together with an account of the remarkable power of appreciating time possessed by one hypnotised subject, will form the main features of this paper. I also propose giving a short account of other phenomena, and will try to group them so as to form a general picture of the hypnotic state, as it appears to me. The sequel to this paper will deal with these phenomena in relation to the various theoretical explanations of hypnotism.

METHODS AND SUSCEPTIBILITY.

As various theories have been based, both on the manner in which hypnosis is induced, as well as on the mental condition of those capable of being hypnotised, it is necessary that I should say a word or two on these two points. I have never observed an instance in which hypnosis has followed mechanical means alone; on the other hand, it has frequently appeared when these have been carefully eliminated, and when the only method employed has been the creation by verbal suggestion of a picture of the desired condition. I have neither been able to confirm the observations of others in reference to the value of chloroform and other narcotic drugs in inducing hypnosis, nor to succeed, as they claim to have done, in changing natural into hypnotic sleep.

The susceptibility to hypnosis varies widely, usually in proportion to the subject's power of concentration. Where voluntary attention is absent, as in idiots, hypnosis is impossible; where, as in insanity,

hysteria, &c., the attention is actively engaged in other directions, hypnosis is generally difficult.

The following figures, comprising two groups of 100 consecutive cases, illustrate this. In group No. 1, many were in good health when I attempted to hypnotise them, while of the remainder, few suffered from diseases calculated to interfere with their powers of attention.

The results in this class were as follows :—

Slight hypnosis, 12. Deep hypnosis, 40. Somnambules, 48. Refractory, 0. Hypnotised at first attempt, 92. After repeated trials, 8 : average number of trials in these eight cases, 4.

In group No. 2, nearly all suffered from grave and long-standing nervous disease, and with them the susceptibility was considerably decreased, thus :—

Slight hypnosis, 35. Deep hypnosis, 13. Somnambules, 29. Refractory, 23. In the 77 successful cases hypnosis was obtained at the first attempt in 51 instances. After repeated trials, in 26 : average number of trials in these 26 cases, 15.

Sex apparently exerted no influence on susceptibility.

HYPNOTIC PHENOMENA.

Closure of the eyes is usually the first phenomenon observed in hypnosis, and as soon as this occurs other alterations in the voluntary muscles can usually be induced by suggestion. In reference to these I have nothing special to report. I, like others, have seen that voluntary muscular power can be increased or diminished to a remarkable extent.

Involuntary Muscles and Special Senses.—The action of the involuntary muscles and the special senses can be influenced in hypnosis. Of this I have seen many striking instances, but will confine myself almost entirely to one case, that of a woman aged forty, in which all the experiments were checked by independent observers.

Pulse.—In this subject, the rapidity of the pulse could be quickly increased or diminished by simply suggesting that it should beat faster or slower. These changes, as recorded by the sphygmograph, showed corresponding alterations in tension.

Muscular Sense.—Differences in weight as small as eight grains could be distinguished in the hypnotic state; this the patient was quite unable to do in the normal condition.

Thermal Sensibility.—She was able to discriminate between very slight changes in temperature, such as she was unable to appreciate when awake.

Common Cutaneous Sensibility.—The common cutaneous sensibility was nearly double, *i.e.*, the patient could distinguish the points of a

compass, applied to different parts of the body, at about half the normal distance. She possessed no increased power when awake.

Hearing.—The range of hearing could be doubled by suggestion.

Sight.—The variations in this patient's range of vision were recorded for me by Mr. Bendelack Hewetson, Ophthalmic Surgeon to the Leeds Infirmary; and, as they appear to be of considerable interest, I will give them in detail. He first saw her in 1889, long before she had been hypnotised, and reported that she was hypermetropic; that this condition was over-corrected by ciliary spasm; that she could only read the third line of Snellen's test types, and required a minus glass to enable her to read the bottom line. In hypermetropia, as many of my readers are doubtless aware, the axis of the eye is shorter than normal, and the rays of light, or a certain proportion of them, in passing through the lens, are focussed at a point behind the retina. In this case, as the result of spasm of the muscles of accommodation, the position, and possibly the curvature of the lens was altered; *i.e.*, it was projected further forward and rendered more convex. In consequence of this, the hypermetropia, which was only slight, was not only neutralised, but over-corrected. Thus the patient was rendered virtually myopic; the axis of the eye had become longer than normal, and the rays of light were focussed at a point in front of, instead of behind, the retina. At this time treatment by glasses failed to relieve the defect, as the patient, who suffered from other nervous affections, was unable to wear them. She was first hypnotised in March, 1892, when I observed that I could apparently alter the range of vision by suggestion. In the following July she was again examined by Mr. Hewetson, who found the physical condition and range of vision identical with what it had been in 1889. Suggestions were then made in his presence, with the view of increasing the range of vision, whereupon the spasm disappeared, and the patient easily read the bottom line of Snellen's test types without a glass. After having shown that the spasm, with its accompanying defective vision, could be restored, I suggested its total disappearance. In June, 1893, Mr. Hewetson again examined the patient, and reported that the range of vision was normal, and that there was no return of the spasm.

Analgesia.—With this patient, as with many others, hypnotic analgesia could be easily induced. On one occasion she had six teeth painlessly extracted, and on another four. There was no pain at any time after these operations, and the healing process was a remarkably quick one. A powerful application of the Faradic brush was also unattended by any disagreeable sensation.

Change of Temperature.—On two occasions only have I had an opportunity of testing whether the suggested sensations of heat and

cold were accompanied by change in temperature. The subject of both experiments was a young man, a remarkably good somnambule, in whom all the usual phenomena of deepest hypnosis could be induced. Dr. Waller, the well-known physiologist, recorded the temperature by means of a delicate electrical apparatus, capable of registering fractions of a degree of change, while I alternately made emphatic and prolonged suggestions of heat and cold. The result was an entirely negative one.

APPRECIATION OF TIME BY SOMNAMBULES.

To Professor Delbœuf's experiments in this direction my own owe their origin. Delbœuf drew attention to the fact that, in most instances in which it had been suggested to somnambules to do something at the end of a certain number of days, this had been rendered more simple by the terminal day falling upon some easily recognisable date, such as the New Year, and, as the subject knew this, the suggestion was equivalent to saying that he was to do something on New Year's Day. To avoid mistakes of this kind and to render the test conditions more stringent, Delbœuf made his suggestions in minutes varying in number from 350 to 3,300. In thirteen experiments there were only two complete successes; in the majority of the remainder there was a partial success, with an error of a tenth to a thirty-seventh of the interval. Despite these failures, Professor Delbœuf considered that the successes, under the conditions in which he obtained them, were amongst the most extraordinary things presented by induced somnambulism.

I propose at present to confine my account to the history of one case and, as the results obtained were so extraordinary, I will put before you as many details as possible, in order to present a fairly complete picture of the subject of the experiments, and of the circumstances under which they were carried out.

Miss —, the patient in question, aged 19, was first hypnotised by me on September 2nd, 1895. At this time she had suffered from muscular tremor of both arms and legs for about twelve months. The illness had appeared after over-exertion and mental strain, the result of nursing a relative who died after a long illness. Previously, the general health had been good and there had been no signs of hysteria. Family history good. After about three weeks of hypnotic treatment the tremor disappeared, and has not returned since. The patient is intelligent and fairly well educated, but possesses no extraordinary calculating powers either in the normal state or in hypnosis. According to her mother, she has always been remarkably truthful and well-conducted, rather grave in disposition and inclined to take the duties of life seriously. She is a dressmaker, and is in the employment of a personal friend, but lives at home. She is fond

of her business, and her main interest in life, apart from it, appears to be a kind of amateur mission work, which she carries out with considerable success amongst the children of a poor and rough neighbourhood. Her parents are shopkeepers and are comfortably off for their position in life.

Some time before the commencement of the experiments, she had become a good somnambule, and I had satisfied myself of the genuineness of this condition before thinking of making her the subject of any experiment. She could be made analgesic or anæsthetic by suggestion. The touching of the cornea or the tickling of the back of the throat with a feather produced no reflex, and the passing of a needle deeply into the flesh was unattended by pain. She never spontaneously recalled in the waking state anything that occurred in hypnosis. During this time she was also treated medically by suggestion, but this was only for a functional disturbance, which was of little importance in reference to her general physical state, and of none in regard to her mental one. With the exception of a short time towards the close of the experiments, when she was suffering from the effects of a severe fall, she was in good health, and on more than one occasion she rode over fifty miles in a day on a heavy tricycle without undue fatigue.

The experiments were all of the same character. On each occasion I suggested to her, during hypnosis, that at the expiration of a varying number of minutes she should feel impelled to make a cross on a piece of paper with a pencil and also, without looking at clock or watch, write down what time she believed it to be, and then immediately compare this with the actual time and, if possible, obtain corroborative testimony from her friends.

Experiment No. 1. November 5th, 1895, 4 p.m.—Suggestion to to be realised in five hours and twenty minutes, *i.e.*, at the expiration of that time the patient was to make a cross and put down the time in the manner just described. Result.—Correct.

Remarks.—On this occasion I did not say anything to the patient about the experiment, either before or after hypnosis. I told her mother its nature, but not the time at which the suggestion should be fulfilled. At 9.15 the same evening her mother noticed that the patient was restless and asked her what was the matter. She replied, "I feel I must do something, but cannot tell what." At 9.20 p.m. she rapidly made a cross with a pencil and wrote 20 minutes past 9 on a piece of paper, at the same time saying, "It's all silliness." There was no clock in the room, but her mother went into the next room where there was one, and found that the time was 9.20. When I again saw the patient I explained the nature of the experiments I proposed making to her, and instructed her always to carry a pencil

and paper with her during the day, and to put one by her bedside at night. I did not describe them as anything extraordinary, but simply told her that hypnotised subjects were often able to calculate time, and that I wished to see whether she could do so. *No pecuniary or other reward was promised or given.* I told her I should make these experimental suggestions from time to time, but not on each occasion when she visited me. I neither told her in the waking condition that the suggestions had been made, nor informed her relatives when I made them, or what they were. They knew that suggestions of this nature were given frequently, but only became acquainted with them on seeing the patient carry them out, or on hearing from her that she had done so. Invariably, before making the suggestions, I wrote them down in my case-book, and when the patient again visited me I copied into it what she had written on the different pieces of paper. In many instances I did not calculate when the suggestions fell due, and in others the calculations I made at the time were proved to be erroneous, and the results of the experiments were in these cases only determined when the series was completed.

Experiment No. 2.—November 28th, 1895, 2 p.m. Suggestion in 320 minutes. Result.—Correct.

Remarks.—The suggestion was carried out at 7.20 p.m. when the patient was in a friend's house. She had no watch with her. There was a clock in the room, but it was wrong.

Experiment No. 3.—December 4th, 3.15 p.m. Suggestion in 24 hours and 100 minutes. Result.—Correct.

Remarks.—When in a friend's house the following afternoon she carried out the suggestion at 4.55. She then asked the time. Her friend looked at her watch and told her, whereupon she remarked, "Your watch is three minutes fast." This was the case.

Experiment No. 4.—December 12th, 3.20 p.m. Suggestion in 24 hours, 1,440 minutes. Result.—3.20 p.m., Saturday, December 14th. Correct.

Experiment No. 5.—Wednesday, December 18th, 3.45 p.m. Suggestion in 24 hours, 2,880 minutes. Result.—3.45 p.m., Saturday, December 21st. Correct.

Experiment No. 6.—Tuesday, December 24th, 2.55 p.m. Suggestion in 30 hours, 50 minutes. Result.—9.45 p.m., Wednesday, December 25th. Correct.

Experiment No. 7.—Tuesday, December 24th, 3.10 p.m. Suggestion in 7,200 minutes. Result.—3.10 p.m., Sunday, December 29th. Correct.

Remarks.—The patient was teaching a class in the Sunday School, when she suddenly felt an impulse to make a cross and mark the time.

It was only after doing so that she looked at the clock, which was behind her.

Experiment No. 8.—Tuesday, December 31st, 3.45 p.m. Suggestion in 4,335 minutes. Result.—4 p.m., Friday, January 3rd, 1896. Correct.

Experiment No. 9.—December 31st, 1895, 4 p.m. Suggestion in 11,525 minutes. Result.—11.5 a.m., Wednesday, January 8th. Wrong.

Remarks.—The result ought to have been 4.5 p.m., January 8th. I rehypnotised her on that day and asked her to recall the suggestion I had made on December 31st. She said it was to be executed in 11,225 minutes. It is possible, but not at all likely, that I had made a mistake, as I had read the suggestion to her with the figures before my eyes. The supposed suggestion of 11,225 minutes had been carried out correctly.

I now attempted to find out during *hypnosis* the patient's mental condition in reference to these suggestions. In reply to my questions she informed me :—1. That when the suggestions were made in hypnosis she did not calculate when they fell due. 2. That she did not calculate them at any time afterwards. 3. That she had no recollection of them when awakened. 4. That no memory of them ever arose in the waking state. 5. That shortly before their fulfilment she always experienced a motor impulse, that her fingers moved as if to grasp a pencil and to perform the act of writing. 6. That this impulse was immediately followed by the idea of making a cross, and of the time. 7. That she never looked at clock or watch until after she had written the figures.

Experiments.—Wednesday, January 8th, 1896.

No. 10.—4.5 p.m. Suggestion in 4,417 minutes.

No. 11.—4.5 p.m. Suggestion in 11,470 minutes.

No. 12.—4.30 p.m. Suggestion in 10,070 minutes.

Results.—*No. 10.*—5.42 p.m., Saturday, January 11th.

No. 11.—3.15 p.m., Thursday, January 16th.

No. 12.—4.20. p.m., Wednesday, January 15th.—All were correct.

Remarks.—As the patient had stated in hypnosis that she made no calculations in reference to the suggestions, in order to vary the experiments, I asked her as soon as I had made them, and before awakening her, to calculate mentally when they would fall due, and to tell me the result.

She replied as follows :—

“No. 10 in 3 days, 37 minutes, or 23 minutes to 5 next Saturday afternoon.

“No. 11 in 187 hours, 50 minutes, or 7 days, 9 hours, 50 minutes. Next Wednesday morning at 5 minutes to 12.

“No. 12 in 1,067 hours, 40 minutes, or 6 days, 23 hours, and 40 minutes. 4.20 p.m. next Wednesday.”

In No. 10, the answer was 1 hour, 5 minutes too early, the interval (which was 1 hour too short) having apparently been calculated from 4 o'clock, instead of 4.5 p.m.

In No. 11 the answer was 1 day, 3 hours, 20 minutes too early. Here (1) the interval is calculated as 187 hours, 50 minutes, showing that 11,470 has probably been mistaken for 11,270. (2) 187 hours, 50 minutes, is stated to be equal to 7 days, 9 hours, 50 minutes, instead of 7 days, 19 hours, 50 minutes. The answer seems, however, to have been calculated with the latter interval, but (3) a mistake of 1 day is made.

In No. 12 the answer is correct, but does not correspond with the calculations; 10,070 minutes equals 167 hours, 50 minutes, not 1,067 hours, 40 minutes. Here (1) a cypher has been wrongly inserted, and (2) 40 minutes miscalculated for 50. The former error is corrected, but the latter repeated when 6 days, 23 hours, 40 minutes is given instead of 6 days, 23 hours, 50 minutes.

When No. 12 was fulfilled the patient had been asleep in my consulting-room for an hour. There was no clock in the room. I was hypnotising another patient, Mrs. M. Exactly at 4.20, without awaking or opening her eyes, the patient said she had to make a cross and put the time down. When the suggestions were realised in my presence I invariably noticed the motor impulse previously described by the patient. From this date, I arranged that a certain number of the experiments should be fulfilled when the patient visited me. On these occasions she was sometimes awake, sometimes asleep. In almost every instance I made her write the time she thought it was in my case book, and frequently was able to get this witnessed and signed by others who were present. On these occasions I compared my watch beforehand with the Vere-street Post Office clock, in order to insure greater accuracy.

From this time I usually made a number of suggestions to the patient at each séance. Sometimes these started from the same hour, sometimes from different hours. In the latter case the starting points were usually imaginary, *i.e.*, I said to the patient, “You are to suppose it is such a time, and carry out the suggestions in so many minutes from that imaginary starting point.” The suggestions were all made rapidly one after the other.

Experiments.—Wednesday, January 15th, 4.45 p.m.

No. 13.—From 4.45 p.m. Suggestion in 4,453 minutes.

No. 14.—From 2 p.m. Suggestion in 10,470 minutes.

No. 15.—From 3 p.m. Suggestion in 10,060 minutes.

Results.—No. 13.—6.58 p.m., Saturday, January 18th.

No. 14.—8.30 p.m., Wednesday, January 22nd.

No. 15.—2.40 p.m., Wednesday, January 22nd.—All correct.

At the time the suggestions were made the patient was again asked in hypnosis to calculate mentally when they would fall due, and replied rapidly :—

“No. 13 in 722 hours and 33 minutes, or 11.15 p.m. next Wednesday.

“No. 14 in 197 hours and 30 minutes, or 4.5 p.m. next Wednesday.

“No. 15, 8 days, 5 hours and 30 minutes, or 4.25 p.m. next Wednesday.”

Remarks.—In No. 13 the answer was 4 days, 4 hours, 17 minutes too late. 4,453 minutes equals 74 hours, 13 minutes, not 722 hours, 33 minutes. Perhaps 4,453 was mistaken for 43,353, equalling 722 hours, 33 minutes. The answer has been calculated from the interval of No. 14.

In No. 14 the answer was 4 hours, 25 minutes too early. 10,470 minutes equals 174 hours, 30 minutes, not 197 hours, 30 minutes. The answer also does not correspond with either interval, but is nearly the same as the answer given in No. 15. There is no explanation for either of these two independent errors.

In No. 15 the answer was 1 hour, 45 minutes too late. The wrongly calculated interval, 8 days, 5 hours, 30 minutes, corresponds to the wrongly calculated 197 hours, 30 minutes of No. 14 ; this interval having apparently remained in the mind. The time of falling due has been calculated with 4.45 as initial time, as in No. 13, instead of 3 p.m.

When I made the patient calculate when the suggestions would fall due, and found that her calculations were wrong, I naturally concluded that, as she had fixed the date at which the suggestions were to be fulfilled in her own mind, in the hypnotic state, they would be carried out at the erroneous times. My astonishment was great when I found they were executed correctly. I rehypnotised the patient and said to her, “You have not carried out these suggestions at the time you told me they would fall due. Why is this?” She replied, “What I told you was all wrong.” “How do you know the others are right?” “I can’t tell you, I only feel that they are.” I was not able to elicit by questioning any memory of the processes by which the original mistakes were corrected. The patient assured me that from the time the suggestions were made she had never again thought of them, and that at the time of their fulfilment she had suddenly had the impulse to put down the figures. When doing so she had no recollection of her original calculations.

Experiments.—Wednesday, January 22nd, 4.5 p.m.

No. 16.—Suggestion in 20,180 minutes.

No. 17.—Suggestion in 20,160 minutes.

No. 18.—Suggestion in 20,140.

Results.—No. 16.—February 5th, 4.25 p.m.

No. 17.—February 5th, 4.5 p.m.

No. 18.—February 5th, 3.45 p.m.—All correct.

Remarks.—On Wednesday, February 5th, I hypnotised the patient at 3 p.m. At 3.45 she said the time was 3.45, and that she wished to make a cross. I awoke her at 4 o'clock, and the same thing occurred at 4.5 and at 4.25. On each occasion she marked the time in my case-book, and this was witnessed by two other persons who were present. The two last suggestions were carried out when awake, and while she was in the midst of conversation with me and others in the room.

Patient's Calculations.—"No. 16, 336 hours, 20 minutes, or 13 days, 20 minutes. Tuesday, February 4th, at 4.25 p.m.

"No. 17.—Tuesday, February 4th, at 4.5 p.m.

"No. 18.—Tuesday, February 4th, at 3.45 p.m."

Remarks.—The answers in each instance are one day too early, but in No. 16, 20,180 minutes is correctly given as 336 hours, 20 minutes.

Experiments.—Wednesday, February 5th, 4 p.m.

No. 19.—Suggestion in 10,050 minutes.

No. 20.—Suggestion in 10,080 minutes.

No. 21.—Suggestion in 10,090 minutes.

No. 22.—Suggestion in 840 minutes.

No. 23.—Suggestion in 900 minutes.

Results.—No. 22.—Thursday, February 6th, 6 a.m.

No. 23.—Thursday, February 6th, 7 a.m.

No. 19.—Wednesday, February 12th, 3.30 p.m.

No. 20.—Wednesday, February 12th, 4 p.m.

No. 21.—Wednesday, February 12th, 4.10 p.m.—All correct.

After the suggestions were made the patient was asked during hypnosis when they would fall due, and almost instantaneously replied correctly as follows:—

"No. 19.—3.30 p.m., Wednesday, February 12th.

"No. 20.—4 p.m., same day.

"No. 21.—4.10 p.m., same day.

"No. 22.—6 a.m., Thursday, February 6th.

"No. 23.—7 a.m., same day."

Remarks.—When the patient's mother went to her bedroom on the morning of the 6th, she found the patient asleep and two pieces of paper on a table by the bedside. On each was a rough cross, and on

one the figure 6 and on the other the figure 7. Both very badly written. She said she had not awakened during the night.

The other suggestions were carried out during hypnosis in my room. The time being marked by the patient in my note-book and witnessed by others.

The five suggestions were given rapidly, one after the other, and then the patient was asked when they fell due. These complicated series of suggestions were never read over to the patient more than twice and in some instances were only read to her once, and that quickly.

I rehypnotised the patient and questioned her about the suggestions which had been carried out during the night and presumably in natural sleep. She told me she had no recollection in reference to them, and on subsequent occasions, when suggestions were again carried out in natural sleep, the patient could never recall anything regarding them.

Experiments.—Wednesday, February 12th.

No. 24.—3.30 p.m. Suggestion in 2,220 minutes.

No. 25.—3.30 p.m. Suggestion in 2,285 minutes.

No. 26.—3 p.m. Suggestion in 10,115 minutes.

No. 27.—3 p.m. Suggestion in 10,150 minutes.

No. 28.—4 p.m. Suggestion in 20,190 minutes.

Result.—No. 24.—4.30 a.m., Friday, February 14th.

No. 25.—5.35 a.m., Friday, February 14th.

No. 26.—3.35 p.m., Wednesday, February 19th.

No. 27.—4.10 p.m., Wednesday, February 19th.

No. 28.—4.30 p.m., Wednesday, February 26th.—All correct.

At the time the suggestions were made, the patient was asked to calculate mentally when they all fell due. She replied as follows:—

“No. 24.—18 hours and 40 minutes, or 10.10 to-morrow morning.

“No. 25.—11.15 to-morrow morning.

“No. 26.—25 minutes to 4 p.m. next Wednesday.” Answered immediately.

“No. 27.—5.30 p.m. next Wednesday.” Answered immediately.

“No. 28.—A fortnight and half-an-hour.” Answered immediately.

Remarks.—In No. 24 the answer was 18 hours, 20 minutes too early. It would have been correct if the interval suggested had been 1,120, instead of 2,220 minutes.

In No. 25 the answer was 18 hours, 20 minutes too early, but would have been correct had the suggested interval been 1,185, instead of 2,285 minutes.

In No. 26 the answer was correct.

In No. 27 the answer was 1 hour, 20 minutes too late. The interval here seems to have been taken as 7 days, 150 minutes, instead of 10,150 minutes.

In No. 28 the answer is correct as far as it goes, but the exact time of fulfilment is not given.

At the time I made the suggestions, I also calculated when they would fall due, as follows :—

No. 24.—5 a.m. on the 14th. Wrong. Half-an-hour too late.

No. 25.—6.5 a.m. Wrong. Half-an-hour too late.

No. 26.—3.35 p.m. on the 19th. Right.

No. 27.—4.10 p.m. on the 19th. Right.

No. 28.—4.25 p.m. on the 26th. Wrong. 5 minutes too soon.

Nos. 24 and 25 were fulfilled during sleep on the 14th. The patient on awaking in the morning found papers by her bedside, with 4.30 and 5.35 written on them. On the 19th, she was hypnotised in my room at 3 p.m., and carried out Nos. 26 and 27 while asleep. On both occasions she wrote the time in my note-book, and this was witnessed. I asked her during hypnosis whether she remembered the last suggestion (No. 28), which I had made to her the previous week. She said she did, and repeated the number of minutes correctly, but stated she had never thought of it since, and did not know when it fell due, or the number of minutes that had elapsed. She had apparently forgotten that she had calculated when it fell due, at the time the suggestion was made. No. 28 was carried out correctly on February 26th, the patient being asleep.

Experiments.—Wednesday, February 19th.

No. 29.—3.30 p.m. Suggestion in 720 minutes.

No. 30.—3.30 p.m. Suggestion in 780 minutes.

No. 31.—3.30 p.m. Suggestion in 2,160 minutes.

No. 32.—3 p.m. Suggestion in 10,135 minutes.

No. 33.—3 p.m. Suggestion in 20,210 minutes.

Results.—No. 29.—Thursday, February 20th, 3.30 a.m.

No. 30.—Thursday, February 20th, 4.30 a.m.

No. 31.—Friday, February 21st, 3.30 a.m.

No. 32.—Wednesday, February 26th, 3.55 p.m.

No. 33.—Wednesday, March 4th, 3.50 p.m.—All correct, with the exception that No. 33, stated to be due at 3.50, was executed at 3.48.

At the time the suggestions were made the patient was asked when they fell due. She replied quickly, without apparently making any calculation. Her answers were correct, with the exception of No. 32, which she said was due at 2.5 p.m. on Wednesday, February 26th. This was 1 hour, 50 minutes too early and represented an interval of 7 days, less 55 minutes, instead of 7 days, plus 55 minutes.

On awaking at 7 o'clock on the morning of the 20th, the patient found a piece of paper with 3.30 marked on it and another with 4.30. On the morning of the 21st, she found a paper with 3.30 marked on

it. She had no recollection of waking during the night; and, as usual, questioning in hypnosis failed to revive any memory of what had taken place.

Experiments, Wednesday, February 26th, 3.30 p.m.

No. 34.—Suggestion in 2,140 minutes.

No. 35.—Suggestion in 3,590 minutes.

No. 36.—Suggestion in 5,030 minutes.

No. 37.—Suggestion in 10,125 minutes.

No. 38.—Suggestion in 10,100 minutes.

No. 39.—Suggestion in 20,180 minutes.

Results.—No. 34.—Friday, February 28th, 3.10 a.m.

No. 35.—Saturday, February 29th, 3.20 a.m.

No. 36.—Sunday, March 1st, 3.20 a.m.

No. 37.—Not recorded. [Due March 4th, at 4.15 p.m.]

No. 38.—Wednesday, March 4th, 3.48 p.m. Patient stated the time to be 3.50.

No. 39.—March 11th, 3.51½ p.m. Patient stated the time to be 3.50.

All correct, with the exception of 2 minutes in one instance, and 1½ minutes in another between the time the suggestion was due and the moment at which it was carried out.

Remarks.—These suggestions were only read to the patient once, when she was asked to repeat them, which she did correctly, with the exception of No. 37. She was told not to make any calculations. I did not calculate when the suggestions would fall due at the time I made them. Nos. 34, 35, and 36 were executed during sleep, and the papers, as usual, were found by the patient at her bedside in the morning. No. 38 was carried out at 3.48 p.m., on March 4th, instead of at 3.50, when it really fell due. The patient, however, stated the time correctly at which she ought to have carried it out, viz., 3.50. It is to be noted that 3.50, March 4th, is the date at which another suggestion made a fortnight before fell due, and this has already been recorded in its proper place. The patient stated at 3.48 that she had to make two crosses and to put down 3.50 twice. No. 37, due at 4.15 p.m., Wednesday, March 4th, I have no record of. I am not quite certain whether this is my fault or the patient's. I was hypnotising another patient when the suggestions were fulfilled and may have omitted to enter this one. On the other hand, the patient may have failed to carry it out. Three suggestions fell due very quickly, and one of them, as we have seen, belonged to another series. When suggestions were made to fall due in a fortnight and I saw the patient in the week between, I invariably questioned her in hypnosis in reference to the unfulfilled suggestions. She always assured me that

she had never thought of them, did not know how much of the time had elapsed, nor when they fell due. No. 39 was carried out at 3.51½, but the patient gave 3.50 as the time at which it ought to be executed.

Experiments.—Wednesday, March 4th, 3.45 p.m.

No. 40.—Suggestion in 10,080 minutes.

No. 41.—Suggestion in 10,055 minutes.

No. 42.—Suggestion in 10,040 minutes.

No. 43.—Suggestion in 750 minutes.

No. 44.—Suggestion in 2,160 minutes.

No. 45.—Suggestion in 2,195 minutes.

Results.—No. 43.—4.15 a.m., Thursday, March 5th.

No. 44.—3.45 a.m., Friday, March 6th.

No. 45.—4.20 a.m., Friday, March 6th.

No. 42.—3.5 p.m., Wednesday, March 11th.

No. 41.—3.22 p.m., Wednesday, March 11th.

No. 40.—3.44 p.m., Wednesday, March 11th.

All correct, with the exception of slight variations between the correctly estimated time the suggestion fell due, and its execution; these amounted to 1 minute in No. 40 and 2 minutes in No. 41.

Remarks.—When these suggestions were given I did not calculate them, nor ask the patient to do so. Mr. Barkworth, a well-known member of this Society, and Dr. Barclay, a medical friend, were present during the greater part of the séance on Wednesday, March 11th, and witnessed and signed the suggestions as they fell due. When the patient said it was 3.20 the exact time was 3.22. When she said it was 3.45 the exact time was 3.44. When she said it was 3.50 [No. 39 of former series, made February 26th] the time was 3.51½.

At this séance, March 11th, fresh suggestions were made under the following conditions. Mr. Barkworth and Dr. Barclay were both put *en rapport* with the patient, and it was agreed that they should each make two time suggestions to her, arranged so as to fall due at the next séance, when they both promised to be present. The suggestions were made when I was out of the room, and I was not told what they were until after their fulfilment. While I was still in the room, both gentlemen were busy for some considerable time with pencil and paper before they were able to work out their calculations correctly, and I observed a great deal of whispered consultation and frequent correction of their results. At least, I imagined that this was what was taking place, for I did not hear what they said.

On Thursday, March 26th, I hypnotised the patient at 12.30 p.m. Mr. Barkworth was present and Dr. Barclay came later. At 22 minutes to 1 the patient said she had to make a cross at 20 minutes

to 1. Error of 2 minutes. Mr. Barkworth corroborated the time. At 1 minute to 1 she said she had to mark 1 o'clock. Error of 1 minute as checked by Mr. Barkworth and myself. At 8 minutes past 1 she said she had to mark the time: this was correct. At 14 minutes past 1 she again said she had to mark the time: this also was correct. Dr. Barclay was now present.

Mr. Barkworth and Dr. Barclay had both mislaid their notes and were unable with certainty to recall the suggestions. The patient was asked during hypnosis if she remembered them and replied:—"They were made at 4 p.m. last Wednesday week, and were to be fulfilled in 21,400, 21,420, 21,428, and 21,434 minutes." She said Mr. Barkworth had made two of these suggestions and Dr. Barclay the others, and that she had made no calculation at the time and had not thought of them afterwards. These questions were put to the patient after the suggestions had been fulfilled. On other occasions, when a week or two had elapsed after the suggestions had been executed, I found that she was unable to recall them correctly in hypnosis. On April 22nd, Dr. Barclay sent me the lost memo. of his two suggestions, viz., 21,428 and 21,434 minutes from 4 p.m. on the day already mentioned. On April 27th, Mr. Barkworth wrote to tell me that he also had found his lost memo. and that the suggestions were 21,400, 21,420, 21,428, and 21,434 minutes; the first two having been made by himself and the two latter by Dr. Barclay. This agrees with the patient's account. The results of the suggestions were correct, with the exception of the minute differences in time already mentioned. These experiments just recorded are Nos. 46, 47, 48, and 49.

April 8th, 1896.—A fresh series of suggestions was made on this day, some to fall due during the night, some next day in my presence. The patient lost her papers recording those made at home and I was too busy to enter at the time those that were fulfilled in my presence, and therefore cannot be sure of the results. These are the only experiments in the whole series which are not recorded and are only omitted for the above reasons.

Experiments.—Thursday, May 7th, 3 p.m.

No. 50.—Suggestion in 8,650 minutes.

No. 51.—Suggestion in 8,680 minutes.

No. 52.—Suggestion in 8,700 minutes.

I still further complicated these by suggesting as follows:—

"No. 50 is to be fulfilled in the waking state. Five minutes before 51 comes due you are to fall asleep. No. 51 is to be fulfilled while you are asleep, and five minutes afterwards you are to awake and remain so until after the fulfilment of No. 52. Eight minutes after 52 falls due you are again to fall asleep."

Result.—These suggestions were carried out correctly, with the exception that she fell asleep at 3.31 instead of 3.35.

Remarks.—On May 13th, the patient came into my consulting room at 3.5 p.m., and almost immediately fainted. She would have fallen, had I not caught her in my arms and laid her down. She had recently met with a severe accident, and was in acute suffering. Immediately on regaining consciousness, she said she had to make a cross at 3.10, and did so in my case book. Time correct. She fell asleep at 3.31, and at 3.40 she said she had to make a cross, and mark 20 minutes to 4. She awoke spontaneously at 3.45. Exactly at 4 o'clock she said she had to make a cross, and mark 4 o'clock. Exactly at 4.8 she fell asleep. Others were present in the room when all these suggestions were fulfilled, with the exception of the first.

Experiments.—Wednesday, May 13th, 4.30 p.m.

On this occasion I said to the patient, "You are to carry out all the suggestions made last Thursday, but to-day you are to start from 2.55 instead of from 3 p.m., and to each of them you are to add 1,440 minutes." As I was much pressed for time, these suggestions were made very hurriedly, and without explanation, and I was not at all certain whether the patient understood them.

Results.—Correct, with the exception of slight differences between the correctly estimated time and the moment at which the suggestion was fulfilled.

Remarks.—On Wednesday, May 20th, the patient entered my room at 3 p.m. At 3.5, in the waking state, she said she had to make a cross and mark the time. She fell asleep at 3.30 and at 3.35 she said she had to make a cross and write down 25 minutes to 4. She continued asleep until 3.40, when she awoke spontaneously. According to the suggestions made last week, she was to remain awake until the fulfilment of the next suggestion, but, as she was still suffering from the effects of her accident, I hypnotised her and made curative suggestions, and told her she would awake one minute before the next suggestion fell due. She awoke at 3.49, and at 3.50 said she had to make a cross and mark the time, which she stated to be 3.55. I hypnotised her again immediately. At 4.3, while still asleep, she said it was 3 minutes past 4 and that I had suggested she should fall asleep at that hour. The suggestions were correctly fulfilled, with the exception that the suggestion due at 3.55 was carried out at 3.50, although she stated it to be due at 3.55. It is worth noting that on this occasion the patient fell asleep at 3.30, the exact time suggested, on the last occasion she fell asleep at 3.31 instead of 3.35 as suggested. This is interesting, as the latter suggestion, carried out correctly, was the former one complicated

by 5 minutes having been deducted from the starting point and 1,440 minutes added to the interval.

These experiments, Nos. 53, 54, and 55, complete the series, but the subject is still available for further ones and I shall be glad to receive any suggestions in reference to them.

SUMMARY.

Fifty-five experiments are recorded ; of these one apparently was not carried out at all, while in another (No. 9) the patient had mistaken the original suggestion and fulfilled it correctly in accordance with what she thought it had been. The remainder were completely successful, with the exception that in eight instances (Nos. 33, 38, 39, 40, 41, 46, 47, 55) there were minute differences, never exceeding five minutes, between the patient's correct estimation of when the suggestion fell due and the moment at which she carried it out. The proportions which these errors bear to the respective intervals vary between 1 to 2,028 and 1 to 21,420.

As regards a certain proportion of the experiments, the correctness of the results depends upon the evidence of the patient and her friends. The remainder, however, were carried out before me and other witnesses. In reference to these the following particulars are worthy of note. (1.) A complicated series of figures, which she would have been unable to remember when awake, was read over to the patient while asleep. (2.) These generally started from imaginary hours, and when she calculated in hypnosis when they fell due she was frequently wrong. Thus, out of 24 calculations, the first 9 were wrong, and, of the remaining 15, 11 were right and 4 wrong. It is worthy of note that, as the experiments advanced, not only the frequency, but also the extent of these errors decreased, and the answers were given much more rapidly. The errors in calculation had apparently no effect on the ultimate results, these, with few exceptions, being correct. (3.) She sometimes remained asleep for an hour or more after the suggestions were made. (4.) She had no recollection of the suggestions in the waking state. (5.) When the suggestions were fulfilled in my presence and in that of other witnesses she had sometimes been several hours, either asleep or awake, under such conditions that it was impossible for her to consult the time. (6.) It was impossible for her to receive direct or indirect suggestions from me, as I rarely knew the exact time at which the suggestion was due, and was generally busily occupied in hypnotising some other patient. I may add that I have a bad memory for figures, and even when I had previously correctly estimated the time of fulfilment, this was never in my mind when the patient carried out the suggestion. (7.) The results of the experiments were only completely estimated after the series was com-

pleted, when a friend, Mr. Bartrum, B.Sc., kindly checked them for me. He discovered that some of my calculations made at the time had been erroneous. I am also indebted to him for a critical examination of the calculations the patient was asked to make when the suggestions were given.

MEMORY.

Memory in relationship to hypnotic states varies widely, and is influenced by the depth of the hypnosis, the personality of the subject, and the suggestions of the operator.

Memory in hypnosis may be :—

(1) Unchanged.

In this group the subjects when hypnotised can recall the events of waking life, and on awakening can remember all that has passed.

In some instances, however, where the memory is apparently unchanged, closer examination shows that it has either been increased or diminished. Of this the two following cases are examples.

(a) Miss A. I had frequently hypnotised this patient and could influence by suggestion, not only the voluntary muscles, but also the special senses. On awakening she could always recall what had passed, despite suggestions to the contrary. At a later date I found I could make her analgesic by suggestion. Touching the cornea, passing needles deeply into the flesh, and probing the nose and vocal chords were unaccompanied by pain or disagreeable sensation. On awaking, *despite suggested amnesia*, the patient could recall all the tactile sensations associated with these operations, but was unable, even in response to suggestion, to revive any memory of pain.

(b) Mrs. B. In this patient certain changes in the voluntary muscles and special senses could also be induced, all of which she remembered on awakening. She could not, however, be made analgesic by suggestion. Though her memory was apparently unchanged, experiment revealed the existence of a sub-conscious memory, superior to her normal one. I suggested to her during hypnosis that she should fall asleep the first time a certain friend called and shook hands with her. On awakening she remembered the suggestion. A week or two passed without the friend calling, when one day he met her at my house and shook hands with her. She did not fall asleep. We had both forgotten the exact terms of the suggestion and believed it had been a failure. Some time afterwards the friend called at the patient's own house and she fell asleep the moment he shook hands with her. She was not thinking of the suggestion at the time.

(2) The subject may remember during hypnosis the events of waking life, with a clearness corresponding to his powers of memory in the normal state, and on awakening have a more or less indistinct recollection of what has passed. The subject will frequently state

that he can recall all that has been said or done, but on questioning him it will generally be found that he remembers very little and that this fades rapidly.

(3) Here, in response to suggestion, the subject may recall the events of waking life to a greater extent than he could do in the normal condition, as well as what has taken place during previous hypnoses; and, on awaking, may have lost all recollection of what has occurred. The lost memory can be restored to a greater or lesser extent by suggestion. The improvement in memory extends to remote as well as recent incidents, and I have noticed numerous examples of both. One patient, whose natural memory was unusually bad, was able to recall on awaking some verses with which she was previously unacquainted, and which were only read over to her twice during hypnosis. Another, who could play a few dance tunes upon the piano, but who could only do so with the music before her when awake, was able, when hypnotised and blindfolded, to play the same tunes much more brilliantly. I have found that subjects who could not remember events which happened at an earlier age than six or seven were able, when hypnotised, to recall those which had occurred at the age of two and a-half years. In many of these instances I have obtained confirmatory evidence, at all events as regards the occurrence of the facts themselves, from the testimony of older relatives.

The recollection during the hypnotic state of what has occurred in waking life, and previous hypnotic conditions, rarely appears spontaneously in the first instance. In some cases frequent suggestions are necessary in order to obtain this revival of memory, but once induced, it will often recur spontaneously in subsequent hypnoses, or at all events, it can then be easily produced by suggestion. When a subject has forgotten on awaking the events of the hypnotic state, I have never observed a spontaneous revival of this lost memory in the normal condition.

(4) The subject may be unable, owing to suggestion, to recall during hypnosis the events of waking life, or those of previous hypnoses, and on awaking may have lost all recollection of what has taken place. This lost memory will not reappear spontaneously, but can be revived by suggestion. For example, one of my patients, a nervous girl, was much frightened by seeing a friend in a fit, and was unable to dismiss the scene from her mind. This was blotted out by suggestion, and she has not thought of it since, either in the normal state or in hypnosis.

(5) The subject may be unable, even in response to suggestion, to remember certain events and sensations of previous hypnoses. Of this we have already had an example in the patient who could not recall painful sensations after suggested analgesia. This case may

be taken as a typical one, for amongst the numerous operations performed during hypnosis with which I have had to do, I have in no instance been able to revive any memory of pain. Certain events, particularly those occurring in the lethargic condition, cannot be recalled by suggestion. For example, some subjects are unable to remember various sounds from the outside world, or to recall things said and done by the spectators, but not referring to them. Others can remember everything that has passed in a previous lethargic condition, even when it has been suggested that they should forget it. For instance, I hypnotised C., a good somnambule, and suggested that he should hear nothing but my voice, and that only when I addressed him directly. I then held a long conversation with a medical friend, on a topic unconnected with the patient or with hypnotism. On awaking, C. was unable to recall anything that had been said. On being rehypnotised, however, in response to suggestion, he gave a better *précis* of the conversation than either my friend or I could have done.

(6) The subject may recall during hypnosis the events of previous hypnoses and those of waking life, the latter to a greater extent than he could do in the normal condition; and by suggestion this memory may be retained on awaking.

Here amnesia has been prevented by suggestion, and there is now no break in the memory of the hypnotised subject. The only alteration is one of improvement; the subject now remembers in the waking state past events which he was unable voluntarily to recall, but the memory of which has been revived in hypnosis. He also recalls the recent impressions he has received during hypnosis,—impressions which he would not have been able to revive so vividly had they been made in the waking state. He remembers, for instances, the piece of poetry which has been read to him twice during hypnosis, and which he would have required to have heard read many times in the normal state in order to retain an equally clear recollection of it.

Memory in reference to certain Post-Hypnotic Conditions.

I formerly believed that all post-hypnotic acts, resulting from suggestion in hypnosis, were forgotten immediately after fulfilment. I have lately observed, however, that when the suggestions are carried out some time after awaking, this is by no means always the case. If I suggest to a subject that his arm will become rigid on awaking, this post-hypnotic act is immediately forgotten after fulfilment. On the other hand, if I successfully suggest to the same patient, who perhaps has been suffering from insomnia, that he will sleep eight hours the following night, he will remember that he has done so.

An attempt was made by some members of the Hypnotic Committee of this Society to recall by means of suggestion what had occurred

during the administration of nitrous oxide gas. This was a failure, and I have also been unsuccessful in my endeavours to revive in a similar way the recollection of what has taken place during normal sleep. With one subject, whose memory during hypnosis of the events of waking life was exceptionally good, I carried out the following experiment:—The patient was in the habit of falling asleep every Sunday afternoon in his arm-chair, and it was arranged, on these occasions, that he should be read aloud to, and that the same sentences should be repeated again and again. I afterwards hypnotised him, and tried to make him recall what he had heard, but the experiment, though frequently repeated, was invariably unsuccessful.

With another patient I tried in the same manner to revive the memory of what had happened in a series of attacks of a hysterical nature, in which an apparent change of personality had occurred. The attempt was a failure, despite the fact that the patient was a good somnambule.

WAKING SOMNAMBULISM.

This term is applied by Beaunis to a condition in which the patient will accept suggestions similar to hypnotic ones, without having on that occasion been subjected to any hypnotic process, or having passed through any state resembling sleep or trance. He considers the condition a hypnotic one for two reasons: (1) The patient will receive other suggestions of a hypnotic nature; (2) These suggestions are forgotten immediately after fulfilment. I have observed that all subjects, in whom hypnosis has previously been induced, will subsequently exhibit the same range of phenomena in response to suggestion in the apparently waking state. On the other hand, I have noticed some slight points of difference between the two conditions. In waking somnambulism, while sometimes the suggestions were forgotten almost immediately, at others they were remembered for a longer period, and in some cases were recalled after the lapse of weeks. The subject of one of these experiments was questioned in hypnosis in reference to her memory of suggestions carried out in the state of waking somnambulism. She replied: "Sometimes I forget them quickly, sometimes remember them for an hour or two, never longer." When I reminded her that she had recalled one at the end of a month, she replied, "Oh, yes! You made the suggestion just before I left your room and I talked it over with my mother on the way home." Here the recollection of the event was complicated by the patient's verbal description of it, and possibly by her mother's comments.

With another patient, I noticed a difference between the mental attitude in reference to hallucinations suggested in hypnosis and those created in waking somnambulism. This subject, a good somnambule, on

several occasions, when hypnotised, saw by suggestion a hallucinatory cat. She was always delighted with the imaginary animal and evinced great pleasure in playing with it. At a later date, in the apparently waking state, I successfully suggested a similar hallucination. The patient did not like it at all. She said, "I see that cat, but I know it is not a real one, I know it is only an imaginary one which you have made me see. I don't like this. I don't mind seeing the cat now, because I know you have done it as an experiment and will blot it out again. But if I commence to see cats when I am by myself, I shall be horribly frightened."

SO-CALLED HYPNOTIC AUTOMATISM.

When I first visited Nancy in 1891, Dr. Liébeault showed me one of his subjects, called Camille, who had been frequently hypnotised, and whom he regarded as a typical specimen of deep somnambulism illustrating hypnotic automatism in its highest degree. He assured me that the suggestions he made to her were carried out with the fatality of a falling stone. He hypnotised her, and suggested that on awaking she should find, on opening the outer door, that there was a violent snow storm; that she should at once return, complain of this, and proceed to the stove to warm herself. While so doing one of her hands would touch the stove and be burnt. It was a warm summer's day, and of course the stove had not been lighted. The patient refused to accept the suggestion. Dr. Liébeault insisted for some time and then gave up the attempt, saying that she sometimes refused suggestions. He then asked her, "Will you do this another time if you will not do it to-day?" She replied, "Yes, to-morrow." On the following day the suggestion was repeated and carried out in all its details.

Miss C., aged 19, an uneducated girl, had been frequently hypnotised by me and was a good somnambule. She suffered greatly from her teeth, of which she had only sixteen left, all decayed. These were extracted at Leeds in the presence of 60 medical men and dental surgeons. Anæsthesia was produced by written suggestion, while I remained in another room. The operation was perfectly successful and unattended by the slightest pain either then or afterwards. At a later date I examined her mouth and found that a fragment of one of the stumps remained. I told her to come to my house to have it removed. She mentioned this to one of her neighbours, an old woman, who advised her to have no more teeth extracted, as it would cause her mouth to fall in. The following day she presented herself and was at once hypnotised, but refused to open her mouth, or to permit me to extract the tooth. Emphatic suggestion continued for half-an-hour produced no result. This was the first occasion on which she had refused a suggestion. I then awoke her and asked her why she refused

to have the tooth extracted. She told me what her neighbour had said, and expressed her determination to have nothing more done. I explained the absurdity of this, and pointed out that, as she had only the fragment of one tooth remaining, its removal could not affect the appearance of her face. As she was still obstinate, I said, "Unless this fragment is removed you cannot have your artificial teeth fitted." This argument was sufficient. She gave her consent in the waking condition, was at once hypnotised and operated on without pain.

Miss D., aged 20, was a good somnambule who had been the subject of two painless operations. At a much later date I wished to satisfy myself of the depth of the hypnotic anæsthesia, as another and more serious operation was contemplated. I obtained her consent to test the condition, hypnotised her and pricked the pulp of the thumb deeply with a needle, and also pinched her arm severely. She showed no sign of pain, and remembered nothing afterwards of what had occurred. A few days afterwards I wished to repeat the process. She again permitted me to prick the thumb, but when I attempted to pinch her arm she drew it away and refused to let me touch it. Her mother, who was present, gave the following explanation. After the first experiment her daughter noticed that her arm was blackened in several places and asked the cause. She told the girl what I had done, whereupon she said, "I don't object to being pricked with a needle, but I won't allow Dr. Bramwell to pinch my arm again, because the neighbours might notice the marks." On both occasions her arm was covered, and I did not know it had been marked. I awoke the patient. She had no recollection of what she had said and done. I told her she had refused to let me pinch her arm, and asked the reason. She laughed and gave me the same explanation as her mother had done. One day when I had hypnotised this patient, her mother said to me, "Ask her what she did on a certain occasion." I questioned her, but could obtain no response. I afterwards learnt what she had done. It was something which the mother regarded as a joke, but which was slightly indelicate. Many persons, even fairly refined ones, would have told this without blushing, but one of the patient's characteristics was an extreme prudishness.

Miss E. had been frequently hypnotised, and was a good somnambule in whom anæsthesia could be easily induced. She was maid to one of my patients, a chronic invalid, whose house was managed by a sister of uncertain temper. On one occasion, when I had hypnotised E., her mistress requested that I would ask her what had been said to her by this sister. A quarrel had taken place, of a somewhat amusing nature, and my patient wished to hear E.'s account of it in hypnosis; but, despite energetic suggestions, she absolutely refused to say a word on the subject.

Miss F., aged 19, in good health, intelligent and well-educated. This subject was a very good somnambule, in whom anæsthesia and other phenomena of deepest hypnosis could be easily induced. She had a bad memory for words, and was also extremely shy in reading, singing, or playing before others. I suggested to her that she should recite to me on awaking some verses with which she was unacquainted, and which I had read twice to her when asleep. Shortly after awaking, she repeated them with very few mistakes and without apparent embarrassment. Her mother assured me that under ordinary conditions this feat of memory would have been entirely beyond her power, and that nothing would have induced her to read or recite before me. On another occasion, her mother asked me to suggest to her during hypnosis that on awaking she should go to the side-board in my dining room, pour out a glass of water, and drink it. This suggestion was not carried out, and was the first which had not been fulfilled. I had taught her mother to hypnotise her and on returning home she did so, and questioned her about the suggestion. She recalled it at once and gave the following reason for not carrying it out, namely, that she did not know me well enough to help herself to a glass of water in my house without being asked.

Mr. G., aged 25, a shopkeeper. He had been frequently hypnotised for medical and surgical purposes and was a good somnambule. On one occasion I showed him at the York Medical Society. At the close of my lecture I was asked to give an example of changed personality by making this patient believe he was a dissenting minister preaching a sermon. He refused to do this, and I was then asked to make him believe he was a hawker selling fish. This was also rejected, but he accepted the suggestion that he was Barnum and that the medical men were wild beasts and proceeded to describe them, in his character of showman, in a highly amusing manner. I afterwards tried to make him accept the two first suggestions, but he invariably refused. On one occasion, however, he accepted the suggestion that he should poison a personal friend. The subject was in the alert stage of hypnosis with his eyes open. I took a piece of sugar from the basin, and assured him that it was a piece of arsenic sufficient to kill a dozen persons. I then put it in a cup of tea and told him to give it to his friend to drink. He at once did so. I asked him why he had poisoned his friend and he replied in an unnaturally gruff voice, "Oh, he has lived long enough." Another young man who was present, also a good somnambule, would carry out suggestions like those rejected by G., but refused to execute the fictitious murder. The explanation of the reason why some of these suggestions were accepted and others refused I hope to give in my next paper.

The patient who was the subject of the time experiments also refused certain suggestions. These I will now relate, as well as her own description of her mental and physical condition during hypnosis. On one occasion, during hypnosis, I asked her to put her fingers to her nose at Mr. Barkworth. She laughed, and, despite repeated suggestions, absolutely refused to do so. At a later date, in hypnosis, I asked her for an explanation. She told me she did not want to and would give no other reason. On another occasion, during hypnosis, I suggested that she should steal Mr. Barkworth's watch. The watch was placed upon the table and Mr. Barkworth hid behind a screen. I told the patient that Mr. Barkworth had gone and had left his watch, that he was very absent-minded, would never remember where he had left it, would never miss it, &c. ; suggested that she should take it, no one would ever know, &c. I awoke the patient. She took no notice of the watch. I asked her, "Where is Mr. Barkworth?" "Gone away." "He has left his watch, would you not like to take it?" The patient laughed and said, "No, of course not." I rehypnotised her and asked, "What did I suggest to you a little while ago when you were asleep?" "That I should steal Mr. Barkworth's watch, that he was absent-minded, would never miss it, &c." "Then why did you not do so?" "Because I did not want to." "Was it because you were afraid of being found out?" "No, not at all, but because I knew it would be wrong."

On another occasion I again questioned her in hypnosis in reference to this suggested theft. I said, "Did you recognise it was an experiment?" "Yes, perfectly." "How did you know it was?" "I can't tell you, I only felt sure it was." On being pressed further, she said, "Well, I knew you would never really ask me to do anything wrong." "Well, then, if you were quite certain in your own mind that it was only an experiment, why did you not carry it out?" "Because I did not wish to do what was wrong, even in jest." "If then, I asked you to put a lump of sugar in some one's tea and told you it was arsenic, would you do so?" "No, certainly not." "Not even if you were quite certain that it was only sugar?" "No." "Why?" "Because I should be pretending to commit a crime."

I found with this patient, however, that, although she was able to refuse a suggestion, she was unable to prevent its fulfilment after having accepted it. For instance, if I suggested to her in hypnosis that she should place her hands together and lose the power of separating them, she could reject the suggestion if she pleased. On the other hand, if she accepted the suggestion and placed her hands together, she was unable to separate them, even when encouraged to do so by the exercise of her own volition.

In reply to further questions in hypnosis, she said she felt sure she could refuse any suggestion. That she felt she was herself, that she knew where she was and what she was doing. "Are you the same person asleep as awake?" I asked. "Yes," she replied, with a laugh. She described the condition as a sort of losing herself and yet not losing herself. She knew and heard all that was going on, and yet seemed to be taking no notice of it. When Mr. Barkworth was put *en rapport* with her she remembered his voice, which she had heard on a previous occasion when not *en rapport* with him. She said she was resting all the time, and that nothing she did or thought tired her. I asked her what it felt like to have her arm made cataleptic by suggestion. She replied, "I did not feel frightened, but I felt startled. I think it would surprise any one." "When you awake and find your arm still rigid, what do you feel then?" "I feel amused." "When you are sleeping here and no one is talking to you, do you ever think of anything?" "Yes! One day I was troubled about my dressmaking. My employer was ill and I had more responsibility than usual. I had a difficult piece of work to do and could not understand how it was to be done. When asleep here I planned how I would do it and carried this out successfully when I returned home. When I awoke I did not know that I had done this; the way out of the difficulty suddenly came into my mind on my way home. I now remember planning while asleep what I carried out."

On one occasion, after being hypnotised, and when she was apparently in the lethargic condition, she suddenly volunteered the statement that her mother wished to speak to me. Shortly afterwards her mother came into the room. The patient was still asleep and no suggestions of *rapport* were made. Her mother commenced to tell me about a friend in whom she was interested, with a view to finding out whether I thought hypnotic treatment would be of benefit in his case. The patient suddenly joined in the conversation, and added some important details which her mother had forgotten. On awaking she remembered nothing in reference to this.

On another occasion, under similar circumstances, her mother questioned me in reference to a trivial indisposition from which the patient was suffering, and asked me whether I thought she might give her a certain simple remedy. Upon this the patient commenced to laugh, and recounted in a highly amused manner an experiment of her mother's in domestic medicine, of which she had been the unfortunate victim.

I obtained the following account of the hypnotic condition from another patient, an educated, intelligent woman. She said, "When asleep I still feel that I am myself, and can think and reason just as well as when I am awake. I could resist any suggestion if I wanted

to do so. The sensation is a pleasant one, as if I were getting rested all over. I am not conscious of other sounds, except your voice. When you are not talking to me the condition is generally a blank. At such times I occasionally, but rarely, think and sometimes spontaneously recall the events of past hypnoses."

Another educated patient, a very good somnambule, described her state in similar terms. She said, "I feel a kind of restfulness which I do not get in any other condition of life. I feel no fatigue. External sounds, other than your voice, I hear vaguely, as if in a dream, and pay no attention to them. I still feel myself and can reason just as well as if I were awake." When her arm is made stiff, this appears quite natural, as she recognises it is done as an experiment. She feels certain she could refuse any suggestion which she disapproved of and would not carry out an imaginary crime, even if she knew it was only an experiment. This patient readily accepted suggestions of anæsthesia and analgesia, and was unable to remember in the waking state either painful sensations or tactile impressions. On being rehypnotised, however, though she could not recall any sensation of pain, she was able to state where she had been pinched or pricked and to describe the tactile impressions associated with these operations.

Rapport.

I have never observed any peculiar *rapport* between the subject and the operator, when direct and indirect suggestions in reference to this condition have been carefully excluded. I could always, however, readily induce the condition by suggestion.

Methods of Awaking.

I have never experienced any difficulty in terminating the hypnotic condition. All that is required is to suggest during hypnosis that the patient shall awake at a given signal.

Reinduction of Hypnosis.

Once genuine hypnosis has been obtained, the condition can be reproduced immediately at any subsequent time. It is only necessary to suggest during hypnosis that in future the patient shall pass into that state when told to do so.

Self-Hypnosis.

Except in cases where hypnosis had been previously induced by others, I have never met with an instance in which a subject had succeeded in hypnotising himself. On the other hand, all hypnotic subjects can be trained to do so, by suggestion in hypnosis. All that is necessary is to suggest that they should fall asleep on looking at the operator's signature, or on counting up to five, or, indeed, in any

other way which has been arranged. The subject then can hypnotise himself at any time and also suggest the various phenomena which he desires to obtain. He can, for example, place himself *en rapport* with his dentist and have his teeth painlessly extracted. Some of my patients still possess and exercise this power, which was first suggested to them six years ago.

Multiple Suggestions.

Numerous suggestions can be carried out simultaneously by one and the same patient.

This fact is of considerable importance in reference to certain hypnotic theories, which are based upon the state of the attention. One can suggest, for example, at the same time, paralysis of one arm and catalepsy of the other; excited action of the special senses on one side of the body and diminished or arrested on the other, &c.

Suggestion in Disease.

The phenomena described so far have, with few exceptions, been those induced in healthy subjects. The result of suggestion in disease, by far its most important field of action in my opinion, I cannot describe in detail before a non-medical audience. I may state, however, that I have been able to confirm many of the observations reported from abroad. I have seen, for example, the removal of pain in various diseases, and its prevention in operation; the habit of sleep restored in those suffering from insomnia, and many functional diseases cured which had long resisted other forms of treatment; obsessions and painful memories blotted out; dipsomania, kleptomania, and other vicious habits corrected, and many functions of organic life, which were performed imperfectly or painfully, restored to their normal condition.

CONCLUSION.

If I were asked in one word to describe the difference between the hypnotised and the non-hypnotised subject, I should say that it consisted in the superiority of the former over the latter in his having acquired a far-reaching power over his own organism, which the other does not share. This view of the hypnotic state is not a novel one, and has already been ably described by Mr. Frederic Myers. In addition, I desire to emphasise the fact—denied by some, half-heartedly conceded by others—that this increased power carries with it no penalty, and implies no interference with volition; and that the subject can reject when asleep, as readily as when awake, all suggestions which are contrary to his moral sense.

II.

WHAT IS HYPNOTISM ?

BY DR. J. MILNE BRAMWELL.

The answers to this question have been so numerous and conflicting that it would be impossible, in the space at my disposal, to give even a brief summary of them. I propose, therefore, only to draw your attention to some of the more important, and to consider these more especially in reference to the theories of James Braid. Two points seem to me worthy of special notice :—

1. Apparently little of value has been discovered which can justly be considered as supplementary to Braid's later work, while much has been lost through ignorance of his investigations.

2. The theories of the mesmerists, which he so successfully combatted, still apparently survive. There not only exist, as the questions and statements of one of the audience at my last lecture apparently indicate, frankly avowed believers in mesmerism, but, as we shall see later, views that differ only in name from those of the mesmerists still crop up in strange and unexpected places.

Modern hypnotism undoubtedly owes its origin to mesmerism and, to understand its evolution, a clear conception of mesmeric theories is necessary. The views of Esdaile may be regarded as a fair summary of them.

Esdaile's Theory.

Esdaile believed that mesmeric phenomena were due to the action of a vital curative fluid, or peculiar physical force, which, under certain circumstances, could be transmitted from one animal to another. Various inanimate objects, such as metals, crystals and magnets, were also supposed to possess it, and to be capable of inducing and terminating the mesmeric state, and of exciting, arresting or modifying its phenomena. One metal, for example, would produce catalepsy, another change this into paralysis ; a glass of water could be charged with odyllic force by being breathed upon by the mesmeriser, etc.

Braid's Theories.

Braid explained hypnotic phenomena from two widely differing standpoints ; first regarding them as mainly physical in their origin, and

then, at a later date, as chiefly psychical. From the commencement, however, to the termination of his researches he held practically the same view as to the origin of mesmeric phenomena. In many instances he regarded the phenomena themselves as genuine, considering their explanation only as erroneous. As the result of long and careful experiment, he claimed to have proved that the various mesmeric phenomena could be excited when all their alleged causes had been carefully eliminated, and also that the supposed exciting causes were non-effective when the subjects were ignorant of their existence. The marvels only appeared when the various physical stimuli were associated with mental impressions, and were invariably absent when these were excluded. An imitation magnet, for example, produced all the usual phenomena when the subject was told of its presence, while a real magnet produced nothing when the subject was unaware that it had been brought in contact with him.

Braid's Physical Theory.

Braid held that mesmeric and hypnotic phenomena were due neither to volition on the part of the operator, nor to his possession of any mysterious force or fluid, but were mainly due to physical changes that took place in the subject. These, which consisted in the exhaustion of certain nerve centres with resulting decrease in the functional activity of the central nervous system, arose from the continued monotonous stimulation of other nerves, *e.g.*, those of the eye by means of fixed gazing, those of the skin by passes with contact. At this time (1843), Braid agreed with the mesmerists on one point, *viz.*, that the mesmeric or hypnotic state could be induced without the subject's knowledge. His belief in phrenology also had its analogy in mesmeric theory. Thus, Braid held that certain phenomena could be induced by pressure upon sensitive points of the head, and the mesmerists believed that others could be excited by bringing various inanimate objects in contact with different parts of the body. At a later date Braid abandoned his physical theory, and, with it, all belief in phrenology. To his psychical theory I will refer later; meanwhile, I wish to call your attention to some other physical explanations of hypnotic phenomena.

Charcot's Theory, or that of the Salpêtrière School.

According to this school, hypnosis is an artificially produced morbid condition, characterised by certain chemical changes in the secretions—a neurosis only to be found in the hysterical. Women are more easily hypnotised than men; children and old people are almost entirely insusceptible.

Hypnosis can be produced by purely physical means, such as pressure on certain regions of the body; and a person can be hypnotised, as it were, unknown to himself.

The hypnotic phenomena are divided into three different stages, which usually appear in regular sequence. These are induced and terminated by certain definite physical stimuli.

Hypnotism has so far not proved of much therapeutic value.

There is danger of provoking hysteria in trying to induce hypnosis.

There is a difference between suggestion in normal life and in hypnosis. The former is a physiological phenomenon, the latter a pathological one. Suggestibility does not constitute hypnosis, it is only one of its symptoms. There does not exist a single case in which a somnambule has acted criminally under the influence of suggestion.

This theory has been strongly attacked, chiefly by the hypnotic observers who belong to what is termed the Nancy School. To commence with, they point out the insufficiency of the data upon which the theory has been founded, and cite the confession of its own supporters that only a dozen cases of true hypnosis have occurred in the Salpêtrière in ten years, and that a very large proportion of the experiments were conducted on one subject, who had long been an inmate of that hospital. On the other hand, they call attention to the extended nature of their own observations and to the fact that their conclusions are drawn from the study of many thousand cases.

Is Hypnosis a Morbid Condition which can only be Induced in the Hysterical?

This question must, I think, be answered in the negative. Moll, in reference to Charcot's argument that hypnotism and hysteria are identical, because the chemical character of certain secretions is similar in both, pointed out that Charcot's subjects all suffered from hysteria; and that, as the phenomena which characterise waking life are readily induced in hypnosis, Charcot easily created a complete type of hysteria by suggestion. It would be equally easy to suggest stammering in hypnosis, but one would not be justified, therefore, in characterising hypnosis as a condition of stammering.

Again, as the following statistics show, if the hysterical alone can be hypnotised, over 90 per cent. of mankind apparently suffer from hysteria. Some years ago, Bernheim had already attempted to hypnotise 10,000 hospital patients with over 90 per cent. of successes, while Wetterstrand recently reported 6,500 cases with 105 failures. Schrenck-Notzing in his First International Statistics, published in 1892, gave 8,705 cases by 15 observers in different countries, with 6 per cent. of failures. Mr. Hugh Wingfield, when Demonstrator of Physiology at Cambridge, attempted to hypnotise over 170 men, all of whom, with

the exception of 18, were undergraduates. In about 80 per cent., hypnosis was induced at the first attempt; but as no second trial was ever made with the unsuccessful cases, these results undoubtedly understate the susceptibility. (See *Proceedings S.P.R.*, Vol. VI., p. 198.) Most of the undergraduates would be drawn from our public schools, and, if these do not always turn out good scholars, they cannot at least be accused of producing hysterical invalids. Braid stated that the nervous and hysterical were the most difficult to hypnotise, while Liébeault found soldiers and sailors particularly easy to influence. Grossmann, of Berlin, recently asserted that hard-headed North Germans were very susceptible, and I observed that healthy Yorkshire farm labourers made remarkably good subjects. Professor Forel told me that he had hypnotised nearly all his asylum warders; that he selected these himself and certainly did not choose them from the ranks of the hysterical. In former times Esdaile's patients were stated to be hysterical. In reply to this, he said, "I cannot possibly see how hysteria has got into my hospitals, where I never saw it before—coolies and felons not being at all nervous subjects. . . . As natural hysteria may be supposed to be more powerful than imitation, I shall look with impatience for the announcement, in the *Morning Post*, that Mrs. Freake has been cured of her nervous headaches by the skilful application of hysteria, and that Lady Tantrum has had her arm cut off while in a fit of hysterics, without knowing it. These should be easy feats for our fashionable physicians and surgeons, as they have the disease and antidote ready made to their hands, whereas it costs me and my assistants great trouble to make the coolies and prisoners of Bengal hysterical to the degree necessary to render them insensible to the loss of their members."

These and similar facts apparently justify the statements of Forel and Moll that it is not the healthy but the hysterical who are the most difficult to hypnotise. According to the former, "every mentally healthy man is naturally hypnotisable"; while the latter says, "if we take a pathological condition of the organism as necessary for hypnosis, we shall be obliged to conclude that nearly everybody is not quite right in the head. The mentally unsound, particularly idiots, are much more difficult to hypnotise than the healthy. Intelligent people, and those with strong wills, are more easily hypnotisable than the dull, the stupid, or the weak-willed."

Are Women more Susceptible than Men?

All observers, with the exception of those of the Salpêtrière School, agree in stating that sex has little or no influence upon the susceptibility to hypnosis. According to Liébeault, the difference between the sexes is rather less than 1 per cent. The majority of Esdaile's subjects

were men and, as we have seen, Mr. Wingfield was able to hypnotise about 80 per cent. of the Cambridge undergraduates at the first attempt.

Are Children and Old People Insusceptible?

Wetterstrand found that all children from 3 or 4 to 15 years of age could be influenced without exception. Dr. Bérillon, out of 250 cases in children, hypnotised 80 per cent. at the first attempt. Liébeault also found children peculiarly susceptible, and one of his statistical tables records 100 per cent of successes up to the age of 14. In adult life, age apparently makes little difference. In the same table we find that from the ages of 14 to 21 the failures were about 10 per cent., and from 63 years and upwards about 13 per cent.

Can Hypnosis be Induced by Mechanical Means alone?

This question is answered by the Nancy School in the negative, and my own experience agrees with this. I know of no single instance where hypnosis has followed the employment of mechanical means, when mental influences have been carefully excluded, and the subjects have been absolutely ignorant of what was expected of them. No one was ever hypnotised by looking at a lark-mirror, until Dr. Luys had borrowed this lure from the bird-catchers and invested it with hypnotic power. On the other hand, any physical method will succeed with a susceptible subject who knows what is expected of him.

Are Hypnotic Phenomena divided into three Distinct Stages?

The stages described by the Salpêtrière School, as arising from definite physical stimuli, have never been noticed by other observers. Amongst the many hundred hypnotised subjects I have seen, none have responded to the manipulations which produced such striking phenomena at the Salpêtrière. On the other hand, I and many others have found that we could easily evoke these stages by verbal suggestion, and train the patients to manifest them at any given signal. The condition, however, was always an artificial one.

Is Hypnotism of little Therapeutic Value?

On the one hand, we have the negative evidence of a few cases observed at the Salpêtrière, where experiment, not cure, seemed the main end. On the other, the positive evidence, drawn from many thousands of cases, where hypnotism has been successfully employed for the relief or cure of disease.

Is Hypnotism Dangerous?

The Salpêtrière School answer this in the affirmative, asserting that hysterical symptoms have sometimes appeared after the attempted

induction of hypnosis. That such phenomena should occur with them is not surprising, when one considers the nature of the subjects and their surroundings, and the violent and startling methods sometimes resorted to. The slight accidents which they record have not occurred in other and more experienced hands. Professor Forel says :— “Liébeault, Bernheim, Wetterstrand, van Eeden, de Jong, Moll, I myself, and the other followers of the Nancy School, declare categorically that, although we have seen many thousands of hypnotised persons, we have never observed a single case of mental or bodily harm caused by hypnosis, but, on the contrary, have seen many cases of illness relieved or cured by it.” This statement I can fully endorse, as I have never seen an unpleasant symptom, even of the most trivial nature, follow the skilled induction of hypnosis.

Can various Physical and Mental Phenomena be excited by the Application, or near Presence, of certain Metals, Magnets, and other Inanimate Objects ?

Here, in the assertions of the Salpêtrière School and their refutation by that of Nancy, we have an exact counterpart of the controversy between Braid and the mesmerists. All the old errors, the result of ignoring mental influences, are again revived. Medicines are again alleged to exercise an influence from within sealed tubes. The physical and mental conditions of one subject are stated to be transferable to another, or even to an inanimate object. It is useless to enter into any arguments to refute these statements, for this would be repeating the work of Braid. Indeed, in many instances their absurdity renders argument unnecessary. For example, when a sealed tube containing laurel flower water was brought near a Jewish girl of disorderly life, she adored the Virgin Mary. From this it might be inferred that different religious beliefs were represented by different nerve centres, and that these could be called into action by appropriate physical stimuli. Should this be established, it could hardly fail to have an important influence upon the character and direction of missionary enterprise ! The chief apostle of these doctrines is Luys ; and considerable attention was drawn to them in England a few years ago by popular articles in the daily papers and elsewhere. Indeed, the editor of a well-known medical journal thought them of sufficient importance to demand his writing a book in order to disprove them. He apparently was ignorant of the fact that M. Dujardin-Beaumetz, in 1888, reported to the Académie de Médecine that Luys' experiments were conducted so carelessly as to rob them of all value, and that among students of hypnotism they are entirely disregarded.

The two remaining points, namely, the question of criminal suggestion and that of suggestion in general in relation to hypnotism, I will refer to in discussing the theories of the Nancy School.

Heidenhain's Theory.

According to Heidenhain, the phenomena of hypnotism owe their origin to the arrested activity of the ganglion-cells of the cerebral cortex. He holds that these higher centres are inhibited by the monotonous stimulation of other nerves, *e.g.*, by fixed gazing, passes, etc., and that sensory impressions, which usually produce movements after passing to the higher centres and evoking consciousness, now do so by passing directly to the motor centres. This is essentially a "short-circuiting of nervous currents" theory. Heidenhain regards the hypnotised subject as a pure automaton, who imitates movements made before him, but who is entirely unconscious of what he is doing. To cause him to move his arm, he says, the image of a moving arm must pass before his retina, or an unconscious sensation of motion must be induced through passive movement of his arm. The patient has no idea corresponding to the movements he makes; the sensory impression leads to no conscious perception and to no voluntary movement, but suffices to set up unconscious imitation. In reference to the playing of different parts by hypnotised subjects, Heidenhain says that it is a mistake to suppose that the subjects realise what they are doing: this is quite out of the question; the hypnotised individual neither thinks nor knows anything about himself. Heidenhain holds that the fact of the hypnotised subject's forgetfulness of the sensations he has experienced during hypnosis affords satisfactory evidence that these sensations were unconscious ones. This theory was first published in 1880, and attracted considerable attention. It was accepted, for example, by Professor McKendrick, of Glasgow, and re-stated by him, in the last Edition of the *Encyclopædia Britannica*, as giving a true and scientific explanation of the phenomena of so-called animal magnetism.

To this explanation many objections may be urged, thus:—

(1) It is a mistake, as Gurney pointed out, to call the hypnotic action on the cortical functions *inhibition*, without stating explicitly that the normal action of these functions in respect to motion is to a large extent inhibitory, and that the complete description of the method by which the automatic reflex responses are brought about, is thus "inhibition of the inhibitory functions."

(2) While giving an elaborate exposition of the theory of cerebral inhibition produced by peripheral stimulation, Heidenhain omits to take into consideration the result of central stimulation by means of

an idea or emotion. As hypnosis can be equally well induced in this way, we cannot accept Heidenhain's theory, as he wishes that we should do, in substitution for that of "dominant ideas." It cannot justly be considered as an alternative to it, as it is merely the physiological statement of psychical facts.

(3) The theory itself is not a new one; with the exception of a few details, it is essentially an imperfect reproduction of that of the late Professor John Hughes Bennett, of Edinburgh, published in 1851. But Bennett, as we shall see later, possessed a clearer view of the whole problem and did not fall into the mistake of attempting to substitute the physiological statement of psychical facts for the facts themselves.

(4) Hypnosis can be induced, not only in the absence of *monotonous* peripheral stimulation, but even without any peripheral stimulation at all. At the present day it is usually evoked by central stimulation, which, in those who have been previously hypnotised, need not be persistently monotonous; the single word "Sleep" being then sufficient to excite the condition. In such cases, the factor which Heidenhain regards as essential to the production of hypnotic phenomena, *i.e.*, monotonous peripheral stimulation, is absent.

(5) Instead of a hypnotised subject imitating a movement which he sees and failing to perform one which is verbally suggested to him, the reverse is actually the case. As a rule, the slightest verbal suggestion is sufficient to induce the movements described by Heidenhain; on the other hand, hypnotised subjects never copy movements made before them unless they have been trained to do so. The imitative movements only take place, according to Moll, when the hypnotic subject is conscious of them, and knows that he is intended to make them. If they were unconscious reflexes, the subjects would imitate any person's movements, but they only imitate the one person who exists for them, *i.e.*, the experimenter, and him only when they know he wishes them to do so. A clear idea of the movements to be made is the first condition. When such experiments are often repeated, the imitation may become automatic in later hypnoses, as happens in waking life. At first, however, a clear idea is necessary; but as we regard the cerebral cortex as the seat of ideas, and as there is no reason for shifting them to another part of the brain in hypnosis, so there can be no doubt of the activity of the cerebral cortex.

(6) According to Gurney, Heidenhain's only argument is based upon the subject's subsequent defect of memory; he thus assumes, as his sole test for present consciousness, the subsequent remembrance of its content. Yet, as Gurney says, if the reality of that test be granted, the question whether a man was conscious when he read an article in the *Times*, will depend on whether or not he receives a blow on the head when he has finished it. Gurney further points out that there is

a more radical objection to all these arguments founded on subsequent loss of memory,—the fact, namely, that memory is frequently present. Braid, for example, found that only some 10 per cent. of his subjects were unable to recall the events of hypnosis, while Schrenck-Notzing's International Statistics of 8705 cases give 15 per cent. Again, if on waking the act performed during hypnosis is forgotten, the lost memory can be revived in subsequent hypnoses; and, finally, the amnesia, which would otherwise follow deep hypnosis, can be entirely prevented by suggestion.

Mr. Ernest Hart's Theories.

Mr. Hart has also attempted to explain the phenomena of hypnotism from a physical standpoint. His theories in themselves demand little or no attention, as they are almost entirely unsupported by experimental evidence. On the other hand, from his position as Editor of the *British Medical Journal*, he has had exceptional opportunities of making them known to the medical profession. According to Mr. Hart, the hypnotised subject "is reduced more or less perfectly to the state of a living automaton. The upper brain is more or less completely, and more or less regularly, bloodless, its functions in abeyance, the will is abolished, suspended, or enfeebled. A hypnotised subject will perform unconsciously, under the influence of suggestion, acts which are dangerous to himself and others, and which are in themselves criminal—so that he can be made to thieve, to commit arson, or to attempt violence." He summarises his views in the following somewhat obscure sentence:—"We have already, I hope, succeeded in eliminating from our minds the false theory,—the theory that is experimentally proved to be false—that the will, or the gestures, or the magnetic or vital fluid of the operator is at all necessary for the abolition of the consciousness and the abeyance of the will of the subject; and we now see that ideas arising in the mind of the *subject* are sufficient to influence the circulation in the brain of the *person operated on* (!), and in such variations are adequate to produce sleep in the natural state, or artificially, by total deprivation, or by excessive increase, or local aberration in the quantity or quality of the blood to produce coma and prolonged insensibility by pressure of the thumbs upon the carotid; or hallucinations, dreams, and visions by drugs, or by external stimulation of the nerves; or to leave the consciousness partially affected, and the person in whom sleep, coma, or hallucinations is produced, subject to the will of others and incapable of exercising his own." (See "Hypnotism and Humbug," *Nineteenth Century*, January, 1892.)

To Mr. Hart's theories there are three objections.

(1) It is doubtful whether any of the phenomena—unconsciousness, automatism, susceptibility to criminal suggestion,—which he regards as characteristic of the hypnotic state, exist. The general question of consciousness and automatism has already been referred to in dealing with Heidenhain's theory; that of criminal suggestion I propose to discuss more fully in connection with the views of Bernheim and others. Meanwhile, I may state, as the result of seven years' hypnotic research, that I have failed, either at home or abroad, to discover a single instance in which the phenomena described by Mr. Hart have occurred.

(2) The presence of cerebral anæmia in hypnosis is by no means established. The belief in its existence is an old one, which recent investigations have done much to discredit. Many years ago Carpenter suggested it as a possible explanation of at least some hypnotic phenomena, and Hack Tuke also considered there was a partial spasm of the cerebral blood vessels in hypnosis. Heidenhain too at first supposed that anæmia of the brain was the cause of hypnosis. He soon gave up this opinion for several reasons: (a) He saw hypnosis appear in spite of the inhalation of nitrite of amyl, which causes hyperæmia of the brain. (b) The investigations of Förster discovered no change in the vessels at the back of the eye during hypnosis. (c) Salviole and Bouchut found cerebral hyperæmia during hypnosis.

(3) Granting that cerebral anæmia exists, to assume that it explains the phenomena of hypnosis is unscientific. For, as Professor William James points out, the change in the circulation is the result, not the cause, of the altered activity of the nervous matter. Many popular writers, he says, talk as if it were the other way about, and as if mental activity were due to the afflux of blood. That belief has no physiological foundation whatever; it is even directly opposed to all that we know of cell life. The stomach does not digest because more blood flows into it, nor do the muscles of the arm contract for a similar reason; on the contrary, their increased blood supply follows their increased functional activity.

Hypnosis in Animals.

Mr. Hart believes that animals, such as guinea-pigs, rabbits, frogs, birds, crayfish, and even young alligators can be hypnotised by methods similar to those employed with the human subject, and that they present like phenomena. The only argument in favour of this is drawn from the fact that these animals, after certain physical stimuli have been applied to them, present the phenomenon of catalepsy. Is this catalepsy invariably a genuine one? I am inclined to think that in many instances it is a conscious simulation of death, adopted by the animal from the instinctive knowledge of the fact that certain birds and

beasts of prey, except under pressure of extreme hunger, will not attack what is dead. If, for example, you turn a beetle over on its back it will remain motionless and apparently cataleptic, with its legs sticking rigidly in the air. The moment you turn away, however, it scrambles to its feet and resumes its journey. Here death or catalepsy was in all probability only shammed, and doubtless the insect was keenly watching your every movement and anxiously waiting for your departure. Again, catalepsy is only one, and a comparatively unimportant, phenomenon of hypnosis. One of the main characteristics of the hypnotic state is the rapidity with which one phenomenon can be changed into its opposite. Have we any evidence of this in the so-called hypnosis of animals? I think not. Again, is it logical to conclude similarity of cause from identity of effect? In order to induce hypnotic catalepsy in the human subject, a clear idea of the suggested act is necessary. What evidence have we for concluding that a crayfish becomes cataleptic from a clear idea that the operator has suggested this condition? It is possible that in some instances the phenomenon is genuine, and then, according to Preyer, the condition is one of paralysis resulting from fright. Now fear is not necessary for the induction of hypnosis; and, before concluding that the condition is a hypnotic one, it would be wise to exclude this factor from the equation. To do this experimentally would not be difficult; it would only be necessary to get rid of the disproportion between the size and strength of the operator and the animal, a disproportion which, in the experiments referred to, has always existed in favour of the hypnotiser. Instead of a young alligator, let one of greater age and larger growth be chosen and the experiment repeated. I am inclined to think that in such a case the rôles would be reversed, the operator would become cataleptic and the subject uncommonly and disagreeably mobile.

Again, Mr. Hart holds that hypnosis can be induced only in the hysterical, in those possessing ill-balanced nervous systems. What evidence have we for the existence of hysteria in the alligator? I think none, and yet the spectacle of an alligator executing "grands mouvements" or even "mouvements passionnels" would have been certain to have attracted attention.

Braid's Later or Psychological Theory.

According to this theory the hypnotic condition was essentially one of mental concentration or monoideism, in which the mind was so engrossed with a single idea as to render it dead to all other influences. All the phenomena, no matter how hypnosis was induced, resulted entirely from dominant ideas aroused in the minds of the subjects.

The attention was concentrated upon the particular function called into action, while the others passed into a state of torpor. Only one

function was active at any one time, and hence intensely so. The arousing of any dormant function was equivalent to superseding the one in action.

In his earlier theories Braid attached most importance to the physiological changes associated with hypnosis; in his later, to the psychological ones. He never entirely separated the two, however; and when he explained the condition by means of monoideism, he still clearly stated that this depended upon a definite physical change in the subject. This resulted from the methods employed to induce hypnosis, and alone rendered the mental condition possible. In his later works he gives no further elaboration of his physical theory and for this we must turn to Professor John Hughes Bennett, who adopted Braid's view in reference to monoideism, and explained it both from the physiological and psychological side.

Bennett's Physiological Theory.

According to Bennett, hypnosis was characterised by alterations in the functional activity of the nerve tubes of the white matter of the cerebral lobes. He suggested that a certain proportion of these became paralysed through continued monotonous stimulation, while the action of others was consequently exalted. As these tubes, "fibres of association" as they have been called, connect the cerebral ganglion-cells, suspension of their functions was assumed to bring with it interruption of the connection between the ganglion-cells.

Bennett's Psychical Theory.

From the psychical side, he explained the phenomena of hypnosis by the action of predominant and unchecked ideas. These were able to obtain prominence from the fact that other ideas, which under ordinary circumstances would have controlled their development, did not arise; because the portion of the brain with which they were associated had its action temporarily suspended, *i.e.*, the connection between the ganglion-cells was broken, owing to the interrupted connection between the fibres of association. Thus, he says, the remembrance of a sensation can always be called up by the brain; but, under ordinary circumstances, from the exercise of judgment, comparison, and other mental faculties, we know it is only a remembrance. When these faculties are exhausted, the suggested idea predominates and the individual believes in its reality. In this manner we attribute to the faculties of the mind as a whole a certain power of correcting the fallacies which each one of them is liable to fall into, in the same way that the illusions of one sense are capable of being detected by the healthy use of other senses. There are illusions, mental and

sensorial ; the former caused by predominant ideas and corrected by proper reasoning ; the latter caused by perversion of one sense and corrected by the right application of the others.

In hypnosis, then, according to this theory, a suggested idea obtained prominence and created mental and sensorial illusions, because the check action—the inhibitory power—of certain higher centres had been temporarily suspended. These theories were first published by Professor Bennett in 1851.

If we confine ourselves entirely to the psychological side of this conception of hypnosis, we find an almost identical picture of the condition presented by certain later observers, such as Gurney and Bernheim.

Gurney's Theory.

After referring to the certain and isolated way in which suggestion evokes a particular idea in the mind of the subject, Gurney states that this isolation of a single object in the mind naturally implies abeyance of the normal controlling and relating powers. In the normal state, he says, successive vivid points of consciousness are surrounded by a swarm of subordinate perceptions and ideas, by reference to which conduct is instinctively or subconsciously kept rational. In the hypnotic state the contact is broken between the predominant idea and this attendant swarm ; and conduct thus ceases to have reference to anything except the predominant idea. The hypnotic mind is working with marked absence of individuality in the channel chosen by others ; and what its owner says or does, in response to external influence, is that on which his attention is concentrated to the complete exclusion of every other thought.

Bernheim's Theory.

In hypnosis, according to Bernheim, the whole nervous force of the subject is concentrated upon a single idea. This nervous concentration may be changed from one point to another in response to the suggestions of the operator, but, though the focus shifts its place, the same concentration continues to exist.

In the normal state, he says, we are subject to errors, illusions and hallucinations. Sometimes these are spontaneous, or follow imperfect sensorial impressions ; at others they are suggested to us, and accepted without being challenged. In the normal state there is a tendency to accept ideas suggested by others and to act upon them ; but every formulated idea is questioned and, as the result of this, either accepted or rejected. In the hypnotised subject, on the other hand, there exists a peculiar aptitude for transforming the suggested idea into an act. This is so quickly accomplished that the intellectual inhibition has not time to prevent it, and, when it comes into play, it does so too late, as

the idea has been translated into its physical equivalent. If consciousness follows the suggested act, it at all events follows it too late to interfere with its fulfilment.

While Bernheim almost exactly reproduces the views of Braid and Bennett in reference to the general mental condition in hypnosis, he and certain other members of the Nancy School differ from them in many important points, and to these I now propose to call your attention.

Points of Difference.

Braid and Bennett, as we have seen, regarded the phenomena of hypnosis as the result of a definite physical change in the subject; Bernheim, on the other hand, attempts to explain them (1) by finding an analogy between them and the phenomena of the normal state, and (2) by means of suggestion.

According to Bernheim, hypnotic phenomena are analogous to many normal acts of an automatic, involuntary and unconscious nature, and nothing, absolutely nothing, differentiates natural and artificial sleep. If any distinction exists at all between the normal and the hypnotic state, this can be explained by means of suggestion. Both the normal and the hypnotised subject can be influenced by it; but, as we have suggested to the latter that he should become more responsive, a peculiar aptitude for transforming the idea into an act has in this way been artificially developed. *In other words, every one is suggestible and if you take some one and suggest to him to become more suggestible, that is hypnotism!* Thus, suggestion not only excites the phenomena of hypnosis, but also explains them. Suggestion, *i.e.*, the mental impression, including the preliminary suggestion to become more suggestible, conveyed from the operator to the subject, is the only essential factor in the equation, and the condition of the patient, physical or mental, is absolutely unimportant.

This theory contains five distinct statements, none of which can be accepted without discussion.

I. Nothing differentiates natural and artificial sleep. Hypnotic phenomena are analogous to many normal acts of an automatic, involuntary and unconscious nature.

II. An idea has a tendency to generate its actuality.

III. In the hypnotic state, this tendency to accept suggestions is somewhat increased by the action of suggestion itself. Such increased suggestibility, one of degree, not of kind, alone marks any difference between the hypnotic and normal state.

IV. The result of suggestion in hypnosis is analogous to the result of suggestion in the normal state.

V. In the four preceding propositions is to be found a complete explanation of hypnosis and its phenomena.

In discussing the above propositions, I will, for convenience' sake, somewhat change their order.

I.—Explanation of Hypnosis by means of a supposed General Analogy between it and the Normal State.

My chief objections to this are :—

(1.) That an analogy, however successfully established between two sets of phenomena, by no means explains either of them.

(2.) That the automatic, involuntary and unconscious acts, in which Bernheim seeks to find his analogy, rarely, if ever, occur in hypnosis, and are certainly by no means characteristic of it.

Putting aside the question of automatism, which I shall discuss later in conjunction with suggested crimes, we find that Bernheim believes that a complete analogy exists between the therapeutic action of hypnosis in his hospital and the miracle cures at Lourdes. How far these and similar phenomena resemble each other can, however, be better dealt with under the head of suggestion.

Braid considered that marked differences existed between hypnosis on the one hand, and natural somnambulism and the normal sleeping and waking states on the other. A detailed account of these, which, he thought, consisted mainly in the increased mental and physical powers of the hypnotised subject, is to be found in the article on Braid in Part XXX. of the *Proceedings* of this Society (p. 127).

III.—In Hypnosis the Tendency to accept Suggestions is somewhat increased by the Action of Suggestion itself; this alone distinguishes the Hypnotic from the Normal State.

Granting for the moment that the normal and hypnotic states are identical; that both are characterised by susceptibility to suggestion, how far are we justified in concluding that increased suggestibility is alone possessed by the hypnotic subject and affords the only difference which distinguishes him from the normal one? Let us consider the means by which the supposed change has been brought about. The phrase, "You are to become more suggestible," is stated to have artificially created it. Now, if we admit that this formula is sufficient to change a normal into a hypnotic subject and to account for his increased suggestibility, we must be prepared to show, in order to maintain the distinction between the two, that the individual who is still regarded as normal, *i.e.*, less suggestible, has escaped similar influences. Suggestions in normal life, however, are frequently associated with those of increased suggestibility. A beggar, in appealing for alms, not only asks that they should be given him, but also suggests in various ways, directly or

indirectly, according to his skill and ingenuity, that the object of his petition should become more responsive to his prayer, *i.e.*, more suggestible. There is an important difference between the two. In hypnosis we attempt to gain increased power by quietly repeating some recognised formula once or twice, while in normal life we attempt to obtain it in a much more forcible and varied manner. We must conclude, then, that, if the hypnotic and normal states are identical and suggestion a factor common to both, suggestibility, as the result of the methods employed to develop it, ought to be more markedly characteristic of the normal than of the hypnotic condition.

IV.—The Result of Suggestion in Hypnosis is analogous to the Result of Suggestion in the Normal State.

If we confine ourselves to cases in which suggestion in the normal subject has been employed in the same manner as it is used in hypnosis, the analogy is at once seen to be an extremely imperfect one. The cold-blooded results of the action of the mind upon the body, as Mr. Myers calls them, are extremely rare and generally unimportant. On the other hand, if we turn to the effects of violent emotional states, we find many phenomena have been produced by them which more or less closely resemble the phenomena of hypnosis. Similarity of result, however, does not necessarily imply identity of cause, and an attempted analogy, which is based solely on the former and ignores the latter, must ever be an imperfect one. Fear, hope, faith, or intense religious excitement is almost invariably present in cases which are cited as analogous to hypnotic ones. Not only are these conditions unnecessary for the induction of hypnosis, but some of them absolutely preclude its production. Thus, hypnosis can be evoked in the absence of all those conditions that are essential for the production of analogous phenomena in the normal state; and, further, the presence of some of these conditions, instead of favouring hypnosis, hinders or prevents it. Putting aside this important objection—the difference between the conditions associated with the development of the phenomena—there still remain certain points of contrast between the phenomena themselves, which I shall now enumerate.

Suggestion in Hypnosis.

1. Once hypnosis has been induced, a wide range of phenomena, both mental and physical, can be evoked at any time, and, with the consent of the subject, by any one. A considerable number of phenomena can be simultaneously produced in the same subject.
2. One phenomenon can be immediately changed into its opposite, *e.g.*, muscular rigidity into paralysis, anæsthesia into hyperæsthesia, etc.
3. Hypnotic phenomena can be terminated at will.

4. The date of the appearance of the phenomenon can be delayed, *e.g.*, it can be suggested during hypnosis that it shall not appear till twelve months afterwards.

5. The suggestion will invariably be responded to, subject to two important limitations, *i.e.*, that it contains nothing in opposition to the patient's moral sense and is not beyond the range of his hypnotic powers.

6. Under the conditions just mentioned, the exact nature of the response can be predicted, *i.e.*, similar stimuli produce identical results.

7. Hypnotic suggestion tends to gain strength by repetition.

8. Patients who readily respond to suggestions when hypnotised are frequently the very subjects who have for years resisted suggestion in the normal condition, even when this has been associated with emotional states. For example, a patient who had long suffered from dipsomania received many and varied suggestions in the normal state. The grief of his friends and relatives and their repeated remonstrances were powerful suggestions. So, too, were the loss of fortune and self-respect, and the physical sufferings, associated with keen remorse, which followed his drinking bouts. Twelve months passed in a home for inebriates must also have been full of suggestion of many kinds. All these, however, produced no result; and yet, after a few weeks' hypnotic treatment, the patient abandoned the alcoholic habit and still, after the lapse of six years, remains an abstainer.

Suggestion by Means of Emotional States.

1. The resultant phenomena are usually isolated ones or, at all events, much more limited in number than those which can simultaneously be evoked in the hypnotised subject.

2. One phenomenon cannot be immediately changed into its opposite, without an alteration in the emotional state which had produced it.

3. Emotional phenomena cannot be terminated at will.

4. The date of the appearance of the phenomena can rarely be delayed and fixed.

5. The phenomena are evoked with less certainty than in hypnosis. An emotional state which will produce a physical effect in one subject will produce nothing in another.

6. The result of identical emotional states is not similar physical phenomena. On the contrary, opposite conditions are frequently produced in different subjects by identical emotions: *e.g.*, fear will paralyse one, and excite violent muscular movements in another.

7. An emotional suggestion frequently loses strength by repetition, *e.g.*, a subject may rapidly come to disregard former fears.

II.—*An Idea has a Tendency to Generate its Actuality.*

According to Bernheim, the suggestive phenomena of hypnosis depend upon the fact that, in the normal subject, an idea has a tendency to generate its actuality. This power, as we have seen, was supposed, and erroneously so, to be artificially increased by suggestion in the hypnotised subject alone.

Now, if we confined our attention to the hypnotic state and considered how frequently a suggested idea, unattended by emotional conditions, produced a rapid and definite response, we should be inclined to admit that in hypnosis an idea had not only a tendency to generate its actuality, but almost invariably did so.

A similar statement, however, in reference to normal life cannot be accepted without question. If an extended statistical inquiry were made as to the results of suggestion we should find that these would fall under three classes.

1. Where the suggested idea had produced no result.
2. Where the result was opposite, or, at all events, different from that intended.
3. Where the suggestion had been responded to with more or less exactitude.

1. *Where the Suggested Idea produced no Result.*

A very casual glance at the events of everyday life would compel us to conclude that this class is the commonest of the three. This is evident, if we think of the numberless things ineffectually suggested in the family circle, to domestics, workmen, tradespeople, friends and acquaintances, county councillors, vestrymen, Members of Parliament, and even to the Prime Minister himself !

2. *Where the Result produced was Opposite, or, at all events, Different from that intended.*

In point of numbers this class possibly comes second, but, in regard to the annoyance associated with it, it might be considered to stand first. Numerous examples can easily be cited. Thus, if a thief snatches my watch from me, and I suggest to him to stop, he, on the contrary, runs the faster. If a street arab is making a noise under my window and I tell him to cease and go away, he not only persists, but incites others to join him. If I suggest to a Liberal friend to become a Home Ruler, he rejects the idea and joins the opposite party. If a servant asks for a rise in wages, this frequently results in his dismissal.

3. *Where the Suggestion has been Responded to with more or less Exactitude.*

When we compare the results of this class with those obtained in the others they must, I am afraid, sink into insignificance. For one

suggestion which has generated its actuality, we must count at least a hundred which have produced nothing, and possibly ten where the result has been an unexpected or disagreeable one. I would therefore restate the proposition as follows:—

1. A suggested idea has generally a tendency to generate nothing.
2. A suggested idea has frequently a tendency to generate its opposite.
3. A suggested idea rarely tends to generate its actuality.

V.—In the four preceding Propositions is to be found a complete Explanation of Hypnosis and its Phenomena.

So far we have been occupied in discussing the facts upon which Bernheim's theoretical explanation of hypnosis is founded. To these exceptions has been taken on every point, viz:—

I. To the supposed analogy between the phenomena of hypnosis and automatic, involuntary and unconscious acts of normal life.

III. To the statement that suggestion increases suggestibility in the hypnotised subject alone.

IV. To the general analogy between the result of suggestion in the normal state and in hypnosis.

II. To the general principle that, in normal life, an idea has a tendency to generate its actuality.

Of all these statements there is only one I am prepared to accept, namely, that suggestion plays an important part in evoking hypnotic phenomena. There remains for our consideration the question how far suggestion *explains* the phenomena of hypnosis.

I wish first, however, to refer to Braid's views regarding suggestion.

While Braid held that hypnotic phenomena resulted from dominant ideas in the mind of the subject, he, at the same time, stated that it was a matter of indifference whether these had existed previously, or were afterwards audibly suggested by the operator, or indirectly created by the sensory impressions resulting from his manipulations.

Self-suggestion.

Braid cites many instances in which hypnosis and its phenomena were entirely the result of self-suggestion, although they were supposed to be due to other causes.

Passes and other Manipulations.

According to Braid, everything which produces a new impression is capable of modifying existing functions, whether the impression be of a mental or physical nature. Hence he thought it possible that passes might have a physical effect through mechanical agitation of the

air, by touch, or by producing some change in the temperature or electrical states. In support of this, he drew attention to the fact that physical impressions, too slight to arouse consciousness, might yet produce potent results; for example, although a person did not notice he was sitting in a draught, this might cause rheumatism. He considered that physical methods acted most powerfully, however, when they directly excited mental action, either by fixing the attention on one part or function of the body and withdrawing it from others, or by arousing ideas previously associated with the physical impression. In reference to the latter point, he says, this is simply an inversion of the ordinary sequence between mental and muscular excitation. Under ordinary circumstances the mental impression precedes and excites the physical one, but here the order of events is reversed. The touch calls into play the muscles constituting the "anatomy of expression" of any given passion or emotion, idea or train of thought; and, secondly, this physical expression suggests to the mind of the subject the corresponding idea with which it has been previously associated in the waking condition. Though Braid explained the action of passes in this way, he also drew attention to the fact that their effects might be neutralised or even reversed by direct suggestion. Thus, he said, suppose the operator, while making the passes, spoke aloud and predicted what would happen, the verbal suggestion might be so strong as to cause the predicted manifestation to be realised instead of what otherwise would have been the case; and thus, from this time forward, through the action of the hypnotic memory, a similar impression on that part or organ of sense would recall the previously associated idea and manifestation. Though Braid at first employed passes, &c., he almost entirely discarded these methods when he began to regard hypnotic phenomena from a psychological standpoint. He then stated distinctly that the value of mechanical means was purely suggestive and that direct verbal suggestion was best for exciting the phenomena of hypnosis, whether experimental or therapeutic. His usual method was as follows: after hypnotising his patients, he stated in a confident manner the results he wished to obtain and, in certain subjects, found that these could be varied by a simple change in the voice. Thus, if he made a patient see an imaginary sheep, and then asked him in a cheerful manner what colour it was, this tone usually elicited the reply "White," or some light colour. If he then asked, "What colour is it now?" giving a sad intonation to the word now, the reply would usually be "Black."

The difference between Braid and the Nancy School, with regard to suggestion, is entirely one of theory, not of practice. Braid employed verbal suggestion in hypnosis just as constantly and just as intelligently as any member of the Nancy School. This fact is denied by Bernheim,

who states that Braid did not dream of using verbal suggestion in therapeutics ; but his statement has its sole origin in ignorance of Braid's later work and writings. Braid, however, while agreeing with Bernheim as to the practical use of suggestion, differs entirely from him in his theoretical conception of it. He did not consider suggestion as explanatory of hypnotic phenomena, but, like Mr. Myers at a later date, regarded it simply as an artifice used in order to excite them. He considered that the mental phenomena were only rendered possible by previous physical changes and, as the result of these, the operator was enabled to act like an engineer and, by means of suggestion, to excite and direct the forces which existed in the subject's own body.

Before discussing the general question of how far suggestion explains hypnotic phenomena, I wish to draw attention to the difference between the views of Braid and of Forel as regards passes. While Braid believed that the mental effect resulting from the indirect physical action of mechanical means could be checked or reversed by stronger and more direct verbal suggestion, he still held, and I think justly so, that the physical impression was capable of producing both physical and mental results. Forel, on the other hand, denies the physical influence of mechanical processes, on the ground that suggestion is capable of altering their supposed action. He says, "blowing on the face no longer awakens my subjects, because I have suggested that this would remove pain instead of arousing them." From this he concludes that the act of blowing produces no result, and considers this a powerful argument against the somatic school. Would it not be equally logical to contend that the prick of a pin produced no physical effect, because the patient, rendered insensible to pain by suggestion, had been taught to regard the pin prick as the signal to evoke some other condition ?

Does Suggestion explain Hypnosis and its Phenomena ?

The answer to this question must, I think, be a distinctly negative one. The success of suggestion depends, not on the suggestion itself, but on conditions inherent in the subject. These are (1) willingness to accept and carry out the suggestion, and (2) the power to do so. In the hypnotised subject, except in reference to criminal or improper suggestions, the first condition is generally present. The second varies according to the depth of the hypnosis and the personality of the patient. For instance, I might suggest analgesia, in precisely similar terms, to three subjects and yet obtain quite different results. One might become profoundly analgesic, the second slightly so, and the third not at all. Just in the same way, if three jockeys attempt to make their horses gallop a certain distance in a given time, the suggestions conveyed by voice, spur and whip may be similar, and yet the results quite different.

One horse, in response to suggestion, may easily cover the required distance in the allotted time. It was both able and willing to perform the feat. The second, in response to somewhat increased suggestion, may nearly do so. It was willing, but had not sufficient staying power. The third, able but unwilling, not only refuses to begin the race, but bolts off in the contrary direction. With this horse, we have the exact opposite of the result obtained in the first instance; and yet possibly the amount of suggestion it received largely exceeded that administered to the others. As Mr. Myers has pointed out, the operator directs the condition upon which hypnotic phenomena depend, but does not create it. "Professor Bernheim's command, 'Feel pain no more,' is no more a scientific instruction HOW not to feel pain, than the prophet's 'Wash in Jordan and be clean' was a pharmacopœal prescription for leprosy." In hypnosis, the essential condition is not the means used to excite the phenomena, but the peculiar state which enables them to be evoked. Suggestion no more explains the phenomena of hypnotism than the crack of a pistol explains a boat race. Both are simply signals, mere points of departure, and nothing more. In Bernheim's hands, the word "suggestion" has acquired an entirely new signification, and differs only in name from the odyllic force of the mesmerists. It has become mysterious and all-powerful, and is supposed to be capable, not only of evoking and explaining all the phenomena of hypnotism, but also of originating, nay even of being, the condition itself. According to his view, suggestion not only starts the race, but also creates the rowers and builds the boat!

Attention in Hypnosis.

While Braid and Bernheim differ as to the physical changes which precede or accompany hypnosis, they both attach much importance to the question of attention in reference to the induction of hypnosis and of its phenomena.

Attention in the Induction of Hypnosis.

According to Braid, the induction of hypnosis was facilitated either by:—(1) The concentration of the attention on some external object. (2) Concentration of the attention on some idea connected with hypnotism.

Liébeault and Bernheim consider that ordinary and hypnotic sleep both owe their origin to the fixation of the attention and of the nervous force upon the idea of sleep. The individual who desires to go to sleep chooses a quiet place, meditates and keeps still. His nervous force is concentrated upon a single idea and deserts the nerves of sensation, emotion and special sense. The conditions which induce the hypnotic state are identical. The subject is told to concentrate his mind upon

the idea of sleep and, to aid him in doing so, is directed to look fixedly at some object. From this results bodily repose, the senses become less acute, more and more isolated from the external world and, finally, thought is arrested.

A connection undoubtedly exists between the subject's powers of attention and the facility with which hypnosis can be induced. For example, idiots, who possess little spontaneous and no voluntary attention, cannot be hypnotised at all, and others, such as those suffering from mania, hysteria, &c., whose attention is actively turned into other channels, are extremely difficult to influence.

In reference to the connection between the attention and the induction of hypnosis, the following points seem worthy of notice.

1. It is not necessary that the attention should be concentrated on the idea of sleep. Braid, as we have seen, easily induced hypnosis when the patient gazed steadily at an external object and concentrated the attention on the idea of that object. The primary hypnosis also need not resemble sleep, and the subject may at once pass into the alert state with the eyes open.

2. Primary hypnosis has sometimes been induced in cases where it would be difficult to prove that any concentration of attention had existed, either upon some external object or upon the idea of sleep. In these cases, the subject, after having given his consent to the experiment, has rested quietly and voluntarily reduced his mental activity. He has, as nearly as possible, emptied his mind of all thought and produced, not a condition of concentration, but its opposite,—abstraction.

3. Again, as Gurney points out, the phenomena of natural somnambulism, which, in respect to the absorption of the mind in one direction, present the closest analogy to those of hypnotism, demand no previous concentration of attention at all.

4. Once hypnosis has been induced, the condition can be evoked at any time, and practically instantaneously, in response to a previously arranged signal. Here, though the attention of the subject has been momentarily directed to the signal, prolonged concentration of attention has been absent.

Does Concentration of Attention cause Hypnosis?

Gurney says:—"But, even if we confine ourselves to cases where attention is actually present during the production of the state, what ground is there for describing it as the *cause* of that state? . . . The general effects of a one-sided strain of mind or body are pretty well known and 'tonic cramp of the attention' may be a very satisfactory description of the one-sided absorption in a particular direction which

characterises many isolated stages of hypnotic trance. But what tendency should the cramp of an attention, which is directed to a button held in the hand, have to produce, or to facilitate, a fresh cramp or series of cramps, when the attention is diverted to quite fresh objects? . . . I have again and again found the complete change to a new genus of ideas to be absolutely effortless and instantaneous—found, that is, that the attention, which has been as usual fixed during the *process* of hypnotisation, became quite abnormally mobile afterwards. . . . If I am told that a particular mental attitude,—that of fixed or one-sided attention—is the *cause* of certain mental phenomena which are new to me, I am surely justified in demanding that the order of events shall present some perceptible coherence—shall at least not run directly counter to what my general experience would have led me to expect.” (*Proceedings S.P.R.*, Vol. II., pp. 271–3.)

Again, taking the case where the attention was concentrated during the production of the state, how does this explain the fact that when the patient is left to himself in hypnosis, his condition is usually one of abstraction? Here, as a supposed result of a previous concentration of attention, we have the spontaneous development of its opposite.

Preliminary fixation of attention cannot be accepted as an explanation of subsequent mobility. All that we can concede so far is:—(1) That fixation of the attention frequently precedes and usually facilitates the induction of hypnosis. (2) That the attention in hypnosis can easily be rendered excessively mobile.

Further Conditions favourable for the Induction of Hypnotic Phenomena.

Rapport and attention.

The following is Liébeault's view:—“It is observed,” he says, “that nearly all artificial somnambules are in relation by their senses with those who put them to sleep, but only with them. The subject hears everything the operator says to him, but hears him only, provided the sleep is sufficiently deep. He only hears the operator when he is addressed directly by him and not when a third person is spoken to. This *rapport* extends to the other senses.” According to Liébeault, the subject remains *en rapport* with the hypnotiser because he goes to sleep in thinking of him, and this does not differ from what sometimes happens in ordinary sleep. A mother who goes to sleep close to the cradle of her child, does not cease to watch over him during her sleep, but while she hears his slightest cry, is insensible to other louder sounds. The concentration of the subject's attention upon the operator, and his mental retention of the idea of the one who put him to sleep is the cause of *rapport*.

In *rapport* Bernheim finds his solitary point of difference between normal and hypnotic sleep. He says, "In ordinary sleep, as soon as consciousness is lost, the subject is only in relationship with himself ; in induced sleep his mind retains the memory of the person who has put him to sleep ; hence the hypnotiser's power of playing upon his imagination, of suggesting dreams, and of directing the acts which are no longer controlled by the weakened or absent will."

The following is Braid's view of the condition of the attention in hypnosis :—

The principal difference between hypnotic and normal sleep is to be found in the mental condition. When falling into ordinary sleep, the mind passes from one idea to another indifferently, and the subject is unable to fix his attention on any regular train of thought, or to perform any act requiring much voluntary effort. As the result of this, audible suggestions and sensory impressions received by the sleeper, if not intense enough to entirely awaken him, seldom do more than arouse dreams, in which ideas pass through his mind without exciting definite physical acts. On the other hand, the concentration of attention, which is the result of the means employed for inducing hypnosis, is continued into the state itself, and verbal suggestions or sensory impressions excite definite trains of thought or physical movements, instead of dreams.

Certain points of difference and resemblance are to be noticed between these views.

According to Braid, the condition of the attention in hypnosis favoured response to external suggestion, but not to suggestion conveyed by any particular person, such as the hypnotiser. It was possible by suggestion to create an artificial state in which the subject was apparently only *en rapport* with the operator, but this condition was only an apparent, not a real one. The subjects really heard the suggestions of others, though special artifices might be necessary in order to make them respond to them. Braid relates a case in which he made a somnambule respond to his indirect suggestions, conveyed in the form of confident predictions of what was going to happen, though the subject was asleep when he entered the room and apparently was only *en rapport* with the original operator. Carpenter drew attention to the fact that *rapport* was unknown to Mesmer and his immediate disciples and was not discovered until long after the practice of mesmerism had come into vogue. The phenomena of *rapport* only acquired constancy and fixity in proportion as its laws were announced and received. Mesmerists, ignorant of it, produced a great variety of remarkable phenomena without discovering *rapport*, until the idea had been put into their minds and thence transferred to their subjects.

Bernheim and Liébeault believe that a real *rapport* exists between the subject and the operator and that this follows as a natural consequence from the methods employed in inducing hypnosis. According to Bernheim, not only does it exist, but the operator's power of evoking hypnotic phenomena depends on it. While Bernheim and Liébeault agree on this point, they differ on another. Thus, Bernheim finds in *rapport* the sole difference between hypnotic and ordinary sleep, while Liébeault, on the contrary, tries by means of it to establish an analogy between them.

My own observations in reference to *rapport* have led me to conclusions similar to those of Braid, viz.:—1. That *rapport* does not appear unless it has been directly or indirectly suggested. 2. That the condition is always an apparent and never a real one. It could always be experimentally proved that the subjects actually had been cognisant of what had been said and done by others who had not been placed *en rapport* with them. In those who did not know what was expected of them, and to whom neither direct nor indirect suggestions of *rapport* were made, this condition did not appear. On the contrary, they heard and obeyed any one who might address them.

Moll, in *Der Rapport in der Hypnose*, published in 1892, comes practically to the same conclusion as Braid in regard to *rapport*, viz.:—that it is caused by direct or indirect suggestions of the operator, or by self-suggestions which result from the subject's conception of the nature of the hypnotic state.

It is true, as Liébeault has pointed out, that *rapport* frequently exists between the sleeping mother and her child and that she will hear its slightest cry and yet be unconscious of louder sounds. This, however, has no analogy in the hypnotic state. The *untrained* somnambule responds with equal readiness to the voice of any one and, if he has been taught to respond only to one voice, he still hears others. Again, the difference between hypnotic and normal sleep is not, as Bernheim says, that *rapport* exists only in the former. On the contrary, we might with justice establish a distinction between hypnotic and normal sleep on the ground that *rapport* is absent from the former and is a frequently occurring phenomenon in the latter.

*Alterations in Volition. The so-called Automatism.
Suggested Crimes.*

According to Braid's conception of hypnosis, the state was characterised by mental and physical phenomena which were not to be found in other conditions. The hypnotised subject had acquired new and varied powers, but had not at the same time lost his volition or moral sense. He asserted that he had proved that no one could be affected by hypnotism, at any stage of the process, unless by voluntary

compliance. The subjects were docile and obliging; but, despite this, they refused all criminal suggestions and even developed a higher sense of propriety than characterised their normal condition.

Totally different views are held by Bernheim and certain other members of the Nancy School. They believe that the subject's volition is weakened or destroyed, and consider this condition to be one of automatism. To both these points I wish to draw your attention.

The hypnotic state is described as one of cerebral automatism, and, according to Bernheim, its phenomena find their analogy in various automatic movements of normal life, such as walking. Suggested crimes, which, I think, differ essentially from acts like these, are described as illustrating automatism in its highest form. It is with the latter that I desire to deal at present. Let us take a typical case. It is suggested to a high-principled girl in the somnambulant state that she shall take a piece of sugar from the basin and put it into her mother's tea-cup, after having been informed that this is really a lump of arsenic certain to cause death. Apart from the question whether, in carrying out this suggestion, she has committed what she believes to be a real crime, or knows that she has merely carried out an experiment, let us attempt to understand the supposed mental condition with regard to consciousness and volition, and then compare it with the usual scientific conception of automatism. It is, I think, generally conceded by the Nancy School that hypnotic acts are conscious ones, and that, if amnesia follows on waking, the lost memory can be restored in subsequent hypnoses. Indeed, Professor Bernheim, in discussing the Salpêtrière experiments, insists upon the fact that the hypnotised subject is conscious in all stages. The alleged criminal act was, then, a conscious act. Again, we are told that somnambules, before accepting criminal suggestions, frequently struggle against them. This would indicate that, in some instances at all events, they are carried out in opposition to volition as it exists in hypnosis. Further, it must be conceded that a criminal act would not be performed voluntarily by a virtuous person in the normal state. The suggested act, then, is one which would have been opposed by volition in the waking state. Now, let us turn to automatism, as defined by Professor Waller, the well-known physiologist. "The word," he says, "has received two diametrically opposed meanings, viz. (1) self-moving, self-arising, spontaneous, (2) automaton-like, that is to say, like a mechanism that appears to be self-moving, but that we know to be moved by secret springs and hidden keys." The second sense is the one in which he employs it, and is also, I think, the one now generally adopted by science. As the supposed essential characteristic of the suggested crime is the fact that it arose, not spontaneously, but in

response to the desires of the operator, it is obvious that if it be automatic at all, it must accord with the second conception of automatism. Now, let us follow Dr. Waller in his further definition of the second condition and then see how this agrees with the so-called hypnotic automatism. According to him, the automatic action is essentially a reflex action, and differs from it only in that it is, as a rule, the habitual or serial effect of habitual or serial stimuli. An automatic act is the repeated or rhythmic motor response to a repeated or continuous excitation. Usually it is carried on unconsciously. Automatic actions are distinguishable into two sub-groups: (1) Primary or inherited, of which the act of sucking is an example. (2) Secondary or acquired, of which walking is an example. In this discussion I think we may disregard primary or inherited automatic acts. Obviously, to kill one's mother cannot be regarded as an inherited automatism, and, if such a crime be automatic at all, it must fall under the group of secondary ones. Of this form of automatic act, the winding of one's watch may be taken as a typical example. This is first performed consciously and voluntarily. After a time consciousness ceases to participate in the action. On attempting to wind your watch, many of you must have occasionally found that you had already done so, although quite incapable of recalling it. Now, this automatic act is simply a voluntary one performed inattentively or unconsciously; one that has previously been frequently performed and possesses well-worn nerve channels. It has commenced as a conscious, voluntary one. It has become unconscious by repetition, but still remains voluntary in the sense that it is an act which the consciousness would approve of did it happen to participate in it. Let us consider the so-called automatic crime of the hypnotised subject and see how it agrees with this conception of automatism. (1) The crime has not been an habitual one. In the present instance the very nature of the act renders this impossible. Obviously the subject could not have habitually killed her mother. The alleged automatic act must, then, in this instance, have been performed for the first time. Now the essential character of the secondary or acquired automatic act is that it has previously been frequently, consciously and voluntarily performed and possesses in consequence well-worn nerve tracts, which offer no obstacle to its fulfilment. (2) The hypnotic act is performed consciously, and the attention, instead of being directed into other channels, as in genuine automatism, is supposed to be intensely concentrated on the operator or on the signal given by him, and this latter may be so faint that the subject is only enabled to recognise it by means of the hyperæsthesia of his special senses. (3) The hypnotic crime is sometimes supposed to be performed in opposition to volition as it exists in hypnosis, and is always supposed to be in opposition to the normal volition. The genuine automatic

act, on the other hand, has only been enabled to become automatic owing to the fact that it has previously been frequently performed as a voluntary act ; and now, when performed unconsciously, it still remains such an act as the volition, as a general rule, would approve of. The so-called automatic crime of the hypnotised subject not only *differs*, then, from the general scientific conception of automatism, but is its exact *opposite* in every detail.

While holding, and holding strongly, that the hypnotic crimes which we are discussing cannot in any sense be termed automatic, I do not deny that the hypnotic subject can be trained to perform automatic acts. If I suggest some simple movement to a subject, which his volition does not disapprove of, doubtless after a time it may be performed automatically, *i.e.*, after having been frequently, voluntarily, and consciously performed, it may at length be executed unconsciously as a genuine automatic act in response to the habitual stimulus which has excited it.

Putting aside all question of the correct conception of the word automatism, or, perhaps better still, characterising the described condition as one of obedience, I now desire to see how far the phenomenon so-called can be taken as the essential characteristic of the hypnotic state. The writings of the Nancy School indicate a belief that the hypnotic state is essentially characterised by the obedience of the subject to the operator. Some years ago most stress was laid upon complete obedience, and Liébeault said, "We may postulate, as a first principle, that a subject during the state of magnetic sleep, is at the mercy of the hypnotiser." Now, possibly as the result of the influence of the late Professor Delbœuf, a greater power of resistance is conceded. In a recent article Dr. Liébeault admits that he has only encountered four to five per cent. of hypnotised subjects to whom one could, with absolute certainty, suggest crime. This admission is an important one, but despite it, the so-called automatism is still regarded as the essential characteristic of the hypnotic state. If only four or five out of a hundred subjects evince the so-called automatism, surely one is not justified in describing this as the essential characteristic of the whole group. If five out of a hundred unhypnotised individuals presented certain phenomena which were absent in the remainder, one would surely not choose these rarely occurring phenomena as the descriptive characteristics of the class, and those upon which the belief in other and more frequently observed phenomena should depend. Yet, strange as it may seem, this is the position assumed by Durand le Gros, who assured Delbœuf that if he succeeded in proving that the suggested crimes of the Nancy school were recognised by the subject as experimental ones, he would destroy hypnotism entirely. The existence, then, of many undisputed phenomena, which are common

to all hypnotic subjects, is to depend upon the acceptance of others which it is alleged occur in four or five per cent. alone out of the same number.

Putting aside in its turn the question of the average number of subjects in whom it is alleged crime can be successfully suggested, I desire first to refer to some of my own experiments in this direction and afterwards to consider them in conjunction with the so-called suggested crimes of Bernheim and others, in order to gain, or at all events to strive after, a clearer conception of the mental states involved.

When I commenced hypnotic work some seven years ago, I, like Delbœuf, believed that the hypnotic subject was entirely at the mercy of the operator. I was soon aroused from this dream, however, not by the result of experiments made to test the condition, but from the constantly recurring facts which spontaneously arose in opposition to my preconceived theories. In the paper printed above, under the heading "So-called hypnotic automatism," I cited a number of cases in which suggestions had been refused by hypnotic subjects. I also mentioned two subjects who had rejected certain suggestions and accepted others. Miss F., for example, recited a poem, but would not help herself to a glass of water from my sideboard, while Mr. G. would play one part, but not others, and committed an imaginary crime.

These subjects accepted suggestions which were apparently in opposition to their normal character. For instance, Miss F., who was extremely nervous and shy about singing or reading aloud, not only before strangers, but also before certain members of her own family, recited a poem in the waking state which I had read to her during hypnosis. Her mother told me that, under ordinary circumstances, she would rather have died than have done so. While Mr. G., who refused the rôles of dissenting minister and hawker, accepted that of showman. He also, without the least hesitation, promptly put a piece of sugar in a friend's tea-cup, after having been assured it was arsenic. When asked why he had poisoned his friend, he replied, laughing, "Oh, that's all right, he has lived long enough!" I made no attempt to ascertain G.'s mental condition in reference to the supposed crime, but I think one can, without much difficulty, imagine it. G. was a respectable tradesman and a somewhat devout Dissenter, and it is not unnatural to suppose he refused the part of fish-hawker as this was not in keeping with his social position, and that of minister as it offended his religious susceptibilities, and accepted that of showman because it contained nothing objectionable to him. Would it be reasonable to suppose that he should at the same time be capable of weighing fine distinctions between the suggested alterations in personality and unable to understand the experimental nature of the crime?

He, by the way, affords the only instance in which an imaginary crime has been carried out by one of my own patients. All others, without exception, have absolutely refused such suggestions.

Why should Miss F. have recited the poem and refused to take a glass of water from my sideboard? The answer to the first question is obvious. She was extremely anxious to get rid of the nervous embarrassment from which she suffered and thus the suggestion contained nothing opposed to her volition. She herself explained the second; after leaving my house, her mother rehypnotised her and asked why she had refused my suggestion, whereupon she replied, "I do not know Dr. Bramwell well enough to help myself unasked to a glass of water."

In the cases above recorded, although a certain amount of evidence was obtained from the patients themselves in reference to their mental condition, no systematic attempt was made to investigate this. I am well aware that this admission is a startling one. I can only say in self-excuse that this all-important point has apparently been equally neglected by others. I have recently attempted to repair my mistake, and with interesting results. Some of these have been given in my former paper, and are to be found in the description of the mental condition of somnambules as revealed by the answers obtained to questions asked during hypnosis. One of them, the subject of the time experiments, said she would not put a piece of sugar in any one's tea if she were told it was arsenic. At a later date, when Mr. Myers was present, she gave a different answer. She said, "I would not take a watch, even if I knew the suggestion was made as an experiment, because this would be pretending to commit a crime. I would, however, put a piece of sugar in a friend's tea-cup, if I were sure it was sugar, even though some one said it was arsenic, because then I should not be the one who was pretending to commit a crime." So subtle a distinction would not, I think, have occurred to the subject in the waking condition.

In most of the cases referred to, the patients refused to carry out suggestions in hypnosis which they would have rejected in the waking state. Sometimes, however, they refused in hypnosis things they would readily have done, or submitted to, when awake. For example, Dr. Alden, when Resident Physician at the Brompton Hospital, hypnotised a girl suffering from chronic pulmonary disease. She was naturally docile and obedient and rapidly became a good somnambule. On one occasion, after hypnotising her, the nurse reminded him that it was his day for examining the patient's chest, but, to his astonishment, she refused to allow it to be bared. She had previously been examined dozens of times by himself and others and had never made the slightest objection. He insisted upon her submitting, but was unable to overcome her resistance. He asked her why she objected now, when she

had never done so previously. She replied, "You never tried before to examine my chest when I was asleep." On awaking, she remembered nothing of what had occurred and he said nothing to her about it. Afterwards the nurse told her, whereupon she was greatly distressed and wondered how she could possibly have been so rude to the doctor.

These, and many similar facts, have forced me to abandon all belief in so-called automatism or helpless obedience; still, I must refer to some of the arguments in support of it, before attempting to analyse further the mental condition in hypnosis.

(1) When subjects successfully resist suggestion, it is usual to explain this by assuming that they have not been so deeply hypnotised as those in whom no resistance has manifested itself. I cannot admit the correctness of this in my cases. During the last seven years, I have had frequent opportunities of examining hypnotic subjects, at home and abroad, and have nowhere observed more profound somnambules than amongst my own patients, rarely, in fact, seeing cases to equal them. All to whom I have referred not only exhibited the phenomena of profoundest somnambulism, but nearly all had been subjects of painless operations in the hypnotic state.

(2) The personality of the operator, and his method of training his subjects, is supposed to play an important part in the acceptance or rejection of suggestions. Granting that this be true, it does not explain the resistance which I encountered. I commenced by believing that the subjects were entirely at my mercy and did my best to develop their supposed obedience.

(3) The existence of one class of phenomena is considered as necessarily implying the existence of another and totally differing class. Durand le Gros asks:—"Is it possible that suggestion should have the power of producing extraordinary physical changes and yet be without this particular effect upon the moral state?" The facts I have already cited answer this question in the affirmative. Putting these aside, the assumption that the physical phenomena necessarily imply certain moral ones is unreasonable. What inevitable connection exists, for example, between an alteration in the pulse rate and the murder of one's mother? Should I not be equally justified logically in assuming that the subject in the normal state who, in response to suggestion, would play the violin or paint a picture would be equally willing to rob a church?

(4) Evidence in favour of obedience afforded by cases in which the subjects are alleged to have accepted criminal and analogous suggestions. These are important. The fact that the phenomenon of helpless obedience was invariably absent in my patients does not justify me in concluding that it did not sometimes occur in those of others. These cases of so-called automatism fall into two classes: (a) where an

imaginary crime has been suggested ; (b) where a real act has been performed, which it is assumed the patient would not have submitted to in the normal state.

(a) First, as regards imaginary crime ; here, as Professor Delbœuf has pointed out, it is supposed that the patient is passing through a mental state similar to that of the operator. Assumption without experimental proof is a frail and unsatisfactory basis on which to erect a theory. Let us first examine the facts. A somnambule puts a piece of sugar into her mother's teacup, while her medical man makes various absurd and untruthful assertions as to its composition. Bernheim and Liébeault assert that the subject accepted these absurd statements as true because, being hypnotised, she was unable to distinguish between truth and falsehood, while Delbœuf claims that she had sufficient sense left to know exactly what she was doing. To neither does it seem to have occurred to ask the subject during hypnosis what she thought about the matter herself. If they had done so, she would promptly have solved the difficulty and told them that while they were gravely discussing probabilities, she was quietly laughing in her sleeve at the grotesque absurdity of the whole performance. It may be noticed in passing that, while Bernheim considers the Salpêtrière subjects so abnormally acute that they can catch the slightest indication of the thoughts of the operator and so destroy the supposed value of the phenomena alleged to be induced by metals, magnets, drugs in sealed tubes, &c., he, on the other hand, supposes the Nancy subjects to be so abnormally devoid of all intelligence as to be unable to understand when a palpable farce is played before them.

(b) Where a real act has been performed, which it is assumed the patient would not have submitted to in the normal state. Of this Bernheim cites an example. He states that he uncovered a young woman, presumably a hospital patient, in the presence of his assistants and that she appeared perfectly calm and indifferent. Bernheim also quotes a case in which he entirely failed in persuading another young woman, also a good somnambule, to allow him to uncover her, or to commit an imaginary crime, despite the fact that he varied the suggestion in every conceivable way. Let us take the case of supposed helpless obedience. The mere fact that a woman permitted herself to be uncovered does not necessarily imply that she was incapable of resisting. Before this can be used as an argument in favour of the helpless obedience of the hypnotised subject, one is justified in demanding that it should be clearly proved that, under similar circumstances, the patient would have objected to being uncovered in the waking condition. Medical men are frequently obliged to uncover their female patients for examination and rarely encounter resistance. The first time that I visited Professor Bernheim's wards I was struck by

the fact that, in order to show some hysterical muscular movements in the abdomen of a non-hypnotised subject, he threw off the bedclothes, drew the patient's nightgown up to her neck and left her in that condition while we examined other cases. Though such treatment is opposed to the practice of English hospitals, I do not propose to criticise it. I only desire to draw attention to the fact that a patient was stripped in the waking state—from my point of view unnecessarily so—and that she and every one else apparently regarded this as devoid of importance. The hypnotised subject did not object to be stripped. Why should she? She must have been accustomed to see other patients examined, and there is no special reason given why she should have objected to the ordinary routine. Cases such as these appear to me absolutely valueless, while the reasons for the patient's supposed obedience remain so easily accounted for in other ways. To render such a case worthy of serious consideration it would be absolutely necessary to eliminate many important factors such as:—1. The fact that the subject was ill. 2. That she was in a hospital where patients were stripped as part of the ordinary routine. 3. That the examination was made by a medical man.

Strangely enough, the most marked case of resistance to suggestion that I have observed was shown by Liébeault's celebrated somnambule, Camille. To this I have already referred, but I wish to emphasise the fact that the classic hypnotic automaton, the one who was supposed to carry out a suggestion with the fatality of a falling stone, refused one, not on moral grounds, but apparently from pure caprice.

The difference between the hypnotised and the normal subject, as it appears to me from a long series of observed facts, is not so much in conduct as in increased mental and physical powers. Any changes in the moral sense, I have noticed, have invariably been for the better, the hypnotised subject evincing superior refinement. As regards obedience to suggestion, there is apparently little to choose between the two. A hypnotised subject, who has acquired the power of manifesting various physical and mental phenomena, will do so in response to suggestion, for much the same reasons as one in the normal condition. In the normal state we are usually pleased to show off our various gifts and attainments, more especially if we think they are superior to those of others, and in this respect the hypnotised subject does not differ from the normal. Both will refuse what is disagreeable; in both this refusal may be modified or overcome by appeals to the reason, or to the usual motives which influence conduct. When the act demanded is contrary to the moral sense, it is usually refused by the normal subject, and invariably by the hypnotised one. I have never observed any decrease of intelligence in hypnosis. In the alert state it is often conspicuously increased, while in the lethargic it is only

apparently, not really, suspended. Forel's warders, who could sleep by the bedside of suicidal maniacs and wake immediately at a given signal, or who could inhibit their own hearing of the purposeless noises of the insane and acutely hear everything which demanded their attention, did not in so doing show any real loss of intelligence. The power of concentration in the normal state, with its accompanying inhibition of undesirable impressions, is a well-known and somewhat analogous condition, but one which is not usually regarded as indicative of mental degeneration.

When one turns to the later works of Braid and sees how clearly he experimentally proved that the hypnotised subject not only had the power of choosing between suggestions, but invariably refused those repugnant to his moral nature, one cannot help feeling surprised at the revival of theories, in reference to so-called automatism or obedience, identical with the views of the mesmerists. More especially so when one considers that Bernheim, who holds these views, also boldly asserts that there is nothing in hypnotism but the name, that it does not create a new condition and that hypnotic acts are only exaggerated normal ones. According to Bernheim, however, the moral state in hypnosis differs widely from the normal, and this is in obvious contradiction to his own conception of hypnotism. One can understand, for example, how a prolonged muscular rigidity may be a hypnotic exaggeration of a somewhat shorter normal one, but it is difficult to comprehend how the murder of one's mother when hypnotised can be an exaggeration of the refusal to hurt a fly when awake. Bernheim's view of the moral state does not follow logically from the supposed resemblance between the hypnotic and normal condition, but apparently has its origin in an erroneous estimate of the nature and power of suggestion. On the one hand, he tells us that the hypnotic and normal conditions are practically identical, their only distinction being a slight difference in suggestibility. On the other hand, we are informed that a virtuous individual will commit crime in response to hypnotic suggestion. If this were correct, we should be justified in describing the origin of hypnotic crimes thus:—

(a) A virtuous girl in the normal state has a natural tendency to accept the suggestion that she should murder her mother.

(b) In hypnosis suggestibility is slightly increased and so, when it is suggested to her to murder her mother, she does so.

Suggested Crimes—Summary.

1. I have never seen a suggestion accepted in hypnosis which would have been refused in the normal state.

2. I have observed that suggestions could be resisted as easily in the lethargic as in the alert stage.

3. I have frequently noticed increased refinement in hypnosis ; subjects have refused suggestions which they would have accepted in the normal condition.

4. I saw Camille refuse a suggestion from mere caprice.

5. Examination of the mental condition in hypnosis revealed the fact that it was unimpaired.

6. The arguments of Bernheim cannot be considered conclusive, as they are founded solely on two classes of facts. (a) Where a simple and harmless act has been assumed to be thought criminal by the subject, because the operator has stated it to be so. (b) Where the subject has permitted something in hypnosis, which he would probably have submitted to in the normal state.

The Influence of the Operator in inducing the so-called Automatism.

In the estimation of the part played by the operator, Braid differs from certain members of the Nancy School. According to the former, the operator merely acts as an engineer who directs the forces in the subject's own body, but the phenomena of hypnosis can also be evoked by ideas previously existing in the subject's mind. The latter regard the operator's rôle as a much more important one ; not only are his suggestions a mighty force in themselves, but their power is increased by constant undermining of the volition.

Moll says, the suggested idea cannot be supplanted by a voluntary one, because, owing to alterations in the attention which result from the methods of the operator, the subject is unable to control the ideas conveyed to him, or to put forward his own. External ideas dominate his consciousness. He thus explains negative hallucinations :—the conviction of the non-existence of an object arises from the subject's weakened will and dependence on the operator. The fact that many motor suggestions have already been made, which the subject has been unable to resist, renders further suggestions easy.

Forel's explanation is somewhat similar. For the successful manifestation of hypnotic phenomena, he considers it essential that the subject should be under the dominion of the operator and have lost his own power of concentration and attention. He regards the condition as a battle between operator and subject, in which the former, after capturing outpost after outpost, at last reigns supreme in the central citadel itself. "The mind of a man, A, imposes itself," he says, "upon the mind of another man, B, takes possession of it by entering through some crevice in its armour, and finishes by reigning there more or less as master and by employing the brain of B as its docile instrument."

According to Bernheim, the natural tendency that exists in every one to accept suggestions is gradually and skilfully developed by the operator.

In opposition to the views of Bernheim, &c., I would draw your attention to two classes of cases.

(1) Where the operator has deliberately tried to minimise his own importance in reference to the induction of hypnotic phenomena.

Although I soon ceased to believe that the subject's volition was dominated by that of the operator, I still found, as the result of sensational writings on the question, that a considerable number of my patients objected to being hypnotised, on the ground that it would interfere with their volition. To obviate this difficulty, I changed my method of inducing and managing the hypnotic state. I commenced by informing every new patient that I did not believe it possible for the operator to dominate the volition of the subject, and that, even if such a thing were possible, it could certainly be prevented by suggestion. I explained to my patients that nothing would be suggested without their consent having been previously obtained in the normal state. Under these circumstances, if the suggestions were successful, this would not imply any interference with volition, seeing that their consent had already been obtained. I pointed out that the fulfilment of a hypnotic suggestion frequently demonstrated an increased, not diminished, power of volition. For example, a patient who desired to resist a morbid impulse, but was unable to do so by the exercise of his normal volition, might gain this power by hypnotic suggestion. Thus, the suggestion did not suspend the volition of the subject, but removed the obstacle which prevented the wish being carried into action. Further, as resistance was manifested despite suggested obedience, it was reasonable to expect that this might be enormously increased by training. I suggested, therefore, to all patients during hypnosis that they should invariably possess this power of resistance, and also that neither I nor any one else should ever be able to reinduce hypnosis without their express consent. This change of method did not affect the results. Notwithstanding the fact that the patients were convinced, and justly so, that they possessed complete control of the whole condition, hypnosis was evoked as easily as formerly, and as wide a range of phenomena was induced.

(2) Where an attempt has been made to teach the subject to evoke hypnosis and its phenomena without the intervention of the operator.

Some six years ago I commenced to instruct patients to hypnotise themselves. This was done by suggesting in hypnosis that they should be able to reinduce the state at a given signal, as for example, by counting "One, two, three." These subjects could afterwards evoke the condition at will. I also found that the use of suggestion during hypnosis was not necessary for the induction of its phenomena. On the contrary, the suggestions could be made equally well beforehand in the waking state. The subject was able to suggest to himself when

hypnosis should appear and terminate, and also the phenomena which he wished to obtain during and after it. This training was at first a limited one; the patients, for example, were instructed how to get sleep at night, or relief from pain. They did not, however, always confine themselves to my suggestions, but originated others, and widely varying ones, regarding their health, comfort, or work. Some, trained in this way six years ago, still retain the power of hypnotising themselves.

In such cases it would be difficult, I think, to explain hypnotic phenomena as the result of arrested or weakened volition, and of outside interference by the operator. It might be objected, perhaps, that the influence of the operator had not been entirely eliminated, on the ground that he had been associated with the induction of the primary hypnosis. The conditions, however, which are more or less frequently associated with the origin of a particular state are by no means always essential for its after-manifestation. For instance, the art of swimming is usually taught either by means of a life-belt, or by attaching the pupil to a cord which his teacher holds and guides by means of a rod. These artificial aids, however, are not essential to the art of swimming; they are only useful in its acquirement. It would be illogical to ascribe a champion's power of winning a race to the presence of a life-belt, which he discarded years before. In the same way, it would be unjustifiable to attribute a subject's power of influencing forces within his own body by suggestions arising in his own mind, to the influence of the operator who had formerly instructed him how to evoke and direct this power.

Monoideism.

Although Braid and Bernheim differ on many points, they are in complete agreement as to the main factor in the problem. According to both, the essential condition is one of *monoideism*. The mind of the subject is concentrated on a single idea. Only one function is active at any one time; and intensely so, because all the attention is given to it. Other functions are inactive, other sensations unperceived, because the subject has no attention left to give to them. Bernheim, as we have seen, stated that, while the attention might be directed from one point to another, concentration remained. This was regarded as essential and characteristic; the existence and explanation of hypnotic phenomena depended on it. Impressions, which under ordinary circumstances would reach consciousness, now ceased to do so, not only because they did not happen to be attended to, but also because the subject had nothing left wherewith to attend to them. Thus, this is not only a "concentration of attention" theory, but a "concentration and limited quantity of attention" theory.

In reference to this, Gurney says, "the energy of attention is not a fixed quantity, bound to be always in operation in one direction or another; nor does the human mind, any more truly than Nature, abhor a vacuum. . . . What do we gain, then, by employing a general term to describe such special effects? When once the chandelier metaphor is abandoned—when once it is recognised that in a multitude of cases the quantity of attention turned on in one direction is in no way connected with the withdrawal from any other—the idea of a common psychic factor seems out of place and misleading." (v. *Proceedings S.P.R.*, Vol. II., pp. 276 and 277.)

This theoretical objection is in accordance with observed facts. Doubtless certain hypnotic states exist in which all the attention, so far as it is called into action, is concentrated upon one idea. In order to prove, however, that directing the attention upon a fresh point necessarily withdraws it entirely from another, it must be shown that the phenomenon which resulted from the first concentration inevitably ceased when the second one arose. A cutaneous analgesia of the arm might, with some show of reason, be said to result from attention directed to the muscles during suggested catalepsy, on the ground that no attention was left wherewith to attend to painful sensations. But, while the catalepsy still exists, how—on this theory—can one explain, for example, a cutaneous tactile hyperæsthesia of the same limb, by means of which the subject can distinguish the points of the compass at half the normal distance? If the subject is unconscious of painful sensations because his attention is entirely concentrated on his muscular condition, this same lack of attention to the skin ought not only to have prevented abnormal distinctness of tactile impressions, but also to have inhibited the usual ones. The experiment can be still further complicated, for, while still permitting the catalepsy to persist, the cutaneous tactile hyperæsthesia can be associated by suggestion with a cutaneous analgesia over the same area. Now the subject's whole attention cannot be directed to maintaining a condition of muscular rigidity, if he has still enough of it left to suffice, not only for the increased perception of certain tactile sensations, but also for the selection and inhibition of other painful ones. Further, the opposite of these phenomena can be simultaneously evoked on the other side of the body: the patient's muscles be paralysed by suggestion, his tactile sensibility abolished, and his sensibility to pain increased. The attention is now directed to six different points, and could with equal ease be simultaneously directed to many others. A psychic blindness, for example, could be suggested on one side; a psychic deafness on the other; hyperæsthesia of the sense of smell and taste on one side, and diminished or abolished sensibility on the other, etc., etc. But this is not all, for while the attention is presumably turned in all these

different directions, the subject may be engaged in the attempted solution of some intellectual problem. A still further complication is possible. Let us suppose that a fortnight before, in a previous hypnosis, a suggestion to record the time at the expiration of 20,213 minutes had been made; this will be carried out, despite the existence of the various muscular and sensorial conditions already referred to, and the fact that at the moment of its fulfilment, the patient is engaged in some other mental effort.

This picture of the hypnotic state is neither fanciful, nor dependent solely on my own personal observation. The fact that numerous and varied hypnotic phenomena can be simultaneously evoked in the same subject has been repeatedly observed and recorded by others, and, strange to say, even by those who attempt to explain hypnosis by the concentration of the attention upon a single point. It is solely the importance of these facts with regard to this particular theory, which has hitherto been so largely overlooked.

Granting that hypnotic phenomena are the result of changes in the attention, one is forced to conclude that these are the exact reverse of those stated by Bernheim as explanatory of the hypnotic state. The simultaneous presence of many phenomena clearly show that hypnosis cannot be explained by the concentration of the attention on any one given point. Again, the fact that the multiple phenomena are sometimes similar in character to the isolated ones, indicates that the explanation of hypnotic phenomena by means of the amount of attention concentrated is also fallacious. If all the attention is requisite for the production of one phenomenon, and, while it still lasts, many other hypnotic phenomena are simultaneously induced, whence do the secondary ones derive that excessive amount of attention which is said to be necessary for the induction of the primary one? The hypnotic condition differs then from the normal, not because only one phenomenon can be manifested in it at once, but because it may present simultaneously many and more varied phenomena than can be evoked in the normal state at any one time. In one word, hypnosis is a state of *poly-ideism*, not of *mono-ideism*.

The Subliminal Consciousness Theory.

Within recent times another theory has arisen. This, instead of attempting to explain hypnotism by the arrested action of some of the brain centres which subserve normal life, would do so through the arousing of certain powers over which we normally have little or no control. This theory appears under various names—"Double Consciousness," "Das Doppel Ich," etc.—and the principle on which it depends is largely admitted by science. William James, for example,

says, "In certain persons, at least, the total possible consciousness may be split into parts which co-exist, but mutually ignore each other."

The clearest statement of this view is given by Mr. Myers; he suggests that the stream of consciousness in which we habitually live is not our only one. Possibly our habitual consciousness may be a mere selection from a multitude of thoughts and sensations,—some at least equally conscious with those we empirically know. No primacy is granted by this theory to the ordinary waking self, except that among potential selves it appears the fittest to meet the needs of common life. As a rule the waking life is remembered in hypnosis, and the hypnotic life is forgotten in the waking state,—this destroys any claim of the primary memory to be the sole memory. The self below the threshold of ordinary consciousness, Mr. Myers terms the "subliminal consciousness," and the empirical self of common experience the "supraliminal." He holds that to the subliminal consciousness and memory a far wider range both of physiological and of psychical activity is open than to the supraliminal. The latter is inevitably limited by the need of concentration upon recollections useful in the struggle for existence, while the former includes much that is too rudimentary to be retained in the supraliminal memory of an organism so advanced as man. The recollection of processes now performed automatically and needing no supervision passes out of the supraliminal memory, but may be retained in the subliminal. The subliminal or hypnotic self can exercise over the nervous, vasomotor, and circulatory systems a degree of control unparalleled in waking life.

He suggests that the spectrum of consciousness, as he calls it, is indefinitely extended at both ends in the subliminal self. Below its supraliminal physiological limit lie a vast number of complex processes belonging to the body's nutrition and well-being. These our remote ancestors may possibly have been able to modify at will, but to us they seem entirely withdrawn from our sphere of volition. If we wish to alter them we must do so by drugs and medicaments, whether the body to be treated is our own or another's.

At the superior or psychical end the subliminal memory includes an unknown category of impressions which the supraliminal consciousness is incapable of receiving in any direct fashion, and which it must cognise, if at all, in the shape of messages from the subliminal consciousness.

Mr. Myers arranges hypnotic phenomena into three divisions.

1. The great DISSOCIATIVE triumph of hypnotism, namely, the inhibition of pain under conditions of nerve and tissue with which it is usually inevitably connected.

Here, psychologically, the whole interest lies in the question whether pain is suppressed together with sensations of every kind, or

whether other sensations persist, pain alone being inhibited. Our ancestors, Mr. Myers suggests, had already attained to a rough practical knowledge of this distinction. They knew that if you stunned a man by a blow he would not feel the pain for some time. Also, that if you ran pins into particular parts on a witch's body, she, although perfectly awake, and conscious of other sensations, would feel no smart.

The second of these discoveries was the more important. By stunning your enemy, you only proved that vital functions could continue unimpaired, notwithstanding that the brain's action was so far disturbed that all consciousness was temporarily abolished. By pricking the witch in her "marks"—now called hysterical analgesic zones or patches—you proved that pain was a dissociable accident of organic injury, that other sensations might persist and only that of pain be in some way inhibited. The insensitiveness to pain which runs wild in hysteria is now being directed into useful channels by "hypnotic suggestion." Some INTELLIGENCE is involved in a suppression thus achieved; for this is obtained, not as with narcotics by a general loss of consciousness, but by the selection and inhibition, from among all the percipient's possible sensations, of disagreeable ones alone. This is not a mere anæsthetisation of some particular group of nerve-endings,—such as cocaine produces: it involves the removal also of a number of concomitant feelings of nausea, exhaustion, anxiety, not always directly dependent on the principal pain, but needing, as it were, to be first subjectively distinguished as disagreeable before they are picked out for inhibition. This freedom from pain is obtained without either deadening or dislocating the general nervous system; with no approach either to coma or to hysteria. The so-called hypnotic trance is not always necessary: sometimes the pain can be prevented by post-hypnotic suggestion destined to fulfil itself after the awakening. And if there be trance, this is often no mere lethargy, but a state fully as alert and vivid as ordinary waking life.

Mr. Myers argues from this that it is plain that hypnotic analgesia thus induced is by no means a mere ordinary narcotic—a fresh specimen of such methods as are already familiar for checking pain by arresting all conscious cerebration. It is a new departure; the first successful attempt at dissociating forms of sensation which throughout the known history of the human organism have almost invariably been found to exist together.

2. The ASSOCIATIVE or SYNTHETIC triumphs of hypnotism, namely, the production and control of organic processes which no effort of the ordinary man can set going, or in any way influence.

Hypnotic analgesia, Mr. Myers says, may be classed with equal justice as a dissociative, or as an associative act. The sensations are severed from the main supraliminal current and thus far the act is

dissociative. The group itself, however, has to be formed and the more complex it is, the more this involves some associative act. Inhibition of all the pain consequent on an operation is in reality a complicated associative process. It involves (1) the singling out and fitting together of a great number of sensations which have only the subjective bond of being disagreeable, and (2) the inhibition of all of them, which thus leaves the supraliminal consciousness in perfect ease.

In further illustration of the associative powers of hypnotism, Mr. Myers refers to alterations in the pulse, the secretions, excretions, etc. He also cites Delbœuf's case of two symmetrical burns on the same subject, one running the ordinary course of inflammation, the other in which morbid action was arrested by suggestion.

3. The INTELLECTUAL OR MORAL achievements of hypnotism.

These, like the others, are based upon physiological changes, but present problems still more profound. The removal of the craving for alcohol and morphia, the cure of kleptomania, bad temper, excessive indolence, etc., are cited as illustrating the moral and psychological changes which suggestion can effect.

Volition, etc.

According to Mr. Myers, the hypnotic subject is not a maimed or stunted normal individual, but one who, while he has gained increased power over his own organism, has not at the same time lost his volition, or the mental and moral qualities which formerly distinguished him. He admits that there is some difficulty in explaining hypnotic obedience, but holds that this will be refused when the act suggested is contrary to the subject's moral nature. He believes that a complete comprehension of the suggested act exists in the subliminal strata; and that, when grave need arises, the subliminal self will generally avoid compliance—not by awakening the organism into ordinary life, but by plunging it into a hysterical access, or into a trance so deep that the unwelcome order loses its agitating power. The moral tone of the somnambule is, in Mr. Myers' opinion, the precise opposite of the drunken condition. Alcohol, apparently by paralysing first the higher inhibitory centres, makes men boastful, impure, and quarrelsome. Hypnotisation, apparently by a tendency to paralyse lower appetitive centres, produces the contrary effect. The increased refinement and cheerfulness of the developed somnambule is constantly noticed.

The Possible Source or Origin of Hypnotic Control over Intimate Organic Processes.

Mr. Myers asks whether we can find anything in our ancestry which suggests to us these internal powers of modifying circulation,

quicken cell-proliferation, and altering trophic processes in unknown ways. He admits that the analogies to which we can appeal are vague and remote, yet he says we can point to the general fact that in man and the higher animals an increase in the power of modifying the action of the organism as a whole, has evidently been purchased by a decrease in the power of modifying its internal parts or constituent elements. The self-shaping powers of the amoeba, the self-regenerating powers of the worm or crab, die gradually away into the comparative fixity of the organism of the higher mammalia.

It is possible, he thinks, that this fixity is more apparent than real:—"We may regard the human organism as an aggregation of primitive, unicellular organisms, which have divided their functions, and complicated their union, in response to the demands of the environment, and along such lines of evolution as were possible to the original germ. It is possible, too, that all these processes—beginning with the amoeboid movements of the primitive cell—were accompanied by a capacity of retaining the impress of previous excitations, a rudimentary memory which at first constituted all the consciousness which our lowly ancestors possessed. And further—may we not suggest?—as evolution went on and more complex operations were developed, while the primitive processes of cell-change became stereotyped by long heredity, the memory which represented these earlier changes sank to a low psychical depth;—became subliminal, and could no longer be summoned by voluntary effort into the supraliminal sequence of conscious states. How do we know that any psychical acquisition is ever wholly lost? Or even that a memory is the weaker because it has sunk out of voluntary control? It may be possible, by appropriate artifices, to recall primeval memories, and to set in motion any physiological process which could at any moment of our ancestral history have been purposively, however blindly, performed." (*v. Proceedings S.P.R.*, Vol. VII., pp. 345-6.)

Mr. Myers refers to the fact that Professor Delbœuf, although in no way committed to the conception of a subliminal self, has been led to a somewhat similar hypothesis.

Delbœuf, in reference particularly to his case of the two symmetrical burns, says that experiments like those lead us to suppose that the action of the moral on the physical may be almost, if not quite, equal to that of the physical on the moral. Thence it follows that the idea of physical mischief may produce mischief; and, on the other hand, that the idea of absence of mischief may bring about, or at least favour, a cure. How, asks Delbœuf, are we to explain the mechanism of this inverse action of the moral and the physical? We are forced to admit that the influence of the will is more extended than we used

to suppose. It may be able to act, not only on the reflexes, but on the vasomotor system, on the unstriped muscles, on the apparatus of secretion, etc. If a contrary opinion has till now prevailed, this is because observation has been exclusively directed to the normal exercise of the will. In ordinary life, in fact, our attention is mainly concentrated on the external world, the principal source of our pleasures and our pains, and our will is devoted to perfecting our means of attack and defence. The care of the vegetative life has been handed over by the will to nervous mechanisms which have learnt to regulate themselves, and which in general fulfil their task to perfection. Thus, the rapid changes of external phenomena mask the regularity of internal phenomena, which accomplish themselves habitually without our knowledge. But in the hypnotic state the mind is in part drawn aside from the life of relation, while at the same time it preserves its activity and power. It can then, under the impulsion of the hypnotiser, employ those powers to regulate movements which have become irregular, or to repair injuries to the organism. In a word, hypnotism does not depress, but exalts the will, by permitting it to concentrate itself entirely upon the point where disorder is threatened.

Can all the effects of hypnotic suggestion be explained, Mr. Myers asks, by even the most complete revival of ancestral memories? Do not the moral or psychological achievements represent a point beyond that to which such analogies will carry us? "These changes must," he says, "of course rest on a physiological basis; but that basis implies a well-developed, a human brain. The knowledge of cortical centres, which must somewhere exist to make such changes possible, can scarcely have been inherited from pre-human ancestors. Nothing, perhaps, in the whole inquiry is of deeper interest than the possibilities thus dawning upon us of disentangling from the cerebral labyrinth which represents a man's tastes and character the special brain processes which stand for some special temptation—say, those which represent the reaction of his organism to alcohol. What is the hidden process that to one patient makes brandy as nauseating as it is to a cat—that in another patient makes the morphia-craving as impossible as it is to a rabbit?" (*v. Proceedings S.P.R.*, Vol. VII., p. 347.)

Hysteria, a Disease of the Subliminal Self.

Mr. Myers does not consider the subliminal self free from disturbance and disease, any more than the supraliminal. He points out that there is a marked analogy between the changes in the nervous vasomotor and circulatory systems which are to be found in the hypnotic state, and those which manifest themselves in hysteria. An important difference exists between them, however; in the former they

are under the control of the operator or the subject himself, in the latter they are the result of irrational self-suggestion in regions beyond the power of the waking will. Hysterical anæsthesia or analgesia implies a power of modifying the sensibility to touch or pain which we cannot imitate under ordinary conditions. He does not regard hypnotism as a morbid state, but simply as a manifestation of a group of perfectly normal, but habitually subjacent powers. Self-suggested troubles are a disease of the hypnotic substratum; and hysteria falls under the category of hypnotism, not hypnotism under hysteria.

After criticising adversely the theories of Mesmer, Heidenhain, Charcot, Bernheim, and others, Myers says:—"It is, therefore, as it seems to me, in a field almost clear of hypotheses that I suggest my own;—my view that a stream of consciousness flows on within us, at a level beneath the threshold of ordinary waking life, and that this consciousness embraces unknown powers of which these hypnotic phenomena give us the first sample." (*v. Proceedings S.P.R.*, Vol. VII., p. 350.)

This theory presents many interesting points for consideration.

I.—The Hypnotic Powers and the Conditions more immediately associated with them.

The special point of interest in the cases cited as illustrating the powers of the hypnotic state is the supposed mental condition of the subject. The immediate origin of hypnotic phenomena depends, according to Mr. Myers, upon a VOLUNTARY alteration in the arrangement of ideas. The introduction of the term VOLUNTARY, and the recognition that all the subject's attention is not requisite for the production of a solitary hypnotic phenomenon, is one of the most important distinctions that exists between this theory and some of those we have already considered.

Regarding Bernheim's theory, I raised the following objections:—

1. The condition cannot be called one of monoideism, because many phenomena can be evoked at the same time.

2. It cannot be explained by the concentration of the attention upon a single point, because, again, many phenomena can be evoked simultaneously.

3. It is not due to arrested or impaired volition, as we have shown (*a*) that the subject can resist the suggestions of the operator, and (*b*) in cases of self-hypnosis, voluntarily create the phenomena for himself.

4. It could not be explained by suggestion, as this was merely the artifice used to excite the phenomena.

Despite these objections, one must admit that certain phenomena described by Mr. Myers, and others cited as illustrating the theory of monoidealism, possess one important feature in common, namely, a change in the arrangement of ideas. If, for example, a hypnotised subject, supposed to be under the influence of his operator, sees a hallucinatory cat, and a self-hypnotised subject successfully suggests one to himself, the phenomenon is practically identical in both instances. The only difference is in the explanation of its origin. According to Bennett, the hypnotised subject sees a hallucinatory cat because the genesis of his ideas is not interfered with, but only their voluntary synthesis. Thus, the operator is able to suggest the remembrance of a cat; but the subject, owing to the involuntary arrest of certain mental powers, fails to understand that it is only a remembrance, and believes in its reality. In Mr. Myers' opinion the subject, instead of having lost the power of voluntary synthesis of ideas, has acquired an increased power of voluntary association and dissociation of ideas. The remembrance of the image of a cat has received hallucinatory vividness, not because he was unable to check it from lack of voluntary synthesis of ideas, but because he has elected to allow it to become vivid by voluntarily inhibiting the appearance of all the ideas which would have interfered with its clearness, while, at the same time, he has associated with it ideas connected with the remembrance of formerly seen cats.

Bernheim, as we have already seen, attempted to explain the phenomena of hypnosis by the *involuntary* concentration of the attention on one point. According to Mr. Myers, the mental changes which take place are *voluntary* ones, and thus, if the phenomena are due to the subject's attention, he must have acquired the power not only of turning it upon one point, but upon several points simultaneously. The inhibition of sensory impressions in hypnosis presents a certain analogy to what is found in the normal state. The student at his books who wishes to carry on his work without disturbance, may gradually train himself to be unconscious of external sounds. He teaches his attention to concentrate itself upon the problem before him, and to disregard more and more the noises which might distract him. So also, in looking into a microscope with one eye, he may train himself to keep the other eye open, and at the same time to become unconscious of the objects within its field of vision. Here, both the hypnotised and non-hypnotised subject are producing voluntary changes in their attention. Important points of difference, however, exist between the two.

1. The student does not disregard auditory or visual impressions the first time he tries to do so. On the contrary, prolonged training is often necessary in order to obtain this power; and frequently he is

unable to acquire it. In the deeply hypnotised subject, on the other hand, the power can be developed by a single suggestion and with almost absolute certainty.

2. In the normal subject the inhibition of the sensory impressions is associated with concentration of the attention upon something else. The moment the student closes his books he becomes conscious, for example, of the organ grinder under his window, whose presence he was ignorant of a moment before. The instant the attention ceases to be directed to the object under the microscope, the brain becomes conscious of the impressions received through the other eye. With the hypnotised subject the condition of the attention is extremely variable. You may have absence of painful sensations at the very moment that you direct the subject's attention to the fact that you are piercing his flesh deeply with a needle. Again, you may have increased sensory perceptions of the points of a compass when you have engaged his attention in the attempted solution of a mental problem. The inhibition of sensory impressions by the normal subject might perhaps be justly regarded as an acquired automatic act, but it is an automatism which only acts properly when the attention is voluntarily concentrated on something else. At first the attention must have been consciously divided between the problem contained in the book and the process of inhibiting the sensory impressions. In the hypnotised subject the inhibitory act, seeing that it was performed without previous training, cannot be regarded as completely analogous to the acquired automatic inhibitory act of the normal subject. It can also be performed without conscious concentration of all the attention in another direction. We must not conclude, however, that the hypnotic act is not associated with a concentration of some of the attention, merely because (a) the subject is attending to something else at the same time and (b) because he is not conscious of attending to the particular act itself. It is possible that the hypnotic act may have been performed by means of a conscious concentration of attention which existed in some lower hypnotic substratum of the personality.

II.—Moral and Volitional Conditions.

The views of Mr. Myers practically agree with those I have already expressed in discussing the question of so-called automatism. I have not, however, seen subjects try to escape objectionable commands in the manner which he describes; though some instances of this kind have been recorded by Professor Beaunis and others. In one of these cases the patient refused to awake, after a disagreeable post-hypnotic suggestion had been given. Another, under similar circumstances, rather than fulfil the suggestion, passed from the alert to the deep stage of hypnosis.

III.—Hysteria.

Mr. Myers' theory that hysteria is a disease of the hypnotic substratum is an extremely ingenious one, and is the only reasonable explanation of the resemblance between certain hypnotic and hysterical phenomena with which I am acquainted. As we have seen, those who believed that hypnosis and hysteria were identical stated that the hysterical alone could be hypnotised. On the other hand, those with wider experience have successfully demonstrated that the hysterical are generally, if not invariably, the most difficult to influence. Of this fact Mr. Myers' theory possibly affords an explanation. May not the difficulty of inducing hypnosis in the hysterical—of making one's suggestions find a resting-place in them—be due to the fact that the hypnotic substratum of their personality is already occupied by irrational self-suggestions which the subject's waking will cannot control?

IV.—What is the Evidence for the Existence of a Subliminal Consciousness?

Many cases of alternating consciousnesses have been observed in the non-hypnotised subject. As a rule this has been associated with hysteria or other morbid conditions. Sometimes the primary waking state has been morbid, the secondary one healthy. Of this class, Félicité X., so ably described by Dr. Azam, is the familiar example.

The work and writings of Edmund Gurney, Dr. A. T. Myers, Mr. Frederic Myers, Pierre Janet, William James, and many others have rendered us familiar with the phenomenon of secondary or multiple consciousness in hypnosis. It can be experimentally demonstrated not only that the hypnotised subject possesses a secondary consciousness, which alternates with his primary one, but also that it is possible for the two to coexist and to manifest different phenomena simultaneously. For example, an individual may have his attention concentrated upon the act of reading aloud from a book with which he was previously unacquainted; and, at the same instant, he may be writing automatically,—as far as his primary consciousness is concerned,—the result of a problem which was suggested to him in hypnosis the moment before that state was terminated. The primary waking consciousness retains no recollection of the hypnotic suggestion; does not know that the secondary consciousness, after the hypnotic state has been terminated, first solves the problem and then directs the motor acts which record it; and is also unconscious of the motor acts themselves.

In Mr. Myers' opinion, the general alternations in memory which occur in connection with hypnosis, afford the strongest evidence in favour of a subliminal or secondary consciousness. As a rule, he says,

the hypnotised subject remembers waking life, but when awake has usually forgotten the events of the hypnotic trance. This statement cannot be accepted unquestioned. According to Braid, amnesia regarding the events of hypnosis only showed itself in 10 per cent. of those whom he hypnotised, while Schrenck-Notzing's "International Statistics" give 15 per cent. It is to be noted also that this amnesia rarely occurs the first time hypnosis is induced, but, on the contrary, frequently shows itself only after the process has been repeated many times. Under such circumstances it is impossible to be certain that the condition was not artificially created by training, in the same way as analgesia, hyperæsthesia, and other phenomena of hypnosis. Undoubtedly the operator frequently suggests amnesia; but, even when it is carefully explained that the primary hypnosis is rarely or ever followed by it, I almost invariably find that the idea is so deeply rooted in the subject's mind that he suggests it to himself. Again, this amnesia can be prevented by suggestion. This objection is, however, of little importance. Your next-door neighbour would still continue to possess his former characteristics, even if you broke down the partition between your house and his, and afforded him free facilities for passing from one to the other.

While we must admit that this general amnesia only occurs in a small per centage of hypnotised subjects, forgetfulness in reference to many of the details of hypnotic life is very common, and apparently affords evidence for the existence not only of one, but of several sub-conscious states. The subject, who on awaking apparently remembers what has happened in hypnosis, does not really recollect everything that has occurred. He may remember that the prick of a needle caused no pain, but may be quite unable to recall the mental phenomena which—on Mr. Myers' theory—must have been involved in the selection and inhibition of painful sensations. The memory of this selective and inhibitory process is lost not only to the primary consciousness, but apparently to the ordinary hypnotic one also; for questioning in hypnosis fails to revive it. Again, the patient who wrongly calculated in hypnosis when a complicated time-suggestion would fall due, but successfully carried the suggestion out in the waking state (although no recollection of the original suggestion, nor of the erroneous calculation and its subsequent correction, existed in the normal waking consciousness), was unable to recall in hypnosis that she had corrected the original erroneous calculation. This forgetfulness, we see, is not only manifested in reference to acts which might possibly be regarded as automatic ones inherited from some ancestral type, but is also shown in regard to others of an entirely different nature, and which could not possibly have arisen in this way. Some of these phenomena, then, cannot be regarded as hereditary

automatic acts of the hypnotic state, nor as analogous to normal acquired automatic ones, seeing that they had not previously been frequently performed in the hypnotic condition. The simultaneous appearance in hypnosis of a greater number of phenomena (regarding them from their numerical side only) than can be manifested in waking life, is possibly also to be explained by the existence of several subconscious states. The normal attention apparently cannot attend to so many things at once as the hypnotic. Now, as we have seen, certain of these hypnotic acts, seemingly performed unconsciously, really demand intelligent attention: not only did they require it in the past, but, as they are neither inherited nor acquired automatic acts, they obviously require it now.

Granting that one or more subconscious states exist in the human personality, and that hypnotic phenomena owe their origin to the fact that we have by some means or another succeeded in tapping them, two questions still remain:—

Thus, let it be supposed that I possess a friend called Brown, who is usually, physically and mentally, an ordinary individual; from time to time, however, he manifests an extraordinary increase of physical power. Again, though still more rarely, he displays a range of mental powers of which he had formerly given no indication. I ask for an explanation and am told that Brown, as I know him best, is indeed Brown, but that his increased physical powers are due to the fact that when he shows them he is Jones, and his increased mental ones to the further fact that he is then Robinson. Granting that the phenomena afford evidence of the existence of three separate personalities, I cannot accept this explanation as a solution of the problem in its entirety. I want to know, first, how Jones and Robinson acquired their powers, and secondly, what has been done to or by Brown which has enabled these powers to be evoked.

1. *How did Jones and Robinson gain their Powers?*

Mr. Myers' explanation,—or, at all events, part of it,—is that these powers are a revival of those formerly possessed by some lower ancestral type. He frankly admits, however, that the analogies to which we can appeal are certainly vague and remote, and that to find them we must leave the higher mammalia, and descend to the crab, worm or amœba.

Is it reasonable to suppose that the Hypnotic Powers, regarded as a Whole, existed in some lower Ancestral Type?

Granting that a limited analogy exists between lower animal types and hypnotised subjects as to their power of influencing certain physical conditions, it would, I think, be impossible to establish an

analogy between the mental and moral powers of the latter, and those of the savage or lower animal. For example, one of my patients, as we have seen, suddenly developed arithmetical powers far exceeding those she possessed in the normal state. She is not likely to have derived them from some savage ancestor who was unable to count beyond five, or from some lower animal, presumably ignorant of arithmetic. Again, the same patient spontaneously solved, in hypnosis, a difficult problem in dressmaking. The power of correctly designing a garment in accordance with the passing fashion of the present day can hardly have been derived from some woad-stained ancestor, or lower animal form. Further, the increased modesty of the hypnotised subject, his greater power of controlling or checking morbid passions or cravings, does not find its counterpart in the savage or ape.

Mr. Myers admits that the argument from analogy is weakest when we consider the mental and moral powers of hypnosis. But if it is the essential characteristic of the subliminal state that the spectrum of consciousness is extended at both ends, surely an explanation of both extensions is equally necessary. A theory in itself imperfect becomes still more so when every fact that is supposed to establish the extension of one end of the spectrum renders the extension of the other end still more difficult of explanation.

If we admit that Hypnotic Powers are derived from some Lowly, Non-human type, is their Easy Recovery probable?

I have seen cases in which all the phenomena characteristic of deepest hypnosis could be readily evoked, absolutely without training, within a couple of minutes of the commencement of the process employed for the induction of the primary hypnosis. If any of these were derived from amœba, worm or crab, the rapidity with which they were aroused was surely surprising.

Is it likely that the Powers should have been Lost in Development?

The powers of the hypnotic state are said to have dropped out of the supraliminal consciousness in the process of evolution, as their association with it had become unnecessary in the struggle for existence. It must be noticed, however, that many of them have not only ceased to be employed automatically or unconsciously, but have also sometimes apparently disappeared altogether; and until hypnosis was induced, no means existed by which the supraliminal consciousness could evoke them. Now the powers which the hypnotic self possesses are so numerous, varied, and frequently so essential for the comfort or well-being of the individual, that one with difficulty concludes that development is responsible for their loss. Take, for example, the power of inhibiting pain. Granting that some lower type possessed it, a

fact difficult to prove, when and why has this important power been dropped? In this hyper-civilised age, we appear to have abandoned the powers of the subliminal self just at the very moment when we most require them. Complaints about street-noises and the manners of children show that in many instances, at all events, the supraliminal self is sadly embarrassed by the fact that it cannot perform that feat, so easy to the subliminal one, of shutting out undesired sensations of sound; and in consequence, can neither work by day nor sleep by night.

Can the process which has deprived the supraliminal self of so much that is advantageous be justly described as an evolution from a lower to a higher type? Should it not rather be considered as a sort of Rake's Progress, where the hero of the story has gradually stripped himself of all the treasured possessions of his forefathers, and has finished by selling even the ancestral portraits from off his walls?

2. What is the Connection between Hypnotic Methods and the Production of Hypnotic Phenomena?

To this I think no reasonable answer has been given. Personally, I can see no logical connection between the acts of fixed gazing, or of concentration of attention, or suggested ideas of drowsy states, and the wide and varied phenomena of hypnosis. Hypnotic phenomena do not appear spontaneously, and some of the methods described must have been employed in order to induce the primary hypnosis. But I cannot conceive the idea that the one explains the other.

Summary.

If the theory of subliminal consciousness does not satisfactorily explain all the problems of hypnotism, we are at all events indebted to it for a clearer conception, not only of the condition as a whole, but also of many of its component parts.

The following points in the theory seem most worthy of notice:—

1. That the essential characteristic of the hypnotic state is the subject's far-reaching power over his own organism.
2. That volition is increased and the moral state improved.
3. That the phenomena of hypnosis arise from, or at all events are intimately connected with, voluntary alterations in the association and dissociation of ideas.
4. That subliminal or subconscious states are more clearly defined than in previous theories.

Considerable analogy exists between Mr. Myers' theory and Braid's later one. In reference to the two first points their views are

identical. Little difference exists between them as to the third. Braid and Bennett both appreciated the important part played by the arrangement of ideas in the production of hypnotic phenomena. While the latter held that this was involuntary, the former recognised that the volition was unimpaired. The existence of alternating consciousnesses was not only recognised by Braid, but was also regarded by him as explanatory of certain hypnotic phenomena. He did not ascribe to it, however, the same importance as Mr. Myers does, nor did he try to find in it a possible solution of all hypnotic problems.

While Mr. Myers' theory may with justice be described as such a development of Braid's as might have been expected from the increased knowledge due to further accumulation of facts, some of the other theories already considered show a tendency to revert to "mesmeric" types. The views as to the methods by which hypnotic phenomena are evoked especially show this. The mesmerists attached more importance to the means by which the phenomena were excited than to the subject himself. The "odillic" force could exercise its power against the will of the subject and without his knowledge. Every one was not susceptible to this influence, those who were being termed "sensitives." The Charcot School hold that some inanimate objects are capable of producing many phenomena practically identical with the "mesmeric." Like the mesmerists, they believe that the influence can be exerted without the subject's knowledge, and also that every one is not susceptible to it. For the term "sensitive" they substitute that of "hysterical." Bernheim's theory resembles that of the mesmerists still more closely. He regards the operator, not the subject, as the more important factor, and believes that a skilful operator can hypnotise at least 90 per cent. of mankind. He holds that in many instances the operator can compel the obedience of the subject and force him to perform criminal acts. On this point he differs from the Charcot School, and agrees with the mesmerists. The power by which he evokes and also explains the phenomena, called, as we have seen, by the mesmerists "odillic force" and by Charcot "hysteria," he terms "suggestion." Braid and Myers regard the operator as the mere starter of the phenomena. His existence, according to Braid, is not even necessary. These observers differ from Bernheim in reference to criminal suggestion and various other points already noticed.

If Braid and Myers have done much towards giving us a clearer idea of the hypnotic state, they have also added to the difficulties of explaining it. A conception of hypnosis which limited its manifestations to simple automatic movements was comparatively easy to explain. The hypnotic subject, who, while he has not lost the

physical and mental powers of his waking condition, has acquired new and far-reaching ones, presents a very difficult problem. But normal life contains many problems, both physiological and psychological, which are yet unsolved and some—such as the causal connection between mental and physical states,—which are apparently insoluble, and while this is so, it would be unreasonable to expect a complete explanation of that still more complex state—the hypnotic. Further observation is always giving us clearer insight, if not into the central problem itself, at all events into the phenomena which characterise it. What increased practical advantage this may give us in curing disease, alleviating pain, or improving moral states, time alone will show. Meanwhile it is reasonable to hope that increased knowledge may bring with it increased power.

III.

SOME EXPERIMENTS IN CRYSTAL-VISION.

BY PROFESSOR JAMES H. HYSLOP,
of Columbia College, New York.

From a series of notes taken at the time I report the following results of experiments in crystal vision.¹

In the course of my conversation with the percipient, Mrs. D—, regarding her various experiences, she happened to mention that, when a child, if she happened to look at the surface of a lake or body of water reflecting sunlight, she often saw the most beautiful scenes not in any way representing the objects about her. I at once thought of the resemblance between this and the visions of crystal-gazing, and resolved to try experiments in this with her. I procured a crystal and gave it to Mrs. D—, with information as to how it should be used. After having tried the experiment and found it successful, Mrs. D— told me that when I asked her to try the crystal, she both resented such experiments and utterly disbelieved that anything would result from them. She therefore felt very greatly surprised when distinct visions were produced by the crystal. When she tried it for the first time and a scene appeared, she suspected that it was either a reflection of some surrounding objects or an illusion produced by such a reflection. But by changing her own position, or the position of the crystal, the same scene would continue to appear in it. Most generally she shifted the crystal about in various positions, but the act would not change the vision, which remained constant in spite of alterations in position, until some new scene presented itself with a like continuity under various circumstances.

Another fact of considerable interest in the case is that sometimes the vision appears on the surface of the crystal and sometimes at the centre of it, and gradually develops into clearness. And again it will sometimes originate in this way at the centre and be transferred to the surface. But the distinction between the two kinds of vision is very clear to Mrs. D—. Sometimes when the scene appears at the centre of the crystal, turning the glass will bring the same picture to the surface. Mrs. D— is not sure that she can detect any difference

¹ This Report was written in November, 1895.

of meaning between the two kinds of vision. Indeed there has been no reason to attach any meaning to any of them until investigation suggested a possible significance in two or three of them; and as no record was kept of those which appeared at the centre of the crystal, and of those that appeared at the surface, it is not possible at this date to say whether any of those which investigation some months afterward showed might be veridical were those at the centre or those at the surface of the glass. That they are not representations of the imagination is evident from Mrs. D——'s deliberate attempt to prevent a vision from developing when it once began to appear. She says that in spite of both her repugnance to the experiments and resistance to the occurrence of the visions, they came irresistibly and represented often such absurd positions, attitudes and congeries of facts, events, or scenes, that nothing but the dream-world resembled them. This characteristic will be apparent in the description of them. There are three series of them, obtained at different times and numbered in their order. But as nothing of an apparently telepathic nature occurred, or having any other kind of supernormal psychological significance, the experiments were suspended and not resumed. The following is an account of what was seen in the crystal, with the dates when the experiments were made:—

February 18th, 1895, p.m.

1. An iceberg floating in the water.
2. A sunset view, with the observer looking over a hill upon a bank of clouds surrounding the setting sun.
3. A human head lying on a pillow with the mouth very wide open.
4. The face of Mrs. D——'s mother.
5. A woman and child lying in bed with face uncovered and bed clothes pulled up to the neck.
6. An interesting and complicated scene, comprising a house resembling one in which a relative had lived, and partly concealed by a ledge of cliff rocks (not connected with the relative's house); one gable end of the house seemed to have fallen out or [been] cut open, and various persons, including children, men, and women, were coming out of this opening and returning into it. To the left of the house were two objects like two tall posts. No faces were recognised.
7. The entrance to a cemetery, which resembled the cemetery known by Mrs. D—— at her old home in Ohio. But the appearance of it, beyond the gate and wall with the tombstones and monuments, represented it as different from what it was as Mrs. D—— had known it.
8. A person kneeling before a covered bier, and a face looking over the bier toward the one kneeling before it.
9. Face with large nose and thin sunken lips.

March 20th, 1895.

10. Face of a Mr. D. who had been Mrs. D.'s pastor in P——, Ohio, and whom Mrs. D. had not seen for fifteen years until two or three years from date in New York, and then had seen him frequently after this. But

he appeared as he had been known in Ohio. When the face appeared the eyes were closed, the mouth open and the teeth gnashing. Not very clear at first, but when it developed into distinctness Mrs. D. involuntarily exclaimed, "Why, Mr. D." But when the crystal was turned the face vanished quickly and other faces took its place. Before Mr. D.'s face appeared, however, there was a very slight picture of a cemetery which could be described only as a dream of a dream, it was so vague.

April 6th, 1895. 7—8 p.m.

11. A lady playing at a piano.
12. Lady holding an infant, and a child near by looking at the child.
13. A street with pavement and houses, and a child knocking at a white door.
14. Lady standing at the left of an open trunk, holding up the lid with the *right* hand and stooping over to take out something with the *left* hand. The position was very unusual.
15. A little boy holding a baby in his arms.
16. A child lying asleep on a bed.
17. A man lying on a bed with a diamond shirt stud in his shirt bosom, his head concealed from view by the head board. Behind the bed stood a mirror or screen, and on the wall hung a picture.
18. A man propped up in bed with a pillow, and trying to write.

April 8th, 1895. 11.30-12 m.

19. A landscape representing a cow path entering a pair of bars into a field, and trees, bushes, and stones on the right side of the bars.
20. One of the most interesting of the series.
A room with tiling on the floor and on one of the walls. The other wall was in shadow, apparently caused by streaming sunlight passing through a coloured glass window deeply set in the wall near the corner of the room. Into this stream of light suddenly flew a dove. The scene was a very brilliant one, and resembled that of a fine painting of a view in a mediæval castle or church. The tiling on the wall had cross marks in the pieces.
21. An abrupt rocky and dark cliff somewhat resembling an island with clefts at the left hand through which the sun shone upon some water and in the face of a man who was in the act of rising from a lying posture.
22. The head and face of a man with bushy beard and hair.
23. A bridge across a moat or canal with shipping and houses beyond, such as are often seen in large cities.

Not having found that these images represented any known experience in her life, or that they had any other significance, the experiments were not continued. The visions were all very clear and brilliant.

The problem that of course suggested itself to me was, *first*, whether these visions represented the reproduction of anything once seen or experienced by Mrs D—; *second*, whether there was, in default of the first explanation, any evidence of supernormally acquired knowledge; and *third*, whether they were merely induced hallucinations.

On questioning Mrs. D— about her memory of any of the scenes, her emphatic reply was that she could not remember any of them, except two or three faces, and the one (No. 7) resembling a cemetery which she had known in Ohio, but which was so unlike it in other respects that she would not assert the identity. All other pictures were purely productions of her mind, so far as she knew. I reflected upon the cases for several days, and it suddenly occurred to me that possibly Mrs. D—, being a very religious woman, may have often seen, and perhaps been interested in at some time, a picture which is very common in Bibles, or was at one time, and in other religious books, namely, a picture of a dove flying in the beams of sunlight. I asked Mrs. D— whether she remembered ever seeing such a picture, and she replied that she did not recall anything of the kind. But Mr. D— soon remarked that they had a Bible and had had it for a long time, on which was just such a picture. Mrs. D— then remembered the book, but could not recall having noticed or thought of the picture. The peculiarity of the case (No. 20), however, is that the crystal-vision resembled this picture in no respect except that of the dove flying in the sunbeams. In all but this it was like a reproduction of some picture in an art gallery. I remember myself having seen one very much like Mrs. D—'s drawing in the Dresden Gallery, but Mrs. D— has never been in Dresden. I asked her whether she had ever seen such a picture in any American gallery, store, or house, and she replied that she had not, so far as her recollection went. It may, therefore, be a purely spontaneous creation of the mind. But whether it be this, or the reproduction of some forgotten visual experience, the chief interest lies in the sudden appearance of a dove in the sunbeams, a phenomenon which seems to show subliminal association between two totally distinct pictures. The streaming sunlight in the picture seems, through suggestion, to have called up the hallucination of the dove, which had probably been seen at one time in the picture on the Bible, and was here connected with a scene to which it had never belonged in reality.

At this point the matter stood without farther investigation, since no clue to a similar interpretation of the other scenes could be obtained. No recollection of them was possible to Mrs. D—. But another experience of hers increases the probability that the scenes are reproduced past experiences without recognition. Mrs. D— used often to have a visual hallucination of a bright blue sky overhead, a garden with a high walled fence, and a peculiar chain pump in the garden situated at the back of a house. She attached no significance to it, but took it for one of the many automatisms in her experience which were without assignable meaning to her. But two summers ago she had gone out west to her old home in D—, Ohio, and made the acquaintance of a lady whom she had never known before, and by

chance was invited to take tea with her one evening. She went, and after tea remarked that she would like to have a drink of water. The lady of the house remarked: "All right, let us go out into the garden and get a fresh drink from the well." They went, and behold here was the identical blue sky, high fence, and chain pump which she had so often seen in her vision. After going home in the evening, Mrs. D—— told her mother of her experience, remarking how strange it was. Her mother replied that when Mrs. D—— was a little girl about two or three years old she used to visit this house very frequently with her. Here, then, is a case of spontaneous reproduction without recognition. Mrs. D—— has had one other similar experience connected with the events of her early childhood.¹

Perhaps one remark ought to be made on number six (No. 6) of the visions. The form and shape of the house were very familiar to Mrs. D——, being those of a relative's. But the cliff of stone and the opening in the gable end were no part of the house and its locality as she knew them.

But there are two cases which are interesting as coincidences. The first of these is the vision of the entrance to the old cemetery in Ohio (No. 7).

This last summer, July and August, 1895, Mrs. D—— visited her old home in D——, Ohio. Now it must be remembered in this connection that all the crystal-visions occurred during the illness of Mrs. D——'s brother, who lived in Ohio, and I report below some coincidences occurring at the time between Mrs. D——'s automatisms and the condition of her brother. One of them was that a postal card or letter was written by him saying that he was propped up in bed writing, and this was somewhere near the time when her crystal-vision (No. 18) of a man in this position occurred. But there was no recognition of her brother's form in it. However, I lay no stress upon this incident, except to mention that it prompted Mrs. D—— to make inquiries

¹ Mrs. D—— gives the following account, written in 1893, of these experiences:—

"A few years ago I was visiting my mother. I said, 'Mother, I dreamed of being in some place last night. It seemed so real, I want to tell it to you.' After telling her of the house, the queer garden, etc., mother told me I had been there, but that I was a *very* small child when I made my visit.

"Through the early years of my life a place came to my mind so vividly [that] it seemed I surely had seen it. Sometimes it came when awake, sometimes in sleep. When about 20 years old I became acquainted with a lady friend. I was at her house to tea. After tea I asked for water. She said 'Come on, we will get some fresh.' I followed her and came out into the square with frame walls all around, the blue sky above, and there was the old chain pump. I had seen the same place and pump many times in thought, and many times had looked up at the blue sky above. I told mother of my experience and of the former thoughts of the place. She said, 'Yes, Eva; you were there visiting when a little girl.' I know I was not five years old, perhaps only three. Mother said her cousin used to live in the house."

about various things to determine whether there were any coincidences in the other cases of crystal-vision. Since her parents and sister did not like to believe in her experiences as more than fancies, Mrs. D—— did not tell them her experiments, but questioned them carefully in regard to what occurred during her brother's illness, all in a way merely to satisfy a sort of gossipy curiosity and without arousing suspicion as to her motives. She found, in her own judgment, several coincidences between the thoughts of her sister and brother and herself at the time of the crystal-vision, one of which is interesting. Mrs. D—— visited the old cemetery purposely to see how far it resembled her crystal-vision of it. To her astonishment the resemblance was complete. The tombstones and monuments which appeared in the vision, and which she had never seen, or could not recall seeing, were there with the entrance, precisely as they appeared in the vision. They—the monuments, not the entrance—were recent additions to the cemetery, and since the time when Mrs. D—— had seen it many years ago. Mrs. D—— inquired very carefully whether her sister had had the cemetery in mind during the brother's illness. The brother had suffered from a relapse of typhoid fever; all hope of his recovery had been abandoned by his relatives, and Mrs. D—— was ready to respond to a summons at any time to attend the funeral. The family burial place was not in this particular cemetery, but in another graveyard now in a rather dilapidated condition. As most of the family were still living and a new lot might seem desirable, the sister said she often thought, during her brother's illness, that they ought to purchase a new lot in this better kept cemetery, and was ready to propose it in case of her brother's death. In this way was established the fact that the cemetery was often in the sister's mind, and she knew from familiarity the exact appearance of the entrance to it. It is possible, therefore, to account for the crystal-vision by telepathic influences, if we accept such a fact and if we attach any value to the coincidence.

The second case in which the coincidence may have some interest was that of the fifth crystal-vision (No. 5). This was that of a woman and child lying in bed. This vision occurred during the illness of Mrs. D——'s brother and during her mental anxiety about him. The peculiarity about it is that Mrs. D—— thought of her sister-in-law, her sick brother's wife, and recognised her form and appearance about the head, but could not recognise the face. But she knew no reason to account for the presence of a baby in bed with the sister-in-law. When she was visiting her brother during the summer, as referred to above, she learned from his wife that he, during the illness, was constantly troubled with the illusion that she had given birth to a child, and could not be divested of it. He often referred to the circumstance,

and insisted in a delirious condition on seeing the child, when, as a matter of fact, there was no reason in the case for his belief.

But strict science, before it can attach evidential value to the coincidences, must be able to record more accurately the time of the thoughts which are assumed to be the cause of the vision. The absence of this feature from the case very greatly diminishes the value of the instances for the purposes to which we might wish to put them as evidence. But the cases are, of course, such that there was no chance to obtain the definite knowledge, and we are left with just enough coincidence to make us laugh and wonder, while we entertain a sceptical attitude in regard to their significance. In this they are illustrations of those frequent coincidences, occurring spontaneously, to which it is impossible to give scientific completeness, and which can have no value until they are multiplied so numerous and under such varying conditions as to make us doubt the influence of chance. In these instances, however, we are certainly shut off from the kind of evidence which strict scientific method demands, until it be otherwise shown that telepathy does not depend upon chronological coincidences.

[Mrs. D——, as Professor Hyslop mentions, has had a large number of psychical experiences, which he had been engaged in investigating for some time before his account of her crystal-visions was written. They were fully reported by him in a series of letters to Dr. Hodgson, and it will be interesting in connection with the above to give some of the best authenticated cases. We quote here extracts from Professor Hyslop's letters, with statements by Mr. and Mrs. D——. Ed.]

(1)

Mr. D.'s Statement.

May 11th, 1893.

I was a Sophomore, or Junior, at ——. The Young Ladies' Institute was at the foot of "the Hill" on one of the streets that led from the College to the main street of the village.

One of the girls, looking from the window of her room, saw a student passing. She knew neither his name nor his aim in life. I am not certain that she had ever noticed him particularly. If at all, it was simply as a student and member of the church choir. She felt that the young man was tempted to cease studying for the ministry, and choose some other calling. Something told her to pray for him. She did, of course. Fear kept her from asking the other "Sem." girls who the stranger was, or what profession he had chosen. Not many days afterwards he led a prayer meeting in the church. After meeting she managed to pluck up courage to ask his name. Not till later did she learn of his calling. As the young student had no company he cared especially for, he secured an introduction to this young lady through a mutual lady friend.

I think it was during his first call that he was startled with the question, "Were you ever tempted to give up studying for the ministry?" She afterwards told him how he acted and what he said. He could remember neither his actions nor his words. After several minutes' thought and walking across the room, he returned to her side and simply asked her, "Why do you ask that question?" Then she explained her impression and her act. He then told her how a short time back he was inclined, not to cease studying for the ministry, formally, but to study for a Greek professorship, which would of course be a practical abandonment of the ministry. But he assured her that he had told no human being of this thought before that afternoon.

How did she know my mental experience? Were my thoughts transferred to her? Am inclined to think I had noticed her particularly among the other ladies of the Institute and desired her acquaintance, but I did not intend to tell her that which in some way she had learned.

Mrs. D.'s Account.

June 15th, 1893.

The incident mentioned by my husband to Dr. Hyslop proved so interesting that he has asked me to give it more in detail. First I should remark that Mr. D. was not quite accurate in the particulars of his account, though correct in the main incident. My own memory also can be refreshed by reference to my journal, which I kept at that time, and had kept for a long time before, and we have kept since. But, as I remember the experience, it was somewhat as follows.

I have always been of a devoutly religious turn of mind, and so accustomed to give such incidents a religious meaning. When this occurred, I did not know that it had any special scientific value, and remembered it only as a very remarkable experience, and do not recall ever alluding to it to any one except my husband. It took place a number of years ago, the exact date, which was October 5th, 1879, being found in my journal of that time. On that evening, before retiring for the night, I was reading my Bible, as was my usual custom, and suddenly saw the vision of a face appear before me. I had raised my head up from the Bible, and was looking toward the wall. The face was that of a gentleman whom I afterwards felt that I must have seen among the students of — University, of the same place, but having no connection with the ladies' seminary. I should also say that the face did not appear to be an ordinary memory picture, representing a strong impression, but was projected beyond me and externalised, so that it seemed quite as *real* as any actual person would seem. At the same time, the vision was accompanied by a voice indicating very distinctly that the gentleman was tempted and that I should pray for him.

The voice which I mention here was quite as real as the vision. It said: "He's tempted, pray for him." What the temptation was in particular did not come to me until I was in the midst of my prayer on my knees, and then it was that he was tempted to abandon the ministry. The voice I heard was one that enables me to understand why the negroes and some other enthusiasts say at times that the Lord tells them audibly certain things they narrate for revelations,—a fact I mention in order to indicate that the

voice was more than an impression in my mind. I can always distinguish the two, such experiences being frequent. But the particular temptation came to me as a thought, and not as a voice.

The thought seemed very irrelevant and foolish to me, and I tried to pass it by. But it was too insistent to be thus disposed of. I therefore obeyed the feeling that I should pray for him, though I had never met the person and did not even know [his] name. Such an occurrence had no special meaning to me other than a religious one. But I could not understand why his temptation to abandon his studies for the ministry, if any person was so tempted, could or should be revealed to me in this way. But at any rate, the impression was so vivid and my curiosity so aroused, that I resolved to try and find the student represented by it. I was afraid to say anything to my schoolmates about the experience, for fear they would laugh at me for having a special interest in this person, and so I kept the whole matter sacredly to myself, all the while improving every opportunity to try the identification and verification of the impression. Some time afterward I recognised the person at an entertainment, as he stepped upon the platform, but would not say anything about it. Later I was at a prayer-meeting where he led the exercises, and by this time I mustered up courage to ask some one what his name was. On the same evening I found also that he was a student for the ministry. This excited my curiosity still more, but I had no immediate means of gratifying it. It was several months later before I met him, and then rather by accident on my part. It was at one of the young ladies' society entertainments. But nothing was said of my experience to the gentleman for obvious reasons. It was not until several months afterward that the matter was mentioned between us. In the mean time, we frequently met each other. But when it was mentioned, it occurred in a singular way. We were talking over a Sunday school lesson concerning temptation together, when I happened to tell him what my experience had been. He at once arose from his seat, and looking as pale as a sheet, walked backward and forward for a few minutes, stepped to the window and looked out, and then returned to his seat, when he remarked: "Well, E., that is the strangest thing I ever heard. I guess the Lord must have meant you for my guardian angel." He then confessed that he had, some time before, been tempted to abandon his study for the ministry, during the very period in the midst of which I had my experience. But by this time he had concluded to continue his studies, and not to be tempted by a career in a Greek professorship. My experience then had taken place while he was in his mental struggle, and long before I had any opportunity to verify it personally and without any knowledge of the facts which it represented, especially as Mr. D. himself had not mentioned the fact of his temptation to any one.

Mr. D. adds:—

June 15th, 1893.

I remember distinctly that I was interested in Mrs. D. (then Miss B.), before we met, having seen her frequently among the students of the Seminary. My interest was a strong one, and could easily have been romantic. I also remember quite confidently that, while passing through my mental struggle, I wondered what she would think, if I thought of abandoning the ministry,

and which she would prefer, a fact that may indicate the strength of my interest in her, and for which there was no reason, except the attraction [she] had for [me]. In regard to the temptation to abandon the study for the ministry, I can say that it was brought on by my pleasure in the study of Greek. It was understood that I was destined for the pulpit, and the sense of honour I felt about it came into conflict with the desire to devote myself to the Greek language; and so for several months I was sorely tempted to choose the latter. After a severe struggle I finally decided to abide by my first resolutions, and kept the mental struggle to myself. I told no one about it, so that there was no opportunity for Miss B. to hear of it, and even if she had, it would have had no meaning to her, because we were entire strangers to each other. My astonishment can then be imagined when, some months later, she told me of her experience, revealing the fact which I had concealed so carefully.

Professor Hyslop's Report.

Columbia College, New York, *June 16th, 1893.*

Mrs. D.'s present written account was taken down yesterday by myself from her own statements, and is identical with the story she told me on the 7th instant, when I called to learn more about it than Mr. D.'s letter indicated.

Mr. D. merely mentioned the incident, and on my request for more details, replied that he and his wife had talked it over, and that he found several more details of interest in it. I then made an arrangement to see them on the afternoon of the 7th instant. In the mean time, Mrs. D. suspected that she might have mentioned the experience in her journal which she had kept at the time and before she was in college, and on examination found that she had done so on the very night of its occurrence, the 5th of October, 1879. She said nothing of the fact to her husband, and he was entirely ignorant of the existence of the journal until she mentioned her consultation of it to me in his presence, when he expressed his surprise. She then told me the details of her experience, as I have given them, and I took down the journal for the 5th of October, 1879. I emphasized the value of the incident on the ground of the recorded evidence, and urged her to write out a full account of it. From my account of such phenomena and the meaning of them her curiosity was aroused, and she wondered whether her journal said anything more about it. She referred to it again, and to her own surprise, found all the other entries which I have appended. I give below the various entries in the journal, indicating by dots the existence of matter not connected with the case at all. . . .

"October 5th, 1879.—On this eve, while sitting in my room, a face that I have seen present at our meetings came before my vision so plain that I am impressed that this person is, or has been, suffering temptation. It seems to me that he has in time past felt that he should study for the ministry, and is now tempted to give up this idea. I felt impressed that I must pray for him. Then the thought came to me,—strange that I should have such a feeling, for I do not even know the name, but how plainly I see his face. I have prayed, and earnestly, although for a stranger, yes, a perfect stranger. After arising from my knees, I soliloquised thus: I wonder who he is; if he is studying for the ministry. Why should these feelings come to me? I mean to find out."

“October 18th [1879].—Several of us attended the rhetorical exercises in — Hall. Since the 5th of this month I have been endeavouring to find out the name of the dark-eyed stranger spoken of. To-day I heard his name spoken when called on for his recitation. I found myself becoming much interested in this person. I pray for him daily, for I feel that he needs my prayers. . . .”

“October 28th, [1879].—Attended prayer meeting in the B. P. Church. The dark-eyed stranger that I am praying for led the meeting. While he was reading, talking and praying, I sat silently praying for him. Since October 5th, I have found out that he is studying for the ministry. I feel so anxious to become acquainted with him, and ask him whether he has been suffering temptation concerning his studying for the ministry. I wonder if we will ever be permitted to meet? . . .”

[This last question was prompted by the strictness of the rules which kept the students of both institutions from meeting except on rare occasions.]

“December 5th.—Attended the Society. I met my stranger. . . .”

[The Society here alluded to was the Philharmonic of the Seminary.]

“February 7th, 1880.—Mr. D. called at the Sem. During the afternoon I told him my feelings on October 5th, and he said that he had been suffering temptation concerning studying for the ministry. . . .”

Of Mr. and Mrs. D.—I can say that they are both educated people, and of very respectable intelligence, non-believers in Spiritualism and not superstitious, unless a belief in special providences must be so interpreted. Mr. D. is a Baptist minister, engaged in mission work in —, and has attended my lectures at Columbia College this school year, and I have found him intellectually a careful and cautious man on all matters of scientific facts and theories. Mrs. D. is equally so, though perhaps her tendency to give many of her peculiar experiences a special meaning might be regarded as due to mental incautiousness. But I found her without any explanation of some of them and curious to know if psychology could account for them. In fact, there was only one class of her impressions, of which she has had many, that seemed to her to have a definitely religious import. I can understand how, in the absence of a knowledge of telepathy, a religious mind might give a serious import to many of the impressions mentioned to me, and this without in the least being suspected of or chargeable with a weak judgment. I found her memory for small things very good, and this in regard to ordinary events in her life [which] have no significance whatever. Her ordinary perceptions are evidently very vivid, and she does not fail to remember them down to the smallest details.

She very often hears a voice, which quite uniformly is connected with her religious life. It is nearly always a command to pray. Sometimes it is merely a conviction or thought. She distinguishes very clearly between them, and did so spontaneously and without any question from me. It was a matter of curiosity to herself that there should be this peculiar difference between the impressions, some being sensible, as it were, and others merely intellectual. The voice in these instances is perfectly audible to herself, though apparently less vivid than common sounds. These are the cases which have seemed to her to have a personally religious import, simply

because they happened to concur with a devotional life, and occur at times when she feels some special need, and apparently in response to it.

(2)

*Mrs. D.'s Account.**January 20th, 1894.*

On the night of June 26—27, here in — [N.Y.], I had a dream which impressed me so that I noted [it] down the next day, the following being the details of the journal.

“Tuesday, June 27th, 1893.

“Several weeks ago I felt impressed to write to aunt R., an aunt I have not seen for eight years and have not heard from for a long time—never received a letter myself from her nor [ever] wrote to her. She continued in my mind for two days and a night. I neglected writing. Last night I saw, in dreams, aunt A., (the aunt with whom R. lives). We were in the cemetery [P —, Ohio]; aunt held in her arms a little child. The ground was disturbed for some distance. It seemed that she was trying to make room by putting the little one across the foot of the grave, as one would place a little one across the foot of the bed. I said, ‘Who is it?—Berdie?’ (a little one she had lost years ago.) Aunt was covering the earth carefully around the little form and crying as if her heart would break. While sitting at my sewing this morning, I thought of my dream and how strange it was. My mind was on aunt A., when a voice said ‘Aunt R. is dead.’ I will write this eve.”

The letter which I wrote to my aunt that evening contained the following extract, which was the only reference I made to my dream.

“June 27th, 1893.

“I write to you because I saw you in my dreams last night with such a troubled face. If you do not feel like writing, let some one else write, that I may know you are all well.”

This extract I copied from the letter before sending it and placed it on the same page with the journal of the dream.

It is of interest to remark that I have not been in correspondence with my aunt, and have had no communication with the family for six or eight years. The last communication from one of the members was not a very pleasant one, and hence we had no means of following up each other's lives.

On the 10th of July I went west and arrived at D—, Ohio, about six o'clock in the evening of the 11th of July. I was met by my sister at the station, and asked her how all the folks were, using the expressions, “Are all well? Is father well?” She replied in regard to father, “Not very, he is down to P—, G. is dead.” I had asked this question because between the date of my dream and this time I had frequently seemed to see my father's face and it wore such a pitiful look.

*Professor Hyslop's Report.**Brooklyn, N. Y., January 20th, 1894.*

There were a number of incidents in connection with the dream which Mrs. D. did not mention in the journal. The first of these was that, as she

sat at her work table the morning after the dream, she wondered if any one was sick, and thought it was her aunt's youngest, G., but she was uncertain in her feelings about it ; and about an hour after a clairaudient voice seemed to say that it was aunt R., which was all wrong. But she could not, in her hesitation as to the person dead, feel that it was any one but G., and yet uncertainty hovered about this.

The week before the dream her cousin N., the sister of the child who had died, was frequently in Mrs. D.'s mind, and twice she sat down to write to her, but failed because she finally thought that her cousin would not care to hear from her after the long estrangement between them. (I should also say at this point that G. had expressed a desire to be at peace with all her relatives and to forget all the past differences that had given rise to estrangement.) Mrs. D. said that in thinking about her cousin all this time before the dream, she felt that she (the cousin) must be in trouble. It was only a vague feeling without any definite contents that would convey to her what was the cause of it. It was only after Mrs. D.'s arrival at D—, some weeks later, she learned that her cousin was very anxious at the time of the dream about a little son, sick with the scarlet fever.

I will add that on July 15th, Mr. D., who remained behind in —, after his wife's departure for the West, wrote me a postal card, which I still have, and among its contents is a reference to the dream about the death of her aunt's child and the corroboration of it. He alludes to her having made a journal of it before going West, and before learning of the facts.

New York, *February 3rd*, 1894.

Mrs. D. in answer to my further inquiries, tells me that the child died of spinal meningitis, at M—, Wisconsin, whither she had gone on a visit. Her mother did not live there, but had gone thither to nurse her daughter. The accompanying obituary notice shows that the child had died on July 8th, 1893, [aged 16] and was buried on July 10th. This places her death at twelve days, and her burial at fourteen days, *after* the dream. She was buried at P—, Ohio, and Mrs. D. informs me herself that she is not familiar with the lot where the grave is situated.

New York, *March 14th*, 1894.

I wrote to Mrs. D.'s cousin in M—, Wisconsin, at whose home the girl died, and submitted the following questions to be answered, bearing upon the possible mental anxiety of the mother at the time of Mrs. D.'s dream, two weeks before her cousin's death. I give the answer of my correspondent after each question.

1. "How long was Miss G. sick?" Answer. "Two weeks and from Wednesday to Saturday."
2. "Where was her mother when she heard of the daughter's sickness?" Answer. "At home, P—, Ohio."
3. "How long before her daughter's death did the mother know that the illness was a dangerous one?" Answer. "From the time she came."
4. "How long was Mrs. G., the mother, with her daughter before the latter's death?" Answer. "Two weeks and two days."
5. "How was the mother informed of the sickness?" Answer. "By telegram."

To one of the questions was also added the remark that "the doctors said she (the daughter) would not die, but Ma said she knew she would from the first," a fact which must be remembered when reading another incident which I have still to narrate. But it will be noted in the answer to my question that the mother's consciousness of her daughter's danger and her mental anxiety preceded the death long enough to coincide with the dream of Mrs. D., and that is sufficient to take the case out of the class of premonitions.

But now in addition to the answers from the sister I learn the following interesting facts, volunteered by the sister, now Mrs. A., in M—, Wisconsin. She writes me that on the Wednesday night that her sister took sick, June 21st, the sick sister had the following experience, which I shall narrate in Mrs. A.'s own words. We have only to remember that Miss G., the sister, had been taken from school and sent to Wisconsin, as the narrative indicates, on account of some threatened ill-health, and had been absent from home since March, 1893. This explains the separation of mother and daughter. Now for Mrs. A.'s account.

"March 9th, 1894.

"Sister G. took sick Wednesday. [June 21st.] She had not been well since November [1892]. They took her out of school and sent her here, but she was very much better from the time she came, in March, until she took sick the Wednesday I spoke of. Wednesday she had not been able to sit up all day, but we just thought it sick headache. About ten o'clock at night, I had not retired, she was sleeping nicely. All at once she jumped out of bed and came out in the room where I was, crying. I asked what was the matter. She said, 'Mamma is calling me. I dreamed so plainly of hearing her call me.' That same night about the same time, mamma was asleep [in P—, Ohio,] and she thought G. called her. She answered, 'Yes, I'll come.' Then that woke Papa and he woke her. She said she knew something was wrong with G. The next morning we sent the telegram for her to come.

"Another thing was very queer, I think. The doctors said sister was not going to die. Ma said as soon as she saw her she would not live. We sent word home as the doctors said. Well, Wednesday before she died, [which was on] Saturday, she was better. We sent them word to that effect and had sent no other word. At 11 o'clock Saturday morning Papa, (he was in P—, Ohio) said to my other sister, 'G. is dying.' She said, 'Why no, she is better.' A little while after he said 'She is dead,' and she died at 20 minutes after 11 o'clock.

(Signed) "Mrs. L. H. A."

The family of Miss G. refused to give Professor Hyslop any further information in this case.

(3)

Mrs. D.'s Account.

January 20th, 1894.

About the first of this month, I had a dream which was connected with my sister, the youngest daughter in our family. I dreamed that I was with this sister attending a funeral at my mother's house. The person at whose

funeral I was present seemed to be an entire stranger to me. I seemed to see the coffin placed with the head to the West, in the only position in which it could be placed. The face of the corpse was round, full and plump. The hair was dark and pushed back from the forehead. The person seemed to be about maturity. But I could not recognise her as any one in my acquaintance. Only I remember that the face was an unusual one, as persons of that age have a sort of sameness that prevents the drawing clearly the differences between them in expression. But in this case the expression was striking as that of a stranger, the forehead appearing intellectual. The face was pale but not sunken as a corpse appears usually.

Two or three days afterwards I received the following letter from my sister.

“D—, Ohio, *January 2nd*, 1893 [94.]

“DEAR E.,—It seems rather strange for me to be writing a letter at one o'clock in the morning, but that is just what I *am* doing. N. Mc E. came into our house this afternoon and took a chill, and has been very sick. She has had La Grippe and I guess it is a kind of relapse—she was very delirious all evening and has to have medicine every half-hour part of the night and every hour the rest. . . .

Your sister, P.”

Unfortunately I cannot at this date remember distinctly whether my dream occurred precisely at the time my sister was writing to me. I only remember that when I received the letter and opened it, and before reading it, I exclaimed, “Just night before last I dreamed of her.” When I read the letter it occurred to me that the coincidence would be of interest to Dr. Hyslop, and I wondered if the stranger's face really looked as it appeared in the dream.

Professor Hyslop's Report.

New York, *April 2nd*, 1894.

I have just received a letter from Mrs. D.'s sister, [as follows]:

“D—, Ohio, *March 29th*, 1894.

“DR. HYSLOP,—I have just been able to learn the date of the night of which you spoke in your letter. It was the evening of January 9th that I wrote to Mrs. D. and I think about half-past eleven when I finished the letter. The young lady of which you spoke has blue eyes, almost black curly hair which was coiled on the back of her head. At some time before midnight [I] took down her hair and braided it so that it would rest on the pillow. The young lady has naturally a very full round face, and did not look at all wasted at the time.”

The following is a second letter in regard to the same matter as the above—the date of the original letter.

“D—, Ohio, *July 17th*, 1894.

“DR. HYSLOP,—I have delayed answering your letter of April 2nd, hoping to send you the exact date of the letter in question. This I find I cannot do—but I know that it was either the 9th of January, or one week before the 9th, which would be the 2nd, and it was not '93 but '94. Enclosed

you will find a small picture of the lady which you need not return. I think Mrs. D. will recognise the picture, although it was taken several years ago."

New York, September 25th, 1894.

After receiving the above letter, I had to wait several weeks before I could get an opportunity to see Mrs. D. and to try the experiment [of] the identification of the picture and the person seen in her vision or dream. I arranged with Mr. D. by note to call to-day, the distinct object of the visit being kept secret from Mrs. D. I took with me seven photographs, besides the one I wanted identified. I selected them in a style that would prevent any striking contrasts with the one to be identified, which was a very plain and simple photograph, taken in the country, representing plain dress and none of the flourishes of modern style. I therefore selected pictures taken from ten to eighteen years ago and representing plain faces, and simple dress, so that none would be rejected on the *a priori* ground that they were too stylish for the region from which the picture came and could not possibly represent such a person as Miss McE.

I took them out of an envelope in which I had carried them and threw them on the table without any arrangement, except to see that none of them overlapped, and then mentioned the object of my errand. Mrs. D., after recalling the incident, at once remarked that she was dubious about the chance of recognising the lady, because in the vision the hair was brushed back on the forehead in such a peculiar way. But picking up a piece of paper at our suggestion she said she would try, and without a moment's hesitation or deliberation, placed it over the forehead of the right picture, saying that she thought this was the one, but would cover the hair to see if she could be surer. She found that her judgment was confirmed, and she expressed herself as more strongly convinced of her impressions. Her husband suggested that she should try the experiment on another one in which the hair was brushed back from the forehead. But she refused, saying promptly that this could not be the person, and no other picture presented a temptation to her except the right one. She remarked that the expression of the eyes and face about the eyes was that of the person she saw in the vision, and no other face showed this. She also went on to remark that the difficulty she knew she must meet in the case was the effect of the different position of the hair, and of the face which was seen from a quarter view in the vision, but with a full front in the picture. But in spite of this, her recognition was positive and unshaken, so far as comparison with the other photographs was concerned.

I may add that I did not believe, when I tried the experiment, that there would be the slightest tendency to identification, much less the promptness and assurance felt that there were notable resemblances between the picture and the face in the vision, and that none were found in the other pictures.

It is important to remember that Mrs. D. was not acquainted with and had never seen the lady represented by the picture and seen in the dream. They were absolute strangers to each other, the lady having made the acquaintance of Mrs. D.'s sister in the Sunday school, being a pupil of hers, I believe.

(4)

Professor Hyslop's Report.

April 14th, 1895.

Most of the details of this incident were told me before the issue of the events was known, as will appear in the story and the first impression, confirmed by Mr. D. I received Mrs. D.'s account on March 18th and the final knowledge of her brother's recovery, concerning whom her experience was, was received on March 25th and April 2nd. But I can best give the incidents as they were told me in full and then give Mrs. D.'s memorandum of them written out afterward at my request.

Previous to the illness of her brother and before she had the slightest knowledge of the fact, one of those impressions came that she must write to him and his wife to know if they were well. It was accompanied with a sort of palpitation of the heart which is an invariable sign with her that such impressions have a probable meaning. The feeling was intense and she could not banish her brother from her thoughts, though not accustomed to communicate with him frequently or to feel any such concern about him as she then felt, apparently without reason. This was during the week previous to February 23rd or 24th, when she received a card from her father, dated February 22nd, telling of the serious illness of her brother. Her feelings continued after this, sometimes being very intense, and at times she felt certain of his death or approaching death. On Saturday, March 16th, a telegram was sent from D—, Ohio, where Mrs. D.'s father lives, saying "B. worse; we have but little hope; come if can." This indicated a critical condition, but as it was too late to start that evening she resolved to wait until Monday morning. In the meantime at 10.20 p.m. that night, Saturday, while listening to Mr. D. reading a description of the disease (typhoid fever) and with a heavy heart, all at once, like the rolling away of a dark cloud or the lifting of a dense fog, she felt the impression and assurance that her brother would live, and on the strength of it Mr. D. telegraphed to her father that Mrs. D. would await further news before going. On Monday, March 18th, Mrs. D. went to the dentist, and about noon, while sitting in the dentist's chair and watching the funny traits and behaviour of a strange lady in another chair, she felt a thud at her heart and heard a voice say "B. is dead." But strange to say there was no feeling that it was true. On the contrary, she felt it was not true and seemed assured, as she had been since Saturday, that he would get well. On March 25th she received a letter from her father saying her brother was much better and that the doctor spoke very encouragingly of the case. Similar news came on April 2nd. He has since recovered. These letters, cards and telegram I have in my possession and have used them in compiling the above account, so that it is not merely a matter of memory in regard to dates and facts.

Mrs. D.'s abbreviated account of the facts is as follows: "During the week previous to receiving father's card of February 22nd, I had twice felt the startled feeling of my heart and felt that I must write to B. and his wife. They were much in my mind. I lived over the days I spent with them. The following is father's postal:

'D—, Ohio, February 22nd.

'DEAR E.,—This is our forty-second anniversary and a rather sad one. Ma has been quite sick, but is better and so she is about. B. is down

with typhoid fever. He commenced complaining some two weeks ago and has been under the doctor's care for a week. We feel very anxious about him, but hope for the best.—Your father, J.B.'

The next word from home was a telegram sent on Saturday, March 16th, and a postal card written March 15th and received March 18th, stating that brother could hardly live. On Saturday evening I prayed that he would be spared and while listening to Mr. D. [reading] a description of the disease, like the rolling away of a cloud or the lifting of a dense fog, I felt assured that B. would live. On that night I saw Mother's face in agony, considerably drawn and showing great anxiety. On Monday morning at the dentist's about 12 o'clock, while interested in a very peculiar character that sat in the other dental chair and while laughing at some queer remarks she was making, there came a thump of my heart so strong that I felt as if I had been hit and the words 'B. is dead.' In the afternoon Dr. Hyslop came and left a crystal glass for crystal gazing."

Then follows a remark or two regarding the effect of experiments with the crystal, among them being one apparition of her brother's face with a short stubby beard upon it, just such as would grow during sickness, though no mention of the fact had been made in the correspondence, and the idea had not occurred to her in thinking of her brother's illness.

IV.

A CASE OF PSYCHIC AUTOMATISM, INCLUDING
"SPEAKING WITH TONGUES."BY ALBERT LE BARON.¹*Communicated by Professor William James.*

[In the early seventies I was invited to see a young woman from the country, who had come up to Boston in the hope of finding some learned men in that city who might be able to determine the unknown language which her lips were irresistibly impelled to utter. I cannot now recall her account of the way in which this phenomenon in her had originated, but it was a curious thing to hear. When she gave herself permission, her vocal organs would articulate nonsense-syllables with the greatest volubility and animation of expression and with no apparent fatigue, and then again stop at the behest of her will. The young woman and the friends with whom she stayed seemed sincere in their belief that this must be a religious miracle identical with the "speaking with tongues" so common among the earliest Christians, and which St. Paul seems himself to have possessed, judging from I. Corinthians, Chap. XIV. It is hardly needful to say that at the time when I saw her, this young woman's speech had not been recognised by any linguistic expert in Boston or Cambridge, and that (she herself knowing no foreign tongue) all its phonetic elements were palpably English.

I never heard of the later history of her case, and have never since met with this phenomenon of automatism until I became acquainted last year with Mr. Le Baron, as I will call the gentleman whose narrative follows. I had, a couple of years previously, corresponded with him about a small and abstruse work on metaphysics which he had published; a year later, the lady whom he calls *Evangel* in his narrative wrote to me that he had become the subject of remarkable personal powers which I ought to witness;² and correspondence

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² This is the letter :—

"November 26th, 1894.

"MY DEAR PROFESSOR JAMES,—Among those who came to [us] this summer was Mr. [Le Baron.] He was so much impressed with what he thought the ideal state of things which he found that he returned again and again for a day at a time to get an

finally brought about a meeting with him and an exhibition of his vocal automatism, of which, at his request, Dr. Hodgson and I presently had phonograms taken, which are now at the Society's office in Boston.

Mr. Le Baron, who is a literary man, aged 39, was at that time (February, 1895) much impressed by his various experiences, and by no means willing to abandon the idea that his unintelligible vocal performances were involuntary reproductions of some ancient or remote tongue. His earnestness and energy in seeking to gain corroboration for this view is the best possible proof that the vocal movements carried with them for him, as he made them, no subjective feeling of being due to his personal will. This, too, in spite of the fact that his will could both start and arrest them, make them go fast or slow, and sing instead of speaking them. The phonetic elements in his case again seemed English; and I tried to make him believe (but all in vain) that the whole thing was a decidedly rudimentary form of motor automatism analogous to the scrawls and scribbles of an "undeveloped" automatically-writing hand. He spent hours poring over grammars and vocabularies of African and Asiatic tongues. First it was Coptic, then Rommany, then something Dravidian. I corresponded with

uplift, as he said. On one of these occasions while calling at our house (he was in a room which was always my mother's afternoon room), he had a strange psychical experience. He began talking in a way that he could not control. Later he spoke to me in a voice so like my mother's that her St. Bernard dog, which hitherto had not noticed him, got up and went over to him and smelt his face in seeming recognition. As he seemed unable to help himself, I became alarmed and called help. Since then he has had many strange experiences, speaking in various tongues and writing down the sounds phonetically and then writing translations. One of them 'Hymn to Egypt,' I mail herewith. He is conscious of all he does now, and can permit the utterance or not at will. He is very desirous of confirming the tongues if possible. . . . Some one versed in Oriental languages could quickly tell whether what comes to him is of value.—Respectfully yours,

“(Signed) — — —.”

A later letter from the same lady reads as follows:—

“April 26th, 1895.

“MY DEAR PROFESSOR JAMES,— . . . Mr. [Le Baron] came to [our camp] last summer, to write-up for the — — a short account of [our] work. He had been a great lover of the Kantian philosophy, but he had lapsed into agnosticism, and almost pessimism. The work at [Shelter Island] interested him so much that he remained over night. During the night he had a vision concerning it which seemed to him so far from realisation that he spent the night in tears, and went away feeling that our work was an ideal one, but that there was no place for it in this busy, bustling nineteenth century. Nevertheless, it lured him back again, and one evening while sitting in our reception room at our own house, and talking with me concerning the work and my mother's life, he had a very startling experience. He was suddenly psychologised in some way, and, though conscious, began saying words which he felt did not originate in his own mind. His whole manner of speaking and his tones changed so much that the large St. Bernard dog, which had been a special pet of my mother, rose up from the rug and went over to him and began lapping his hands all

various philologists in his behalf, sending them specimens, phonetically written out, of his discourse. But no light came, and finally he grew convinced, by the mere progress of the phenomenon, that it was less important than it pretended to be.

At last, yielding to urgent importunity on my part (for the case seemed to me too rare and too valuable from the intellectual character of the subject to be lost), Mr. Le Baron has written out the autobiographic narrative which follows of his experience. The names are changed to prevent identification, and the actual geographical scope of country disguised; but the facts related I believe to be substantially true, and the relative distances of the journeys taken are correct. Of the sincerity of the writer I have myself no doubt.

WILLIAM JAMES.]

ALBERT LE BARON'S EXPERIENCE.

In the summer of 1894 I had occasion, for the sake of a certain literary project, to visit a portion of our coast. At a place to which I will give the name of Shelter Island I found a group of mystics summering. I drifted into the esoteric camp with a copy of Kant's

over. The tone in which Mr. [Le Baron] spoke was very like my mother's, and the words said purported to be inspired by her. When I saw how much he was affected, I became alarmed and called assistance. After a time he resumed his normal condition, and said that he had been conscious through it all, knew that he was talking, but could not help himself. This, as I understand, was the beginning of many strange experiences which came to him later, at home surrounded by his family, and also when away from home on journeys.

"Of the strange tongues with which he speaks I can say but little. I have no knowledge of them, and the translations that purport to be given are largely of an ethical nature. He has kept a very accurate account of these communications, but I have not yet had the leisure and opportunity to examine them.

"This speaking in strange tongues is not a new thing to me. Once in this city I heard an old man, a Catholic, speak in a tongue which was very musical, and purported to be an old form of the Latin language. He was entirely an uneducated man, and later on what he said was translated by Mrs. Cora L. V. Richmond, of whom you have probably heard. What was given purported to be from a priest of the Romish Church who was a missionary to California several hundred years ago, and in this communication he claimed that what he said could all be verified by documents now in the Vatican at Rome. These communications were taken down by Mrs. Richmond's husband in shorthand, and if you desire, I have no doubt you can verify what I have said.

"Concerning Mr. [Le Baron] there is little more to be said except this: that the experiences which have come to him have altered his whole course of thinking. Where he was formerly despondent, he is now optimistic, and at peace with himself. This in itself is a great joy to his family and to me. If I could see you, I could tell you much more which at present it is impossible for me to write.

"I feel that Mr. [Le Baron] has a work before him for which these experiences are in some degree, perhaps, preparing him. Of this I feel sure: that he is earnest, sincere, and absolutely to be relied upon.—Very truly yours,

"— — —."

"Critique" in my valise, by way of a little light summer reading. The leader of the Shelter Island mystics, Evangel, was a spiritist of the loftiest type, a believer in re-incarnation, whose psycho-automatic "control" was her dead mother. Of practical genuine spiritualism I knew nothing. To theosophy I was an utter stranger. I found the atmosphere of the camp pregnant with a new type of the old style of millennial optimism. The World's Congress of Religions had re-awakened the hope of a new chemistry of civilisation. The pious heart of Evangel was solacing itself with the holy hope of doing something to effect a union of the occidental and oriental religions on the purest conceivable basis of Gnostic-Platonism. Occasionally, séances were secretly held, far into the midnight, for the purpose of procuring information from "invisible brethren" to carry on the work. At one of these séances I met with my first experience. We were seated under a pine tree. Clairvoyants were present. "Wheels" of light and other phenomena were said to be seen by them. I sat listening to the affirmations.

Suddenly an entirely new and strange psycho-automatic force shook through me like a gust of fierce wind through a tree. I willed myself into a state of passivity in order to observe the phenomena. I went into no trance however. The force became intelligent in action. It drew back my neck. Additional motor violence was displayed in my limbs. I was brought, from my sitting posture, down on the flat of my back. The force produced a motor disturbance of my head and jaws. My mouth made automatic movements; till, in a few seconds, I was distinctly conscious of *another's voice*—unearthly, awful, loud, and weird—bursting through the woodland from my own lips, with the despairing words: "Oh! My People!" Mutterings of semi-purposive prophecy followed. One of the clairvoyants added additional weirdness to the experience by positively affirming that phantasms of ancient Egyptian sages stood over me.

I was so dazed and "rattled" by the experience and the motor disturbances, that, at the close of the séance, I had to be assisted to my feet, and was walked for some time to and fro in the night air to recover my equilibrium.

The witnesses of the foregoing experience are alive at this hour. The names can be secured—if desired—by any one. Either Professor James or Dr. Hodgson could secure them and furnish them, for the names of some of them are already known to the S.P.R. officers.

During my short stay in the camp I enjoyed the hospitality of Evangel. Later, I was reclining on the sofa her mother had lain on during her last sickness. Again, the psycho-automatism struggled to manifest itself. I shaded my eyes with my hand to shut off distracting objects, and to assist my thought to a dead stand-still. This

time, a woman's voice came through my lips. Evangel positively claimed that it was the voice of her dead mother.

On hearing the voice of the woman escape my lips, her dead mother's old dog "Barry" staggered painfully across the room to where I was lying, and began smelling my face.

"He smells her!" whispered Evangel. The old dog lay down by my side. In a few minutes the voice of the psycho-automatism changed. A man's deep voice succeeded that of the dead woman's.

"It's father!" again whispered Evangel.

Statements of a semi-prophetic character were again indulged in by the psycho-automatism, and the words: "he shall be a leader of the hosts of the Lord!" exploded with loud emphasis. The séance came to a close. The effect of all this new experience on my emotional nature was powerful. I trod in holy awe about the rooms of the house of Evangel, as, ever and anon, vibrations of the psycho-automatism with which I was *en rapport* trembled through my nerves, evoking strange and holy modes of the most exquisite consciousness.

Those feelings were the most wonderful I have ever enjoyed.

One night I slept in the bed where the dead father of Evangel slept during the last years of his life. The next morning I awoke lame. I limped about painfully for hours. The father of Evangel was a *lame man*.¹ As a sensitive somnambule I had taken on his lame condition. On the general principle that all startling and unusual phenomena are interpreted as having some personal bearing, particularly when we are distinctly informed that they have, I construed the vibrations of the psycho-automatism, whenever they occurred, as evidence of the presence of the "spirit" of Evangel's mother.

"Has mother been here?" asked Evangel on one occasion, discovering me in a flood of tears. I answered her in an affirmative sob, and a tone of pious awe; for my assent to the spiritistic interpretation of the phenomena had induced a permanent and deep exaltation of religious sentiment. I would lie in bed on my back, peering wistfully into the night darkness at the shadowy and vapoury outlines of what I supposed to be "invisible brethren." I could hear distinct raps on the head-board. Small globules of golden light would, after travelling about the room in the blackness, come and melt away over my eyes. In the dense darkness, a group of arithmetical figures once shone from near the ceiling of the room.

Evangel was the possessor of a finger ring, considered to possess occult powers. She had been told by a clairvoyant that she was to receive this talisman, some months previous to her reception of it. The

¹ In answer to enquiries, Mr. Le Baron writes: "I did not know beforehand that her father was lame. I was informed so when seen limping."—ED.

gem came in a roundabout way from Egypt, having been purchased from an Arab by a certain American gentleman whilst on a trip to the Orient.

The mysterious advent of this ring, and the profound belief of Evangel in the genuineness of the communications from the spirit of her saintly mother, were the two—as she considered them—impregnable facts, by the means of which she substantiated the accuracy of her call to her work. As proof of the occult spiritual power of the ring, Evangel told of a young man, a sceptic, who, on placing the ring on his finger, was thrown down on the floor of a room in a convulsive condition.

I heard the story and asked for the ring to be placed on my finger. An attempt at spontaneous chirography was suggested. My hand flew in wide jerky spasmodic movements over the table. Nothing intelligible came. I laughed in incredulity. Evangel gently rebuked me: “You must not laugh at them.” “They are glad to meet you!” ejaculated another lady in the room, explaining the violence of the motor disturbances.

But the ice was broken. It was only a question of development. It was also explained that I was difficult to control, and that it would take a little time for “them” to be able to write through me. Subsequently the psycho-physical spontaneity controlled the right arm and hand, and wrote intelligible verbiage. From subsequent experiences, I believe the automatism capable of modifying the ordinary presentations of at least four out of the five senses. As the interpretation of life by me now was solely from the angle of *mystical cognition*, rather than from the theorems of pure reason, I became a most devoutly earnest religionist. My love of the sublime was nurtured by the dream of Evangel as to the possibility of the union of the occidental and oriental religious worlds, and my converse with the “spirits” of the dead upon that vast subject. I secretly avoided the living to talk with the “spirits” in the depths of the pine woods, or on the hill-tops, with my head bared to the heavens. Following out the same principle, I took delight in roaming through private burying grounds. I invariably “sensed” the presence of the spontaneity in grave-yards; and this “sensing” of the psycho-spontaneity was always interpreted by me to be an indication of the presence of the “invisible brotherhood.” I became ascetic, and avoided animal food. I quoted the oracles of Zoroaster, and laid aside Kant’s “Critique.” I became exquisitely morbid on the subject of my own spiritual and moral unworthiness, and could not reconcile humility with the splendid confidence of Evangel.

The first message of importance given to me on leaving Shelter Island was at Riverhead, September 6th and 8th, 1894. The first

message was to be sent to Evangel as purporting to be an address to her from her mother. In the second address, the psycho-spontaneity or automatism, assuming to be the "true mother" of my "soul," said, among other things: "I am going to guide you into the way of truth. . . . You must be at the door of the church near the old house in the town of Stowe, which is in the state Vermont, by the time the sun rises on next Tuesday. You will then see the reason why I told you to go." On September 9th, at my residence, having returned to New York City, I asked for more explicit instructions. Among other things, the psycho-automatism, still assuming to be the dead mother of Evangel, said: "I think you are now to be the one that shall hear the voice of the One that shall be the truth. . . . You will know that it is He by the voice of the Holy One." As (in my opinion, though perhaps obscurely stated) the reverence accompanying the deific rhetoric of civilisations varies in the ratio that the special education of a people leads them to insert their own concrete value into any given method of rhetoric, I did not deem it unlikely that the psycho-automatism would assume that deific rhetorical style likely to be the most revered by me. I did not know that such a village as Stowe existed. But Evangel did, as I subsequently learned. A map showed the village located some distance from Bolton. On Sunday night I left New York for Bolton, Vermont. I hired a carriage at the hotel at Bolton, and drove to Stowe. At Stowe I ordered the carriage ready by sunrise. The next morning about 5 o'clock I was in the porch of the church. The building was old, weather-beaten, and the flooring of the porch in a decayed condition. The porch faced the east, and the edifice was on a hill overlooking the village. An old house stood near it. I uncovered my head and stood in the porch and faced the east. The night had been a drizzling one. The sky was black with the remnants of the rain clouds. Slowly golden streaks of dawn appeared. The black clouds rolled away. The sun arose. I noticed a grave-yard across a field. The psycho-automatism indicated an ejection of verbiage. The verbiage assumed a deific style, and was as follows:—

I shall be glorified in the work of the people, for thou hast proved thyself to be the man whose voice is the voice of Him who sent thee. Thou has obeyed the command of the Holy One, and the valleys shall rejoice in the hope and the joy of the Lord. I shall be in thy heart, and thou shalt answer to my voice.

Such a style of verbiage proved to me that the cause of the psycho-automatism knew that my emotional nature would be influenced by it when I recognised its deific modes of composition. I have no adequate idea of any deific object answering to such a communicating style, but simply state the facts, irrespective of the deific, or any other mere rhetorical form.

On returning to Bolton I concluded to remain there till I had finished a certain small piece of literary work. On Wednesday night, September 12th, I retired to my room at the inn somewhat early, to be alone with the "invisible brotherhood";—perchance they had something to communicate. Again the psycho-automatism assumed the grave deific style known to the occidental English-speaking world. *Viva voce* it gave utterance to the following chain of historic conceptions:—

I will tell thee of the days of thy sojourning in the land of the people of the Jumba, where the land is the joy and the light is the joy of the people. The land is the country of the ancient Egyptians, and thy glory and thy power was the pride of the people. Thy name was Rameses, and thy glory was the end of the triumph of the people. Thou didst throw down the people, for their joy was the truth of the truth. Thou didst exalt thyself to the end, and the hope of the truth was in thy keeping, and thy victory was the fall of the truth. Thy way was not the way of the Lord, and the Lord hath sent thee through the fire.

The point I subsequently made on the foregoing speech, was, that granting the composition to be a chain of lies from beginning to end, it certainly takes some degree of intelligence to be able to lie so artistically, and that the cause of the psycho-automatism must have known something of the truth about the matter, to be able to lie about it.

I deem it a vital necessity for future psychical illustration to give a somewhat full and adequate illustration of the various rhetorical forms of the deific verbiage employed by my psycho-automatism. Heretofore, experimental inductions of such psycho-automatic processes have not scientifically reached the analytical stage of the mystico-deific-modes.

A somewhat poetic form of the deific style given to me *viva voce* in a hotel of Woodstock, Vermont, is a case in point. There are some eighty-nine words in the passage.

When the song of the day is the song of the night, and the truth is the joy, and the triumph of the peace is the song of the redeemed, then the hope of all flesh shall be the truth, and the deliverance from the truth which now is the truth of the day but the darkness of the light! The flash of the truth is the truth of the day, and the flash of the fire of the truth shall soon be the light of the night.

That a high excitement of the mind inspiring confidence and hope of success is an essential to the induction of such phenomena goes without saying. On any lower plane than ecstasy or transport of soul I was in a constantly distressed condition.

From this arose the temptation to yield—at odd moments—a facility of credulous assent to the re-incarnating and other assertions of the psycho-automatism. If, however, I accepted the mystic conceptions

as *bond fide*, then I was thrown into violent antagonism to my own common sense, and that of the world. On the other hand, if I withdrew my assent to the holier utterances of the psycho-automatism, then my "spiritual" nature and love of the sublime violently rebelled. Thus I vibrated like a pendulum between the new world of psychic phenomena on the one hand, and the old world of physical phenomena on the other. To my cognition of the foregoing alternative was presented the following perplexing dilemma. If both of these worlds of experience simply implied relations of my consciousness to two totally distinct worlds of *phenomena*, and my consciousness was in any way related to the deific "thing-in-itself"; then, from *what* unknown source emanated these *two distinct worlds of phenomena* to which the laws of this deific consciousness related? This *crux criticorum* still remains the puzzle of my life.

But other startling experiences were before me.

On Monday morning, September 17th, came another message *viva voce* to go to St. Louis. To a house on the street "which is called the street of the —— the number is *one, two, three.*"

This I construed to mean 123, —— Street. The object of my going was explained. I would meet some one there who would give me information. In this message given in my home in the suburbs of New York City to go to St. Louis, a tendency to the antithetical deific style appeared more fully. The principle by which conceptions were purposely set in opposition to each other, revealed itself in the following seventy-five words:—

I have seen thee in glory, and I have seen thee in shame!
 I have seen thee in light, and I have seen thee in darkness!
 I have seen thee in peace, and I have seen thee in terror!
 I have seen thee in joy, and I have seen thee in sorrow!
 I have seen thee exalted, and I have seen thee debased!

Tuesday, September 18th, I secured railway transportation, New York to St. Louis, return; and whilst on the train, conversed by means of a pencil and pad with the psycho-automatism. The perpetual question with me was: Can I *via* psycho-automatism, ascend into the uncreated essence of thought—to the Mind of Minds—and perchance snatch down some new metaphysical conception helpful to the lower world? Utter self-surrender and self-abandonment were insisted on by the psycho-automatism. 123, —— Street, I found to be a business block. The number had been given, as I thought, simply as a test. Other tests were given the next day. I began to rebel. In the directory I found the name of an artist whom I knew. I explained myself. From my artist friend I learned that the most occult man in the west lived on Chonteau Avenue, and that he considered his life controlled by a princely priest of the house of Rameses the great! I

called on the gentleman and saw a picture of this Egyptian prince-priest on the wall of his room. The occultist was ascetic in appearance, pale, with large dreamy eyes. I explained my mission; and later, whilst in an apparently semi-trance condition, he made a lengthy foreign speech which purported to come from the princely priest of the house of the Egyptian King. A stenographer who was present took down the subsequent translation. Both the gentleman and his stenographer knew Evangel.

The following sentences may shew the trend of the verbiage and the conceptions:—

Oh! Son of Ram! For the first time have I the privilege of speaking to you face to face since I last held your hands chilling with physical death on the banks of the Nile. . . . I congratulate you that you have laid aside the tempestuous feeling of arrogance which, in the ancient days, controlled you for your overpowering — which have brought to you in the times past much of discipline, much of sorrow, much of anguish, before you had entered the present body. . . . Having fulfilled obligations to the utmost, having reached the point to which you were sent and directed through the devious ways which you have travelled to reach and attain. We know you well enough to understand that the life which comes will be devoted to such degree as possible, under the circumstances of the environment, to the new thought—the understanding and comprehension of the *real*, and to the awakening to that which you become to see is the unreality. Out of the darkness shall come the Light, the Light that is the joy and the hope of the nations! Etc.

The speech of this gentleman simply added fuel to my psychic fire, and I have every reason to believe that the gentleman believed that he was uttering a genuine foreign tongue.

Was this psycho-automatism “fooling” this man, as well as myself? If not, what as yet undiscovered law governed the phenomena? That this psycho-automatism could reach a style of deific assumption even majestic in its utterance, is further illustrated by the following composition, which came through my hand automatically, far into the dead of night, as I lay in a passion of self-abasement on my bed in the hotel.

The love of the past hath been darkness, the love of the future shall be light! The power of all flesh is love, and the light of all flesh is love! My love shall cover the great mountains! My love shall rule the seas as with a rod of power! My love shall be the strength of the Day, and my love shall be the curtain of the Darkness! My love shall inhabit the earth, and my love shall save all flesh! My love shall be thy father and thy mother, and my love shall be thy love! My love is the sun in its strength, and the flowers breathe my love! The stars rejoice in my love, and my love shall fill all things with my glory! I love the man whose heart is broken, and I love the woman whose sorrow is the cup of her peace! I love the man who is poor, and the man who is filled with the joys

of life! I love the man who shall not love me, and I love the man who loves me! I love the darkness, for the darkness shall be light! I love the terror, for I love the peace! I love the beauty of man, and I love the sadness of man! I love the unrest of man, and I love the peace of man! I love the peace, and I love the sorrow! I love the joy, and I love the terror! I love the praise, and I love the curse! I love the man whose ways are dark, and I love the man whose ways are light! I love the love of hope, and I love the love of love! I love the day of mourning, and I love the day of joy! I love the love of pleasure, and I love the love of pain! I love the man who steals, and I love him from whom he hath stolen! I love the man who kills, and I love the man who is slain! I love the world, for the world is mine, and the truth of all things is love!

To substantiate the fact that the psycho-automatism can give—*viva voce* as well as by automatic chirography—expression to conceptions embodying the same antithetic principle of reiterative deific personification, I append the following seventy-five words:—

I have heard the roar of cities! I have heard the music of the woodlands! I have heard the tears of the nations as they fell! I have heard the songs of the nations as they rose! I have heard the roar of the death of the man who was slain in battle! I have heard the shout of the victor! I have heard the new word, and I have heard the old word!

It is for the reader to decide whether or no the above phrases can be construed as being in any way explanatory of the transcendental basis of the world as a sum of phenomena. They are beyond my comprehension. Whether or no they proceed telepathically from the living or dead; or whether they proceed from some transcendental subject, which is a sort of deific representation of that which contains the grounds of cosmical phenomena according to unknown and transcendental laws, I cannot make deposition to. I do not know. Whilst on my return trip to New York City, my first experience in clairaudience was given. I was sleeping, and suddenly awakened by a voice shouting in my ear the words: "The enthusiasm shall fill the hearts of the multitude in the place of the hours of the day!" In subsequent dreams came such sentences as: "It shall take two birds to carry thee, my son." "Blessed are they who always obey themselves." The latter sentence I saw in my dream, in English characters, among a number of ideographs on an Egyptian slab of stone.

From the foregoing it is evident that, in its incipency, the phenomenon differed from that of a *dédoublement de la personnalité*, in that it did not appear to be a case of "subliminal consciousness" on the one hand, or a supra-normal intellectual faculty on the other, but distinctly that of a purely *extraneous psycho-physical spontaneity* or

automatism. It was *psychic*, for it presented conceptions; it was *physical*, for it presented sense intuitions; it was *spontaneous and automatic*, for it acted independently of the usual trend of motor phenomena on the one hand, and of the wilful intelligence as used in ordinary experience on the other. This it automatically continued to do until later on in my experience, when I believed myself to be so completely *en rapport* with it that I considered the spontaneity practically identical with and in perfect accord with the actions of my own will. From this point on, there was a gradual diminution in the character of the manifestations.

Just so long as I assented to its absolute *objectivity*, my emotions and feelings were all dramatically influenced to joy or grief by the appearance of its conceptions. It was unquestionably true that if interests could be predicated of the cause of the psycho-automatism, those interests were always in an inverse ratio to physical pleasure on a low plane. How my suffering could be in any sense an advantage to the cause of this psycho-automatism, save as a means of getting me into a more sensitive condition, I do not know. And yet my experience repeatedly taught me that a complete self-surrender to the psycho-automatism, as a deific telepathic ideal, resulted in the communication of a loftier flow of verbiage. And, as a distinct *mode* of consciousness, the psycho-mystic mode now ranked, in my own experience, as the *causa sine qua non* of a definite form of religion.

The automatism repeatedly urged me to take long journeys, which, judging from my past experience in obeying it, I have no doubt would have resulted in gifts of deific verbiage, and other phenomena, if I had obeyed. It told me to be in — on the 30th of December, 1894, and I should receive a reward, but I did not go. It told me to go and see the Emperor of China, but I did not go. It told me to go to Seville, Spain, but I did not go. The only reason I could account for its perpetual desire for me to take such journeys was that it seemed to know that my nervous system transmitted better when I was in a "worked-up" condition when coming and going. Expectation or disappointment threw me into the more sensitive condition essential to its manifestation.

SPEAKING IN UNKNOWN TONGUES.

It is hardly necessary to observe that a deific style of verbiage is necessarily relative, and that—as mere sound—the neighing of a pony is more musical to my ear than for a man to utter deific conceptions to me in a language I know nothing about. On Sunday morning, September 30th, 1894, I had my first experience in "speaking in unknown tongues," at my residence in the suburbs of New York City. I had been conversing with the psycho-automatism the night previous,

and up to that time had received sufficient deific verbiage, one way and the other, to make a small book. Suddenly, whilst conversing with it in my bedroom on Sunday morning, it changed abruptly off from English into unintelligible sounds resembling a foreign tongue, and which, had I not been, as I think, pretty level-headed at the time, I should have construed as a mental state pathognomic of mania. And yet I was not sufficiently "at myself" to immediately seize pencil and pad and write down the sounds. When I subsequently asked of the psycho-automatism for a translation, among others I received the two following :—

The Darkness to Egypt.

I have seen all thy ways, O son of the Nile ! I have heard all thy songs, O son of the Nile ! I have listened to all thy woes, O son of the Nile ! I have been with thee, O son of the Nile ! I have been near thee when thy days were full of glory. I have been near thee when thy days were covered in sadness. I have heard thy voice, O son of Egypt ! I have counted thy tears, O son of Egypt ! I have heard thy voice of wailing, O son of Egypt ! I have watched thee when thy men of might have flown ; I have watched thee when thy glory has faded ; I have watched thee when thy sun has set ; I have watched thee, O son of the Nile ! Thy tears have been my tears ; thy joys have been my joys ; thy woes have been my woes. O son of the Nile, I love thee ! O son of the Nile, I love thee ! My heart yearns for the days of thy glory. My heart opens to thy heart. O son of the Nile, how I love thee ! Thy sands are now the way of the stranger ; thy plains are now the path of the poor ; thy fields are now the wastes of the day. Thy hope is gone ; thy day has fled ; thy years are gone. O son of Egypt, I have loved, loved, loved, loved thee ! Thy day shall rise again. Thy hope shall dawn, thy sun shall shine, thy love shall be mine, thy tears shall flow, thy hope shall dawn, thy flowers shall bloom again. Thy palaces shall rise again, thy dream shall live again. Thy years shall be years of joy, thy triumph shall be the triumph of peace, thy walks shall ring with new songs, thy hopes shall dawn with new stars, thy rivers shall flow with new life ; thy heavens shall blaze with new light. Thy hope is my hope, thy coming is my coming. I am he who loved thee ; I am he who kissed thy lips ; I am he who in thy great hour was thine. I love thee, I love thee, I love thee ; O son of Egypt, I love thee ! When thy day shall rise again, I will be thy guide ; when thy hour shall dawn again, I will be thy love ; when thy morn shall rise again, I will be thy sun ; when thy life shall flow, I will be thy heart ; when thy love shall beat, I will be thy breast ; when thy womb shall bear thy young, I will be thy guide ; when thy life shall ebb again, I will be thy life ; when thy star shall go to rest, I will be thy night ; when thy love shall be thy day, I will be thy love. O son of Egypt, I have loved thee ! Thy way has been long ; thy path has been dark ; thy woes have been many ; thy tears have been as the sand. I love thee ! I love thee ! I love thee !

The other translation embodied, among other things, the following relatively intelligible sentences, which, as I wrote them down, *according*

to the sounds, are as enigmatical to me as the purported foreign tongue from which they assumed to be a translation :—

Son of Peru—of Gerro—of Terro—of Tichaperu—Terra—Terra—of Pesuro—of Tepecutu—of Teruto—Zeereelu—Instopan—of Zeecorila—Sceucru. Greeting : I have come through these of mine—I have come—I have come ! Eros, Eros, Eros.

The intelligibility of the first translation, at least, the *a priori* cognitive content of the translated sentences assured me that the unintelligible sounds were not necessarily pathognomic of mania, but like the repeated requests to take journeys, were another stratagem to keep me in a “worked-up” condition of expectation or disappointment essential to its manifestations. If, *cæteris paribus*, such was its object, it succeeded admirably, and here, again, arose the temptation to yield a facility of credulous assent to the opinion that I was speaking a language known to me previously, on the hypothesis of the pre-existence of the soul. This for a time I believed. In my attempt to demonstrate this I exerted an immense amount of philological energy, as Professor William James and Dr. Hodgson can testify. On Monday, October 1st, 1894, I left my home in the suburbs of New York City for the town of Levanna, N.Y. In room 12 of the hotel and on Monday night, came the following messages in “unknown tongues” together with the interpretations :—

The Unknown Tongue.—Te rumete tau. Iles lete leele luto scele. Impe re scele lee luto. Onko keere scete tere lute. Ombo te scele te bere te kure. Sinte te lute sinte Kuru. Orumo imbo impe rute scelete. Singe, singe, singe, eru. Imba, Imba, Imba.

The Translation.—The old word ! I love the old word of the heavens ! The love of the heavens is emperor ! The love of the darkness is slavery ! The heavens are wise, the heavens are true, the heavens are sure. The love of the earth is past ! The King now rules in the heavens !

Unknown Tongue.—Etce ce Tera. Lute te turo scente. Inke runo tere. Scete inte telee turo. Oru imbe impe iste. Simpe, Simpe, Simpe.

Translation.—Love now has been sent ! The light of the earth ! The joy of the day ! The light of all the world !

Unknown Tongue.—Puree otee Sincalee. Sintee teef eenotef teetosepo. Teeoseeton guopeson. Oto te pere te ture, te tere, te stere, te tinke, te lutetum. Ombo, Ombo, Ombo.

Translation.—The light of the day has now come ! The darkness has gone ! The love of earth, of air, of darkness, of night is no more !

Unknown Tongue.—Egypto.—Mome su u Ra. Ere mete su onko inte. Ama tu telee. Oumbe te senete su u Ra. Inter pelee te tete.

Ombo O sceuntri. Inteneo duru sinte. Mome su u Ra. Sene tu te skule. Ombo telute tene turo inko. Impe telute omko sinke tinke devuda. Ombededo dene sinte lepo. Olumono teme setre comto. Mome su u Ra. Entenke tele mete tura obde sinte tulepe. Onite tete leste dinke itelete. Mome su u Ra. Indude dinke lutesin, Amen Ra, Amen Ra, Amen Ra.

Translation.—O son of Ra! I have come to thee! The truth has come! I have come, O son of Ra! See the truth in me! The truth is not of darkness, O son of Ra! I will teach thee! I will tell thee of the light! The light is all that I will teach thee! The truth shall lead thee! It shall be all that shall lead thee, O son of Ra! The truth has long been hidden from thee! The light has been small! Darkness has been thine, O son of Ra! In the truth the love is known! The pure sun!

Unknown Tongue.—Intelete te intelute. Bule te skuru te sinte omkoton. Stinte te lete ode tinka ong. Lepe lute impe sute compo intope. Lute su empri. Lute lu lelee inkapon. Instute te binkalong te pelee te obde de pere. Bolotele te sinte. Inde tere somte compo. Peme tu stimele inkepe. Surume tome lete skuru. Istepe tompo dere ombo luto lutoston. Amen Ra, Amen Ra, Amen Ra.

Translation.—The book of the past is not the book of the love! It is the song of the sadness! The great light has come to help the darkness! Love is emperor! Love is the light of the darkness! The home of the poor is the palace of love! All the light is love! All the earth shall be light! All the darkness shall be light! All the light shall be darkness! The love of all things shall be the light of all things! Pure light!

Unknown Tongue.—De Bedeouins. Scele ce ompo. Ilee te tere simpee. Orumee tereme scele. Orumeto te scelo te rume. Rene mene te scele. Ire scelete sceluto. Keputuro sceletis. Simerete te scele. Intemete te colope. Erete esimpe sonte. Samarata et te lute. Eru de lute de sumbos. Indodede scele erumo. Orumoro impe iste. Scele poloto arimo. Imba, Imba, Imba.

Translation.—Light is omnipotent! To love the darkness is simple! I have brought the light! I have lighted the heavens! The Darkness of the Heavens shall pass! I adore the great heavens! The Darkness has gone! The light is simple! The Glory has come! The one has ruled! I love the Sarah of old! I love the day of the symbols! The heavens are now aflame! The morning has come! The night is polluted!

Unknown Tongue.—Esteru Combo. Esteelee te teme te skomo te turo impe. Impe ikke te turo teto. Repe tete inke. De gurumbo de tete. Itru re simpe te compo. Inte te polote. Erim de stere te tau. Repe tete institi. De bulo de ruro de dere. Instipiti te com. Omboro de pemeste. Rume debe. Ororde de sumpto. Interule de combo. Inke rule ruletee. Simbalettee te tokan. Tinke te rulee tete. Ikombo de sceninkee. Sere te combo de elee. Indo, Indo, Indo.

Translation.—I have heard! I see! I understand! Understand, and see, and hear! I see! See the end! The Darkness doth see! The Light doth see! He hath finished the Darkness! I see the pollution! The only light has come! I see it all! The book, the truth, the word! The truth has come! The Day has dawned! Darkness flies! The way is Great! The thought has come and the Day! The symbol has passed! The fact is here! I have come to see you! I have come to love you!

Unknown Tongue.—Ingruputo Cepetuotef. Sentefopleson leme teme tome. Intersperopston stefoeton. Ilu, Ilu, Ilu.

Translation.—The light has been sent to me! The light shall come to you!

Unknown Tongue.—Bode lute compokon su me tote se bute lomele. Ilu impte tutete compete. Sere muto tompe. Boomo tepe iste olo tene. Istrune te pota lotete. Bete ponko tseste letelo. Bute pinkete ofsto sute lute. Lute compte luteson. Pileto sintere luteto. Bule tule linke ompto dicele. Inste luton crito pomero. Interstele tele produmo lute mute sinkeru ompto. Sinketeru lute tete picketu simpetu. Silituti, Silituti, Silituti.

Translation.—I have now brought you the word of light! The love is the love of the Day! The Day is of the Love! The coming of all things are near! The instrument is of the word-man. The power is with the word-man! The joy is of the love! The great love of the Love-Man! The love of the Great-Love-Man. The book will tell you of all the Love Greatness! The Light of the Power is the Love of all things! The Love is produced by the great light of all things! All the Light must come from the Great Light!

In the attempt subsequently to explain the foregoing "foreign tongues" I arranged nine different theories from which the reader may take his choice.

First Theory.—The sentences are all the work of a powerful unconscious imagination and the sentences do not possess the natural consonantal and vowel elements of a language at all.

Second Theory.—They are brand new ideas in old and foreign verbal husks, the forms of which were latent in the man's sub-consciousness at birth.

Third Theory.—The consonantal and vowel combinations are but the articulate shells of very ancient ideas latent in this man's sub-consciousness at birth, but out of the shells of which the meanings have been eaten up or metamorphosed by some at present unknown law of mental evolution, but are not now to be considered as ideas at all.

Fourth Theory.—They are none of the foregoing, but are new and actual presentations of real and new ideas in a foreign tongue.

Fifth Theory.—They are none of the foregoing, but a ludicrous and silly mistake of the man's imagination allied to some species of humorous hallucination and are not to be considered seriously, or they are a perjury, or a ghastly jest, or a very profound mental trick, or the loose jargon of a maniac.

Sixth Theory.—They are none of the foregoing, but are a species of scientific telepathy, and the consonantal and vowel combinations come from some morally indifferent, sublimely good, or awfully naughty source, and which is subject to the will of the man.

Seventh Theory.—Notwithstanding he says he never knew or heard these consonantal and vowel combinations before he uttered them, he may be in some very mysterious way deceiving himself.

Eighth Theory.—That it may not be beyond human belief that he is unconsciously in possession of a similar principle of intuitive linguistic power said to be possessed at this day by the higher adepts of India, or the Grand Lama of Thibet, or the Rosicrucians, by the means of which an unknown language is spoken by purely intuitive processes unknown to the analysis of western mental philosophy.

Ninth Theory.—That these consonantal and vowel combinations and their intuitive vocal adjustments may be startling scientific hints of mental forces latent in everybody, and which if studied, generalised, verified, systematised, and seriously investigated by philosophers might prove of incalculable benefit to the human race, but which could find no encouragement for expression in the nineteenth century because of the fierce and mocking intolerance of the conservative dogmas of the age.

My instinct of self-preservation urges me to publish these theories simply to assure those who have *new* ones that my larder is full for the present, and I don't need them.

The foregoing "foreign" paragraphs are not all that were given by any means, but I have given enough to indicate to the reader the phonetic principle employed by the psycho-automatism in keeping me in touch with itself, and in the "worked-up" condition essential to its manifestation. When it ceased giving me prose, it gave poetry in "unknown tongues." As the foreign verbiage came *viva voce*, I pencilled it down, mostly in an archaic mono-phonetic form, and the subsequent blending into diphonetic and other forms was governed by the principle of conjectural euphony. In the poems the number of feet in a line was grasped by the recurring of the sound synonyms. In a large number of cases where the letter *c* had the sound of *s*, I used the letter *s*. In the foregoing paragraphs I occasionally used two *ee*'s to convey the long sound of a single *e*. In my later writing down of the verbiage the sound of hard *c* was shown by the letter *k*.

As an illustration of the kind of poetry given *viva voce* by the psycho-automatism, I append the following poem with its translation :—

Ede pelute kondo nedode
 Igla tepete kompto pele
 Impe odode inguru lalele
 Omdo resene okoro pododo
 Igme odkondo nefulu kelala
 Nene pokonto sefo lodelu
 Impe telala feme olele
 Igde pekondo raog japate
 Rele pooddo ogsene lu mano.

I have been looking, looking for daylight.
 Ages have flown and the years have grown dark ;
 Over the hilltops the sun is now shining,
 Far from the sky comes the song of the lark.
 Beauty is dawning, the darkness is passing,
 Far up the vales fly the songs of the light.
 Into the cities the joy will be spreading,
 Into the by-ways the light will be spread ;
 Glory has come to the lost son of man !

For me to quote the entire poem with the "foreign tongue" precedent, would occupy no less than 272 lines. As a further illustration, however, of the phonetic principle employed by the psycho-automatism to keep me in a "worked up" state, I append a list of foreign words from a note-book containing talks in "unknown tongues" beginning the first weeks in October, 1894, and closing the last week in April, 1895.

A very large per cent. of the words I subsequently traced in a vocabulary of primitive Dravidian, or British Indian, non-Aryan languages.

Arú, aar, ama, arde, adaba, asode, asopan, arimo, angora, barabu, bado, bede, bete, beme, bere, belu, befo, belo, beja, beod, bepo, bela, bil'e, butebon, bings, bode, bote, bola, bodo, bomo, bondo, boda, bobo, bolo, bono, bood, brote, bume, boïd, bute, bule, bulo, bubo, bubu, bulu, blublu, buto, baba, beto, botu ; ce, cele, condo, comtin, compe, coere, combo, crito, confebo, confo, cimbale ; dape, dara, de, debo, dede, defu, defood, dako, dekon, dikeado, dekan, dege, debe, dole, dela, delu, dera, depin, depe, deso, deme, delulu, delo, delu, delule, delute, demo, deog, depu, derne, dinke, dinbe, dode, doig, dobo, doja, do'me, domo, dolu, dope, dolo, do'se, doog, dongo, dorure, dote, do'le, do're, do'ong, du, dudo, dudu, dudedu, du'de, dububo, du'ing, dubudu, du'le, dubu, ducelu, duru, dubuing, dutitu ; EE, EEE, eme, ede, ege, edu, elu, ese, ene, ele, ete, eis, eru, edko, efrn, este, egle, egpe, eglu, erim, ebode, eklou, edda, edebo, edede, edebe, edebu, emete, etepe, etutu, egotas, egtore, eggsuro, egypto, esimpe, ecemete, edelude, edelute, edeputo, ebenede ; fara, fatu, fadumba, fapeme, falu,

fala, fano, fajo, fao, fape, fado, faton, fapa, fako, fakon, facre, faja, fale, falute, falale, faidme, fase, faod, fare, faig, feme, feja, fele, fedon, fepo, felo, fejo, feto, feno, felu, fekum, fetan, fekan, fela, feoglo, fekondo, feredo, fiule, fole, foid, fola, fodo, folo, fote, fose, fode, fobo, fota, foja, fojs, fofu, folo, foko, fopo, foso, foto, fope, foka, fomo, fondo, fore, food, fokon, fosan, foigre, foloda, folecon, fosonko, fonoto, folale, fula, fuka, futu, fute, fuja, fule, fupe, fulalo, fulela, fukodo, fulo, fure, fuma, futing, fupon, fukolo, furo.

As the tracing out of the phonetic forms through the entire alphabet would be a bore to any one but a linguist, the foregoing may suffice for illustrative purposes. I visited other towns, and received *viva voce* enough additional verbiage at the hotels I stopped at to make several chapters. I abandoned my experiments about the end of April, 1895. This was due to the fact, primarily, that I could not, and did not substantiate the verbiage as an actual language, although I could trace out a very large number of words in actual use among the non-Aryan tribes of British India. Balfour's "Cyclopædia of British India" put me on the track of a number of words, also Hunter's vocabulary of the non-Aryan tribes. That there are some laws in mystic psychology not yet understood goes without saying. That there exists some mental source, defined as a psycho-automatism, with which man is capable under certain conditions of putting himself *en rapport*, has been abundantly proven by the praiseworthy efforts of the Society for Psychical Research; and if my desperate plunge at the problem ended in a *seeming negation*, it was not due to any lack of persistency on my part.

[At the General Meeting of the S.P.R. on April 24th, 1896, when the above paper was read, Mr. F. W. H. MYERS made the following remarks upon the case, which, at Mr. Le Baron's request, are here reprinted.—Ed.]

Mr. Le Baron's experiences are of especial interest as filling a gap that had remained for some time open in the symmetrical series of cases which show the progress of each class of automatic verbalisation from insane incoherence to supernormal instructiveness. In each of the other forms of verbalisation the series is already pretty complete. In *word-seeing* we start from the meaningless and terrifying words or sentences sometimes seen by the insane, as though written in fire, without them or within; we pass through the stage of words seen in the crystal with nothing to point to an origin external to the seer's mind; and we arrive at the supernormal phenomenon of the sight of words in the crystal which convey facts previously unknown to the seer. Similarly in *word-hearing* we start from the delusions of madness,

when persecuting voices and the like are so often heard; we go on to internal auditions of a monitory kind, which may well proceed from the auditor's own subliminal self; and finally we come to those "clairaudient" premonitions which imply the possession of a wider purview than the automatist himself had ever—to his own supraliminal knowledge—attained. For the third form of verbalisation,—*word-writing*,—the continuous series from insanity to inspiration is by this time still more familiar to readers of our *Proceedings*. In each case the gradual development from phenomena *below* into phenomena *above* the normal standard of personality seems to show that in these special directions the personality is most easily modifiable; and that subliminal disturbances, whether dissolutive or evolutive, are apt to come to the surface by these as their readiest paths. It is therefore only by a study in each case of the actual messages given that we can rightly rank the automatist, either as insane, or as merely a person in whom subliminal uprushes are unusually facile, or as a man in some sense inspired with fuller knowledge than other men, either by his own hidden spirit, or by spirits without him.

In the fourth form of verbalisation,—*word-utterance*,—we have until now mainly found examples of the lowest and the highest classes. The ceaseless vociferation of mania is familiar to all; and wonder is often expressed at the vigour and persistency of the maniac's utterance,—far surpassing the achievements of practised public speakers. Then at the other end of the scale we have the utterances which come through Mrs. Piper, in which (as fresh evidence makes increasingly probable) intelligences other than Mrs. Piper's own are habitually concerned.

But for intermediate examples,—for utterance neither insane nor in any true sense inspired,—we have thus far had to fall back mainly on old records. Chief of these have been the accounts of the Irvingite speaking with tongues. Next, perhaps, comes a little-known work, "Strange Sermons of Rachel Baker," which contains two cases of sermonising utterance during apparently quite genuine sleep. I need not say that "trance addresses" are quite a common feature in spiritist reunions. In the very few cases where I have heard these public addresses under supposed inspiration, I have felt sure that the speaker was in full possession of his or her ordinary consciousness. But I think it very probable that speeches may sometimes be genuinely made in a trance state;—which would, of course, be no more wonderful than it is when a hypnotised boy at an entertainment lectures on temperance and so forth, and remembers nothing about it when he awakes. The trance may be a mere self-hypnotisation;—and such, in the absence from the speech of any facts unknown to the speaker, we are bound to consider it.

But among all these strictly automatic vocalisations, neither insane nor inspired, Mr. Le Baron's case is the fullest and most instructive. I know no stronger example of the subjective sense of genius, or rather of positive inspiration, accompanying a subliminal uprush of absolutely meaningless matter. Some of this matter, indeed, was meaningless even to incoherence,—consisting of “unknown tongues,” which are pretty certainly destined to remain unknown. One cannot but note, with satisfaction at our present progress, yet with deep regret at the sad story of the past, the different way in which these so-called tongues were treated in Irving's time and in our own. Several, at least, of the speakers with tongues in Irving's congregation were, I have no doubt, perfectly sincere; and Irving himself was, as all know, a man of probity and elevation. Yet his ignorance—his unavoidable ignorance—of the phenomena of automatism landed him and his flock first in natural mistake, but at last in obstinate credulity, and spoilt the close of a noble and high career. In Mr. Le Baron's case, on the other hand, the automatist himself had the courage and candour to estimate his utterances in the calm light of science, in spite of strong subjective inducement to continue to assign to them a value which they did not possess. He had the good fortune, I need hardly add, to meet with a wise and gentle adviser, and the phenomenon which, if differently treated, might have led on to the delusion of many, and perhaps to the insanity of one, became to the one a harmless experience, and to the world an acquisition of interesting psychological truth. If our Society shall continue thus to tend to convert enthusiasm into science and peril into instruction, it will not have existed in vain.

F. W. H. MYERS.

SUPPLEMENT.

I.

INVOLUNTARY WHISPERING CONSIDERED IN RELATION TO EXPERIMENTS IN THOUGHT-TRANSFERENCE.

BY PROFESSOR HENRY SIDGWICK.

In a pamphlet of 60 pages, published in Wundt's *Philosophische Studien*, (Vol. XI., Part 4), Messrs. Lehmann and Hansen, of Copenhagen, give the results of a series of experiments in what they call—the term seems to me not quite exact—"involuntary whispering"; and on the basis of these results, they endeavour to show that the apparent success of two series of experiments in thought-transference of numbers, recorded in these *Proceedings* (Vol. VI., pp. 128—170, and Vol. VIII., pp. 536—552), may be explained by supposing the agent, Mr. G. A. Smith, to have unconsciously whispered the numbers. This explanation is in no way novel; in fact, attention was expressly called to it in the record of our first series of these experiments, *Proceedings*, Vol. VI., p. 164-6. We there speak of it in the following terms:—

"It is necessary to examine the experiments dealt with in this paper with anxious care, in order to see whether there was any possible channel of sense through which the agent's impression could have reached the percipients." We show briefly that "we are reduced to the sense of hearing." Then we say, "There seem to be only two ways in which the impression could have reached the percipient through his ears—either by means of *faint unconscious whispering* of the number by Mr. Smith in the effort of concentrating his attention on it, or by means of faint unconscious counting of the number by breathing, or some other rhythmical movement producing sound. . . . Of the two suppositions, unconscious whispering seems the less improbable, because the concentration of the mind on a written or printed number, with a view to having as intense an impression of it as possible, is found to cause a certain tendency to say the number mentally, but no tendency to count it."

We had then in view "faint unconscious whispering" as the least improbable explanation of our results, supposing that there was no genuine thought-transference.

At the same time I fully admit that the experiments of Messrs. Lehmann and Hansen have placed this probability in a new light.

That is, they have certainly proved experimentally—what, in our discussion we could only surmise as possible—that a number of two digits may be communicated from agent to percipient, by faint whispering with closed lips, so that a bystander in a slightly less favourable position for hearing than the percipient would hear no sound and probably observe no external signs of movement of the organs of speech. I say "probably" because so far as I have myself been able to imitate these experiments, I

should say that if the observer directed his attention to the neck and throat instead of the lips, he could hardly fail to detect such signs ; but unless he had the possibility of whispering with closed lips clearly in his mind, he would probably consider it enough to watch the lips, and give no special attention to the neck and throat.

I will briefly describe the experiments of Messrs. Lehmann and Hansen. They placed two concave spherical mirrors opposite each other, the distance between the two foci being two metres ; so that when the head of the agent was in one focus and the head of the percipient in the other, the concentration of the sound by the mirrors might be a substitute for the hyperæsthesia which they supposed to exist in the hypnotised subjects of our experiments. Under these conditions Messrs. Lehmann and Hansen attained a considerable degree of success in hearing each other's (so-called) "involuntary" whispering. It appears to me that "semi-voluntary" would be a better term than "involuntary," because the experimenters were conscious of giving way partially, but only partially, to the impulse to innervate the vocal muscles which they found to accompany the concentration of thought on a definite number. (I lay stress on this, because my own experience is that I cannot consciously make an audible whisper which is in any degree involuntary). In any case the mouth of the agent was firmly closed ; and we are told that "no movements of the lips were visible, and a bystander could not hear any sounds." The experimenters do not, however, give any record of systematic observations by a bystander, or state where he was placed ; they merely say generally that "all this was confirmed by Herr Buch, an assistant of the laboratory, who was once (!) present at the experiments." Accordingly, in performing a series of experiments in imitation of those of Messrs. Lehmann and Hansen—but omitting the apparatus of mirrors—I paid special attention to this point. I found that it was quite possible for an observer, fixing his gaze on the agent's mouth, neither to hear or see any sign of a whisper at a distance of two feet from the agent, while the percipient, at a distance which varied, but was ultimately extended to 18 inches—measured from the agent's mouth to the percipient's ear—heard with sufficient distinctness to attain a considerable amount of success in guessing. The whisperer in my experiments was sometimes my wife, and sometimes Miss Johnson ; but I ought to say that in both cases—as also in my own case when I made the attempt—the whispering was completely voluntary ; we could none of us detect in ourselves the slightest tendency to the semi-voluntary whispering described by Messrs. Lehmann and Hansen.

At the same time, with their experience before us, I must admit it to be possible that Mr. Smith may have whispered unconsciously in such a manner that—assuming hyperæsthesia in the hypnotised percipient—he might in some cases have been heard by the percipient without being observed by his fellow-investigators. I ought, however, to say that—as stated in *Proceedings*, Vol. VI., p. 165—we found nothing to suggest that the percipients were ever hyperæsthetic, though we were on the look-out for evidence of this. I must say further that I see no reason for regarding it as at all probable that Mr. Smith whispered unconsciously, since (1) his attention had been called to the danger of doing so, and (2) his effort was concentrated on the visualisation of the number ; and both these conditions must, it would seem, tend to

prevent involuntary whispering. Again, the experience of Messrs. Lehmann and Hansen gives no ground for the supposition that unconscious whispering is likely to be unperceived by the observers. On the contrary, Dr. Hansen expressly says that "at first there was a tendency to whisper too loud," which had to be "half-consciously" checked; and, certainly, the process of whispering with closed lips—which they ultimately adopted for the experiments—is, according to our experience, a markedly artificial one, which it requires some practice to carry out successfully. I may add that I have lately made further experiments in thought-transference of numbers with Mr. Smith without giving him any hint of my special aim in so doing; in which, besides listening close and attentively, I have concentrated my visual observation on possible signs of movement in the submaxillary region, where my other experiments had taught me to look for them; and have been unable to detect the slightest sign of a whisper. Nor was any sound of whispering detected by Mrs. Verrall, who acted as percipient, and who had practised herself in hearing the whispers of my wife and Miss Johnson.

Still, in spite of all this, unconscious whispering and hyperæsthesia combined give a possible explanation of the results of our experiments, so far as they were performed with agent and percipient in the same room: and accordingly this, on our principles, would have to be accepted as the most probable explanation, if experiments of this kind constituted the only evidence for thought-transference. This I fully admit.

The contention of the Danish investigators, however, goes considerably further than this. They endeavour, by an elaborate comparison of the unsuccessful guesses in their experiments and ours respectively, to show strong positive reasons for concluding that the same mode of communication was operative in both cases.

This part of their argument appears to me quite inconclusive.

They made altogether 500 experiments, taking the parts of agent and percipient alternately, so that each made 250 guesses. The experiments, like ours, were made with numbers of two digits. The results are given in a tabulated form in their paper, and we have reproduced their table at the end of this paper as Table A. The results of our experiments, which they compare with their own, were given in a similar table in *Proceedings S.P.R.*, Vol. VI., p. 168.¹ We reproduce the essential part of this table as Table B. It shows how often each numeral (the two digits being counted separately) was drawn, and all the guesses that were made for it. Comparing the two sets of results, they endeavour to show that the same wrong guesses of one numeral for another—which we will speak of as "substitutions"—occur in both Tables, to an extent that renders it a probable inference that the same cause—whispering—was operative in both cases. For this purpose, they compare the four substitutions made most frequently for each numeral in the two cases. The result² shows that out of the two sets of 40 substitutions thus compared, 28 are common to the two sets. (We will speak of these as "correspondences.") This is, no doubt, an amount of agreement decidedly in excess of what would most probably occur by mere chance. But a glance at Tables A. and B. will show that the agreement is exaggerated. The four

¹ They are reproduced in Dr. Lehmann's paper as Table V., p. 486.

² This result is given in Dr. Lehmann's paper as Table VI., p. 487.

substitutions most frequently made for each numeral are not determinate ; as there are a good many cases in each Table in which two or more numerals are guessed with equal frequency for another. In such cases of equality Dr. Lehmann has uniformly made the selection most favourable to the conclusion which he wishes to prove ; and I find that if the selection had been made on the opposite principle, his total of correspondences would have been reduced from 28 to 22¹. This much diminishes the impressiveness of his comparison ; and its effect will, I think, be altogether destroyed by a simple empirical test which our own experiments have enabled me to make.

Adopting Dr. Lehmann's plan of comparison, I have compared the thought-transference experiments of Table B. with a series of experiments in which we may assume that the guesses made were pure guesses and had no relation whatever, other than accidental, with the numbers drawn. The series thus used is the set of distant experiments with Miss B. mentioned in *Proceedings S.P.R.*, Vol. VIII., p. 547, which we have tabulated below in Table C. In these, the agent and percipient were either in different buildings or divided from one another by at least two closed doors and a passage. The number of experiments tried under these conditions was 383 (that is, 766 digits guessed) and the successful guesses (about 11 per cent.) were clearly due to mere chance. This series, compared with the thought-transference series (Table B.) in regard to the substitutions made for each numeral, gives a maximum number of 27 correspondences and a minimum number of 25. If the maximum here is not quite so much above the average as in the comparison of the series of Tables A. and B., the minimum is more so, so that it cannot be said that the second comparison shows a less close agreement between the two series compared than the first. Yet, as in the series of pure guesses there was no transfer at all, the cause of the agreement cannot be that an identical mode of transfer operated in both series.²

So far, I have followed Dr. Lehmann in comparing the four substitutions for each numeral which occur most frequently in the unsuccessful guesses in the two sets of results. But I do not think the plan of comparison a particularly good one ; because it requires us, in some cases, to include substitutions which occur hardly oftener—or even in some cases less often—than the average number of times ; and it does not seem reasonable to try to infer a law governing the substitutions from those which do not occur decidedly oftener than the average. Let us turn then, to enquire whether

¹ I observe that Dr. Lehmann himself—when comparing these experiments with a set of numbers arrived at through imperfectly apprehended visual impressions—treats 22 correspondences as a number which might not improbably occur by chance.

² I need not go into the more elaborate estimate of probabilities given by Dr. Lehmann on pp. 491—2, because the method used is fallacious. The improbability of the fortuitous occurrence of a particular number and arrangement of the correspondences in question, is not in itself a measure of the probability that the cause was the determination of the two series compared by a common mode of transfer. This can be seen at once by taking an extreme case. It might happen that there were no correspondences at all. The probability of this is, of course, extremely small, viz., $(\frac{5}{1226})^{10}$, or, using Dr. Lehmann's notation, $\frac{1}{12^{10}} W_2^{10}$, but it would be obviously absurd to say that therefore the same phonetic laws must have operated in determining the two series compared.

anything can be inferred from a comparison for each numeral of the one most frequent substitution. The following table shows these substitutions:—

	For									
	1	2	3	4	5	6	7	8	9	0
Substitutions in Whispered series (A) }	5	3	5	5	6 7	7 5	5	3	4	5
Substitutions in Thought-transference series (B) ... }	5	3	2	3	6	7	2	3	3	3
Substitutions in series of mere guesses (C) }	3	5	4	3	6	5	2	5	3	3

Dr. Lehmann lays great stress (p. 490) on the fact that the most frequent substitution is in five cases common to the thought-transference series and the whispered series, namely 5 for 1, 3 for 2, 6 for 5, 7 for 6, and 3 for 8. Two of these are, it will be observed, ambiguous, 6 and 7 being guessed with equal frequency for 5, and 7 and 5 for 6 in the whispered series. Still, without these there are three agreements. The apparent significance of this is, however, neutralised when we observe that there are five similar correspondences between the thought-transference series and the series of mere guesses.

Another way of comparing would be to take, say, the ten substitutions most often made in the whole of each series. These are as follows:—

<i>Whispering (A)</i>	<i>Thought-transference (B)</i>	<i>Mere guessing (C)</i>
7 guessed for 6, 20 times	3 guessed for 8, 26 times	6 guessed for 5, 18 times
5 " " 6, 20 "	2 " " 3, 24 "	4 " " 3, 17 "
5 " " 4, 17 "	5 " " 1, 22 "	3 " " 4, 17 "
5 " " 7, 15 "	3 " " 4, 22 "	3 " " 1, 16 "
3 " " 2, 13 "	3 " " 2, 21 "	5 " " 2, 16 "
5 " " 1, 12 "	1 " " 4, 21 "	2 " " 7, 16 "
3 " " 8, 12 "	2 " " 7, 21 "	1 " " 5, 15 "
8 " " 2, 11 "	3 " " 1, 20 "	5 " " 7, 15 "
4 " " 7, 11 "	6 " " 5, 19 "	5 " " 8, 15 "
3 " " 6, 10 "	2 " " 1, 18 "	6 " " 4, 14 ¹ "

¹ Five other substitutions occur in this series 14 times. The one selected is that which, taking into consideration both its line and its column, seems relatively the most frequent. One of the remaining five, namely, 5 for 1, is common to both the other series, and would therefore have made five correspondences between the thought-transference series and the series of mere guesses.

Here we have four correspondences between the thought-transference series and the series of mere guesses, and only three between the thought-transference and whispering; that is, again a larger number of correspondences with the series of guesses. It is clear, therefore, from all these various ways of considering the matter, that the correspondence between the substitutions made in the thought-transference series of Table B. and the series of mere guesses is at least as close as that between the thought-transference and the whispered series.¹

Here I may be asked, "Have you no positive explanation of the amount of correspondence found in the three series compared?" In answer, I would suggest that it is due to a certain amount of agreement in the "number-habits" of the percipients, *i.e.*, their unconscious bias in favour of particular numbers. In the three series that we have been discussing, the prevalence among the erroneous guesses of certain numbers is marked. In Table B, the numerals 3, 2, 5, 4, 6 are the five most frequently guessed erroneously. In our series of mere guesses (C), the same numbers, in the order, 5, 2, 3, 6, 4, are the favourites; while in the whispered series of Messrs. Lehmann and Hansen (A), 5, 3, 7, 4, are guessed above the mean number of times, 2 coming next in frequency. Now, in the series of mere guesses, this result can only be due to some subjective tendency in the guesser to select by preference the favoured numbers; and if so, we may reasonably suppose that the same cause operated in the other two series. And this is confirmed by an examination of the distribution of the erroneous guesses. We find (*e.g.*) that 5—the numeral most frequently guessed erroneously in the Danish table—is the most frequent erroneous guess for 1, 3, 4, 6 (ambiguously), 7, and 0. It is surely unreasonable to suppose that the preference for 5 in all these cases is due to its peculiar phonetic affinities with all the six numerals for which it is preferentially substituted; we must therefore attribute its frequency largely to "number-habit."²

¹A similar comparison of Dr. Lehmann's and Dr. Hansen's guesses with each other gives between the four most frequent substitutions for each numeral a maximum of 23 and a minimum of 16 correspondences; between the most frequent substitutions for each numeral in each series, three correspondences; between the ten most frequent substitutions in each series two correspondences and one ambiguous one; so that the agreement of these two series, which are arrived at by the same process, is not very close.

²Tendencies to guess particular numerals show various peculiarities. They are different, for instance, with the same percipient for the two digits, and that obviously independently of indications by hearing or otherwise. We have three different series with Miss B., described in our *Proceedings*, Vol. VIII.; one, a series of experiments with agent and percipient in the same room, which was very successful; the second, the series with agent and percipient in different rooms, which is shown in a tabulated form in Table D at the end of this paper, and which was moderately successful; the third was the series C, of which we have been speaking, in which there was no success at all. Omitting in all cases the successes, we find that in each series Miss B. named 1, 2, 3, and 5 above the mean number of times as a first digit (tens), and 3, 4, 6, and 8 above the mean number of times as a second digit (units). (They were not always in the same order.) Eight never occurs above the mean number of times as a first digit, nor 1 as a second, nor 0 or 9 as either. Our other percipients, P. and T., who were the percipients most concerned with the experiments of Table B. exhibit considerable agreement. Both of them name 2, 3, and 4, above the mean number of

Further confirmation is given by my own experiments in whispering in imitation of those of Messrs. Lehmann and Hansen.

For when we consider the favourite numerals in the unsuccessful guesses in both sets of experiments, we find, at first sight, a certain amount of agreement.

As the favourite numerals in my series are 5, 2, 3, 6—in this order, while, as we have seen,

The favourite numerals in the Danish series are 5, 3, 7, 4 (2 coming next).

But when we examine the exact substitutions in both cases, we find that the agreement vanishes.

For in the Danish experiments, taken together,

5 is erroneously guessed most often for 6 (20 times out of 93)

and with next degree of frequency for 4 (17 times),

but for 3 only 8 times.

Whereas, in my experiments,

5 is erroneously guessed most often for 3 (21 times out of 92),

next for 7 (20 times).

While it is only guessed 4 times for 6,

and only *once* (!) for 4.

This analysis seems to me to demonstrate clearly that the preference for 5 in both sets of experiments must be attributed mainly to “number-habit,” and not to the similar operation of phonetic laws of substitution in the two sets of experiments.

The only way in which such laws can be reasonably supposed to have operated is in causing 5 to be guessed erroneously for 7.

This occurs, as was said, 20 times in my experiments,

and also 17 times in the Danish experiments (7 being next in frequency to 6 and 4).

I find that in my experiments this tendency to guess 5 for 7 is found entirely in the case of the first digit—50 is remarkably often guessed for 70, but not 5 for 7.

I may observe that in my experiments 70 appears by far the hardest sound to catch. It is only guessed correctly 8 times out of 49, while 50 is substituted for it 15 times and 30 twelve times; 7 is also a difficult sound: it is only guessed right 11 times out of 40; but there is no preference for 5 as a substitute for it.

Messrs. Lehmann and Hansen have, of course, an entirely different explanation of the agreement between the whispered series and the thought-transference series. Dr. Hansen has made a very careful examination of the numbers incorrectly guessed in the Danish experiments; and he thinks that in the majority of cases he can trace the error to some regularly operating phonetic law, leading to that particular mishearing. It is, no doubt, *a priori* probable that the incorrect guessing in the whispered series would be partly traceable to such laws. At the same time—since the table appears to show that almost any number was liable to be taken for any other, and since Dr.

times as first digits (tens) and 3, 5, and 7 as second digits (units). Drs. Lehmann and Hansen seem to agree less well. Dr. Lehmann's greatest favourites are 5 and 3, and Dr. Hansen's 5 and 7. We have no means of comparing their first and second digits.

Lehmann and Dr. Hansen exhibited marked differences in the relative frequency with which they made particular substitutions¹—I cannot think that the data are sufficient to establish empirically the large number of phonetic laws which Dr. Hansen lays down.

It is, of course, easy for Dr. Hansen to show that in certain cases the incorrect guesses in our thought-transference experiments are in accordance with one or other of his numerous phonetic laws; and, as he does not attempt more than this, I think that—after the proof that I have given of the failure of Dr. Lehmann's attempt to establish the general probability that unconscious whispering operated in our experiments,—I need not enter into a detailed discussion of Dr. Hansen's laws. But I may observe that his whole treatment of our results appears to ignore the part that chance undoubtedly played in producing them. The cause of the transfer of numbers, —whether telepathy or whispering, or something different from either,—was not always operative; there were whole days when we had no success beyond chance. It is of no use looking for laws of deviation when there is no normal to deviate from, and on these completely unsuccessful days we must assume that no impression of the real number reached the percipient, through his ear or otherwise, and that, therefore, he could not mishear it. It is, therefore, certain that those of our percipients' impressions which occurred on these days were determined by chance. But it can, I think, be shown that others were so too. Let us suppose that in a series of experiments, the numbers of which both digits are guessed right are by some means—telepathic or other—transferred, but that no others are, the others being merely chance guesses. Then, after taking out the complete successes, so far as they exceed what chance would be likely to give, the remaining guesses would be distributed by chance. There would be no half-successes, (*i. e.*, successful guesses of one digit only, in its right place) beyond what chance would produce. And that is what we actually find to be the case in our percipient T.'s guesses of first digits, *i. e.*, digits in the units' place.² If the first and second digits (tens and units) in T.'s experiments are tabulated separately, we find that in second digits there are 51 successes in 246 guesses. But 30 of these successes belong to complete successes, leaving only 21 for half-successes. By chance we should have expected about three complete successes. If we take out the other 27, we have 219 guesses, with 24

¹ Apart from successes, there were only 458 single numerals to distribute over 90 places, of which only 7 were left blank. The most numerous substitutions were 5 and 7 for 6, each of which occurred 20 times; but whereas 7 for 6 was a substitution frequently made by Dr. Hansen, it was rarely made by Dr. Lehmann—who, on the other hand, favoured the substitution of 5 for 6 considerably more than Dr. Hansen did.

² Dr. Hansen complains (p. 526) that we have adopted the coarse method of tabulating first and second digits together instead of separately, so that Dr. Lehmann was obliged to do the same, and thus some substitutions are, in his view, less easily explained than they might otherwise have been. I think the complaint somewhat unreasonable. We have given a complete list of every number drawn and the corresponding guess, so that Drs. Lehmann and Hansen could have tabulated them in any manner convenient for their investigation. I am not surprised that they did not think it worth while to do so. I only point out that they had the material there,—which is more than we have as regards their experiments.

successes, and the most probable number of successes is $\frac{219}{10} = 22$. Apart, therefore, from complete successes, there is really no indication of any transfer in T.'s second digits. They appear to have been merely chance guesses.¹

A careful perusal of our paper in *Proceedings S.P.R.*, Vol. VI., will reveal other cases in which the percipient's impression was certainly determined by causes entirely independent of the number drawn. It is, therefore, certain that in a large proportion of the incorrect guesses of our Table B., it is perfectly idle to search for exemplifications of phonetic laws.

To return : I hold, for the reasons above given, that Messrs. Lehmann and Hansen have failed to furnish any positive evidence of the operation of unconscious whispering in our experiments. I have, however, admitted that their explanation of our results would still be the most probable one, if our successful experiments in thought-transference had been confined to the transfer of numbers with agent and percipient in the same room. But, as our readers know, this is by no means the case. A strong reason for thinking that unconscious whispering was not the cause of success in these experiments lies in the success in the series described by Mrs. Sidgwick and Miss Johnson in *Proceedings S.P.R.*, Vol. VIII., pp. 536—596, in which the agent and percipient (Miss B.) were in different rooms, separated by a considerable distance and a closed door. The conditions are, we can assure Dr. Lehmann, accurately described, and, as he admits (p. 493), it follows that if whispering is the explanation of the success attained, the percipient on the one hand must have had an almost fabulous hyperæsthesia of hearing and the agent on the other must have whispered so loud that it is inconceivable that the persons present should not have remarked it. He can only suggest that, as sounds are differently audible at different points of a room, and sometimes more audible at some point more distant from the source than at a nearer one, it may have happened that the relative positions of agent and percipient were favourable for hearing, while the relative positions of the agent and the person with him were not. I think that this hypothesis is in any case extravagant, considering the closed door, but it is rendered still more inadmissible by the fact that the percipient's position within the room was intentionally often varied, and that the relative positions of the agent and the person with him were varied also. And it will be remembered also that the experiments succeeded in two different sets of apartments. I believe it to be impossible that unconscious whispering can have been the mode of transfer in these experiments.²

¹ P. was about equally successful with both digits during the series of experiments here discussed. Miss B. in the experiments in separate rooms (see Table D) had, like T., practically no half-successes beyond chance in second digits, but was very successful in first digits.

² It may interest the reader,—though, after what we have said, it will be understood that we attach no particular importance to the fact,—to observe that a comparison of the four most frequent substitutions for each numeral in this thought-transference series with Miss B. (Table D.) gives, when compared with the series of mere guesses (Table C.), a maximum of 25 correspondences and a minimum of 24; compared with the thought-transference series of Table B., a maximum of 25 and a minimum of 22, and compared with the whispered series of Table A., a maximum of 24 and a minimum of 20. If we take the one most frequent substitution for each

Before leaving the subject of whispering, I will reply to one or two of Dr. Hansen's remarks about our experiments. At p. 526, he complains that we did not, in discussing the possibility of mishearing, distinguish between first and second digits, and attributes this to our probably having formed the conclusion beforehand that the appearance, and not the sound, of the number was the important matter. Drs. Lehmann and Hansen quite mistake our views about visual impressions,—but to that I will return later. In lumping together in the Table the first and second digits, we were influenced by two considerations. The first is that, if there was unconscious whispering, it is impossible to know whether it took the form of whispering the whole number as a number of two digits, or of whispering each digit separately. The second method would naturally be suggested by the independent way in which the two digits seemed generally to strike the percipients; and it must be remembered that Mr. Smith was consciously concentrating his efforts on a vivid visualisation of the two digits; in fact, he used to say sometimes that he concentrated his mind first on one digit and then on the other. The second consideration that led to our printing only one table was that, even so, the number of experiments was too small in our opinion to enable us to draw any very certain inferences as to the causes that may contribute to the particular distribution, apart from the successes. The numbers are distributed among 90 places, besides those occupied by successful guesses, and we know that the distribution is at least in great part accidental, so that there is not much margin left to work upon.

As Dr. Hansen points out, in thus combining first and second digits, we have ignored the resemblance of "teen" and "ty" and the difference between "three" and "thirty." The interchangeability of "teen" and "ty" he regards as of great importance. If the first and second digits of our experiments (complete lists of them are given in the paper in *Proceedings S.P.R.*, Vol. VI.) be tabulated separately on the same plan as the other tables we have been using, the substitutions of "ty" for "teen" will be shown by the first line of the table of first digits (tens). If specially liable to happen, this substitution will lead to 3, 4, 5, 6, 7, 8, and 9 being in the aggregate often guessed for 1, and to a small number of correct guesses of 1. On the other hand, the substitutions of "teen" for "ty" are shown by the first column of the table, and, if specially liable to happen, will make the substitutions of 1 for 3, 4, 5, 6, 7, 8, and 9 in the aggregate relatively frequent. It will be found that none of these things occur. One is not a numeral which our percipients were specially successful in guessing correctly, but it was about as often right as a first digit as it was as a second.¹ If

numeral, we find that series D. has in common with each of the above series, taken in the same order, two correspondences and one ambiguous one, four and one ambiguous one, and one and one ambiguous one, respectively. The ten most frequent substitutions for each series have in common two, four, and one, respectively. By none of these methods of comparison, therefore, is any marked agreement shown between series D. and the whispered series.

¹ In the experiments with Miss B. and the agent in different rooms (Table D.), 27 of the successful guesses of 1 occurred with first digits (tens), and only 16 with second digits. "Teen" was guessed as "ty" only 11 times, which is much below the average; and "ty" was turned into "teen" also below the average number of times.

therefore Dr. Hansen is right in thinking that interchanges of "teen" and "ty" would be specially liable to occur when unconscious whispering is the mode of communication, the argument, as far as it goes, is against the hypothesis that whispering occurred in our experiments.

The special interest of the numeral 3 depends on its having been rather often substituted for 8 in our experiments. As Dr. Hansen points out in a foot-note, the resemblance in sound between "thirty" and "eighty" is much greater than between "three" and "eight." But if our experiments be examined, it will be found that the prevalence of 3 for 8 is, in the first place, entirely due to one percipient, P.; and in the second, that he makes this substitution 11 times in the case of first digits (tens), and 10 times in the case of second digits (units). In the case of both digits, it is the most frequent substitution he makes, but its pre-eminence, compared to other substitutions, is more marked in the case of the second digits. It does not appear, therefore, that there is any force in Dr. Hansen's arguments to show that, by tabulating together the first and second digits, we have obscured the phonetic nature of the substitutions.

As I have said, I do not propose to discuss Dr. Hansen's explanations of some individual experiments of our series; since every numeral is substituted more or less frequently for every other, it is clear that, whatever the laws of phonetic interchanges may be, some apparent examples of them must be found among our experiments. I will only point out that one at least of his hypothetical explanations—twice repeated—is not tenable. He suggests that the guessing of 0 for 7 is due to the resemblance of the words "seven" and "zero." But the name of the numeral 0 is not "zero" in English; it is always spoken of as "nought" or "ought," and there is no resemblance between these sounds and "seven."

We have now to discuss from the point of view of visual impressions the mistakes that were made. Dr. Lehmann attributes to us the opinion that the thought of the agent called up directly visual images¹ in the brain of the percipient by means of an at present unknown form of energy. Dr. Lehmann has misapprehended our meaning. We did not intend to put forward any theory as to the process of thought-transference: we were solely concerned with establishing the fact that communications may pass from one mind to another otherwise than through the recognised channels of sense.

The passage from which Drs. Lehmann and Hansen infer our theory is the following²:—"Eight mistakes were made twenty times or more. These were: 1 guessed as 3 and as 5, 2 guessed as 3, 3 guessed as 2, 4 guessed as 1 and as 3, 7 guessed as 2 and 8 guessed as 3. Of these eight, only three could possibly be explained by unconscious counting, viz., 3 for 2, 2 for 3, and 3 for 4. But of these, the two first might equally well be explained as results of the kind of imperfect vision of the number so often complained of by the percipients, and this is also the explanation suggested by the most prevalent mistake of all, namely, 8 guessed as 3. And that this is the true explanation

¹ Lehmann, p. 487. "Die genannten Autoren nehmen, wie wir gesehen haben, an, dass die Gedanken des Absenders, vermittelt einer noch unbekanntenen Form der Energie im Gehirn des Empfängers direct Gesichtsbilder hervorgerufen haben." (See also p. 479.)

² *Proceedings S.P.R.*, Vol. VI., pp. 169-170.

is further suggested by the fact that 3 is very seldom guessed as 8. For though an 8 half rubbed out might resemble a 3, a 3 could not so easily be converted into a badly seen 8, whereas with 2 and 3 the possibility of mistake would be reciprocal; an imperfect 2 might be mistaken for a 3 as easily as a 3 for a 2. On the whole, therefore, we think that an examination of the facts affords no support worth considering for the supposition—in itself, as we have said, extremely improbable—of unconscious counting hyperæsthetically heard.”

The suggestion here is that the errors, so far as they go, point rather to defective externalisation than to defective transmission by counting. This in no way implies the direct transference of a visual impression, though it is not inconsistent with it. Our percipients in this series of experiments almost always became conscious of the idea through what, in a broad use of the term, may be called a visual hallucination. It was certainly more than a mere mental image, and we only hesitate about calling it a hallucination because the percipients generally had their eyes closed, so that we cannot judge to what extent their number visions would have competed with the visual sensations derived from external objects. But whatever name be given to the species of their impression,—and this is discussed at some length in the paper referred to, pp. 158-163,—there is no doubt, we think, that they first saw the number and then thought of it, not that they first thought of it and then saw it. They were not conscious of it until they saw it. This was, as we state, probably due to our own suggestion. In later experiments (*Proceedings S.P.R.* Vol. VIII.), the ideas were similarly caused to reach the consciousness of the percipients through auditory hallucinations, through automatic writing and through table tilting. But in none of these cases did we suppose that the mode in which the percipient became conscious of the idea threw any light on the question how it originally reached his mind. We believed ourselves to have stated this clearly in our paper. It is almost certain that the ideas sometimes reached the percipient through the ear, as when P. and T. imitated each other's guesses;—though, so far as we could ascertain, they could not consciously hear each other, owing to being hypnotised and not put *en rapport* with each other. “We must therefore suppose” to quote our previous words (see *Proceedings*, Vol. VI., p. 164), “that sounds which fell unconsciously on the ear yet produced an impression on the mind, of which the percipient became aware solely through its reproduction in a visual form—a supposition which is, of course, entirely in accordance with observations made by others.” At other times, as we have seen, the impressions seem to have been the result of pure guess-work, or,—what is for practical purposes the same,—produced by a variety of unrelated causes acting in opposition to one another. It is clear that the impressions sometimes came from Mr. Smith's mind,—how transmitted, whether through the senses or telepathically, is the question at issue. If telepathically, it may have been the name or the visual impression, *i.e.*, the form, that was transmitted. But that there was direct transmission from visual organs to visual organs is rendered improbable by the fact that the process of perception by the percipient was identical, so far as we could judge, whether the idea reached him from Mr. Smith, or orally from his co-percipient, or was the result of his own invention.

Our point was that, in the transmission of an idea to the percipient's conscious intelligence, error may occur in two ways ; either through the idea being imperfectly transferred (whether through the senses or telepathically), so far as the process of transference takes place outside the percipient's ordinary consciousness, or through being imperfectly externalised as a hallucination, which hallucination is then wrongly interpreted by the percipient's conscious mind. Of such misinterpretations of hallucinations we have definite instances,—instances where the idea that was intended to be communicated to the hypnotised person was known, his description of the hallucination that was produced by it heard, and also his conscious interpretation of that hallucination. Compare, for instance, P.'s post-hypnotic hallucinations of a vague rhinoceros when told to see a hippopotamus, of a figure which he called "Buffalo Bill" when he was told to see Robinson Crusoe, and of what he took for the Mayor when he was told to see Macbeth, and other similar instances, both with P. and T. as percipients, in Mr. Myers' experiments (*Proceedings*, S.P.R., Vol. VIII., pp. 459-462). Compare also P.'s apparently telepathically suggested hallucination of a choir-boy interpreted as a ghost (*Proceedings*, Vol. VIII., p. 565) and Miss. B.'s hallucination of a sailing-boat, of which the sails at first suggested chalk cliffs (*Proceedings*, Vol. VIII, p. 561). For a spontaneous case of a somewhat similar process,—a memory picture called up by association, but only afterwards recognised,—see *Proceedings*, Vol. X., pp. 143-4. Of course, the indistinctness of a hallucination might be due either to indistinctness in the underlying idea, as in the hippopotamus case above, or to imperfect reproduction of it in the hallucination, as in one of Mr. Myers' experiments referred to above, when T. saw horses with little things on their backs, but failed to recognise the little things as monkeys. Whatever the cause, there is no doubt that the hallucinations of numbers often were indistinct.

Drs. Lehmann and Hansen attempted to verify or disprove the hypothesis that this indistinctness may have been the immediate cause of the misnaming of the numbers, by experiments in which they read numbers flashed rapidly before their eyes. The results are of some interest, but we do not think the method affords any useful comparison with the kind of misreading we have suggested, because the indistinct vision complained of by our percipients was seldom that due to a momentary sight of the object looked at, but rather that due to distance or want of definite outline, or partial blotting out of the object (hallucination) itself. The hallucination usually persisted long enough to be seen as well as it was capable of being seen.

We have discussed this subject of misinterpreted visual hallucinations at some length, because what we said before seems to have been completely misunderstood by Drs. Lehmann and Hansen. But though it is quite true (in our opinion at least) that more evidence is afforded by our experimental series for errors of this kind than for errors arising from the misinterpretation of unconscious whispering or counting, the evidence does not amount to much, and it is not increased or supported by our later experiments.

A few words, before we conclude, about the observations of Drs. Lehmann and Hansen on thought-transference experiments, conducted by means of drawings. Certainly their own experiments, a certain superficial plausibility notwithstanding, were not very successful. They made fifteen attempts in

which the agent—Dr. Hansen—looked at a double number, and the percipient, Dr. Lehmann, drew the picture of it which arose in his mind. Of the results, six, comprising images of eleven separate numerals, at first seemed to them successful; but afterwards they concluded that the resemblance was illusory. This second opinion I have no inclination to question: undoubtedly there is a curious vagueness about Dr. Lehmann's figures suggesting deliberate ambiguity on the part of his subliminal consciousness; and the moral drawn by him as to the need of caution in interpreting results of this kind is undeniably sound, and useful to beginners.

But when Dr. Lehmann tries to apply the moral to the experiments in thought-transference by means of drawings or diagrams recorded in our *Proceedings*, he makes it evident that he has only given them a very partial and superficial consideration. Thus (1) he selects Professor Richet's experiments in *clairvoyance* for comment when the subject under discussion is *thought-transference*; (2) he asserts sweepingly that the percipients were most frequently hypnotised or hysterical: this being true of Professor Richet's percipients, but not true in the case of the thought-transference experiments with drawings described in our *Proceedings*. In these, none of the percipients were hypnotised, and there is no reason to think that any of them, except some of those who assisted Dr. von Schrenck-Notzing, were hysterical. In view of these palpable inaccuracies, his assertion that the agreement between original and reproduction in our experiments with drawings is "usually" not better than in Professor Richet's experiments, may be fairly set down to ignorance; it is evident that he has never seen those given in Vols. I. and II.—Mr. Guthrie's experiments,—or those in which Mr. Smith was percipient and Mr. Blackburn agent: or, again, those conducted by Mr. Rawson, and described in Vol. XI. This being so, his general conclusion that the result of all the experiments hitherto carried on in thought-transference in which the percipient expresses his thoughts in drawings can without difficulty be explained by two causes—namely, accidental coincidence and illusory resemblance—hardly deserves serious discussion. No one could assert this with regard to (*e.g.*) the six consecutive reproductions given in *Proceedings*, Vol. II., pp. 33—35 (see also *Phantasms of the Living*, Vol. I., pp. 35—51).

We have taken the trouble to examine and estimate all the experiments of this kind described in the *Proceedings* of the S.P.R., taking as a standard those drawings which Colonel Taylor regards as resembling each other in his "Experimental Comparison between Chance and Thought-transference," Vol. VI., p. 398. Those which we estimate as successes, we divide into three classes, as Colonel Taylor does. These classes are:—

1. Those which are alike in idea—that is to say, have the kind of resemblance one would expect if the percipient knew the name of the object the drawing represented, but had not seen the drawing. Instances of this are the hand in Mr. Rawson's experiments, Vol. XI., p. 4, and several others of his experiments,—or again, the cat in M. Schmoll's experiments, No. 58, Vol. V., p. 180, when a rough sketch of a cat was drawn by the agent and a cat's face seen by the percipient.

2. Those which are alike in shape. All successful experiments with nameless diagrams come under this head, and so do some cases where the

object drawn has a name, but has not been recognised by the percipient. An instance of this is No. 11 in *Proceedings*, Vol. I., p. 193, where a rough drawing of a horse's head is roughly reproduced, but not recognised.

3. Those which are alike both in idea and shape. As, for instance, the pig in Mr. Rawson's experiments, Vol. XI., p. 4; or the fish or the face in Mr. Guthrie's experiments, Vol. II., pp. 35 and 41. Simple geometrical figures with names may, of course, easily come under this head. See, for instance, some of Mr. Dessoir's experiments, Vol. V., pp. 355—357. There are in all in the eleven volumes of the *Proceedings* 493 experiments with drawings described, or at least mentioned.¹ Included in the 493 are 24 cases in which it is stated that no impression was received by the percipient, and 40 experiments with Mr. Guthrie's percipients, performed in sets of 6 or 7, under conditions known beforehand to be unfavourable, and which Mr. Guthrie thinks should not count. The following is the list :—

	<i>No. of Experi- ments.</i>
Mr. Blackburn and Mr. Smith— <i>Proceedings</i> , Vol. I., pp. 83—97, and pp. 175—216 (four preliminary and successful experiments on p. 163 omitted)	46
Mr. J. W. Smith, of Leeds— <i>Proceedings</i> , Vol. II., p. 7., and pp. 207—216	10
Mr. Guthrie, with the assistance at various times of Mr. Birchall, Mr. Hughes, Mr. R. C. Johnson, Professor O. Lodge, Professor Herdman, Mr. Gurney, and others.— <i>Proceedings</i> , Vol. II., pp. 31—42, and 189—200; Vol. III., pp. 424—428, and 442. <i>Phantasms of the Living</i> , Vol. I., pp. 35—51. Only a small portion of Mr. Guthrie's drawing experiments are given in detail in the <i>Proceedings</i> . We have, however, tracings of almost all the drawings and reproductions, and have used them in making our estimate	246
Herr Dessoir— <i>Proceedings</i> , Vol. IV., pp. 115—124, and Vol. V., pp. 355—357	30
M. M. Schmoll and Mabire— <i>Proceedings</i> , Vol. IV., pp. 324—337, and Vol. V., pp. 169—195 and 208—215	104
Dr. Frherr von Schrenck-Notzing— <i>Proceedings</i> , Vol. VII., pp. 3—22	26
Professor Lodge— <i>Proceedings</i> , Vol. VII., pp. 374—381	16
Mr. Rawson— <i>Proceedings</i> , Vol. XI., pp. 1—17	15
	Total, 493

Among these we estimate that both shape and idea were apprehended in 27 cases, the idea alone in 14 cases, and the shape alone in 82 cases—in all

¹ In a few of these experiments, the original was a real object and the reproduction a drawing, or the original a drawing which was verbally described by the percipient.

123, or 25 per cent. of the total 493. Of course, as the reproductions are in no cases quite exact copies, various persons would estimate some of them differently, so that, though we have tried to maintain a certain standard, a margin should be allowed for differences of opinion. We find, for instance, what had escaped our memory when we made our own estimate, that Colonel Taylor had made an estimate of the Smith and Blackburn drawings. We count 16 successes, while he considers that there were only 13 successes comparable to those in his chance series, and among these 13 he includes 2 which we do not count in our 16. There are, therefore, 5 of the 16 which he does not agree about. Let us assume that this is a normal proportion of disagreement, so that about a third of our 123 successful cases should be regarded as doubtful. Still we have 82, or about 17 per cent. of successes to compare with Colonel Taylor's 2 per cent. by chance; which last, moreover, would also probably be reduced if the supposed coincidences were required to be approved independently by several persons. In our total, also, we have included and counted as failures every experiment mentioned, but of which we have not a sufficient account to enable us to estimate it for ourselves. There are probably cases where no impression was produced among these.

But this is not the whole strength of the case against chance in these experiments. Those which we have not counted as successes are by no means all failures. There are intermediate classes showing varying degrees of resemblance to the original, or apparently representing part of the original only. When, without being all good reproductions, a set of experiments is such that if the originals and reproductions were severally shuffled up, they would be re-arranged in their proper pairs by a person seeing them for the first time, as is, for instance, the case with all or almost all the Blackburn and Smith series, this cannot be due to chance coincidence. Nor is it conceivable that series like Mr. Rawson's and Mr. Smith's of Leeds, or, as we have already said, Mr. Guthrie's on some days, should be accidental.

Dr. Lehmann thinks that, to avoid vagueness or ambiguity, the originals in experiments of this kind should represent definite objects or figures with names, which the percipient should be required to give. But supposing his own experiments in seeing numbers had been successful, would not he in the light of his later experience have been the first to say that his success was due to unconscious whispering by Dr. Hansen? It was to avoid the possibility of indications of this sort, conscious and unconscious, that the plan of trying to transfer nameless geometrical figures was adopted. In experiments in clairvoyance like Professor Richet's, where the drawing to be reproduced is unknown to all present, it would no doubt be desirable to use very clear and definite figures which could be named; as has been already pointed out by Miss A. B. Balfour in a careful criticism of Professor Richet's results (see *S.P.R. Journal* for December, 1888. Vol. III., p. 348). But in thought-transference experiments with agent and percipient in the same room, there are obvious advantages in making some of the experiments with nameless figures. Nameless figures may, no doubt, be sometimes transferred by unconscious movements appealing to the sense of touch, for which reason contact should be avoided; but it is hard to conceive of their being conveyed by unconscious—or, for that matter, even conscious—auditory

indications. Nameless figures afford, too, the best evidence that form may be transferred apart from any other qualities or associations ; and therefore, granted the reality of thought-transference, constitute an important part of the data for forming an idea of the nature of the process.

To sum up, we conclude that, interesting and instructive as the paper of Drs. Lehmann and Hansen is, and useful in giving practical illustrations of certain dangers to be guarded against, they have not shown that either chance, illusion, or unconscious whispering will account for the evidence for apparent thought-transference afforded by experiments in reproducing drawings and guessing numbers, described in the *Proceedings* of the Society for Psychical Research.

TABLES.

TABLE A.

Messrs. Hansen & Lehmann.

Numerals drawn	Guessed as.									Totals drawn	
	1	2	3	4	5	6	7	8	9		0
1	45	5	4	6	12	1	4	3	7	1	91
2	—	60	13	6	6	4	7	11	6	1	114
3	—	2	81	3	8	4	4	4	1	2	109
4	6	6	5	7	17	—	5	5	3	1	119
5	3	6	5	6	74	7	7	1	1	—	110
6	2	2	10	6	20	38	20	3	3	—	104
7	8	9	7	11	15	8	44	4	5	1	112
8	4	5	12	3	3	3	5	71	4	1	111
9	5	6	8	9	6	5	4	7	38	2	90
0	3	—	3	1	6	2	5	3	—	17	40
Totals guessed	79	101	148	122	167	72	105	112	68	26	1000

TABLE B.

Experiments in Thought-transference
(reprinted from *Proceedings*, Vol. VI., p. 168).

Numerals drawn	Guessed as.									Totals drawn	
	1	2	3	4	5	6	7	8	9		0
1	43	18	20	17	22	13	10	13	6	2	164
2	10	54	21	12	8	9	6	8	8	4	140
3	14	24	54	11	15	13	11	7	9	5	163
4	21	16	22	52	13	10	11	6	9	3	163
5	7	9	12	16	35	19	7	8	7	3	123
6	12	11	12	12	11	46	14	13	3	3	137
7	13	21	13	11	15	16	40	8	4	2	143
8	11	7	26	13	13	12	14	34	7	5	142
9	4	5	11	2	6	3	5	6	19	9	70
0	7	6	10	8	9	7	8	2	6	19	82
Totals guessed	142	171	201	154	147	148	126	105	78	55	1327

TABLE C.

Series of mere guesses.

Numerals drawn	Guessed as.									Totals drawn	
	1	2	3	4	5	6	7	8	9		0
1	5	13	16	6	14	9	6	7	—	2	78
2	6	7	9	12	16	12	5	12	1	4	84
3	8	10	12	17	12	5	7	6	3	2	82
4	9	14	17	6	10	14	4	4	1	3	82
5	15	14	12	14	18	18	12	11	—	5	119
6	7	8	10	9	12	7	8	9	1	1	72
7	7	16	10	5	15	10	15	5	1	—	84
8	3	14	9	11	15	13	8	12	—	1	86
9	—	5	8	3	4	6	6	6	1	—	39
0	1	6	7	5	6	5	1	6	1	2	40
Totals guessed	61	107	110	88	122	99	72	78	9	20	766

TABLE D.

Experiments with Miss B., Agent and Percipient in different rooms.

Numerals drawn	Guessed as.									Totals drawn	
	1	2	3	4	5	6	7	8	9		0
1	43	7	4	4	5	8	3	7	2	—	83
2	11	20	6	3	5	7	5	10	2	—	68
3	5	15	13	5	7	7	3	7	—	—	62
4	4	7	16	16	13	5	6	8	1	—	76
5	4	6	6	244	8	1	8	—	1	—	80
6	3	6	4	6	6	39	7	4	1	—	7c
7	10	14	7	8	6	11	18	6	2	2	84
8	6	8	6	10	4	10	11	25	—	1	81
9	2	3	4	3	4	5	6	1	1	3	32
0	2	3	4	5	4	8	3	9	1	1	40
Totals guessed	90	89	69	62	98	108	63	85	10	8	682

II.

RECENT EXPERIMENTS IN NORMAL MOTOR AUTOMATISM.

BY F. W. H. MYERS.

Two articles of much interest to students of automatism have recently been published in the *Psychological Review* (Macmillan). In July, 1895, appeared a paper on "Experimental Induction of Automatic Processes," by Professor Newbold, of Philadelphia—a valued contributor to these *Proceedings*. In September, 1896, among *Studies from the Psychological Laboratory of Harvard University*, appeared a paper on "Normal Motor Automatism," by Leon M. Solomons and Gertrude Stein, describing certain experiments on the early stages of such automatism, conducted with a care and ingenuity worthy of that distinguished psychological school.

I purpose first briefly to point out the relation in which these papers stand to views previously set forth in these *Proceedings*, and then to pass on to one or two reflections of wider scope, which the new experiments suggest. In Vol. II., (Part VII., November, 1884), of these *Proceedings*, will be found a paper "On a Telepathic Explanation of Some So-called Spiritualistic Phenomena," in which I attempted a first imperfect analysis of certain motor phenomena which, until that time, had excited little or no attention, except from those who saw in all automatic writing the direct action of spirits of the dead. Dealing in that paper with the earlier and simpler types of these phenomena, I there urged (pp. 222—6) that the "graphic automatism of mental abstraction" was often a normal and not a morbid thing: "simply an extension of the tricks of unconscious action, which to some extent are common to every one." Speaking of Greek words "unconsciously scribbled on the edge of composition papers in the nervousness of examination," I said that "in this case it is the strong concentration of the current of attention elsewhere, which allows the writing faculty to manifest itself automatically,—permits, that is to say, the unconscious cerebral action to discharge itself along the well-worn track which leads to the formation of written words."

It is this view of the connection of motor automatism with normal processes which these newer writers strongly, and, as it seems to me, convincingly support;—a fact the more interesting since I do not think, judging by internal evidence, that my own paper—written at a time when our *Proceedings* reached a smaller public than they now reach—has fallen under the notice of either author.

"I am now convinced," writes Professor Newbold, "that in many cases the writing is produced precisely as these sensory processes are produced—by the continuous application of an indeterminate stimulus to the highly organised writing mechanism." Precisely so;—and the previously cited instance of verse-composition, with mind fixed on the idea of *writing*, seems a good illustration of this "indeterminate stimulus."

Mr. Solomons' paper affords a confirmation,—which, as I have said, should be absolutely convincing for those who accept his account of himself and his collaboratrix as “representatives of the perfectly normal, or perfectly ordinary being, so far as hysteria is concerned,”—of a thesis which I have from the first urged as very important, but which has been called in question by high authorities (see *Proceedings*, Vol. VIII., pp. 470–472). I mean the thesis that there does exist a “Normal Motor Automatism;” that the so-called “disaggregation of personality” which produces automatic script may be cultivated without injury (if proper care be taken) by perfectly healthy persons of either sex. These two students taught themselves to read aloud unconsciously, and to write from dictation unconsciously, to write words of their own unconsciously—to perform, in short, to perfection various automatic tricks;—and yet at the end of (apparently) weeks of it they were not a penny the worse,—were even more scientific and even less hysterical than when they began. Their paper should become a *locus classicus* on this important question of the cultivation of motor automatism by sound and normal persons.

The task which they set themselves was an ingenious one. They aimed at reproducing, in a waking state of complete normality, “the essential elements of the *second personality*, so far as they consist of definite motor reactions unaccompanied by consciousness,” “or,” they politely add, “shall we say, out of deference to the subliminal consciousness theory, unaccompanied by *conscious consciousness*.” “These elements” they continue, “appeared to us to be conveniently considered under four groups, as follows:—

- “ 1. General tendency to movement without conscious motor impulse.
- “ 2. Tendency of an idea in the mind to go over into a movement involuntarily and unconsciously.
- “ 3. Tendency of a sensory current to pass over into a motor reaction sub-consciously.
- “ 4. Unconscious exercise of memory and invention.”

The first three of these elements they exemplified with great distinctness. They approximated, probably more nearly than waking experiments have ever done, to those phenomena of dissociation of the writing and the reading processes, and of either of these from normal memory, on which Mr. Edmund Gurney recorded so many experiments in his papers on “Peculiarities of Certain Post-hypnotic States,” and “Stages of Hypnotic Memory,” (*Proceedings*, Vol. IV., p. 268 and p. 515.) And in the course of these experiments—not being hypnotised, but alert and accurate—they made observations well worth study on the fluctuations of attention and consciousness.

As to the fourth element—“unconscious exercise of memory and invention”—they were perhaps less successful. Their best “writing from invention” seems to have consisted in the following sentence,—described (somewhat euphemistically) by Mr. Solomons as “more poetical than intelligible”;—*When he could not be the longest and thus to be, and thus to be the strongest.* Perhaps if their poetry had been stronger their paper would have been longer.

“That the second personality,” says Mr. Solomons after summing up his main results, “shows, in general, no abilities beyond this, will, I think,

generally be admitted." I certainly admit, and have often asserted, that the bulk of automatic messages,—including the first scrawls of a planchette, and the first tiltings of a table,—are much on this level. But certainly neither Professor Janet, (to whom I think allusion is made) nor myself ever regarded utterances of this type as indications of the formation of a secondary personality. They are, as I have frequently said, precisely parallel to the scappy words which float through one's mind in a moment's doze. A new personality is no more formed in the self by these little spurts of fragmentary independence than a new party is formed in the House of Commons whenever an honourable member cries "Oh! oh!"

The formation of a new personality, as of a new party, depends upon the number of psychical or parliamentary units which cohere, and the length of time for which they remain coherent. It may range from an *idée fixe*—which is a mere knot of fanatics—to a coalition which overturns the government, as when Félicité X.'s second personality dethroned her first. It is often a question of words at what point the term should be first applied—what degree of independent, intercurrent, persistent memory, altered faculty and diathesis, is needed to make one feel that here is a true psychical dimorphism, a second mould into which the plastic life of the intelligence might equally well have run.

The experimenters of whom I have been speaking here paused just beyond the threshold of the enquiry. The true, the important difficulty of classification occurs (as Professor Newbold, at any rate, knows well) at a later stage altogether. It occurs when the intruding type represents no longer a partition merely, or an allotropism, but something superadded and supernormal, something which seems to lie beyond the native scheme and scope of man. There is the point where previous beliefs or disbeliefs are rudely tested. In the case of Mrs. Piper's trances, for instance,—nay, in cases which in strangeness fall far short of hers,—we may some day see the conservative critic driven to cling to this very hypothesis of secondary personalities;—to stretch to breaking-point the conception of a subliminal self. For what else would have to be admitted would be more perturbing still.

Problems such as these should be slowly and carefully approached. In the mean time there is a real satisfaction in the thought that the younger generation of experimental psychologists are entering upon a line of investigation from which some of them, I doubt not, are destined some day to reap a rich reward of discovery. Only let them follow fearlessly wherever truth may lead, and beware of preconstructing from too few factors their formula for the Sum of Things.

III.

REVIEWS.

Prevestniki Spiritizma za poslednie 250 lyet. (The Precursors of Spiritism for the last 250 years.) By A. M. AKSAKOFF, St. Petersburg, 1895.

It is perhaps hardly fair to quote Mr. Aksakoff's title without his sub-title. He must now be almost, if not quite, the *doyen* of Continental Spiritists, and no man is better qualified to write a history of the movement, and at the first glance we might hope to have such a history here. To prevent disappointment, therefore, it is well to say at once that he does not profess to give more than "Published Cases of Spontaneous Medianic Phenomena from the year 1661, and the transition to Experimentalism in 1848."

It follows that much of the present work is but a translation into Russian of cases with which the English student is familiar. We need not deal here with Glanville or the Wesleys, with Tedworth or Hydesville, nor even with the recent report of the Continental observers of Eusapia. But two of the cases recorded, though previously published in one form or another, are inaccessible to western readers, and for different reasons deserve to be made more widely known.

The first occurred in a small Russian village, and, by the happy accident that it resulted in damage to Government property, became the subject of an official enquiry of an obviously unprejudiced character. Mr. Aksakoff has published verbatim, without comment, the whole of the official papers, including the depositions of all the witnesses. From these I have compiled a connected narrative. The other case does not enjoy this almost unique "objectivity" of record; but the facts stated are certainly among the most remarkable of their class, and, in spite of obvious deficiencies in the testimony, are sufficiently in analogy with other cases to deserve attention.

In January, 1853, a small cavalry post (*étape*) at the hamlet of Lipty, in the Government of Kharkoff, was commanded by a Captain Jandachenko, who, with his wife, lived in a small four-roomed house, which had been taken by the village community for his official residence. It had previously belonged to peasants, in whose time nothing abnormal had occurred in it. It seems, indeed, that in the beginning of January, 1852, something mysterious had happened there, but, as this is only casually alluded to by one of the witnesses, we must pass on a year, to January 9th, 1853, when the present history opens.

On that day it appears that the house was occupied by Captain Jandachenko and his wife, who had a bedroom and sitting-room on one side of the passage; on the other side was a store-room and the kitchen, in which the servants also slept. On this evening there were five of them, two maids named Efiia and Matrona, the latter hired, the former a serf of the

captain's, and three soldiers, one of them, Vasili (Basil), being the captain's orderly, and the other two attached to him temporarily.

After the servants had put out the light, but before they had gone to sleep—such is the account which they give without variations—sundry small objects, such as cups and wooden platters standing on the stove, were thrown about the room. A light was struck, but the throwing continued when no one was looking, and no cause could be found for it. Next day, the 5th, Captain Jandachenko mentioned this to his parish priest, Victor Selyezneff, who came with his church officers on the 6th, the Epiphany,¹ after the ceremony of blessing the water in the river. "On entering the house," he says, "I saw a small stone fall in the passage; a cup full of dumplings fell at my feet in the midst of the attendants who were carrying the icons, and I heard repeated knocks." Captain Jandachenko adds that after the house had been sprinkled with holy water—the object of the priest's visit—"an axe was thrown from the loft in the passage against the doors with remarkable velocity and noise." Another priest, Father Lobkovsky, whose curiosity had been aroused by what he had been told during the blessing of the river, was also present, with several other official visitors to the captain. They went into the kitchen, when, "in the sight of all of us, there was smashed against the door in the passage, where no human being was, a bottle of varnish, which, according to the captain, had been standing in the sitting-room cupboard under lock and key." Moreover, a soldier reported—though this, as we know, is "not evidence"—that a tub full of vegetables in the cellar had left its place and upset its contents.

Undaunted by the small success of the aspersion, the good priests brought the heavy artillery of the church into play next day. With the assistance of a third father, of the church officials and the icons, a solemn service was read. Hardly had they begun, when a stone was thrown in the kitchen, which was empty, and smashed a window in the sight of all. Then a piece of wood, followed by a pail of water, flew out of the kitchen into the midst of the assembly, the latter upsetting in the midst. The culminating horror was the fall of a stone into the basin of holy water itself. The house was again thoroughly sprinkled, and the holy objects carried back to the church; but as the phenomena still continued, the captain begged two of the priests to return and read the formal prayers for the exorcism of evil spirits.

This seems to have had little more effect than the previous service. The phenomena continued in the presence of several fresh witnesses, and on the 8th took a new turn. The bed in the room of the captain and his wife caught fire in the presence of both; they put it out, but it immediately blazed out in a fresh place, and had to be again extinguished. At the same time two blows were struck on the window by a brick, and four panes of glass broken. Captain Jandachenko was at last driven to change his quarters, but moved back after a few days. At the same time he again had recourse to the services of a priest, which for the time were successful,

¹ There seems to be some discrepancy in the evidence here; the Captain seems to say that the priest's first visit was on the 5th, while Father Selyezneff himself says that he did not go before the 6th.

as the phenomena were now reduced to nothing worse than some "human groaning" of a most doleful description, heard by the servants in the kitchen.

But after a few days it all began again; and on January 22nd Captain Jandachenko brought some friends in to witness what was going on. On this occasion the orderly, Vasily, was slightly wounded in the head by a knife thrown by the evil agency. Things grew worse and worse, and a number of peasants were brought into the house to watch; but, in spite of all care, next afternoon (the 23rd) the roof of the house caught fire and was burnt off, the efforts of the firemen being much hindered by a peculiarly thick and malodorous smoke blown in their faces. This led to an inquiry by the local "ispravnik" (head of the district police), which took place on February 4th and 5th.

The evil spirits yielded for a time to government interference; and though, as appears from the very full report of the evidence, nothing was found to direct suspicion against any one, all was quiet for some months. Captain Jandachenko had in the meantime permanently removed to another house, and here, on July 23rd, the old games began once more. In one room the pillows were thrown off the beds, in another jars of water were upset. The captain at once applied officially for help, and again a guard of peasants was set all about the house. In vain; things were more lively than ever through the 24th, and in the morning of the 25th the most serious troubles of all began. At eight o'clock the thatched roof was suddenly found to be on fire. It was extinguished before the fire-engine came, but for precaution engine and firemen were kept on the spot. At three o'clock in the afternoon thick smoke was seen coming from a shed in a wing of the house. A soldier crawled in on hands and knees, and dragged out a hay mattress full of smouldering fire, which was put out. Finally, at five o'clock a sudden gust of wind arose, and with it the whole roof of the wing burst into flames. The fire spread so rapidly that the men not only could not start the engine, but had great difficulty in dragging it into a place of safety; and with the captain's house four neighbouring cottages were completely burnt to the ground.

This serious damage of course led to a renewed enquiry, in the course of which most of the inhabitants of the village as well as of the house seem to have been examined. This lasted for five days, from July 27th to 31st, after which, no result having been arrived at, the matter was transferred to the civil court at Kharkoff, where it was duly pigeon-holed. It was only after repeated enquiries, and at last after vigorous representations from headquarters, that the final inquiry was held in July 1856, three years after the events. The evidence previously given was duly recapitulated, and the only decision given was to the effect that there was no suspicion to be traced against any one. There the matter was left till Mr. Aksakoff published the documents *in extenso*.

Naturally the enquiry is more remarkable for impartiality than for intelligence. It was recognised that the kitchen was always the focus of the "evil force," but so little effort was made to connect the phenomena with any particular person that it is very difficult, often impossible, in spite of the voluminous depositions, to discover exactly who was present on any

particular occasion. The evidence of the captain's wife, an important witness, one would think, seems never to have been taken. With a somewhat wider experience of similar cases, we naturally look at once to the servant maid Efimia. She, at least, was in the house during both periods of activity, which the other maid, Matrona, apparently was not. The orderly, Vasily, may have had his share; it is remarkable that the second outburst in July exactly coincided with his return to the house after a spell in hospital. But he came only for a day or two, and reported himself again in Kharkoff on the 24th, the day before the three fires, with which, therefore, he can have had no direct concern; the fact that he was wounded on the first occasion can hardly be said to tell one way more than the other. However, if Efimia was the actual criminal, she must have attained a creditable degree of skill to carry on her mystifications in daylight, often under the eyes of a whole crowd of people, without arousing the least trace of suspicion in the breast of a Russian police officer.

The second case to which I have referred is one of a more complicated and startling sort. It was never subjected to a similar enquiry, but on the other hand it had the advantage of investigation during a considerable period by apparently intelligent sceptics; and it is somewhat less remote in time, so that Mr. Aksakoff has been able to make enquiries and give information as to the credibility of the witness on whose evidence the phenomena are given. The whole story appears to have been widely known in Eastern Russia at the time of the occurrences, and was warmly discussed in the local papers.

The narrative is given in the words of Mr. Shchapoff, a country gentleman living in a house some 20 miles from Iletski, in the government of Uralsk, not far from Orenburg. In the following I give a much compressed outline, as far as possible in his own words:—

“On November 16th, 1870,” says Mr. Shchapoff, “I returned to my house from Iletski, a town some 30 versts away. My household consisted of my mother and mother-in-law, two ladies each aged about 69, my wife, a little over 20, and our infant daughter. My wife at once told me that they had had no sleep for two nights on account of certain strange disturbances. I was at first inclined to laugh, till I found that my wife was in earnest, and heard from her the following narrative.

“On the night of the 14th the infant had been peevish, and in order to quiet her, our cook Maria had been sent for to play the harmonica and dance to her. This sent the child to sleep. My wife then sat with a neighbour, the miller's wife, and was chatting with her, when the latter suddenly started up in alarm, but immediately begged my wife not to be afraid, explaining that she had suddenly fancied that some one was passing the window. Presently they both saw a shadow flitting past outside, and were about to go out to see what it was, when they heard in the loft over their heads the sound of dancing, exactly similar to that of Maria, and clearly recognisable by the characteristic rhythm of a difficult ‘three-footed’ (double-shuffle?) figure which she had been performing. They thought that Maria was practising, till they found her asleep in the kitchen, the steps overhead still continuing. The girl immediately took a light and searched the loft, but without result. Meanwhile the two ladies heard loud raps on the window panes. They got the miller and the gardener to look round the

house ; but nothing was found, and during the search both the raps on the window and the dancing overhead continued till morning and kept the house awake. Precisely the same thing began at ten o'clock the next evening, in spite of a thorough search of house and ground by the whole force of domestics and neighbours.

“I saw the miller, who confirmed this account, but added that he had found under the cornice and cleared away a pigeon's nest, which he thought might be the cause of the noises. I was satisfied by this explanation, and gave my wife a lecture on her superstition, put the whole thing out of my head, and sat down after tea to read Livingstone's Travels in Africa. Through the glazed doors which separated our rooms I heard my wife and child go to bed. All was quiet ; I read with interest for some two hours, when I heard, as though from the ceiling, a sort of vague scratching. I thought the dog had got into the loft, when presently the sound changed to the unmistakable “three-time” of the dance. It ceased and began again ; I could distinctly localise the place in the ceiling, over my wife's bed. As I listened, trying to understand, I heard a rap on the window of my wife's room, a dull rap, as though with the flesh of the finger on the window frame. After a few seconds the rap became clear, like the sound of a finger-nail on the pane. I went to look through the glazed door of my wife's bedroom, and saw by the night-lamp that she was fast asleep in bed. Just then came another rap, much louder, as though impatient ; it awoke my wife, who looked about her, and asked me if I heard. In reply I asked her if she had not been rapping. As though in answer to my question, there came a rap on the window beside my own bed. I rushed to it, and looked out into the yard, which was brilliantly lighted by the moon. I could see no one. I concealed myself behind the window, and held my breath, hoping thus to catch the offender ; suddenly two deafening blows were dealt the outer wall close to my ear, so violent that the house shook as though with an earthquake. I involuntarily jumped away, my wife called out “There ! It has begun again !” and began to pray. I took my great-coat and gun, sent the cook for the gardener, went out, and called the dogs. Neither they nor I could find any traces, though the night was as clear as day, and perfectly still. There were no marks on the snow beneath the windows where the raps had been heard. While we were outside we distinctly heard blows on wall and window ; when we returned with empty hands, those who were in the house asked us if we had not been making the noise from without. All this time the scratching and dancing over our heads continued. We searched the loft with lamps and lanterns ; while we were in it not a sound was heard, but as soon as we returned to the room beneath the noises began again.

“After a sleepless night we spent the day in a thorough search of the loft ; all in vain. When the night came, things were worse rather than better. The house was crowded with neighbours, yet the sounds on windows and walls went on very loudly, resembling in character the beating of a drum. Other phenomena occurred, for instance a loud dull noise in the passage, as though a heavy sack of flour had been thrown down from the loft. We rushed out to see what had happened, and had hardly closed the door behind us when it received such a violent blow that the solidity of the hinges seemed to be severely tried. In neither case could we find any cause.

“Next day the phenomena were much less violent, and in a day or two they ceased entirely. I spoke to my friends about them, and during a visit from one of them some weeks later, on December 20th, we determined to try an experiment by getting Maria to repeat the dance with which all had begun on the former occasion. To our surprise, as soon as she had gone through a few turns of the dance, raps began on the window-pane. They confined themselves to rapping out the rhythm of the seven bars of the dance, finishing each time with two or three louder blows. This ceased at midnight. Next night the raps began without any preliminary dancing at all, combined with a strange dull sound which we agreed came from the chimney of the stove. Then objects lying on the ground, such as boots and slippers, began to fly through the air, up to the ceiling, or against walls or doors; they were sometimes observed to give a sort of hiss as they flew. But the strangest thing was that when they fell on the felt-covered floor, they made a sound which did not belong to them; for instance a piece of stuff from the bedclothes fell with a sound like a hard heavy body, whereas hard bodies fell with no sound at all. The phenomena grew gradually weaker and then ceased.

“Ten days later we had a party of friends to see in the new year, 1871, and repeated the experiment of asking Maria to dance. We heard nothing till past twelve and were going to bed, when the drumming began, and grew louder and louder on the window-pane of my wife’s room, then on the walls, etc., as before. We set ourselves to observe; those who were outside the house heard the noise from inside, and *vice versa*. The raps then transferred themselves to the glazed door of my wife’s room, up and down which they ran, now in small shrill shakes, now louder and more measured. At times we heard vague deep vocal sounds which made us turn to one another and say, ‘Did you do that?’ and then laugh at our involuntary suspicions.

“The phenomena now continued without our attempting to produce them by the dance. On January 8th my wife fainted on seeing a ball of light float from under her bed, small at first, but growing to the size of an india-rubber ball as big as a soup-plate. Next day the raps began in the day-time, at 3 p.m., when she had lain down to sleep, and from this time they followed her everywhere as she walked about the room. This development troubled us both greatly, and alarmed us as to her health; for though she was not particularly afraid of the phenomena, she always felt a peculiar weakness when they began, with a strong tendency to sleep. We decided therefore to go for a month to my town-house. But the first person we met in town was my friend, Dr. Shustoff, who on hearing my account at once explained that the phenomena were due to electric or magnetic force, arising from some peculiarity either in the soil beneath our house or, possibly, in my wife’s organism. This not very lucid explanation was enough to cheer our unlearned minds, and we decided to return to the country with the doctor for a night at least. We did so, and set Maria to dance. The phenomena occurred, though only faintly; but he was able to hear raps on my wife’s bedroom window while she was visibly asleep on the other side of the room. The doctor again expounded his theory of electricity, and we were relieved to think that we could put out of our heads the tormenting idea of evil spirits. Even my mother, who had hitherto been praying and

crossing herself without producing any visible effect on the phenomena, felt that she could breathe again. Still we decided to carry out our intention of staying a time in town. The servants told us that nothing happened during our absence. On one occasion I went there with a friend, and set Maria to dance, but not a sound resulted.

“We returned on January 21st. Hardly had my wife gone to bed when the raps recommenced and things began to fly about—dangerous things now, *e.g.*, a table-knife was hurled violently against the door. This continued in spite of the care with which we shut up all such objects; knives and forks which had been put into a closed cupboard in the evening used sometimes to fly about at midnight, and some were found sticking in the wall by our bed. We were now thoroughly alarmed, and I was grateful for the visits of friends who came out of curiosity to stay with us.

“The doctor’s theory of electricity had finally to be given up on January 24th. That night a visitor, Mr. Alekseeff, was sitting talking to my wife, and I was carrying the baby and singing to it. When I stopped singing the other two asked me to go on with the tune; then they asked me to change it; I did so, and then for the first time noticed that the raps on the window were beating time to me. Mr. Alekseeff began to sing; the invisible fingers beat time to every tune, going astray only when he purposely made a sudden change in tune and rhythm. We then tried singing in a whisper—the whisper was reduced to a mere movement of the lips—finally the tune was repeated only mentally; yet the raps kept time with perfect accuracy. The force was gifted not only with hearing and understanding, but with the power of divination. We got my wife to move to a bed close to the glazed door; the change was followed by a perfect torrent of raps on the glass. We then found that the force would rap as many times as any of us either rapped out on the glass or silently willed. My mother now suggested that we should chant the Lord’s Prayer; there was not a rap to be heard beyond a sort of chord at the end. Thinking that the chant was perhaps not lively enough, I tried the Easter Hymn; again not a sound! My friend sang a secular tune, which was immediately accompanied with embellishments! Just then our Tartar servant entered the room, and we asked him to chant his prayer. Silence at once. We told him to say it faster, but however quickly he gabbled his ‘Allah bismillah’ there was not a rap in answer. But when I tried to imitate his tone in singing the invocation to the spirits from the *Freischütz*, every bar called forth particularly loud raps.

“I then began to put questions. ‘Are you a man?’ Silence. ‘A spirit?’ One rap. ‘What sort of spirit? Good?’ No answer. ‘Evil?’ Two loud raps. ‘What is your name?’ And I went through all the names of good spirits I could think of without getting a reply. But when I came to the general name of the Power of Evil, and hesitated before pronouncing it, the raps began as though trying to utter what I had on the tip of my tongue; and as I spoke the word ‘Devil?’ there came such a deafening blow, as though from the whole substance of the door, that we all involuntarily jumped backwards.

“I then asked why a spirit should behave thus to me, and in reply to various questions was told that it was ‘set on at me.’ I asked who had done it, and after going through many names was told that it was the servant

of a neighbouring miller with whom I was at the time engaged in a law-suit about my mill-pond. (I may mention that some time before I had met this very man, who asked me about the disturbances, and said, with a peculiar maliciousness and confidence, 'It will be worse than that; they will drag you by the hair.' One day I found my wife in tears, and asked her what it was. 'They will not let me sleep,' she said, 'they have been pulling my hair.')

"At this time the Orenburg section of the Imperial Geographical Society, having heard of the manifestations, asked me for an account, particularly of the meteorological phenomenon of the ball of fire. After drawing it up I took the opportunity of sending a copy to Dr. Shustoff, the author of the electrical theory, asking him what he now thought. To my surprise and satisfaction, this letter was answered by a visit from the doctor himself with two friends, Mr. Akutin, a civil engineer employed on government work, and Mr. Savicheff, a local man of letters and poet, editor of the *Uralsk Military Gazette*. The three presented themselves merely as interested enquirers, though it subsequently appeared that they had been officially appointed a committee of enquiry by General Verevkin, governor of the province. I placed my house and family entirely at their disposal, and they began with a strict examination of the rooms. The manifestations, which had ceased for a time, began again on the first evening of their visit, with raps, flying objects, etc. Next morning they set up the apparatus they had brought with them, breaking up part of the floor of my wife's bedroom in order to plant an iron rod in the soil beneath; the other point of it was directed towards the glazed door, the glass of which they covered with tinfoil. They brought also a Leyden jar, magnets, and other instruments; but I may say at once that none of the apparatus threw any light whatever on the causes of the phenomena. A detailed journal of observations was kept, and we took turns to watch in my wife's room, whence the chief phenomena seemed to proceed.

"Our first aim was to establish some sort of system in the phenomena; but they, on the other hand, seemed to take pleasure in deceiving us. Thus quite at the beginning, as we were sitting at tea, the tea-things began to fly away in straight lines from my wife. As soon as we thought we had established the fact of some sort of repulsive power in her, she went to the sideboard and opened the door; the things inside began to fly towards and past her. However we watched, we never saw anything at the moment of starting, but always when flying or falling.¹ We got my wife to touch the things in the cupboard in turn; none of them moved, but while we were all watching them, something at the other end of the room, a candlestick or ladle, would come flying past and fall near us.

"This continued for several days, till things took a new turn. One evening Akutin, who was in sentry duty in my wife's room, suddenly called to us to come in. He told us that he had been listening to some indefinite rustlings on the bed, where my wife was fast asleep, and it had occurred to him to make a slight scratching with his own nails on the silk coverlet. This had been immediately replied to by a similar scratching. He repeated the experiment in our presence. The result was as he had described; the sound he made was repeated at once and at the same spot. The experiment

¹ Compare Mr. Bristow's case in *Proceedings S.P.R.*, Vol. VII., p. 389.

was varied ; a definite number of sounds were made of different intensity, on coverlet, pillow, bedstead or chair ; they were always repeated exactly and at the same spot. Akutin then asked which of us had made the sounds, and as he went through our names the same rustling sound invariably indicated the person who had in fact made the sound. Needless to say that all this time we kept my wife carefully under observation ; she was lying with her head turned away, so that she could not look at us to see who was doing it.

“ Akutin was silent and disturbed for a time. He then began to ask questions on such things as literature and politics, for instance about the events of the Franco-German war, which was then going on. He invariably received correct answers, such as could not have been given by my wife, who took no interest in political matters, and never read the papers, which, indeed, we were not taking in. Purposely misleading questions were received with obstinate silence. Akutin continued to ask in French and German, languages unknown to most of those present. The result was just the same ; the answers were always correct. Akutin went on to ask about the future ; which side would win ? The answer was, the French, and Gambetta would be President. Among other things we were told that the Socialist Lassalle was alive. I thought he was dead, and exclaimed, ‘ What nonsense ! ’ but Akutin corrected my mistake. He asked to be left alone, and did not go to bed, passing the night in deep meditation. Next morning, at breakfast, he turned the conversation on to politics, and convinced himself that my wife hardly knew of the existence of the war, and was utterly ignorant of its details. As for Lassalle and the rest, she had married young, and her mind was entirely occupied with the nursery and housekeeping.

“ Akutin now asked us to move to our town house in Hetski for further observations. Here the phenomena were much weaker ; the raps, for instance, were only heard in the immediate neighbourhood of my wife. Two local physicians were called in to observe. One of them, especially, a German, Dubinsky by name, was completely sceptical. He first declared that my wife made the raps by clicking her tongue, and made her hold it out. The raps ceased for a moment and began again. It was now asserted that ‘ it was only the beating of her pulse, and nothing more ! ’ When Akutin declared his intention of publishing the facts, Dr. Dubinsky attacked him vehemently, and declared that he would compromise himself to no purpose, that the whole thing was trickery, and that all similar inquiries had always ended in a fiasco. This evidently produced an effect upon Akutin, and made him waver. He called upon us to return at once to the country house, where I regret to say that he had recourse to means not the most honourable. He bribed a servant boy to say that his mistress made the sounds herself, and then pretended that he had caught her trying to deceive us by throwing things. He declared, therefore, that Dubinsky was right, and that he would give such a turn to his report as would not lead to any consequences ; but that he was convinced we were victims of a mystification on my wife’s part, owing to some morbid tendency for which she ought to be put under medical treatment.

“ We accordingly placed her in the hands of Dr. Dubinsky ; her health and spirits improved, the phenomena ceased, and we should have been quite happy but for two annoyances. First, the appearance of an article in the

Uralsk Military Gazette, signed by the three members of the commission, to say that the marvels at my country house were all the work of human hands; and, secondly, a letter from the governor of the province, warning me that, as it had been reported that all the manifestations were susceptible of a perfectly natural explanation, such 'tricks' were not to occur again, and reminding me of the serious legal penalties for the dissemination of superstition.

"Imagine, then, our horror when, on our return to the country in March, the unknown force at once set to work again. And now even my wife's presence was not essential. Thus, one day I saw with my own eyes a heavy sofa jump off all its four legs, and this while my aged mother was lying on it—to her terrible alarm, I need not say. This was particularly startling to me, as hitherto I had hardly dared to trust my own eyes; I had always been with others who might have influenced me. But this took place in full daylight, there was no one present but my mother and myself, and a servant in the antechamber; and I clearly saw the heavy sofa, with my mother lying on it, rise three or four times clean off its legs.

"In the evening of the same or the next day, as we were in the sitting-room, there flew out from a wash-stand in the antechamber, in the sight of us all, a bluish phosphorescent spark, with a crackling noise. It went towards my wife's room, though she was not there; and simultaneously we saw something flame up inside. I rushed in and saw a cotton dress, only partly made up, burning on a table in a corner. My mother-in-law, who was alone in the room, anticipated me in extinguishing the fire with a jug of water. Before admitting any one, I made a careful investigation, and found no explanation whatever of the fire, other than the spark we had seen. There was a strong smell of sulphur in the room, proceeding apparently from the dress, the burnt portions of which were still hot to the touch, and steamed as though the water had been poured on hot iron instead of on calico.

"Though reluctant to leave my family alone at such a time, I was called to the town by unavoidable business, and therefore asked a young neighbour, Mr. Portnoff, to come and keep them company in my absence. When I came back the day after, I found the whole household on the point of leaving, and the luggage outside the house; they said it was impossible to stay there any longer, as things had begun to take fire of themselves, and the previous evening it had come to a spontaneous combustion of my wife's dress, in endeavouring to extinguish which Mr. Portnoff had burnt his hands badly. Mr. Portnoff, whose hands were covered with blisters, gave me the following account. On the evening of my departure the phenomena had begun with bright meteors, which appeared dancing in the verandah, in front of the sitting-room window. There were several of them, varying in size from a large apple to a walnut. Their shape was round, their colour deep red or bluish pink; they were not quite transparent, but rather dull. This curious dance continued for some time; it seemed as though the globes were trying to get in at the window. My wife was not asleep at the time.

"Next evening they went to sit in the verandah, the weather being warm. Portnoff returned for a moment to the house and found the bed on fire. He called for help, and the bedding, which was well aflame, was put out, and a careful search was made for any remains of fire. They had again taken

their seats in the verandah, and were wondering what the source of the fire could be, as no matches had been lighted in the room, nor were there any cigarette smokers in the house, when they again smelt burning. This time they found the horse-hair mattress on fire from its underside. The fire had penetrated so far that in their opinion it could not have come from any sparks previously overlooked; the more so as the very unflammable material contained no admixture of anything else.

“But this was not all; the catastrophe was still to come which decided us to leave the house at once, in spite of the inundations of the melting snows. I give it in Portnoff’s own words. ‘I was sitting playing the guitar. The miller, who had been with us, got up to leave, and was followed by Helena Efimovna (Mrs. Shchapoff). Hardly had she shut the door behind her when I heard, as though from far off, a long deep-drawn wail. The voice seemed familiar to me; overcome with an unaccountable horror I rushed to the door, and there in the passage I saw a literal pillar of fire, in the middle of which, draped in flame, stood Helena Efimovna; the lower portion of her dress was on fire, and the flames almost concealed her. I supposed that the fire was not violent, as her dress was quite a thin one, and rushed to put it out with my hands; but I found it burnt them badly, as though they were sticking to burning pitch. A sort of cracking noise came from beneath the floor, which also shook and vibrated violently. The miller came back from without to help, and between us we carried off the unconscious victim in her burnt dress.’

“My wife’s account was that as soon as she passed through the door into the passage the floor shook beneath her, there came a deafening noise, and at the same moment one of the bluish sparks, which we had previously seen come from the cupboard, flew up from below; she just had time to cry out in terror, when she found herself wrapped in fire, and lost consciousness. It is remarkable that she was not in the least burnt, though the thin dress she was wearing was burnt all round higher than the knees, nor was there any sign of fire on her legs.

“The miller’s account was that he had left the house and was walking through the garden, when he heard first a noise and then a cry, and turning round saw there was fire in the passage. He was so frightened that his feet could hardly carry him to render help.

“After this there was nothing for it but to run away. We took refuge at the neighbouring hamlet in a Cossack’s hut till the floods subsided, and I carried out sooner than I had intended a plan already formed to leave my country house and take another. We had no further return of the phenomena.

“I ought to have mentioned in the proper place that we had one or two cases of what I have now learnt to call materialisation. The first was a delicate pink hand like a child’s, which my wife saw drumming on the window-pane. She afterwards saw on the same pane two dark living things like leeches, which frightened her into a swoon. Another time I was alone in the house with my wife, who was asleep, and I tried to get a sight of what it was that was rapping on the floor of her room. Time after time the rapping stopped at the moment I looked in, and began again as soon as I went away. But at last I rushed in just as the raps were beginning, and

was numbed with horror. I saw a tiny pink hand, like a child's, spring up from the floor, disappear behind my wife's coverlet, and pull at the folds, so that I could see with what unnatural quickness the folds moved, beginning from the lower end to the point by her side where the hand had disappeared. I was horrified, because from my wife's position it was absolutely impossible that the hand could be her own.

"I have only to add that my wife was a healthy, religious, quiet, affectionate woman, who suffered from no ill-health till her death from child-birth eight years later."

These events, as has been said, happened more than twenty years ago. But Mr. Aksakoff has done his best to collect all the contemporary confirmative evidence, including letters written at the time, certificates from several of the witnesses, the account as it was published at an early stage of the phenomena in the *Uralsk Gazette*, and the report of Messrs. Akutin and Savicheff, in which they say that "there is nothing which is not the work of human hands." The grounds on which they base this conclusion appear to be that the raps could be imitated, and that when so produced it was generally very difficult to locate the spot from which they came; and that the flying objects were never seen to start, and could only be observed when flying or falling. They do not appear to have grappled with the facts as stated by Mr. Shchapoff; but of course their adverse verdict cannot be entirely set aside. Finally it should be added that Mr. Aksakoff has copiously annotated the narrative with references to similar phenomena in the spiritistic literature with which he is so intimately acquainted. These notes are not the least valuable portion of the publication.

This long notice must close with very brief mention of another curious case, in which similar phenomena occurred in a Russian peasant's hut near Nijni Novgorod. The noises and the throwing of objects were here accompanied by voices, which personated the "domovoi" or house-spirit who in popular belief is attached to every Russian home. The voices used to hold friendly and jocose conversations with the inmates at night, when the lights were out; they represented themselves to be a spirit peasant family, and discussed such village matters as would be of interest to a moujik. The medium in this case was a little girl of eight years old, and the question whether she could not have played the part without any external assistance mainly turns on the physical possibility of so small a child producing the bass voice in which the father domovoi used to talk. Here, as in Mr. Shchapoff's case, the authorities intervened with legal proceedings on the ground of cheating. The family made a pilgrimage to a neighbouring monastery to ask for a cessation of the trouble, and this measure proved successful.

WALTER LEAF.

A Scientific Demonstration of the Future Life. By THOMSON JAY HUDSON, Author of *The Law of Psychic Phenomena*, etc. (Chicago: A. C. McClurg and Co., 1895.)

"The object of this book is to outline a method of scientific inquiry concerning the powers, attributes, and destiny of the soul, and to specifically point out and classify a sufficient number of the well-authenticated facts of

psychic science to demonstrate the fact of a future life for mankind." "In pursuing this inquiry, I have endeavoured to follow the strictest rules of scientific induction, taking nothing for granted that is not axiomatic, and holding that there is nothing worthy of belief that is not sustained by a solid basis of well-authenticated facts." (Preface).

The main argument of the book is summarily stated in the concluding chapter as follows :—"If Nature is constant, no faculty of the human mind exists without a normal function to perform. If no faculty exists without a normal function to perform, those faculties which do exist must perform their functions either in this life or a future life. If man possesses faculties which perform no normal function in this life, it follows that the functions of such faculties must be performed in a future life. Or, to put the argument in a still more concise and purely syllogistic form, the propositions stand thus :—

"Every faculty of the human mind has a normal function to perform either in this life or in a future life.

"Some faculties of the human mind perform no normal functions in this life.

"Therefore, *some faculties of the human mind are destined to perform their functions in a future life.*

"No scientist will for a moment question the soundness of the major premise of the above syllogism. It is self-evident,—axiomatic.

"No one who is at all familiar with the results of modern scientific research in the field of psychic phenomena will for a moment gainsay the minor premise. The one faculty of telepathy alone is demonstrative of the soundness of that proposition, to say nothing of the faculty of intuitive perception, etc.

"The major and minor premises being each demonstrably true, the soundness of the conclusion that man is destined to inherit a future life is self-evident." (p. 321.)

We need hardly say that the major premise of this argument would meet with much questioning by those scientists who no longer believe in "faculties," but who are finding more and more of the inter-connection of states of consciousness and of sub-consciousness, and of the dependence of all these states on the nervous mechanism.¹

The minor premise rests on the evidence on which the author bases his fundamental distinction between the subjective and objective mind. This theory of a dual mind, which was a "working hypothesis," and "formulated tentatively" in the earlier book, he now believes to have been "abundantly demonstrated by the facts of experimental hypnotism, cerebral anatomy, and experimental surgery." (p. 318.)

In the second book he proceeds in this way to carry it to its "legitimate conclusions." The "faculties" of the "subjective mind" have increased in number, definiteness and extent since the earlier book. (See the review of *The Law of Psychic Phenomena, Proceedings S.P.R., Part XXIV., Vol.*

¹ Compare the book under review with, e.g., the late and great "Gehirn und Seele." Flechsig: 2^{te} Ausgabe, mit Anmerkungen, 1896.

IX., p. 231, and the book itself, pp. 29, 46, 62, 151, 208, 250, 287-294.) They are recapitulated in the *Scientific Demonstration* as follows:—

“1. The subjective mind is constantly amenable to control by the power of suggestion.

“2. It is incapable of independent reasoning by the processes of induction.

“3. Its power to reason deductively from given premises to correct conclusions is practically perfect.

“4. It is endowed with a perfect memory.

“5. It is the seat of the emotions.

“6. It possesses the power to move ponderable objects without physical contact.

“7. It has the power to communicate and receive intelligence otherwise than through the recognised channels of the senses.

“8. Its activity and power are inversely proportionate to the vigour and healthfulness of the physical organism.

“9. It is endowed with the faculties of instinct and intuition, and, under certain conditions, with the power of intuitive cognition or perception of the laws of Nature.

“It needs no argument or illustration to show that the objective mind has little in common with the subjective in any of the foregoing attributes, powers, and limitations. The objective mind (1) is manifestly not controllable by the power of suggestion in the sense in which the subjective mind is so controlled,—that is, against reason, experience, and the evidence of the senses; (2) it is capable of inductive reasoning; (3) its power of deductive reasoning is by no means perfect, nor does it approach perfection; (4) its memory, in its best estate, is very defective, and comparatively speaking, amounts to nothing more than an uncertain, evanescent ability to recall a few of the more prominent ideas and impressions which it has once experienced; (5) it is absolutely destitute of emotion; (6) it cannot exercise the slightest kinetic force beyond the range of physical contact; (7) it is destitute of any power remotely akin to telepathy; (8) the essential prerequisite to the successful exercise of its highest powers and functions is a perfectly sound, healthy, normal physical organism; (9) it is endowed with no power which is remotely akin to instinct or intuition.” (pp. 225-6.)

The powers belonging exclusively to the subjective mind are held to constitute a “set of faculties, each perfect in itself and complete in the aggregate,—that is to say, every faculty, attribute, and power necessary to constitute a complete personality being present in perfection; and we find that the most important of those faculties perform no normal function in physical life.

“Here, then, we have a personality, connascent with the physical organism, but possessing independent powers; a distinct entity, with the intellect of a god; a human soul, filled with human emotions, affections, hopes, aspirations, and desires; longing for immortal life with a passionate yearning that passeth understanding; possessing, in a word, all the intellectual and moral attributes of a perfect manhood, together with a kinetic force often transcending, in its visible manifestations, the power of the

physical frame ; in a word, 'a perfect being, nobly planned,'—a being of godlike powers and infinite possibilities. . . .

"Is it conceivable that there has been created such a manhood without a mission, such faculties without a function, such powers without a purpose?" (pp. 319 and 320.)

It ought, however, to be observed that the final syllogism, before quoted, does not involve the theory of the dual mind. "Not," says the author, "that I have the slightest doubt of the scientific accuracy of that hypothesis; for I can have none in view of the array of facts which have been presented. But, as I have already pointed out, the theory of a dual mind and the theory of a unitary mind with dual faculties are concurrent hypotheses, and lead to identical conclusions. Hypothesis is not a final dogma: it is merely an instrument of logic. It is the divining-rod of truth. Facts are primordial, antecedent, and ultimate, and exist independently of any hypothesis that may be employed to account for them. . . . If the facts which have been adduced do not demonstrate my thesis, crudely and imperfectly as they have been presented, then Nature herself has performed a miracle, and demonstrated her inconstancy." (pp. 321-2.)

In looking back through the book for the "facts" thus confidently appealed to, one finds only one new line of evidence over the former book, viz., Chap. XV., "Duality Demonstrated by Anatomy." Here Hammond's ¹ *Treatise on Insanity* is quoted to show that "certain faculties of the mind [instincts] are not confined" to the brain. This is suddenly transformed by a paralogism into "higher functions of intellect," (p. 245) and these are given the name, "subjective mind," and so "demonstrated" to be independent of the cerebral hemispheres. Since no other work on the anatomy and physiology of the nervous system is quoted, we wonder if possibly the author did not get the inspiration for this "new argument" from the quotation of Dr. Hammond's in Sargent's *Scientific Basis of Spiritualism*, (Boston, Colby and Rich, 5th Ed., 1887):—"In the fact that the spinal cord and sympathetic ganglia are not devoid of mental power, we find an explanation of some of the most startling facts of what is called Spiritualism." (p. 228.)

Aside from this anatomical demonstration, there is only repetition of the uncritical and loosely stated evidence of the kind given in *The Law of Psychic Phenomena*. The hope expressed that the review of that work in the *Proceedings*, Vol. IX., p. 234, would perhaps stimulate the author to something more of that "steady experiment and laborious accuracy which alone can help towards his avowed object of 'bringing Psychology within the domain of the exact sciences'"—this hope is sorely disappointed in the *Scientific Demonstration of the Future Life*. For, after getting the confidence of the reader through the introductory apostrophe to Bacon and the inductive method, and after a very wholesome criticism of the defectiveness of the old arguments of Analogy, Authority, Metaphysics and Instinctive desire, the author then gives us no new evidential material, either of observation or experiment.

He simply "explains" everything ever reported in spiritism, hypnotism, telepathy, clairvoyance, and religion, by means of his subjective and

¹ This author is elsewhere (p. 302) credited with having "forever settled the relations between psychic conditions and nervous diseases."

objective entities. This is at bottom similar to the strife over Apperception in Psychology. For "subjective" and "apperceptive" are both most convenient and even necessary terms for the *description* of psychical phenomena, but to personify those terms into faculties or entities for the *explanation* of the phenomena,—this is bringing regression to metaphysical confusion into our modern Psychology, which is trying so hard to be scientific. On the other hand, the author energetically snatches away the only class of cases which seem to many of us to offer any evidential possibility or probability—not to speak of "demonstration" (of which we are finding less and less in this world, not to speak of any other)—viz., the residual cases in spiritism. The following method of a forced disjunctive is very characteristic of a controversialist who makes a parade of "logic" and "the rules of correct reasoning."

"I hold that so-called spiritistic phenomena are valuable as evidence of a future life only on the supposition that *none* of them emanate from disembodied spirits. My reasons are briefly these :—

"In the first place, two antagonistic hypotheses cannot both be correct ; nor can each be partly true and partly false : for any hypothesis that does not explain *all* the facts is necessarily wrong, and therefore utterly valueless. Thus, if any one of a series of so-called spiritistic phenomena can be demonstrated to emanate from disembodied spirits, the telepathic hypothesis is necessarily invalid as a solvent for that series of phenomena. On the other hand, if one of said series can be demonstrated to be referable to telepathy between living persons, the spiritistic hypothesis is necessarily wrong. In other words, it is a logical necessity that, as between two antagonistic hypotheses, one or the other must be wholly right and the other wholly wrong, or both must be wholly wrong. The nature of the case does not admit of compromise ; for principles of natural law are not established by majorities of facts, nor are there exceptions in the operation of natural laws. It follows that if one psychic phenomenon could be scientifically demonstrated to have been produced by disembodied spirits, the whole subject would be relegated to logical chaos, and some solution of the mystery would have to be sought for other than that embraced in either of the hypotheses under consideration." (pp. 112-113.)

This being so, we are not surprised that the author, in controverting the views of Messrs. Savage and Myers, is indignantly aroused to a "protest, in the name of outraged science, against all attempts to base a hypothesis upon a 'small residuum' of phenomena." (p. 105.)

His criticism of a "test case" of Mr. Savage is, we think, just ; but his introduction of Mr. Myers' name into this discussion is rather unwarrantable. At the same time, he politely adds that "the scientific world will never cease to be grateful to them for the painstaking care which they have exercised in eliminating the 'vast bulk' of the phenomena which have been attributed to supermundane agency ; and if I have succeeded in reducing them to a 'still smaller residuum,' I shall beg the privilege of quietly basking in the reflected glory of their achievements." (pp. 111-112).

That this "still smaller residuum" equals 0 the author also apparently believes, because "the unmistakable import of the closing clauses of the parable [of the rich man and Lazarus] is that it is neither expedient nor

possible, for any purpose whatever, for spirits of the dead to communicate with the living." (pp. 324-325.)

Indeed, so far from complaining of his want of appreciation of the scientific work of the S.P.R., we are rather disposed to regret that he often exaggerates our results. We do not presume to claim that "no law or power of Nature has been more completely and scientifically demonstrated than has been the law of telepathy" (pp. 68, 197); still less that "no phenomenon in the realm of physical science is better authenticated than those of so-called spiritism." (p. 54.)

In conclusion, we cannot but regard the somewhat pretentious claim which this book makes to "demonstration" and the maintenance of a strictly "scientific" standard of reasoning as unfounded. The book may possibly gain popularity from the general interest in the subject, the strong desire in many minds for a confirmation of popular religious ideas by the light of science, and certain attractive qualities of the author's style: but it is hardly likely to contribute to the advance of knowledge in matters of psychical research.

HARLOW GALE.

University of Minnesota, Minneapolis.

PROCEEDINGS OF GENERAL MEETING.

The 84th General Meeting of the Society was held at the Westminster Town Hall on Friday, January 29th, 1897, at 4 p.m.; the President, Mr. W. CROOKES, F.R.S., in the chair.

“MISS X.” read a paper entitled “A Passing Note on a Haunted House.”

THE PRESIDENT gave the address which is printed below.

ADDRESS BY THE PRESIDENT,

WILLIAM CROOKES, F.R.S.

The task I am called upon to perform to-day is to my thinking by no means a merely formal or easy matter. It fills me with deep concern to give an address, with such authority as a President's chair confers, upon a science which, though still in a purely nascent stage, seems to me at least as important as any other science whatever. Psychical science, as we here try to pursue it, is the embryo of something which in time may dominate the whole world of thought. This possibility—nay probability—does not make it the easier to me now. Embryonic development is apt to be both rapid and interesting; yet the prudent man shrinks from dogmatising on the egg until he has seen the chicken.

Nevertheless, I desire, if I can, to say a helpful word. And I ask myself what kind of helpful word. Is there any connexion between my old-standing interest in psychical problems and such original work as I may have been able to do in other branches of science?

I think there is such a connexion—that the most helpful quality which has aided me in psychical problems and has made me lucky in physical discoveries (sometimes of rather unexpected kinds), has simply been my knowledge—my *vital* knowledge, if I may so term it—of my own ignorance.

Most students of Nature sooner or later pass through a process of writing off a large percentage of their supposed capital of knowledge as a merely illusory asset. As we trace more accurately certain familiar sequences of phenomena, we begin to realise how closely these sequences, or laws, as we call them, are hemmed round by still other laws of which we can form no notion. With myself, this writing off of illusory assets has gone rather far; and the cobweb of supposed knowledge has been pinched (as some one has phrased) into a particularly small pill.

I am not disposed to bewail the limitations imposed by human ignorance. On the contrary, I feel ignorance is a healthful stimulant; and my enforced conviction that neither I nor any one can possibly lay down beforehand what does *not* exist in the universe, or even what is *not* going on all round us every day of our lives, leaves me with a cheerful hope that something very new and very arresting may turn up anywhere at any minute.

Well, it was this attitude of a mind "to let," which first brought me across Mr. D. D. Home, and which led to my getting a glimpse of

some important laws of matter and energy of which I fear many of my fellow physicists still prefer to be uncognizant. It is this same accessible temper of mind which leads me to follow the problems of the Society for Psychical Research with an interest which, if somewhat calmed by advancing years, and by a perception of the inevitable slowness of discovery, is still as deep a feeling as any which life has left me. And I shall try to utilise this temper of mind to-day by clearing away, so far as I can, certain presuppositions, on one side or on the other, which seem to me to depend upon a too hasty assumption that we know more about the universe than as yet we really can know.

I will take the most essential part first, and address myself to those who believe with me in the survival of man's individuality after death. I will point out a curious, inveterate, and widespread illusion,—the illusion that our earthly bodies are a kind of norm of humanity, so that ethereal bodies, if such there be, must correspond to them in shape and size.

When we take a physical view of a human being in his highest form of development, he is seen to consist essentially of a thinking brain, the brain itself, among its manifold functions, being a transformer whereby intelligent will-power is enabled to react on matter. To communicate with the external world, the brain requires organs by which it can be transported from place to place, and other organs by means of which energy is supplied to replace that expended in the exercise of its own special functions. Again, waste of tissue and reparation have to be provided for; hence the necessity for organs of digestion, assimilation, circulation, respiration, &c., to carry on these processes effectually; and when we consider that this highly complex organ is fitted to undergo active work for the best part of a century, we cannot but marvel that it can keep in tune so long. The human creature represents the most perfect thinking and acting machine yet evolved on this earth, developing through countless ages in strict harmony with the surrounding conditions of temperature, atmosphere, light and gravitation. The profound modifications in the human frame which any important alteration in either of these factors would occasion are strangely unconsidered. It is true there have been questionings as to the effects that might be occasioned by changes in temperature and atmospheric composition, but possible variations in gravitation seem almost to have escaped notice. The human body, which long experience and habit have taught us to consider in its highest development as the perfection of beauty and grace,—“formed in the image of God,”—is entirely conditioned by the strength of gravitation on this globe. So far as has been possible to ascertain, the intensity of gravity has not varied appreciably within those

geologic ages covering the existence of animated thinking beings. The human race, therefore, has passed through all its periods of evolution and development, in strict conformity with and submission to this dominant power, until it is difficult to conceive any great departure from the narrow limits imposed on the proportions of the human frame.

In the first place, I wish to consider what transformation in our appearance would be produced by a change in the force of gravitation. Let us take extreme cases. Say that the power of gravitation were to be doubled. In that case we should have to exert a vastly increased strength to support ourselves in any other than the prone or dorsal position—it would be hard to rise from the ground, to run, leap, climb, to drag or carry any object. Our muscles would necessarily be more powerful, and the skeleton to which they are attached would need corresponding modification. To work such limbs a more rapid transformation of matter would be required; hence the supply of nutriment must be greater, involving enlarged digestive organs, and a larger respiratory apparatus to allow of the perfect aëration of the increased mass of the blood. To keep up the circulation with the necessary force, either the heart would have to be more powerful or the distance through which the blood would require to be impelled must be reduced. The increased amount of nourishment demanded would involve a corresponding increase in the difficulty of its collection, and the struggle for existence would be intensified. More food being required day by day, the jaws would have to be enlarged and the muscles strengthened. The teeth also must be adapted for extra tearing and grinding.

These considerations involve marked changes in the structure of human beings. To accord with thickened bones, bulging muscles, and larger respiratory and digestive apparatus, the body would be heavier and more massive. The necessity for such alterations in structure would be increased by the liability to fall. The necessity of keeping the centre of gravity low, and the great demands made on the system in other respects must conspire to reduce the size of head and brain. With increase of gravitation, the bipedal form would be beset by drawbacks. Assuming that the human race, under the altered circumstances, remained bipedal, it is highly probable that a large increase in the quadruped, hexapod, or octopod structure would prevail in the animal kingdom. The majority of animals would be of the Saurian class with very short legs, allowing the trunk to rest easily on the ground, and the serpent type would probably be in the ascendant. Winged creatures would suffer severely, and small birds and insects would be dragged to earth by a force hard to resist; although this might be more or less compensated by the increased density of the air.

Humming birds, dragon-flies, butterflies, and bees, all of which spend a large portion of their time in the air, would, in the struggle for existence, be rare visitants. Hence the fertilisation of flowers by the intervention of insects must be thwarted; and this would lead to the extinction, or at all events to a scarcity, of entomophilous plants, *i.e.*, all those with the showiest blossoms—a gloomy result to follow from a mere increase of the earth's attraction.

But having known no other type of human form, it is allowable to think that, under these different conditions, Man would still consider Woman—though stunted, thick-limbed, flat-footed, with enormous jaws underlying a diminutive skull—as the highest type of beauty!

Decreased attraction of the earth might be attended with another set of changes scarcely less remarkable. With the same expenditure of vital energy as at present, and with the same quantity of transformation of matter, we should be able to lift heavier weights, to take longer bounds, to move with greater swiftness, and to undergo prolonged muscular exertion with less fatigue—possibly to fly. Hence the transformation of matter required to keep up animal heat, and to restore the waste of energy and tissue, would be smaller for the same amount of duty done. A less volume of blood, reduced lungs and digestive organs would be required. Thus we might expect a set of structural changes of an inverse nature to those resulting from intensified gravitation. All parts of the body might safely be constructed upon a less massive plan—a slighter skeleton, smaller muscles, and slenderer trunk. These modifications, in a less degree than we are contemplating, tend in the present to beauty of form, and it is easy to imagine our æsthetic feelings would naturally keep pace with further developments in the direction of grace, slenderness, symmetry, and tall figures.

It is curious that the popular conceptions of evil and malignant beings are of the type that would be produced by increased gravitation,—toads, reptiles, and noisome creeping things,—while the Arch Fiend himself is represented as perhaps the ultimate form which could be assumed by a thinking brain and its necessary machinery were the power of gravitation to be increased to the highest point compatible with existence—a serpent crawling along the ground. On the other hand, our highest types of beauty are those which would be common under decreased gravitation.

The “daughter of the gods, divinely tall,” and the leaping athlete, please us by the slight triumph over the earthward pull which their stature or spring implies. It is true we do not correspondingly admire the flea, whose triumph over gravitation, unaided by wings, is so striking. Marvellous as is the flea, its body, like ours, is strictly conditioned by gravitation.

But popular imagination presupposes spiritual beings to be utterly independent of gravitation, whilst retaining shapes and proportions which gravitation originally determined, and only gravitation seems likely to maintain.

When and if spiritual beings make themselves visible either to our bodily eyes or to our inward vision, their object would be thwarted were they not to appear in a recognisable form; so that their appearance would take the shape of the body and clothing to which we have been accustomed. Materiality, form, and space, I am constrained to believe, are temporary conditions of our present existence. It is difficult to conceive the idea of a spiritual being having a body like ours, conditioned by the exact gravitating force exerted by the earth, and with organs which presuppose the need for food and necessity for the removal of waste products. It is equally difficult, hemmed in and bound round as we are by materialistic ideas, to think of intelligence, thought, and will, existing without form or matter, and untrammelled by gravitation or space.

Men of science before now have had to face a similar problem. In some speculations on the nature of matter, Faraday¹ expressed himself

¹ "If we must assume at all, as indeed in a branch of knowledge like the present we can hardly help it, then the safest course appears to be to assume as little as possible, and in that respect the atoms of Boscovich appear to me to have a great advantage over the more usual notion. His atoms are mere centres of forces or powers, not particles of matter, in which the powers themselves reside."

"If in the ordinary view of atoms, we call the particle of matter away from the powers α , and the system of powers or forces in and around it m , then in Boscovich's theory α disappears, or is a mere mathematical point, whilst in the usual notion it is a little unchangeable, impenetrable piece of matter, and m is an atmosphere of force grouped around it."

"To my mind therefore, the α or nucleus vanishes, and the substance consists of the powers or m ; and indeed, what notion can we form of the nucleus independent of its powers? All our perception and knowledge of the atom, and even our fancy, is limited to ideas of its powers: what thought remains on which to hang the imagination of an α independent of the acknowledged forces?"

"A mind just entering on the subject may consider it difficult to think of the powers of matter independent of a separate something to be called *the matter*, but it is certainly far more difficult, and indeed impossible, to think of or imagine that *matter* independent of the powers. Now the powers we know and recognise in every phenomenon of the creation, the abstract matter in none; why then assume the existence of that of which we are ignorant, which we cannot conceive, and for which there is no philosophical necessity?"

"If an atom be conceived to be a centre of power, that which is ordinarily referred to under the term *shape* would be now referred to the disposition and relative intensity of the forces. . . . Nothing can be supposed of the disposition of forces in and about a solid nucleus of matter, which cannot be equally conceived with respect to a centre."

"The view now stated of the constitution of matter would seem to involve necessarily the conclusion that matter fills all space. . . . In that view matter is not merely mutually penetrable, but each atom extends, so to say, throughout the whole of the solar system, yet always retaining its own centre of force."—FARADAY, "On the Nature of Matter," *Phil. Mag.*, 1844, vol. xxiv., p. 136.

in language which, *mutatis mutandis*, applies to my present surmises. This earnest philosopher was speculating on the ultimate nature of matter ; and, thinking of the little, hard, impenetrable atom of Lucretius, and the forces or forms of energy appertaining to it, he felt himself impelled to reject the idea of the existence of the nucleus altogether, and to think only of the forces and forms of energy usually associated therewith. He was led to the conclusion that this view necessarily involved the surmise that the atoms are not merely mutually penetrable, but that each atom, so to say, extends throughout all space, yet always retaining its own centre of force.¹

A view of the constitution of matter which recommended itself to Faraday as preferable to the one ordinarily held, appears to me to be exactly the view I endeavour to picture as the constitution of spiritual beings. Centres of intellect, will, energy, and power, each mutually penetrable, whilst at the same time permeating what we call space ; but each centre retaining its own individuality, persistence of self, and memory. Whether these intelligent centres of the various spiritual forces which in their aggregate go to make up Man's character or Karma, are also associated in any way with the forms of energy which, centred, form the material atom,—whether these spiritual entities are material, not in the crude, gross sense of Lucretius, but material as sublimated through the piercing intellect of Faraday,—is one of those mysteries which to us mortals will perhaps ever remain an unsolved problem.

My next speculation is more difficult, and is addressed to those who not only take too terrestrial a view, but who deny the plausibility—nay, the possibility—of the existence of an unseen world at all. I reply we are demonstrably standing on the brink, at any rate, of one unseen world. I do not here speak of a spiritual or immaterial world. I speak of the world of the infinitely little, which must be still called a material world, although matter as therein existing or perceptible is something which our limited faculties do not enable us to conceive. It is the world—I do not say of molecular forces as opposed to molar, but of forces whose action lies mainly outside the limit of human perception, as opposed to forces evident to the gross perception of human organisms. I hardly know how to make clear to myself or to you the difference in the apparent laws of the universe which would follow upon a mere difference of bulk in the observer. Such an observer I must needs imagine as best I can. I shall not attempt to rival the vividness of the great satirist who, from a postulated difference of size far less considerable, deduced in "Gulliver's Travels" the absurdity, and the mere relativity, of so much in human morals, politics, society. But I

¹ I may say, in passing, that the modern vortex atom also fulfils these conditio

shall take courage from the example of my predecessor in this chair, Professor William James of Harvard, from whom later I shall cite a most striking parable of precisely the type I seek.

You must permit me, then, a homunculus on whom to hang my speculation. I cannot place him actually amid the interplay of molecules, for lack of power to imagine his environment; but I shall make him of such microscopic size that molecular forces which in common life we hardly notice,—such as surface-tension, capillarity, the Brownian movements,—become for him so conspicuous and dominant that he can hardly believe, let us say, in the universality of gravitation, which we may suppose to have been revealed to him by ourselves, his creators.

Let us place him on a cabbage-leaf, and let him start for himself.

The area of the cabbage-leaf appears to him as a boundless plain many square miles in extent. To this minimised creature the leaf is studded with huge glittering transparent globes, resting motionless on the surface of the leaf, each globe vastly exceeding in height the towering Pyramids. Each of these spheres appears to emit from one of its sides a dazzling light. Urged by curiosity he approaches and touches one of the orbs. It resists pressure like an india-rubber ball, until accidentally he fractures the surface, when suddenly he feels himself seized and whirled and brought somewhere to an equilibrium, where he remains suspended in the surface of the sphere utterly unable to extricate himself. In the course of an hour or two he finds the globe diminishing, and ultimately it disappears, leaving him at liberty to pursue his travels. Quitting the cabbage-leaf, he strays over the surface of the soil, finding it exceeding rocky and mountainous, until he sees before him a broad surface akin to the kind of matter which formed the globes on the cabbage-leaf. Instead, however, of rising upwards from its support, it now slopes downwards in a vast curve from the brink, and ultimately becomes apparently level, though, as this is at a considerable distance from the shore, he cannot be absolutely certain. Let us now suppose that he holds in his hand a vessel bearing the same proportion to his minimised frame that a pint measure does to that of a man as he is, and that by adroit manipulation he contrives to fill it with water. If he inverts the vessel he finds that the liquid will not flow, and can only be dislodged by violent shocks. Wearied by his exertions to empty the vessel of water, he sits on the shore, and idly amuses himself by throwing stones and other objects into the water. As a rule the stones and other wet

¹ I need hardly say that in this fanciful sketch, composed only for an illustrative purpose, all kinds of problems (as of the homunculus's own structure and powers) are left untouched, and various points which would really need to be mathematically worked out are left intentionally vague.

bodies sink, although when dry they obstinately refuse to go to the bottom, but float on the surface. He tries other substances. A rod of polished steel, a silver pencil-case, some platinum wire, and a steel pen, objects two or three times the density of the stones, refuse to sink at all, and float on the surface like so many bits of cork. Nay, if he and his friends manage to throw into the water one of those enormous steel bars which we call needles, this also makes a sort of concave trough for itself on the surface, and floats tranquilly. After these and a few more observations, he theorises on the properties of water and of liquids in general. Will he come to the conclusion that liquids seek their own level; that their surfaces when at rest are horizontal, and that solids when placed in a liquid, sink or float according to their higher or lower specific gravity? No; he will feel justified in inferring that liquids, at rest, assume spherical, or at least curvilinear forms, whether convex or concave, depending upon circumstances not easily ascertained; that they cannot be poured from one vessel to another, and resist the force of gravitation, which is consequently not universal; and that such bodies as he can manipulate generally refuse to sink in liquids, whether their specific gravity be high or low. From the behaviour of a body placed in contact with a dew-drop he will even derive plausible reasons for doubting the inertia of matter.

Already he has been somewhat puzzled by the constant and capricious bombardment of cumbrous objects like portmanteaus flying in the air; for the gay notes that people the sunbeams will dance somewhat unpleasantly for a microscopic homunculus who can never tell where they are coming. Nay, what he has understood to be the difficulty experienced by living creatures in rising from the earth, except with wings, will soon seem absurdly exaggerated. For he will discern a terrific creature, a Behemoth "in plated mail," leaping through the skies in frenzied search for prey; and for the first time due homage will be rendered to the majesty of the common flea.

Perturbed by doubts, he will gaze at night into some absolutely tranquil pool. There, with no wind to ruffle, nor access of heat to cause currents or change surface-tension, he perceives small inanimate objects immersed and still. But are they still? No! One of them moves; another is moving. Gradually it is borne in upon him that whenever any object is small enough it is always in motion. Perhaps our homunculus might be better able than we are to explain these so-called Brownian movements. Or the guess might be forced upon him that he who sees this sight is getting dim glimpses of the ultimate structure of matter, and that these movements are residual, the result of the inward molecular turmoil which has not cancelled itself out into nullity, as it must needs do in aggregations of matter of more than the smallest microscopic dimensions.

Things still more tormentingly perplexing, our homunculus would doubtless encounter. And these changes in his interpretation of phenomena would arise not from his becoming aware of any forces hitherto overlooked, still less from the disappearance of laws now recognised, but simply from the fact that his supposed decrease in bodily size brings capillarity, surface-tension, &c., into a relative prominence they do not now possess. To full-grown rational beings the effects of these forces rank among residual phenomena which attract attention only when science has made a certain progress. To *homunculi*, such as we have imagined, the same effects would be of capital importance, and would be rightly interpreted not as something supplementary to those of general gravitation, but as due to an independent and possibly antagonistic force.

The physics of these *homunculi* would differ most remarkably from our own. In the study of heat they would encounter difficulties probably insuperable. In this branch of physical investigation little can be done unless we have the power at pleasure of raising and lowering the temperature of bodies. This requires the command of fire. Actual man, in a rudimentary state of civilisation, can heat and ignite certain kinds of matter by friction, percussion, concentrating the sun's rays, &c.; but before these operations produce actual fire they must be performed upon a considerable mass of matter, otherwise the heat is conducted or radiated away as rapidly as produced, and the point of ignition seldom reached.

Nor could it be otherwise with the chemistry of the little people, if, indeed, such a science be conceived as at all possible for them.

It can scarcely be denied that the fundamental phenomena which first led mankind into chemical enquiries are those of combustion. But, as we have just seen, minimised beings would be unable to produce fire at will, except by certain chemical reactions, and would have little opportunity of examining its nature. They might occasionally witness forest fires, volcanic eruptions, &c.; but such grand and catastrophic phenomena, though serving to reveal to our supposed Lilliputians the existence of combustion, would be ill-suited for quiet investigation into its conditions and products. Moreover, considering the impossibility they would experience of pouring water from one test-tube to another, the ordinary operations of analytical chemistry, and of all manipulations depending on the use of the pneumatic trough, would remain for ever a sealed book.

Let us for a moment go to the opposite extreme, and consider how Nature would present itself to human beings of enormous magnitude. Their difficulties and misconstructions would be of an opposite nature to those experienced by pigmies. Capillary attraction and the cohesion of liquids, surface tension and the curvature of liquid surfaces near

their boundary, the dew drop and the behaviour of minute bodies on a globule of water, the flotation of metals on the surface of water, and many other familiar phenomena, would be either ignored or unknown. The *homunculus* able to communicate but a small momentum would find all objects much harder than they appear to us, whilst to a race of colossals granite rocks would be but a feeble impediment.

There would be another most remarkable difference between such enormous beings and ourselves: if we stoop and take up a pinch of earth between fingers and thumb, moving those members, say, through the space of a few inches in a second of time, we experience nothing remarkable. The earth offers a little resistance, more or less, according to its greater or less tenacity, but no other perceptible reaction follows.

Let us suppose the same action performed by a gigantic being, able to move finger and thumb in a second's space through some miles of soil in the same lapse of time, and he would experience a very decided reaction. The mass of sand, earth, stones, and the like, hurled together in such quantities and at such speed, would become intensely hot. Just as the *homunculus* would fail to bring about ignition when he desired, so the colossus could scarcely move without causing the liberation of a highly inconvenient degree of heat, literally making everything too hot to hold. He would naturally ascribe to granite rocks and the other constituents of the earth's surface such properties as we attribute to phosphorus—of combustion on being a little roughly handled.

Need I do more than point the obvious lesson? If a possible—nay, reasonable—variation in only one of the forces conditioning the human race—that of gravitation—could so modify our outward form, appearance, and proportions, as to make us to all intents and purposes a different race of beings; if mere differences of size can cause some of the most simple facts in chemistry and physics to take so widely different a guise; if beings microscopically small and prodigiously large would simply as such be subject to the hallucinations I have pointed out—and to others I might enlarge upon;—is it not possible that we, in turn, though occupying, as it seems to us, the golden mean, may also by the mere virtue of our size and weight fall into misinterpretations of phenomena from which we should escape were we or the globe we inhabit either larger or smaller, heavier or lighter? May not our boasted knowledge be simply conditioned by accidental environments, and thus be liable to a large element of subjectivity hitherto unsuspected and scarcely possible to eliminate?

Here I will introduce Prof. James's speculation, to which I have already alluded. It deals with a possible alteration of the *time scale* due to a difference in rapidity of sensation on the part of a being presumably on a larger scale than ourselves.

“ We have every reason to think that creatures may possibly differ enormously in the amounts of duration which they intuitively feel, and in the fineness of the events that may fill it. Von Baer has indulged in some interesting computations of the effect of such differences in changing the aspect of Nature. Suppose we were able, within the length of a second, to note distinctly 10,000 events, instead of barely 10, as now ; if our life were then destined to hold the same number of impressions, it might be 1,000 times as short. We should live less than a month, and personally know nothing of the change of seasons. If born in winter we should believe in summer as we now believe in the heats of the carboniferous era. The motions of organic beings would be so slow to our senses as to be inferred, not seen. The sun would stand still in the sky, the moon be almost free from change, and so on. But now reverse the hypothesis, and suppose a being to get only one 1,000th part of the sensations that we get in a given time, and consequently to live 1,000 times as long. Winters and summers will be to him like quarters of an hour. Mushrooms and the swifter-growing plants will shoot into being so rapidly as to appear instantaneous creations ; annual shrubs will rise and fall from the earth like restlessly boiling water-springs ; the motions of animals will be as invisible as are to us the movements of bullets and cannon-balls ; the sun will scour through the sky like a meteor, leaving a fiery trail behind him, &c. That such imaginary cases (barring the super-human longevity) may be realised somewhere in the animal kingdom, it would be rash to deny.”—(James’s “Principles of Psychology,” Vol. i., p. 639).

And now let me specially apply this general conception of the impossibility of predicting what secrets the universe may still hold, what agencies undivined may habitually be at work around us.

Telepathy, the transmission of thought and images directly from one mind to another, without the agency of the recognised organs of sense, is a conception new and strange to science. To judge from the comparative slowness with which the accumulated evidence of our Society penetrates the scientific world, it is, I think, a conception even scientifically repulsive to many minds. We have supplied striking experimental evidence ; but few have been found to repeat our experiments. We have offered good evidence in the observation of spontaneous cases,—as apparitions at the moment of death and the like,—but this evidence has failed to impress the scientific world in the same way as evidence less careful and less coherent has often done before. Our evidence is not confronted and refuted ; it is shirked and evaded, as though there were some great *a priori* improbability which absolved the world of science from considering it. I at least see no *a priori* improbability whatever. Our alleged facts might be true in all kinds of ways without contradicting any truth already known. I will dwell now on only one possible line of explanation,—not that I see

any way of elucidating all the new phenomena I regard as genuine, but because it seems probable I may shed a light on some of those phenomena.

All the phenomena of the Universe are presumably in some way continuous ; and certain facts, plucked as it were from the very heart of Nature, are likely to be of use in our gradual discovery of facts which lie deeper still.

Let us then consider the vibrations we trace, not only in solid bodies, but in the air, and in a still more remarkable manner in the ether.

These vibrations differ in their velocity and in their frequency. That they exist, extending from one vibration to two thousand billion vibrations per second we have good evidence. That they subserve the purpose of conveying impressions from outside sources of whatever kind to living organisms may be fully recognised.

As a starting-point I will take a pendulum beating seconds in air. If I keep on doubling I get a series of steps as follows :—

Starting-point.	The seconds pendulum.
Step 1. ...	2 vibrations per second.
" 2. ...	4 " "
" 3. ...	8 " "
" 4. ...	16 " "
" 5. ...	32 " "
" 6. ...	64 " "
" 7. ...	128 " "
" 8. ...	256 " "
" 9. ...	512 " "
" 10. ..	1024 " "
" 15. ...	32768 " "
" 20. ...	1,048576 " "
" 25. ...	33,554432 " "
" 30. ...	1073,741824 " "
" 35. ...	34359,738368 " "
" 40. ...	1,099511,627776 " "
" 45. ...	35,184372,088832 " "
" 50. ...	1125,899906,842624 " "
" 55. ...	36028,707018,963968 " "
" 56. ...	72057,594037,927936 " "
" 57. ...	144115,188075,855872 " "
" 58. ...	288220,376151,711744 " "
" 59. ...	576440,752303,423488 " "
" 60. ...	1,152881,504606,846976 " "
" 61. ...	2,305763,009213,693952 " "
" 62. ...	4,611526,018427,387904 " "
" 63. ...	9,223052,036854,775808 " "

Round

*slotted
rapp
calculator*

100

1000

At the fifth step from unity, at 32 vibrations per second, we reach the region where atmospheric vibration reveals itself to us as *sound*. Here we have the lowest musical note. In the next ten steps the vibrations per second rise from 32 to 32,768, and here to the average human ear the region of sound ends. But certain more highly endowed animals probably hear sounds too acute for our organs, that is, sounds which vibrate at a higher rate.

We next enter a region in which the vibrations rise rapidly, and the vibrating medium is no longer the gross atmosphere, but a highly attenuated medium, "a diviner air," called the ether. From the 16th to the 35th step the vibrations rise from 32,768 to 34359,738368 a second, such vibrations appearing to our means of observation as electrical rays.

We next reach a region extending from the 35th to the 45th step, including from 34359,738368 to 35,184372,088832 vibrations per second. This region may be considered as unknown, because we are as yet ignorant what are the functions of vibrations of the rates just mentioned. But that they have some function it is fair to suppose.

Now we approach the region of *light*, the steps extending from the 45th to between the 50th and the 51st, and the vibrations extending from 35,184372,088832 per second (heat rays) to 1875,000000,000000 per second, the highest recorded rays of the spectrum. The actual sensation of light, and therefore the vibrations which transmit visible signs, being comprised between the narrow limits of about 450,000000,000000 (red light) and 750,000000,000000 (violet light)—less than one step.

Leaving the region of visible light, we arrive at what is, for our existing senses and our means of research, another unknown region, the functions of which we are beginning to suspect. It is not unlikely that the X rays of Professor Röntgen will be found to lie between the 58th and the 61st step, having vibrations extending from 288220,576 151,711744 to 2,305763,009213,693952 per second or even higher.

In this series it will be seen there are two great gaps, or unknown regions, concerning which we must own our entire ignorance as to the part they play in the economy of creation. Further, whether any vibrations exist having a greater number per second than those classes mentioned we do not presume to decide.

But is it premature to ask in what way are vibrations connected with thought or its transmission? We might speculate that the increasing rapidity or frequency of the vibrations would accompany a rise in the importance of the functions of such vibrations. That high frequency deprives the rays of many attributes that might seem incompatible with "brain waves," is undoubted. Thus, rays about the 62nd step are so minute as to cease to be refracted, reflected or polarised ;

they pass through many so-called opaque bodies, and research begins to show that the most rapid are just those which pass most easily through dense substances. It does not require much stretch of the scientific imagination to conceive that at the 62nd or 63rd step the trammels from which rays at the 61st step were struggling to free themselves, have ceased to influence rays having so enormous a rate of vibration as 9,223052,036854,775808 per second, and that these rays pierce the densest medium with scarcely any diminution of intensity, and pass almost unrefracted and unreflected along their path with the velocity of light.

Ordinarily we communicate intelligence to each other by speech. I first call up in my own brain a picture of a scene I wish to describe, and then, by means of an orderly transmission of wave vibrations set in motion by my vocal cords through the material atmosphere, a corresponding picture is implanted in the brain of any one whose ear is capable of receiving such vibrations. If the scene I wish to impress on the brain of the recipient is of a complicated character, or if the picture of it in my own brain is not definite, the transmission will be more or less imperfect; but if I wish to get my audience to picture to themselves some very simple object, such as a triangle or a circle, the transmission of ideas will be well nigh perfect, and equally clear to the brains of both transmitter and recipient. Here we use the vibrations of the material molecules of the atmosphere to transmit intelligence from one brain to another.

In the newly-discovered Röntgen rays we are introduced to an order of vibrations of extremest minuteness as compared with the most minute waves with which we have hitherto been acquainted, and of dimensions comparable with the distances between the centres of the atoms of which the material universe is built up; and there is no reason to suppose that we have here reached the limit of frequency. Waves of this character cease to have many of the properties associated with light waves. They are produced in the same ethereal medium, and are probably propagated with the same velocity as light, but here the similarity ends. They cannot be regularly reflected from polished surfaces; they have not been polarised; they are not refracted on passing from one medium to another of different density, and they penetrate considerable thicknesses of substances opaque to light with the same ease with which light passes through glass. It is also demonstrated that these rays, as generated in the vacuum tube, are not homogeneous, but consist of bundles of different wave-lengths, analogous to what would be differences of colour could we see them as light. Some pass easily through flesh, but are partially arrested by bone, while others pass with almost equal facility through bone and flesh.

It seems to me that in these rays we may have a possible mode of transmitting intelligence, which with a few reasonable postulates, may supply a key to much that is obscure in psychical research. Let it be assumed that these rays, or rays even of higher frequency, can pass into the brain and act on some nervous centre there. Let it be conceived that the brain contains a centre which uses these rays as the vocal cords use sound vibrations (both being under the command of intelligence), and sends them out, with the velocity of light, to impinge on the receiving ganglion of another brain. In this way some, at least, of the phenomena of telepathy, and the transmission of intelligence from one sensitive to another through long distances, seem to come into the domain of law, and can be grasped. A sensitive may be one who possesses the telepathic transmitting or receiving ganglion in an advanced state of development, or who, by constant practice, is rendered more sensitive to these high-frequency waves. Experience seems to show that the receiving and the transmitting ganglions are not equally developed; one may be active, while the other, like the pineal eye in man, may be only vestigial. By such a hypothesis no physical laws are violated, neither is it necessary to invoke what is commonly called the supernatural.

To this hypothesis it may be objected that brain waves, like any other waves, must obey physical laws. Therefore, transmission of thought must be easier or more certain the nearer the agent and recipient are to each other, and should die out altogether before great distances are reached. Also it can be urged that if brain waves diffuse in all directions they should affect all sensitives within their radius of action instead of impressing only one brain. The electric telegraph is not a parallel case, for there a material wire intervenes to conduct and guide the energy to its destination.

These are weighty objections, but not, I think, insurmountable. Far be it from me to say anything disrespectful of the law of inverse squares, but I have already endeavoured to show we are dealing with conditions removed from our material and limited conceptions of space, matter, form. Is it inconceivable that intense thought concentrated towards a sensitive with whom the thinker is in close sympathy may induce a telepathic chain of brain waves, along which the message of thought can go straight to its goal without loss of energy due to distance? And is it also inconceivable that our mundane ideas of space and distance may be superseded in these subtile regions of unsubstantial thought where "near" and "far" may lose their usual meaning?

I repeat that this speculation is strictly provisional. I dare to suggest it. The time may come when it will be possible to submit it to experimental tests.

I am impelled to one further reflection, dealing with the conservation of energy. We say with truth that energy is transformed but not destroyed, and that whenever we can trace the transformation we find it quantitatively exact. So far as our very rough exactness goes, this is true for inorganic matter and for mechanical forces. But it is only inferentially true for organised matter and for vital forces. We cannot express life in terms of heat or of motion. And thus it happens that just when the exact transformation of energy will be most interesting to watch, we cannot really tell whether any fresh energy has been introduced into the system or not. Let us consider this a little more closely.

It has, of course, always been realised by physicists, and has been especially pointed out by Dr. Croll, that there is a wide difference between the production of motion and the direction of it into a particular channel. The production of motion, molar or molecular, is governed by physical laws, which it is the business of the philosopher to find out and correlate. The law of the conservation of energy overrides all laws, and it is a pre-eminent canon of scientific belief that for every act done a corresponding expenditure of energy must be transformed. No work can be effected without using up a corresponding value in energy of another kind. But to us the other side of the problem is even of more importance. Granted the existence of a certain kind of molecular motion, what is it that determines its direction along one path rather than another? A weight falls to the earth through a distance of three feet. I lift it, and let it fall once more. In these movements of the weight a certain amount of energy is expended in its rise, and the same amount is liberated in its fall. But instead of letting the weight fall free, suppose I harness it to a complicated system of wheels, and, instead of letting the weight fall in a fraction of a second, I distribute its fall over twenty-four hours. No more energy is expended in raising the weight, and in its slow fall no more or less energy is developed than when it fell free; but I have made it do work of another kind. It now drives a clock, a telescope or a philosophic instrument, and does what we call useful work. The clock runs down. I lift the weight by exerting the proper amount of energy, and in this action the law of conservation of energy is strictly obeyed. But now I have the choice of either letting the weight fall free in a fraction of a second, or, constrained by the wheelwork, in twenty-four hours. I can do which I like, and whichever way I decide, no more energy is developed in the fall of the weight. I strike a match: I can use it to light a cigarette or to set fire to a house. I write a telegram: it may be simply to say I shall be late for dinner, or it may produce fluctuations on the Stock Exchange that will ruin thousands. In these cases the actual force required in striking the

* The law of conservation assumes a closed system. If it is an open system, it may vary & the difference cannot be C-355

match or in writing the telegram is governed by the law of conservation of energy; but the vastly more momentous part, which determines the words I use or the material I ignite, is beyond such a law. It is probable that no expenditure of energy need be used in the determination of direction one way more than another. Intelligence and free will here come into play, and these mystic forces are outside the law of conservation of energy as understood by physicists.

The whole universe as we see it is the result of molecular movement. Molecular movements strictly obey the law of conservation of energy, but what we call "law" is simply an expression of the direction along which a form of energy acts, not the form of energy itself. We may explain molecular and molar motions, and discover all the physical laws of motion, but we shall be far as ever from a solution of the vastly more important question as to what form of will and intellect is behind the motions of molecules, guiding and constraining them in definite directions along pre-determined paths. What is the determining cause in the background? What combination of will and intellect, outside our physical laws, guides the fortuitous concourse of atoms along ordered paths culminating in the material world in which we live?

In these last sentences I have intentionally used words of wide signification—have spoken of *guidance* along ordered paths. It is wisdom to be vague here, for we absolutely cannot say whether or when any diversion may be introduced into the existing system of earthly forces by an external power. We can no more be certain that this is *not* so than I can be certain in an express train that no signalman has pressed a handle to direct the train on to this or that line of rails. I may compute exactly how much coal is used per mile, so as to be able to say at any minute how many miles we have travelled, but, unless I actually see the points, I cannot tell whether they are shifted before the train passes.

An omnipotent being could rule the course of this world in such a way that none of us should discover the hidden springs of action. He need not make the Sun stand still upon Gibeon. He could do all that he wanted by the expenditure of infinitesimal diverting force upon ultra-microscopic modifications of the human germ.

In this address I have not attempted to add any item to the sound knowledge which I believe our Society is gradually amassing. I shall be content if I have helped to clear away some of those scientific stumbling-blocks, if I may so call them, which tend to prevent many of our possible coadjutors from adventuring themselves on the new illimitable road.

I see no good reason why any man of scientific mind should shut his eyes to our work, or deliberately stand aloof from it. Our *Proceedings* are of course not exactly parallel to the *Proceedings* of a Society dealing with a long-established branch of Science. In every form of research there must be a beginning. We owe to much that is tentative, much that may turn out erroneous. But it is thus, and thus only, that each Science in turn takes its stand. I venture to assert that both in actual careful record of new and important facts, and in suggestiveness, our Society's work and publications will form no unworthy preface to a profounder science both of Man, of Nature, and of "Worlds not realised" than this planet has yet known.

detected. A diminution in our
 increase equal to the energy of our
 solar system would have the
 more measurable effect than
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 BAKER, EDMUND G., High View, Shooters-hill, Kent.
 BAKER, MISS MORRANT, Boston Lodge, Harvard-rd., Gunnersbury, S.W.
Balfour, The Right Hon. A. J., M.P., F.R.S., 4, Carlton-gdns., S.W.
Balfour, The Right Hon. G. W., M.P., 24, Addison-road, London, W.
Balfour, Miss, 4, Carlton-gardens, London, S.W.
 BANNERMAN, COLONEL P. W., 8, Somers-place, Hyde Park, London, W.
 BARCLAY, REV. CHAS. W., M.A., The Vicarage, Hertford Heath, Hertford.
 BARKLY, MRS., Hampton Court Palace, near London.
Barkworth, Thomas, J. P., West Hatch, Chigwell, Essex.

- BARLOW, MISS JANE, The Cottage, Raheny, co. Dublin.
BARLOW, COLONEL W. R., 56, Penywern-road, London, S.W.
Barrett, Ashley W., M.B., 7, Cavendish-place, Cavendish-square, W.
Barrett, Professor W. F., F.R.S.E., Kingstown, co. Dublin.
Barrington, Hon. Eric, 62, Cadogan-place, London, S.W.
BARTHOLOMEW, COLONEL, Bantry Lodge, Glengariff, co. Cork.
BATES, COLONEL C. E., 34, Oxford-terrace, London, W.
BATES, MISS, c/o London and County Bank, Maidstone.
Battersea, The Lady, Aston Clinton, Tring.
BAYFIELD, REV. MATTHEW A., M.A., The College, Eastbourne.
BEATTY, OCTAVIUS, Fairholt, Merton-hall-road, Wimbledon, Surrey.
BEAZLEY, LIEUTENANT-COLONEL GEORGE G., 74, Redcliffe-sq., S.W.
Bective, The Countess of, Barnacre Lodge, Garstang.
BEER, MRS., 7, Chesterfield-gardens, London, W.
BELL, CHARLES W., J.P., D.L., Yewhurst, East Grinstead, Sussex.
BELL, MAJOR WM. MORRISON, Thor, Birchington, Thanet, Kent.
BELLASIS, MAJOR G. M., c/o H. S. King and Co., 45, Pall Mall, S.W.
Bennett, Edward T., Devonshire House, Richmond, near London.
BENNETT, ERNEST N., M.A., Hertford College, Oxford.
Benson, Mrs.
BENSON, MISS ANNETTE M., M.D., Cama Hospital, Bombay.
BENTINCK, LADY HENRY, 13, Grosvenor-place, London, W.
Berens, Rev. Randolph, M.A., 14, Prince's-gardens, London, S.W.
BERGEN, AXEL VON, Harewood Hill, Darlington.
BERGEN, DR. CARL VON, 32, Karlavågen, Stockholm.
BERNARD, JOHN, CAPTAIN, R.M.L.I., H.M.S. "Nelson," Portsmouth.
Berry, Mrs. F. M. Dickinson, M.D., 60, Welbeck-st., Cavendish-sq., W.
BEVAN, MISS N. H., Chalet Passiflora, Cannes, France.
BEVAN, HON. MRS. R. YORKE, 9, Rutland-gate, London, W.
BEVAN, MRS. ROBERT, 131, Gloucester-road, London, S.W.
Beveridge, Erskine, St. Leonard's Hill, Dunfermline, N.B.
Bibby, Charles Hesketh, Trinity College, Cambridge.
BICKFORD-SMITH, R.A.H., B.A., 19, Endymion-road, Brixton Rise, S.W.
BICKNELL, REV. CLARENCE, M.A., Villa Rose, Bordighera, Italy.
Bidder, Mrs. G. P., Ravensbury Park, Mitcham, Surrey.
BIDDER, GEORGE P., Ravensbury Park, Mitcham, Surrey.
Biddulph, The Lady Elizabeth P., 19, Ennismore-gardens, S.W.
BIELBY, HORACE C. V., 67, Lord-street, Liverpool, W.
Bigg, Miss Louisa, Lyndhurst, Luton.
BIRKS, REV. EDWARD B., M.A., Trinity College, Cambridge.
BIRRELL, MRS., Placilla, Lansdowne-road, Worthing.
BLACKBURN, ERNEST M., 38, Egerton-gardens, London, S.W.
BLACKWELL, ELIZABETH, M.D., Rock House, Hastings.
Blackwood, Mrs., Norton Court, Sittingbourne, Kent.

- BLAINE, MISS H. G. DELABÈRE, 129, Cromwell-road, London, S.W.
Blakelock, Rev. R., M.A., Horbury Bridge Vicarage, Wakefield.
 BLYTH, W. M., 20, Highbury-terrace, London, N.
 BOGER, MRS. H. M., Elvington, Ryde, Isle of Wight.
 BOIS, HENRY GORDON, c/o J. M. Robertson and Co., Colombo, Ceylon.
 BOIS, HERBERT G., 4, Clarendon-place, Hyde Park-square, W.
 BOLDERO, LIEUT.-GENERAL G. N., 20, Westbourne-gardens, Folkestone.
 BOLLAND, MRS., 7, Cranbury-terrace, Southampton.
 BOLTON, MISS A. J., B.A. (N.Z.), Hillside, Bourton-road, Buckingham.
 BOORNE, HERBERT H., 9A, Sackville street, Piccadilly, London, W.
 BOSCO DE BEAUMONT, G. DU, Bayeux (Calvados), France.
 BOSWELL-STONE, MISS E. L., Dayrells, 47, Wickham-road, Beckenham.
 BOUCHER, MRS., c/o Miss Lutley, West-street, Wiveliscombe, Somerset.
 BOULNOIS, H. PERCY, M.Inst.C.E., 7, Devonshire-road, Liverpool.
 BOWDEN-SMITH, MRS., at Carey's, Brockenhurst.
 BOWELL, ERNEST W. W., Sissinghurst Vicarage, Cranbrook, Kent.
 BOWNESS, WILLIAM WILSON, 26, Campden-grove, Kensington, London, W.
 BOYD, C. W., 7, Abbotsford-crescent, St. Andrews, N.B.
 BRAMSTON, MISS A. R., Witham-close, Winchester.
 BRAMSTON, MISS M., Suntrap, Radcliffe-road, Croydon.
Bramwell, John M., M.B., 2, Henrietta-street, Cavendish-square, W.
 BRANDRETH, HENRY S., Fairholme, Weybridge.
 BRAYSHAW, JOHN L., Settle, Yorkshire.
 BRETT, GEORGE, The College, Weston-super-Mare.
 BREWSTER, MRS. F., 21, Park-valley, Nottingham.
 BRIGGS, MRS., Welbury Drive, Bradford.
 BRILL, ALICE B., M.D., New York, U.S.A.
 BRITTEN, JAMES, F.L.S., 126, Kennington Park-road, London, S.E.
Brooke, Lady, Ranee of Sarawak, Wimbledon Park, S.W.
 BROOKE, COL. C. K., Army and Navy Club, Pall Mall, London, S.W.
 BROOKE, REV. STOPFORD A., M.A., 1, Manchester-square, London, W.
 BROWN, MISS JOHNSON, 26, Carisbrooke-road, St. Leonards-on-Sea.
 BROWNE, EDWARD G., M.A., M.B., Pembroke College, Cambridge.
 BROWNE, MRS. WALTER P., Bidston, Alleyn-road, West Dulwich, S.E.
 BROWNING, OSCAR, M.A., King's College, Cambridge.
 BRUHNS, THEODORE, Simferopol, Russia.
 BRYANT, A. C., B.A., 2, Langham-road, West Green, London, N.
 BRYANT, CAPTAIN G. E., R.A., c/o J. M. Edwards, The Elms, Ramsgate.
Bryce, J. P., J.P., Bystock, near Exmouth, Devon.
 BRYCE, MISS KATHLEEN, 15, Campden Hill-square, W.
 BUCHANAN, H. B. M., B.A., 9, Upper Beulah Hill, Upper Norwood, S.E.
 BUCKLER, W. H., Trinity College, Cambridge.
 BULLEY, MRS. ARTHUR, West Kirby, near Birkenhead.
 BULLOCK, MRS., St. Margaret's, Mitcham, Surrey.

- BULMER, MRS., Field House, Sleights, R.S.O., York.
BUNNETT, A., JUNR., 10, Station-road, South Norwood, S.E.
BUNSHAW, N.F., Med. Off., B.G.J.P. Railway, Ghadechi, Kathiawar, India.
BURT, PERCIVAL J., 16, Leadenhall-street, London, E.C.
BURTON, MRS., 1, Iddesleigh Mansions, Victoria-street, S.W.
BURTON, MRS., Logner Hall, Shrewsbury.
Bushell, Rev. W. D., M.A., Harrow-on-the-Hill.
Bute, The Marquis of, K.T., Mount Stuart, Rothesay, Isle of Bute.
BUTT, LADY, 17, Viale P^{ssa}. Margherita, Florence, Italy.
BUTTEMER, ROBERT WILLIAM, St. Mary's, Godalming.
Caillard, Sir Vincent, Constantinople.
CAILLARD, MISS, Wingfield House, near Trowbridge, Wiltshire.
CAIRD, MRS., 3, Lyndhurst-gardens, South Hampstead, London.
CALDECOTT, REV. PROFESSOR ALFRED, M.A., Lopham Rectory, Thetford.
CALLAWAY, CHARLES, D.Sc., M.A., Nortonbury House, Tewkesbury.
CAMPBELL, MRS. BURNLEY, Ormidale, Colintrave, Argyllshire, N.B.
CAMPBELL, COLIN E., B.A., 22, Market Hill, Cambridge.
Campbell, Mrs. Napier, 81, Ashley-gardens, London, S.W.
CANDLER, H. A. W., 37, Commercial-road East, London, E.
CANNON, MRS., Hillcot, Sharples, near Bolton.
CARBERY, WILLIAM E., 21, Eldon-road, Kensington, W.
Carey, Arthur, B.Sc., Brownsich, Gateacre, near Liverpool.
CARLETON, HON. MRS. LEIR, Greywell Hill, Winchfield.
*CARLILE, W. A., 101, Whitehead-road, Aston, Birmingham.
Carnarvon, The Earl of, 13, Berkeley-square, London, W.
CARTER, MRS. L. BRUDENELL, 5, Observatory-gardens, Kensington, W.
CATHELS, REV. DAVID, M.A., The Manse, Hawick, N.B.
Cave, Charles, J. P., 13, Lowndes-square, London, S.W.
CAVE-BROWNE-CAVE, MRS. T., Burnage, Streatham Common, S.W.
CAZALET, MRS., Grenehurst, Dorking.
CECIL, LADY FRANCIS, Stocken Hall, Stretton, Oakham.
CHASE, CAPT. W. ST. L., V.C., care of Messrs. William Watson and Co., 28, Apollo-street, Bombay.
CHATTOCK, ARTHUR P., University College, Bristol.
CHICHELE-PLOWDEN, TREVOR, C.S.I., The Residency, Hyderabad, Deccan, India.
CHICHESTER, MISS MAY, Wotton Rectory, Dorking.
CHILDERS, MISS F. I., 46, Gunter's-grove, London, S.W.
CLARK, W. W., Denehurst, Dorking.
CLARK, MISS, Suffield Park, Cromer.
CLARKE, FRANCIS, 63, Gladsmuir-road, Whitehall Park, London, N.
CLARKE, J. F. HOWARD, M.D., M.R.C.S., (Eng.) 105, Wardour-street, W.
CLARKE, JOHN HENRY, M.D., 30, Clarges-street, London, W.
CLARKE, ROBERT H., M.A., M.B., M.R.C.S., Clarence Lodge, Redhill.

- CLARKE, REV. W. J., 186, Bristol-road, Birmingham.
- CLAYTON, CHARLES E., 152, North-street, Brighton.
- CLEMENS, S. L., Hartford, Conn., U.S.A.
- CLEVELAND, THE DUCHESS OF, 18, Grosvenor-place, London, S.W.
- CLISSOLD, EDWARD M., Fawley Lodge, Lansdown-road, Cheltenham.
- Clive, The Hon. Henrietta Windsor**, Oakly Park, Bromfield, Salop.
- Close, Rev. Maxwell H., M.A.**, University Club, Dublin.
- COATES, ANDREW, Pitcullen House, Perth, N.B.
- Coffin, Walter H., F.L.S.**, 94, Cornwall-gardens, London, S.W.
- COGHILL, COLONEL KENDAL, C.B., Cosheen, Castle Townshend, co. Cork.
- COLEGRANE, MRS. E., Bracebridge, Norwood, S.E.
- COLERIDGE, MISS CHRISTABEL R., Cheyne, Torquay.
- COLLINGWOOD, MISS A. M., 5, Addison-mansions, West Kensington, W.
- COLLINS, SIR ROBERT H., K.C.B., Broom Hill, Claremont, Esher.
- COLLISON, MRS. HENRY C., 17B, Great Cumberland-place, London, W.
- COLTHURST, LADY, 47, Hill-street, Berkeley-square, London, W.
- COLVILE, COLONEL HENRY E., C.B., 24, Chapel-st., Belgrave-square, S.W.
- COMPTON, LADY ALWYNE, 7, Balfour-place, London, W.
- COONEY, REV. STEWART E., M.A., 28, Donegall-passage, Belfast.
- COPE, REV. C. H., M.A., Churchills, Caterham Valley, Surrey.
- COTTERELL, JAMES, 140, Earlsfield-road, Wandsworth Common, S.W.
- CORT VAN DER LINDEN, PROFESSOR P. W. A., 6, Swimame-st., The Hague.
- COUSENS, CHARLES H., Star Chambers, 30, Moorgate-st., London, E.C.
- Cousens, John S.**, Wanstead, Essex.
- Cowan, William H.**, 11, Malborough-road, Bournemouth.
- COWPER, THE HON. MRS. SPENCER, Grosvenor Hotel, London, S.W.
- CRACKANTHORPE, MRS., 65, Rutland-gate, London, W.
- Crawford and Balcarres, The Earl of, K.T., F.R.S.**, 2, Cavendish-square, London, W.
- Crawford, F. Marion**, Villa Crawford, Sant' Agnello di Sorrento, Italy.
- CRAWFORD, W. C., 1, Lockharton-gardens, Colinton-road, Edinburgh.
- CRAWLEY, MRS. CHAS., 3, Regent-street, London, S.W.
- Crawshay, Robert**, 16, Berkeley-square, London, W.
- CRESPO, J. CHARTERS, 162, Rua de S. Julias, Lisbon, Portugal.
- CREWDSON, MISS GWENDOLEN, The Barons, Reigate.
- Crommelin, Miss Constance de la C.**, 29, Sussex-square, Brighton.
- CROOKS, MISS, Kensington, South Australia.
- CROSSLEY, PROFESSOR HASTINGS, Casa del Vallone, Bordighera, Italy.
- CROWE, W. LEADHAM, 10, Jeffry's-square, St. Mary Axe, London, E.C.
- CRUISE, SIR F. R., M.D., 93, Merrion-square, W., Dublin.
- CRUMP, HAROLD E., M.A., The Chestnuts, St. Margaret's, Twickenham.
- CUNNINGHAM, G., D.M.D. (Harvard, U.S.A.), 2, King's-parade, Cambridge.
- CUSHING, MRS. F. W., 4, Rue Chalgrin, Paris.
- D'ABBADIE, ANTOINE, 120, Rue de Bac, Paris.

- Dakyns, Henry Graham, M.A.**, Higher Coombe, Haslemere, Surrey.
DALL, MISS E. L., 42, Chesterton-road, Cambridge.
DALLAS, MISS H. S. A., 116, King Henry's-rd., South Hampstead, N.W.
Damania, Surgeon-Major, P. J., National Liberal Club, London.
DANVERS, MRS., 4, Cranley Mansion, Gloucester-road, S.W.
DARELL-BROWN, MRS., 1, Douro-villas, Cheltenham.
DARLEY, LADY, Quambi, Woollohra, New South Wales.
DARTNELL, GEORGE E., Abbottsfield, Stratford-road, Salisbury.
DARWIN, MRS. FRANCIS, Wychfield, Huntingdon-road, Cambridge.
DAVIES, BENJAMIN, 20, Lomond-road, Fairfield, Liverpool.
DAVIS, A. E., F.R.C.S. (Ed.), L.R.C.P.I., 20, Great George-sq., Liverpool.
DAVIS, JOSEPH T., Holly Bush, Snaresbrook, Essex.
DAVIS, THOMAS HENRY, Gatefield, Clarendon-road, Lewisham, S.E.
Davison, Miss Annie, 1, Stanford-road, Kensington, W.
DAY, BARCLAY L., Redcot, Meads, Eastbourne.
De Grey, The Countess, 1, Carlton-gardens, London, S.W.
Dem, John, Walsingham, Chislehurst.
***DESPARD, MISS**, 77, Chesterton-road, North Kensington, London, W.
Dewar, Rev. Peter, M.A., The Manse, North Bute, Rothesay, N.B.
DICKSEE, FRANK, A.R.A., 80, Peel-street, Campden Hill, London, W.
DILL, J. F. GORDON, M.A., M.B., 6, Brunswick-place, Brighton.
Dixon, Edward T., 4, Cranmer-road, Cambridge.
DIXON, HUGH N., M.A., F.L.S., East Park Parade, Northampton.
DOBBIE, A. W., Gawler-place, Adelaide, South Australia.
Dodge, Miss Mary M. H., 39, Brompton-square, London, S.W.
Dodgson, Rev. Charles Lutwidge, M.A., Christ Church, Oxford.
DONNELLY, MRS., Kendall-street, Cowra, New South Wales.
DOUGALL, MISS LILY, Canaan-grove, Newbattle-terrace, Edinburgh.
DOUGLAS, REV. DR. G. W., 239, Whitney-avenue, Newhaven, Conn., U.S.A.
DOVETON, F. B., Eastcliffe, Babbacombe, South Devon.
DOWSON, MRS., L.K.Q.C.P., L.R.C.S.I., 91, Cheyne-walk, Chelsea, S.W.
Doyle, A. Conan, M.D., Haslemere, Surrey.
DUKE, THOMAS, M.A., M.R.C.S., 33, Bilton-road, Rugby.
DULLEY, REV. B., M.A., St. Peter's Clergy House, London Docks, E.
DUNCAN, MRS. A.M.A., Victoria Club, 30A, Sackville-st., London, W.
DUNHAM, MISS HELEN, 11, Half-Moon-street, Piccadilly, London, W.
DUTT, R. C., C.I.E., Burdwan, Bengal, India.
DYCE, CAPTAIN CECIL, (Retired) Bengal Staff Corps, 64, Pembridge Villas, Notting Hill Gate, London, W.
EAGLE, FREDERICK, Devonian, St. Andrew's-road, Henley-on-Thames.
EARDLEY, LADY, 4, Lancaster-street, Hyde Park, London, W.
EARLE, MRS. C. W., 5, Bryanston-square, London, W.
EDELSTEN, JOHN A., 31, Bold-street, Warrington.
EGERTON, MISS MARY L., Whitwell Hall, York.

- Elder, Frederick**, 21, Cleveland-gardens, Hyde Park, London, W.
Elder, Mrs., 38, Hyde Park Gardens, London, W.
ELLIOT, GILBERT, 10, Hanover-square, London, W.
ELLIOT, MRS. MINTO, 7, George-street, Hanover-square, W.
Elliot, Miss, Sandecotes, Parkstone, Dorset.
ELLIOTT, SIR CHARLES ALFRED, K.C.S.I., LL.B., Calcutta.
ELLIOTT, REV. W. A., 54, Kirkgate, Shipley, Yorkshire.
ELLIS, JOHN EDWARD, M.P., 40, Pont-street, London, S.W.
ELLIS, MRS. ROBERT, 4, Rylett-road, Ravenscourt Park, W.
ELLISON, REV. JOHN H., M.A., The Vicarage, Windsor.
ELVEY, MISS MARY M., Finborough-road, West Brompton, London, S.W.
Elworthy, Arthur K., Foxdown, Wellington, Somerset.
Elwyn, Rev. Canon, M.A., Master's Lodge, Charterhouse, London
Eno, J. C., Wood Hall, Dulwich, London, S.E.
ERMACORA, DR. G. B., Padua, Italy.
ESTERHAZY, COUNT MICHAEL, Cseklesz, Pressburg County, Hungary.
EVANS, KIRKHAM, Adelaide, South Australia.
FAGAN, MRS. L. M., 56, Russell-square, London, W.C.
Falcke, Dudley C., 5, Pump-court, Temple, London, E.C.
FALCOMER, PROFESSOR M. T., Regio Instituto Teknik, Alessandria.
Farrer, The Lady, Abinger Hall, Dorking.
FEILDING, HON. EVERARD, 5, John-street, Mayfair, London, W.
FIELD, ALLAN B., St. John's College, Cambridge.
FIELD, E. M., M.A., Cotswold, Bishopswood-road, Highgate, N.
FINCH, H. WYNNE, JUNR., M.A., The Manor House, Stokesley, R.S.O., Yorks.
***FINZI, DR. GEORGE**, 11, Monte di Pieta, Milan.
FISHER, MRS. A. B., 24, Duke's-avenue, Chiswick, near London.
FISHER, REV. J. HARTMAN, Nassau, N.P., Bahamas.
FITZGERALD, DESMOND G., M.S.T.E., 94, Loughborough-rd., Brixton, S.W.
FLETCHER, MRS. K. R., The Orchard, Buckland, near Betchworth, Surrey.
Florence, Ernest B., 33, Redcliffe-square, South Kensington, S.W.
FLOURNOY, PROFESSOR TH., The University, Geneva.
FORD, MRS. GERARD, 7, Mandeville-place, London, W.
FORRESTER, MRS., Gavell House, Kilsyth, N.B.
FORT, CHARLES LEYLAND, B.A., Alderbury House, Salisbury.
Foster, Gerald H., 5, Cleveland-terrace, Hyde Park, W.
Fountain, Alfred, The Elms, Cornwall-road, Uxbridge.
Fox, St. George Lane, Traveller's Club, Pall Mall, London, S.W.
FRASER, COL. A. T., R.E., Bellary, Madras Presidency.
FREEMAN, MISS ADELAIDE C., Belgrave Mansions, Grosvenor-gdns., S.W.
FREEMANN, REV. H. B., M.A., 1, Soho-square, London, W.
Fry, Lewis George, 13, Thurlow-road, Hampstead, N.W.
FRY, OLIVER A., M.A., 141, Portsdown-road, Maida-vale, London, W.
FRY, R. E., B.A., 1, Palace Houses, Bayswater Hill, London, W.

- *FRYER, REV. A. T., 13, Dumfries-place, Cardiff.
 FURNIVALL, PERCY, 34, Adelaide-road, London, N. W.
 GALLOWAY, THE COUNTESS OF, 17, Upper Grosvenor-street, W.
 GARDINER, REV. EDWARD R., M.A., Long Wittenham, Abingdon.
 GARDNER, MRS. ERNEST, c/o Miss Wilson, 33, Ladbroke-square, W.
 GARNER, EDWIN T., Glendale, Alexandra-road, Selhurst, Surrey.
 GARRARD, MRS., 8, Kensington-court, London, W.
 GARTH, HENRY, M.B., C.M. (Edin.), 4, Harrington-street, Calcutta.
Gernet, Miss Nina, Basseynaya, 33, Lodg.4, St. Petersburg.
 GHOSE, N. N., the *Indian Nation* Office, 43, Bancharam Unkoor's-lane, Calcutta.
 GIBOTTEAU, AIMÉ, M.D., Villa Béarnaise, Biarritz.
 GITTERMANN, RUDOLPH C., Odessa, Russia.
 *GLARDON, REV. AUGUSTE, Tour de Peilz, Vaud, Switzerland.
 GLOVER, JOHN J. T., 124, Stephen's Green, W., Dublin.
 GODFREY, MRS., c/o Col. C.W. Godfrey, Bombay Staff Corps, Poona, India.
 GOODHART, REV. CHARLES A., M.A., Lambourne Rectory, Romford.
 GOODIER, MISS B. M., Seighford House, Hardwick-square, Buxton.
Goodman, Louis H., Bertram House, 170, Earl's Court-road, S.W.
 *GOODRICH-FREER, MISS, 27, Cleveland-gardens, Hyde Park, W.
 GORING, LADY, Strettington, Chichester.
 GOVER, JOHN M., LL.D., 5, New-square, Lincoln's Inn, London, W.C.
 GOVETT, THE VEN. ARCHDEACON, M.A., Gibraltar.
 GRAHAM, HENRY R., 8, Marble Arch, London, W.
 GRAHAM, J. W., B.A., 7, Barlow-terrace, High-st., C.-on-M., Manchester.
Graham, William W., 4, Elm-court, Temple, London, E.C.
 GRAY, EDWARD W., SURGEON-CAPTAIN, c/o Messrs. Holt, 17, Whitehall, S.W.
 GREEN, C. T., M.R.C.S., L.R.C.P. (Lond.), 33, Grange-mt., Birkenhead.
 GREEN, MISS MARIAN, The High School, Spring Mount, Blackburn.
Greener, W. O., 2, Kent Villas, Ealing.
 GREIG, REV. DAVID, M.A., Cottenham Rectory, Cambridge.
 GREVILLE, MISS C. C., 9, Queen's Gate-place, London, S.W.
 GRIFFITH, MISS E. C., 37, York-street, Portman-square, London, W.
 GRIFFITH, MRS. ROBERT W., The Old House, Llandaff.
 GRIFFITHS, JOSEPH, M.D., F.R.C.S., 4, Kings'-parade, Cambridge.
 GRIGNON, REV. WILLIAM S., M.A., Essendon, Hatfield, Herts.
 GROOM, ERNEST, Dothill Park, Wellington, Salop.
 *GRUBB, EDWARD, M.A., 5, 22, Crosby-road, Birkdale, Southport.
 GRUBBE, HUBERT H., Shallow, Ongar, Essex.
 GUDGEON, JAMES, Stowmarket.
 GUNTON, REV. CHARLES F., M.A., Farlam Vicarage, Milton, Carlisle.
 GUNTON, REV. F., M.A., Magdalene College, Cambridge.
Gurney, Rev. Alfred, M.A., St. Barnabas' Parsonage, Pimlico, S.W.
 GURNEY, REV. F., M.A., St. John's Cottage, Bovey Tracey, Newton Abbot.

- HACKETT, JAMES F., B.A., 71, King William-street, Adelaide, Australia.
- HAGGARD, JOHN G., H.B.M. Consul, Trieste, Austria.
- Haig, Mrs. C. E.**, Orchardwood, Ascot Heath, Berks.
- HAILEY, ALFRED J., 26, Bruce-road, Willesden, N.W.
- HALKETT, MISS KATHERINE E., 3, Pitt-street, Campden Hill, W.
- HALL, WILFRED, 9, Prior's-terrace, Tynemouth.
- HALL, MRS., 3, St. Alban's-road, Kensington, London, W.
- HALL, MRS. M. H., Blenheim Lodge, Surbiton.
- HAMILTON, COLONEL G. ROWAN, Killyleagh Castle, co. Down, Ireland.
- HAMILTON, W. STIRLING, Woodgaters, Horsham.
- HANDLEY, MISS C., M.A., 1, Clarendon-road, Garston, Liverpool.
- Hannah, Robert**, 82, Addison-road, Kensington, W.
- HANSFORD, CHARLES, 3, Alexandra-terrace, Dorchester.
- HARDCASTLE, EDWARD, 29, Mannheim-road, Bradford.
- HARDING, G. PALMER, Trouville, France.
- HARGRAVE, JOSEPH G., The Larches, Heaton Mersey, Manchester.
- HARGREAVES, MISS, 69, Alexandra-road, Southport.
- HARPUR, REV. GEORGE, B.A., Clifton Vicarage, Newark.
- HARRIS, REV. CHAS., M.A., The Institute, Mansfield-st., Haggerston, N.E.
- HARRIS, CAPT. C. S., Granville House, Richmond Hill, Bournemouth.
- HARRIS, MRS. LEVERTON, 4, Green-street, Park-lane, London, W.
- HARTLEY, LIEUT.-COLONEL J., LL.D., D.L., The Old Downs, Hartley, near Longfield, Kent.
- HARTSHORN, MISS C., c/o Messrs. Brown, Shipley and Co., London, E.C.
- HARVEY, ALFRED S., Hurstbourne, Bishopswood-road, Highgate, N.
- HASLAM, PROF. F. W., M.A., Canterbury College, Christchurch, New Zealand.
- HASTIE, MISS, 11, Ashburn-place, Cromwell-road, S.W.
- HAWES, MISS, 127, Victoria-street, London, S.W.
- HAY, THE HON. MRS. ALISTAIR, 8, Upper Belgrave-street, London, S.W.
- HAYES, FREDERICK W., 12, Westcroft-square, Ravenscourt Park, W.
- HAYWARD, MISS GRACE G., 25, St. George's Road, Kilburn, N.W.
- Hayward, M. Cecil**, Caius College, Cambridge.
- HEARD, RICHARD, 37, York-place, Portman-square, London, W.
- HEHNER, MRS. OTTO, Woodside House, Woodside, South Norwood, S.E.
- HENDERSON, MISS LILIAN, 133, Queen's-road, Bayswater, W.
- Henley, Hon. Ernest**, Watford Court, Rugby.
- HENNIKER-MAJOR, THE HON. MARY, 4, Berkeley-street, Piccadilly, W.
- HENRY, MISS EVA, 1, Argyll-villas, Cheltenham.
- HERBERT, HON. AUBERON, M.A., Burley, Ringwood, Hants.
- HERRINGHAM, MRS., 22, Bedford-square, London, W.C.
- HEWARD, REV. T. MORLEY, M.A., 17, Park-st., Dorset-square, N.W.
- Hewetson, H. Bendelack, F.L.S., M.R.C.S.**, 11, Hanover-sq., Leeds.
- HIBBS, REGINALD R., 13, St. Lawrence-road, North Kensington, W.

- Hichens, Rev. Thomas S.**, Guilsborough Vicarage, Northampton.
HILDYARD, F. W., The Shuttleworth Club, Fye Foot-lane, Queen Victoria-street, E.C.
HILL, CLEMENT HUGH, 63, Church-road, St. Leonards-on-Sea.
HILL, W. SCOTT, 47, Manor-place, Edinburgh.
HILL-TOUT, CHARLES, Trinity College, Vancouver, B.C.
HILLS, MRS., Corby Castle, Carlisle.
HODDING, MISS, Selwood House, Barnard's Cross, Salisbury.
Hodgson, Richard, LL.D., 5, Boylston-place, Boston, Mass., U.S.A.
Hogg, Henry R., M.A., Melbourne Club, Melbourne, Australia.
HOLE, REV. DONALD, A.K.C., 2, Busby-place, Camden-road, N.W.
Holland, Hon. Lionel R., M.P., B.A., 58, Conduit-street, W.
HOLLAND, MRS., Hotel Nervi, Nervi, Genoa.
HOLLAND, MISS, Nidry Lodge, Campden Hill, London, W.
Hollond, John R., M.A., Wonham, Dampton, Devon.
HOLSTEIN, MADAME ALEXANDRA DE, 29, Avenue de Wagram, Paris.
Hood, H. J., M.A., 115, St. George's-road, London, S.W.
HOOD, MRS., 115, St. George's-road, London, S.W.
HOOPER, GORDON, L.D.S.R.C.S., 21, New Cavendish-st., Harley-st., W.
HOOPER, MRS. PITMAN, 5, Endsleigh-street, Tavistock-square, W.C.
HOPKINSON, PROF. ALFRED, M.A., B.C.L., The Lodge, 32, Herne Hill, S.E.
HOPPS, JOHN PAGE, Oak Tree House, South Norwood Hill, London, S.E.
HORNE, ALDERSON B., Ditton-place, Balcombe, Sussex.
HOWARD, THE LADY MABEL, Greystoke Castle, Penrith.
HOWE, E. R. J. GAMBIER, 7, New-square, Lincoln's Inn, London, W.C.
Howell, Alexander, 109, High-street, Portsmouth.
HUDDLESTON, MRS., Llwynderw, Welshpool, Montgomeryshire.
HUDSON, NORMAN W., B.A., Pebble Hill, Limpsfield, Surrey.
HUGHES, MAJOR H. M., F.R.G.S., Rose Bank, Marden Park, Caterham Valley, Surrey.
Hughes, Mrs., Gwynnondale, Llanarthney, R.S.O., Carmarthenshire.
HUME-ROTHERY, J. H., B.Sc. (Lond.), The Pines, Worcester Pk., Surrey.
HUMFREY, MISS L. R., 8, Hyde Park Mansions, London, W.
HUNTER, THOMAS, Arnold House, Rugby.
HUTCHINS, D. E., Conservator of Forests, Cape Town.
Hutchinson, F. W. H., M.A., Brooklands House, Avenue, Cambridge.
HUTCHINSON, WILLIAM B., C.E., F.R.A.S., &c., Southport, Lancashire.
HYSLOP, DR., Bethlem Hospital, London, S.E.
INFIELD, H. I., 130, North-street, Brighton.
INGHAM, CHARLES B., Moira House, Eastbourne.
INGHAM, PERCY B., Moira House, Eastbourne.
INNES, LADY, Winslow, Darling Point, Sydney, New South Wales.
IRELAND, WM. W., M.D. (Edin.), Mavisbush, Polton, Midlothian, N.B.
ISAACHSEN, REV. THORVELD E., 44, Boompjes, Rotterdam.

- JACKSON, REV. F., The Vicarage, Newton-upon-Rawcliffe, Pickering.
 JACKSON, WILLIAM H., M.A., F.L.S., Pen Wartha, Weston-super-Mare.
 JACKSON, MISS E. R., S. Hilda's School, Clifton-road, Newcastle-on-Tyne.
Jameson, F., 6, Westbourne Park-villas, London, W.
 JEAFFRESON, REV. H. H., M.A., Villa degli Angoli Fiesole, Florence.
 JEBB, REV. H. GLADWYN, M.A., Firbeck Hall, Rotherham.
 JEBB, MRS., Springfield, Newnham, Cambridge.
 JEBB, MISS S. G., Overton, Lansdowne-road, Bournemouth.
Jeffreys, Mrs., Glandyfi Castle, Glandovey, R.S.O., North Wales.
 *JENKINS, E. VAUGHAN, Energlyn, 38, St. Margaret's-road, Oxford.
 JENKINSON, MRS. F. R. G., 112, Sloane-street, London, S.W.
 JESSUP, A. E., Villa St. Dominique, Valescure, St. Raphael, (Var), France.
Jeune, Lady, 37, Wimpole-street, London, W.
Johnes, Mrs., Dolaucothy, Llanwrda R.S.O., South Wales.
 JOHNSON, MISS ALICE, Llandaff House, Cambridge.
 JOHNSON, REV. WAYLAND, LL.D., Fredon, Sussex Co., New Jersey, U.S.A.
 JOHNSTON, MISS M. F., 22, Earl's Court-square, S.W.
 JONES, CAPTAIN HENRY MICHAEL, V.C., H.B.M. Legation, Lima, Peru.
 JONES, SIR LAWRENCE J., BART., Cranmer Hall, Fakenham, Norfolk.
 JONES, MISS CONSTANCE, Girton College, Cambridge.
 JONES, PROFESSOR P., 64, Via Sta. Lucia, Naples.
Joyce, Samuel, Latchford House, Greenheys-lane, Manchester.
 KANE, J. G. AURIOL, Sloperton Lodge, Kingstown, co. Dublin.
Kay, H. A., 71, Maida-vale, London, W.
 KEARNE, PERCY, 37, Avonmore-gardens, West Kensington, W.
 KEENE, REV. JAMES B., M.A., The Rectory, Navan, co. Meath.
 KEEP, A. P. PERCEVAL, M.A., 26, Vanbrugh-park, Blackheath, S.E.
Kelso, Commander R.N., Horkesley Park, Colchester.
 KENMARE, THE COUNTESS OF, Killarney House, Killarney.
 KER, C. B., M.D., Hadley House, Cheltenham.
Kerr, George, M.A., M.B., 6, St. Colme-street, Edinburgh.
 *KEULEMANS, J. G., 13, York-terrace, Brewery-road, Southend.
King, Miss, 50, Gloucester-gardens, Hyde Park, London, W.
 KINGSBURY, GEORGE C., M.D., 3, Brighton-parade, Blackpool.
 KINGSTON, H. D. R., M.B., Stormont Lodge, Willesden, N.W.
 *KIRK, JOSEPH, 35, Ripon-road, Plumstead, Kent.
 KLUHT, MISS H. M. 156, Westbourne-grove, London, W.
 KNIGHT, CHARLES N., M.A., 31, Holland-park, London, W.
Knowles, Ernest, Inglehurst Park-road, Bolton-le-Moors.
 KNOX, NATHANIEL A., Adelaide Club, Adelaide, South Australia.
 KNUTSFORD, THE LADY, 75, Eaton-square, London, S.W.
 KOTHEN, BARON AXEL VON, 27, Mikealsgatan, Helsingfors, Finland.
 LACH-SZYRMA, REV. W.S., M.A., F.R.H.S., Barkingside Vicarage, Ilford.
Lafone, A. W., M.P., Springfield, Oatlands Park, Walton-on-Thames.

- LAING, R. M., M.A., B.Sc., Boys' High School, Christchurch, New Zealand.
Lampugh, Rev. David, M.A., Rokeby Rectory, Barnard Castle.
LANCASTER, ERNEST LE C., M. B., Winchester House, Swansea.
LAURIE, PROF. H., LL.D., Melbourne.
LEADAM, ISAAC S., 1, The Cloisters, Temple, E.C.
LEAF, ARTHUR H., 9, St. Paul's Churchyard, London, E.C.
LEAF, MRS., The Green, Marlborough.
Leaf, Walter, Litt. D., 6, Sussex-place, Regent's Park, London, N.W.
LEAF, MRS. WALTER, 6, Sussex-place, Regent's Park, London, N.W.
LEE, REV. W. T., 4, Edith-terrace, Mount Gold-road, Plymouth.
LEGGE, THE LADY FRANCES, Woodsome, Huddersfield.
LEIGH, W. AUSTEN, M.A., 2, Norfolk-crescent, Hyde Park, London, W.
LEVY, MRS., 16, Campden House-road, Campden Hill, London, W.
LEWIS, C. W. MANSEL, Stradey Castle, Llanelly, Carmarthenshire.
Leycester, Mrs., 6, Cheyne-walk, Chelsea, London, S.W.
LEYMARIE, P. G., 12, Rue de Sommevard, Paris.
LIBRARIAN OF THE PUBLIC LIBRARY, Adelaide, South Australia.
LIBRARIAN, School of Arts, Brisbane, Queensland.
LIBRARIAN OF THE PUBLIC LIBRARY, Melbourne, Australia.
LIMOND, MISS CATHERINE, 15, Eaton-terrace, London, S.W.
LINDEN, MISS OLGA, 3, Versailles Road, Anerley, S.E.
LINDSAY, MISS BEATRICE, Bohemia, Port St. Mary, Isle of Man.
LINDSAY, R., L.R.C.S., M.B., c/o Messrs. Holt & Co., Whitehall-place, S.W.
LLOYD, MAJOR FRANCIS, 22, Cadogan-square, London, S.W.
LLOYD, OTHO HOLLAND, Dombresson, Canton Neuchatel, Switzerland.
Lodge, Professor O. J., D.Sc., F.R.S., 2, Grove-park, Liverpool.
LODGE, ROBERT, Laurie Lodge, Meads, Eastbourne.
LOEWE, HUGO L., 3, Southampton-street, London, W.C.
LOUGHNANE, JOHN, Clonkeen, Aughrim, Ballinasloe, Ireland.
LOVELL, REGINALD H., 449, Collins-street, Melbourne.
LOWENFELD, MRS., 31, Lowndes-square, London, S.W.
LUXMOORE, MISS, Bryn Asaph, St. Asaph, North Wales.
LYALL, MISS FRANCES E., Fetcham, near Leatherhead.
LYTTELTON, HON. MRS. ARTHUR, The Vicarage, Eccles, Manchester.
LYTTELTON, SYBELLA LADY, 9, Bryanston-square, London, W.
MACALISTER, PROFESSOR A., M.D., F.R.S., Torrisdale, Cambridge.
MacColl, Rev. Canon Malcolm, M.A., Devonshire Club, St. James's, S.W.
*MACDONALD, REV. J. A., Broadstairs, Kent.
MACKAY, GEORGE D., Inveralmond, Cramond, Midlothian, N.B.
MACKY, DR., 4, Curzon-street, Mayfair, W.
MAITLAND, EDWARD, B.A., 1, Studio-buildings, Thurloe-square, S.W.
MALDEN, WILLIAM E. P., Trinity College, Cambridge.
Manders, H., F.R.C.S., Agincourt House, Yorktown, Farnborough.

- *MANGIN, MARCET, 102, Rue Erlanger, Paris.
- MANN, REV. FREDERIC, M.A., Grange House, Chigwell, Essex.
- MANTELL, MISS BERTHA, 5, South Bank-terrace, Surbiton.
- MARJORIBANKS, LADY, Tillmouth Park, Cornhill-on-Tweed, Northumberland.
- MARSHALL, ARTHUR, 13, Belsize-avenue, London, N.W.
- MARSHALL, HENRY WILLIAM, Quorn, South Australia.
- MARSHALL, THOMAS, Leeds Library, Commercial-street, Leeds.
- MARSHALL, WILLIAM CECIL, M.A., 28, Bedford-square, London, W.C.
- MARTEN, MISS A. R., 78, Vanbrugh-park, Blackheath, S.E.
- Martin, Miss A. E.**, 34, Elvaston-place, Queen's Gate, S.W.
- MARTIN, MISS FLORENCE R., 65, Cornwall-gardens, London, S.W.
- MARTIN, MRS. J. BIDDULPH, 17, Hyde Park Gate, London, S.W.
- Martinez, Mrs.**, 16B, Hyde Park-mansions, London, W.
- MARTINEAU, ALFRED EDWARD, Chief Court, Lahore, India.
- MASON, MISS M. H., Morton Hall, Retford, Notts.
- Massey, Charles C.**, 124, Victoria-street, London, S.W.
- MATHEWS, G.B., B.A., 9, Menai View-terrace, Upper Bangor, North Wales.
- MATHEWS, FRANK H., 22, Wentworth-street, Bolton, Lancashire.
- MAUD, MISS CONSTANCE, Sanderstead Rectory, near Croydon.
- MAXWELL, JOSEPH, 37, Rue Thiac, Bordeaux, France.
- MAYO, ERNEST S. G., 5, Castle-arcade, Cardiff.
- MAYOR, R. G., King's College, Cambridge.
- MCALPINE, MRS., Ardenconnel-row, near Helensburgh, N.B.
- MCCLURE, HENRY, M.D., Cromer, Norfolk.
- MCCONNEL, H. W., M.A., M.B., M.R.C.S., Manor House, Ryburgh, Norfolk.
- McHUGH, P. A., M.P., Sligo.
- McKERLIE, MISS HELEN G., Monkstown, co. Dublin.
- MCLAREN, MRS. C., 45, Harrington-gardens, London, S.W.
- McLAUGHLIN, E. N., Trinity Villa, Spanish Town, Jamaica.
- McNEILY, A. J. W., Q.C., Supreme Court, St. John's, Newfoundland.
- MEDEIROS E ALBUQUERQUE, JOSÉ DE, Rua S. Christovam, 36, Rio Janeiro, Brazil.
- MERRILEES, J. F., M.D., Auburn, Victoria.
- METCALF, FRANCIS W. R., Emmanuel College, Cambridge.
- Micklethwait, Richard K.**, Ardsley House, Barnsley.
- Miles, Miss**, Woodhill, Gerrards Cross, Bucks.
- Milford, The Lady**, 16, Hill-street, Berkeley-square, W.
- MILLER, MRS. W. PITT, Merlewood, Grange-over-Sands, Lancashire.
- MILLS, THOMAS E., Cabra Parade, Dublin.
- MITCHELL, MRS. C. W., 195, Queen's Gate, London, S.W.
- Mitchiner, J. H.**, Acacias, Barham Road, South Croydon.
- MOLESWORTH, SIR GUILFORD L., K.C.I.E., Simla, India.
- Money, Colonel Gerard Noel, C.B., F.R.G.S.**

- Money-Coutts, Francis Burdett**, Walsingham House, Piccadilly, W.
Montagu, The Lady Cecil Scott, The Lodge, Beaulieu, Southampton.
MONTEAGLE, THE LORD, K.P., Mount Trenchard, Foynes, co. Limerick.
MONTGOMERY, MRS., 9, Hartley-road, Exmouth.
MONTMORENCY, J. E. G. de, B.A., L.L.B., 20, Old-bldngs., Lincoln's Inn, W.C.
MOORAJ, FAZAL G., Cooper's-hill, Staines.
MOORE, LIEUT.-GENERAL MONTGOMERY, Bellevue, Halifax, Nova Scotia.
MORDAN, MISS C. E., 15, Queen-square, W.C.
MORGAN, REV. EDWARD, B.A., Penmark Vicarage, Cowbridge.
MORISON, MRS. MILLER, B.A., Douglas-crescent, Edinburgh.
MORISON, THEODORE, M.A., Aligarh, N.W.P., India.
MOUL, MRS., 3, Prince's Mansions, Victoria-street, S.W.
MOULTON, MRS. F. A., care of Low's Exchange, 1,121, Broadway,
 New York, N.Y., U.S.A.
Mount-Temple, The Lady, Babbacombe Cliff, Torquay.
MOYNIHAN, B. G. A., M.B. (Lond.), The General Infirmary, Leeds.
MUNRO, H. A., M.R.C.S., L.R.C.P., Lulworth, Bushey Green, Catford.
MUNTHE, DR., 26, Piazza di Spagna, Rome.
MURRAY, DONALD, M.A., *Sydney Morning Herald* Office, Sydney, N.S.W.
MURRAY, PROFESSOR GEO. G. AIMÉ, B.A., The University, Glasgow, N.B.
MURRAY, MRS. G. A., 10, Hyde Park Mansions, London, N.W.
MURRAY, COLONEL HUGH H., R.A., 28, Gower-street, London, W.C.
MURRAY, R. M., M.A., M.B., M.R.C.P. (Edin.), 11, Chester-st., Edinburgh.
MURRAY, SYDNEY J., 70, Cecile-park, Crouch Hill, London, N.
MURRAY, T. DOUGLAS, Arthur's Club, St. James's-street, London, S.W.
Murray-Aynsley, Mrs., 43, Cromwell-houses, Queen's-gate, S.W.
Myers, Frederic W. H., M.A., Leckhampton House, Cambridge.
MYERS, MRS. F. W. H., Leckhampton House, Cambridge.
MYLNE, MRS., 83, Gloucester-terrace, Hyde Park, London, W.
NEATE, PERCY JOHN, F.G.S., M.M.E., 268, High-street, Rochester.
NELSON, REV. GEORGE, LL.D., St. Michael's Vicarage, Bromley, Poplar, E.
NELSON, MRS. R. A., Redbourne, East Molesey Park, Surrey.
NEVILLE, FRANCIS HENRY, M.A., Sidney Sussex College, Cambridge.
NEWBOLD, MISS A., 4, Artillery-buildings, Victoria-street, S.W.
Newmann, Oscar P., 84, Newman-street, London, W.
NEWSOM, JOHN, The American Trading Company, Yokohama, Japan.
NEWTON, REV. R. HEBER, East Hampton, Suffolk Co., New York, U.S.A.
NICHOLL, ILTYD B., The Ham, Cowbridge, South Wales.
NICHOLS, REV. T. B., M.A., St. Oswald's College, Tynemouth.
NICHOLSON, SIR CHARLES, BART., D.C.L., LL.D., M.D., The Grange,
 Totteridge, Herts.
NICOLSON, SIR A., K.C.I.E., C.M.G., British Legation, Tangier, Morocco.
***NISBET, E. T.**, 17, Latimer-street, Tynemouth.
NOBLE, JAMES B., M.R.C.S., L.R.C.P., 167, Kennington Park-road, S.E.

- Noel-Cox, Herbert L. N.**, 2, Edinburgh Mansions, Victoria-st., S. W.
Norman, Mrs. Herbert G. H., 5, Southwell-gdns, S. Kensington, S. W.
Norris, Professor Richard, M.D., F.R.S.E., Birchfield, Aston, Birmingham.
- NORRIS, WILLIAM ALFRED**, Holmwood Lodge, Laton-road, Hastings.
NORTHCOTE, HON. HUGH OLIVER, The Hyde, Luton.
NUTTER, MRS., Fairseat, Wrotham, Kent.
OATES, F. EDWARD, St. Peter's Presbytery, Gloucester.
***OCHOROWICZ, DR. J.**, 23, Rue Vladimir, Warsaw.
OGILVIE, G. M., c/o Messrs. H. S. King and Co., 45, Pall Mall, S. W.
OGILVIE, MRS., c/o Dr. Ogilvie, H. M. Chief Inspector of Schools, Edinburgh.
OMAN, CHARLES W. C., M.A., All Souls' College, Oxford.
O'NEILL, GREGORY L., M.B., 291, Elizabeth-st., Sydney, New South Wales.
OPIE, EDWARD A. D., J.P., Pirie-street, Adelaide, South Australia.
PACK-BERESFORD, DENIS R., Fenagh House, Bagnalstown, Co. Carlow.
PAGAN, MISS C., Marston Lodge, Harrow.
PAGET, LADY, Villa Bellosguardo, Florence.
- Palmer, Miss**, 3, Carlisle-place, Victoria-street, London, S. W.
PANTON, D. MORRIESON, 84, Park-street, Grosvenor-square, London, W.
PASSINGHAM, MRS., Fermoyle, Castle Gregory, Co. Kerry.
PENNINGTON, MRS., c/o William Watson & Co., 28, Apollo-st., Bombay.
PERCIVAL, MRS., 2, Southwick Place, London, W.
Perez, Dr. Jorge, Puerto de Orotava, Teneriffe, Canary Islands.
PERRY, E. C., M.D., M.A., Superintendent's House, Guy's Hospital, S. E.
PETHYBRIDGE, WALTER, 3, Rhodesia-road, Clapham Rise, S. W.
Petrovo-Solovovo, Michael, 38, Serghievskaja, St. Petersburg.
PHILLIPS, REV. J. T., 147, Beaufort-hill, Beaufort, Mon.
Phipps, Miss, Knebworth House, Stevenage, Herts.
PICKERING, JAMES R., A.I.E.E., 5, Carew-road, Thornton Heath.
Pilcher, Giles T., 29, Dawson-place, London, W.
PLAYFORD, LOUIS L., P.O. Box, 377, Johannesburg, Transvaal, S. Africa.
PLENDERLEITH, WILLIAM, 126, Stroud Green-road, Finsbury Park, N.
Podmore, Frank, M.A., 32, Well-walk, Hampstead, N. W.
POLLOCK, MISS, 50, Weymouth-street, London, W.
PONSONBY, HON. MRS., 2, Wilton-terrace, Belgrave-square, S. W.
PONSONBY, MISS, Rye Vale, Leixlip, co. Kildare.
PONTIFEX, MISS, 72, Cornwall-gardens, London, S. W.
POPE, GEORGE H., M.A., B.C.L., Merchants' Hall, Bristol.
Portal, Miss V., 8, Beaufort-gardens, London, S. W.
PORTER, MRS., Sydney House, Westcliffe-road, Bournemouth.
***PORTER, MISS**, 16, Russell-square, London, W. C.
PORTSMOUTH, THE COUNTESS OF, 2, Abbey-gardens, Westminster, S. W.
POSTGATE, PROFESSOR J. P., Litt.D., Trinity College, Cambridge.
POWELL, MISS CONSTANCE M., 5, Campden Hill-square, London, W.

- POWELL, GEORGE THOMPSON, Rotherwood, Sydenham Hill, S.E.
POWLES, LEWIS CHARLES, M.A., 9, Queen's Gate-place, London, S.W.
POWYS, HON. MRS. FOX, 29, Albion-street, Hyde Park, London, W.
PRAED, MRS. CAMPBELL, 16, Talbot-square, Hyde Park, London, W.
PRIBITKOF, V., 67, Nevsky Prospect, St. Petersburg.
PULLEN, MISS, Milton View, Elsecar, Barnsley, Yorkshire.
PUMPHREY, MRS., Derwent-hill, Ebchester, co. Durham.
PURDIE, MRS., 27, Palace-court, London, W.
PYM, MRS. ANGELA, Bankside, Lunham-road, Upper Norwood, S.E.
RADNOR, THE COUNTESS OF, 52, Grosvenor-street, London, W.
RAMSAY, PROFESSOR WILLIAM, Ph.D., F.R.S., 12, Arundel-gardens, W.
RAMSAY, LADY, 23, Draycot-place, Cadogan-gardens, London, S.W.
RAPER, R. W., M.A., Trinity College, Oxford.
RAUPERT, REV. J. G. F., 30, Belsize-square, London, N.W.
Rayleigh, Clara Lady, 90, Ouslow-gardens, London, S.W.
READE, HERBERT V., 6, Scarsdale Villas, Kensington, London, W.
REICHEL, PRINCIPAL H. R., M.A., University College, Bangor.
REYNOLDS, COLONEL H. C., Thorncliffe, Cheltenham.
REYNOLDS, MRS., Millington House, Thelwall, near Warrington.
RICHARDSON, FREDERIC WILLIAM, F.C.S., 2, Farcliffe-place, Bradford.
RICHARDSON, MISS J., 72, Hamilton-terrace, London, N.W.
RIDDIFORD, MRS. W. H., Chalfont, Barnwood, near Gloucester.
Ridley, Henry N., M.A., F.L.S., 17, Margaret-street, London, W.
RIDLEY, MISS, Stagshaw, Daleham-gardens, London, N.W.
Robb, Mrs., 46, Rutland Gate, London, S.W.
ROBBINS, REV. JOHN, D.D., St. George's Vicarage, Campden-hill, W.
ROBERTS, WILLIAM JOHNSON, 146, Pembroke-road, Dublin.
ROBERTS, REV. W. W., 39, Addison-gardens, Kensington, W.
Robertson, C. Lockhart, M.D., Guns Green, The Drive, Wimbledon.
ROBERTSON, GEORGE M., M.B., Royal Asylum, Morningside, Edinburgh.
ROBERTSON, MRS., Nether Scale Hall, Ashby-de-la-Zouch.
ROBERTSON, MISS N., Alfriston House, Alfriston, Sussex.
ROBERTSON-MACDONALD, MRS., 35, Tregunter-rd., South Kensington, S.W.
ROBIN, PERCY A., B.A., George-street, Parkside, Adelaide, Australia.
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STANWAY, MISS EMILY, 17, Park-street, Taunton.
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STAPLEY, MRS., 33, Bloomsbury-square, London, W.C.
Stead, William T., Cambridge House, Wimbledon, S.W.
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 TATTERSALL, JAMES GRANVILLE, Hanover-square Club, London, W.
Tattersall, Robert W., 31, New Inn Hall-street, Oxford.
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 CHILD, S. R., Lumber Exchange, Minneapolis, Minn.

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Curtis, W. E., 1,228, Connecticut-avenue, Washington, D.C.
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DEXTER, MRS. GEORGE, Egmont-street, Brookline, Mass.
DICKERMAN, REV. W. F., 276, Orange street, New Haven, Conn.
DICKEY, CALVIN, M.A., Room 22, 94, Washington-street, Chicago, Ill.
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Dow, Alexander, 1, West 83rd-street, New York, N. Y.
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Edwards, Mrs. Mary H., 161, Main-street, Keene, N.H.

- ELDRIDGE, PROF. E. H., The Temple College, Broad & Berks-streets, Philadelphia, Pa.
- Ellis, Miss Lucy**, 480, Beacon-street, Boston, Mass.
- ESTY, PROFESSOR WILLIAM C., Amherst College, Amherst, Mass.
- ETHERIDGE, MISS FANNY S., 1,634, Michigan-avenue, Chicago, Ill.
- EVANS, MISS ELLA K., 186, North-street, Buffalo, N.Y.
- EVANS, MRS. GLENDOWER, 12, Otis-place, Boston, Mass.
- EVERETT, PROFESSOR C. C., 53, Garden-street, Cambridge, Mass.
- FARMER, MISS SARAH J., Eliot, Maine.
- Felton, Thomas C.**, Hotel Ludlow, Boston, Mass.
- FIELDS, MRS. JAMES T., 148, Charles-street, Boston, Mass.
- FILLEBROWN, THOS., M.D., D.M.D., 157, Newbury-street, Boston, Mass.
- FINNIGAN, JOHN, 61, Beekman-street, New York, N.Y.
- FLETCHER, HORACE, 323, Baronne-street, New Orleans, Louisiana.
- FLUHRER, REV. CHARLES, D.D., 95, Main-street, Albion, N.Y.
- FORMAN, G. A., 824, Delaware-avenue, Buffalo, N.Y.
- Fullerton, C. W.**, 94, Dearborn-street, Chicago, Ill.
- FULLERTON, PROFESSOR G. S., Univ. of Penn., West Philadelphia, Pa.
- Gage, Lyman J.**, 470, North State-street, Chicago, Ill.
- Gale, Prof. Harlow S.**, Univ. of Minnesota, Minneapolis, Minnesota.
- GARDINER, DR. EDWARD G., 131, Mount Vernon-street, Boston, Mass.
- GARDINER, PROFESSOR H. N., 23, Craft's Avenue, Northampton, Mass.
- GARDINER, J. HAYS, Grays, 18, Harvard Univ., Cambridge, Mass.
- Gardner, Mrs. John L.**, 152, Beacon-street, Boston, Mass.
- GAY, WALTER, 73, Rue Ampère, Paris, France.
- GEHRING, ALBERT, 626, Pearl-street, Cleveland, Ohio.
- Gerrish, Dr. F. H.**, 675, Congress-street, Portland, Maine.
- GLEASON, ADELE A., M.D., The Sanitarium, Elmira, N.Y.
- GODDARD, GEORGE A., 1, Mount Vernon-place, Boston, Mass.
- GOODALE, HENRY STERLING, 400, West 57th-street, New York, N.Y.
- GOODNOW, H. R., 95, Riverside Drive, New York.
- GOODRIDGE, MRS. FREDERICK, 250, Fifth-avenue, New York, N.Y.
- GORTON, DR. D. A., 174, Clinton-street, Brooklyn, N.Y.
- GRAY, MRS. JOHN C., 176, Beacon-street, Boston, Mass.
- GREENE, BERTRAM, 6, Louisburg-square, Boston, Mass.
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- GRIFFIN, REV. R. A., P.O. Box 6, South Billerica, Mass.
- GRIFFING, MRS. C. R., c/o Dr. H. Griffing, 55, W. 47-st., New York, N.Y.
- GROSS, MRS. S. E., 48, Lake Shore Drive, Chicago, Ill.
- Grower, George G.**, Ansonia Brass and Copper Co., Ansonia, Conn.
- HALL, A. D., M.A., Morgan Hall, 1,713, Nicollet-ave., Minneapolis, Minn.
- HALL, PROFESSOR JAMES, Room 32, State Hall, Albany, N.Y.
- HALL, JAMES P., 6, Poplar-street, Brooklyn, N.Y.
- HALL, DR. T. P., Tabor, Fremont Co., Iowa.

- HAMILTON, C. M., 50, Main-street, Salamanca, N.Y.
HAPGOOD, MRS. CHARLES H., Alton, Ill.
HARDAWAY, W. A., M.D., 2,922, Locust-street, St. Louis, Mo.
Harden, Judge William D., Savannah, Georgia.
HARRIS, WILLIAM T., LL.D., 1,303, P.-street, N.W. Washington, D.C.
HARTSHORNE, CHARLES H., 57, Bentley-avenue, Jersey City, N.Y.
HARTZELL, F. S., 96, North Walnut-street, Canton, Ohio.
HARVEY, ANSON B., M.A., 140, North 16th-street, Philadelphia, Pa.
HAWK, WALTER S., Doniphan, Nebraska.
Haworth, George D., Decatur, Ill.
HAYNES, HENRY W., 239, Beacon-street, Boston, Mass.
HAYWARD, ALVINZA, 532, Market-street, San Francisco, Cal.
HEILNER, REV. S. A., D.D., 1,410, Christian-street, Philadelphia, Pa.
Hemenway, Augustus, Readville, Mass.
HEYWOOD, CHARLES, Gardner, Mass.
HICKS, BENJ. D., Old Westbury, Queen's Co., N.Y.
Higbee, Col. George H., Burlington, Iowa.
Hill, Mrs. A. S., 9, Massachusetts-avenue, Boston, Mass.
HODGSON, RICHARD, LL.D., 5, Boylston-place, Boston, Mass.
HODGSON, DR. THOMAS, Astolat, Chapman-street, North Melbourne,
Victoria, Australia.
HOLBROOK, LEVI, P. O. Box 536, New York, N.Y.
HOLBROOK, DR. M. L., 46, East 21st-street, New York, N.Y.
HOLLADAY, PROF. WALLER, 400, West 57th-street, New York, N.Y.
HOLMES, MRS. JULIA SADLER, 28, West 120th-st., New York, N.Y.
HOLMES, REV. S. V. V., Westminster Church, Buffalo, N.Y.
Holt, Henry, 29, West 23rd-street, New York, N.Y.
HOLT, L. EMMETT, M.D., 15, East 54th-street, New York, N.Y.
HOOPER, MISS E. R., 141, Beacon-street, Boston, Mass.
HOPE, ROBERT, Gen. Theological Seminary, Chelsea-sq., New York, N.Y.
HOSKIN, JOHN, 4,100, Locust-street, Philadelphia, Pa.
HOUSEHOLDER, FRANK, Kansas City Stock Yards, Kansas City, Mo.
HOWLAND, MISS B. M., cor. Carver and Museum-sts., Cambridge, Mass.
HUDSON, THOMSON JAY, 10, Ninth-street, S.E., Washington, D.C.
HULL, MISS P. C., 22, John-street, Providence, R.I.
HUNT, CHAS. R., M.D., 262, Union-street, New Bedford, Mass.
HUSE, WM., Ponca, Dixon Co., Nebraska.
HUTCHINSON, MISS MARY S., 2,006, De Lancey-place, Philadelphia, Pa.
HYSLOP, PROFESSOR J. H., Columbia College, New York, N.Y.
JACKSON, MRS. LOUISA S., 16, Rue Auguste Vacqueria, Paris, France.
James, Dr. H. F., 2,627, Olive-street, St. Louis, Mo.
James, Professor William, 95, Irving-street, Cambridge, Mass.
Jefferson, J., Buzzard's Bay, Mass.
Jenks, Mrs. P. A., 290, Marlborough-street, Boston, Mass.

- JEWETT, MISS S. O., South Berwick, Maine.
- JOHNSON, CHARLES R., Box 492, 405, Main-street, Worcester, Mass.
- JOHNSON, PROFESSOR ROGER B. C., Miami University, Oxford, Ohio.
- JOLINE, MRS. ADRIAN H., 1, West 72nd-street, New York, N.Y.
- JONES, MISS ALICE, Bryn Mawr College, Bryn Mawr, Pa.
- JONES, GEORGE H., 561, Madison-avenue, New York, N.Y.
- JONES, MISS THERESE E., Box 566, Los Angeles, Cal.
- KENNEDY, MISS LEILA M., 715, Forman-park, Syracuse, N.Y.
- KIDD, G. W., 853, Fifth-avenue, New York, N.Y.
- KIMBALL, DR. F. H., Rockford, Ill.
- Kimball, Miss Hannah P.**, 325, Commonwealth-ave., Boston, Mass.
- Kinney, Thomas W.**, 220, East Third-street, Portsmouth, Ohio.
- KNOWLES, REV. EDWARD R., LL.D., West Sutton, Mass.
- KOPTA, MADAME FLORA P., Gut Podmok in Podmok, Post Shüttenhofen, Bohemia, Europe.
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- KUHN, HAMILTON, 36, Commonwealth-avenue, Boston, Mass.
- LAMONT, ROBERT G., 68, St. James's-place, Brooklyn, N.Y.
- LANE, CHARLES D., Angels Camp, Calaveras County, California.
- LANE, MRS. CHARLES D., Angels Camp, Calaveras County, California.
- LANGLEY, PROFESSOR S. P., Smithsonian Institution, Washington, D.C.
- Lawrence, A. E., Junr.**, 53, Devonshire-st, Room 15, Boston, Mass.
- Lawton, Miss Elizabeth**, 142, East 18th-street, New York, N.Y.
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 LOCKWOOD, COLONEL J. S., 146, Franklin-street, Boston, Mass.
Logan, W. S., 58, William-street, New York, N.Y.
 LOMBARDI, C., 1,314, Rusk-avenue, Houston, Texas.
 LONG, GEORGE E., Box D., Jersey City, N.J.
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Lukens, Dr. Anna, 1,068, Lexington-avenue, New York, N.Y.
 MACDONOUGH, THOMAS B., 1,227, Broadway, New York, N.Y.
 MAGOUN, WALTER RUSSELL, 47, Tremont-street, Boston, Mass.
Main, W. F., cor. College and Dubuque-streets, Iowa City, Iowa.
 MARCHAND, G. L., 112, Clark-street, Room 516, Chicago, Ill.
 MARTIN, MISS EMMA H., 71, Scio-street, Rochester, N.Y.
 MARVIN, WALTER T., 6, West 130th-street, New York, N.Y.
 MASON, MISS ELLEN F., 1, Walnut-street, Boston, Mass.
 MASON, MISS IDA M., 1, Walnut-street, Boston, Mass.
 MASON, R. OSGOOD, M.D., 348, West 58th-street, New York, N.Y.
 MCCLELLAN, MRS. CLARA D., Galena, Ill.
 MCEWEN, MRS. D. C., 160, Stirling-place, Brooklyn, New York, N.Y.
 MCGEE, W. J., Bureau of Amer. Ethnology, Smithsonian Institution,
 Washington, D.C.
 MCHENRY, MISS J. HOWARD, 200, E. Biddle-st., Baltimore, Maryland.
 MCMANAMA, M. G., 504, Rialto-building, St. Louis, Mo.
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 MENDENHALL, MRS. E. R., 1,804, Green-street, Philadelphia, Pa.
 MILLET, JOSIAH B., 150, Charles-street, Boston, Mass.
 MINOT, PROFESSOR CHARLES S., 688, Boylston-street, Boston, Mass.
 MITCHELL, JAMES, Stock Exchange, New York, N.Y.
 MORGAN, W. E., M.D., 34, East 29th-street, Chicago, Ill.
 MORSE, J. J., 26, Osnaurgh-st., Regent's Park, London, N.W., England.
 MUNNS, DR. C. O., Oxford, Ohio.
 MURLIN, REV. L. H., President Baker University, Baldwin, Kansas.
 MURPHY, HON. FRANKLYN, 1,027, Broad-street, Newark, N.J.
 MYERS, W. H., M.D., 157, West Wayne-street, Fort Wayne, Ind.
 *NEWBOLD, WM. ROMAINE, Ph.D., Univ. of Penna, Philadelphia, Pa.
 NEWTON, REV. R. HEBER, 781, Madison-avenue, New York, N.Y.
 NORBURY, MISS MARY, 206, West 71st-street, New York, N.Y.
Norbury, Mrs. J. F., 5th-avenue Hotel, Madison-sq., New York, N.Y.
 NORRIS, HON. C. H., Marion, Marion Co., Ohio.
 NORTON, MRS. F. L., 186, Beacon-street, Boston, Mass.
Nunn, Dr. Richard J., 119½, York-street, Savannah, Georgia.
 OLCOTT, MISS EDITH, 4, East 53rd-street, New York N.Y.
 OLDHAM, F. F., Blymyer Building, Cincinnati, Ohio.
 OLIVER, GEORGE S. J., Santa Barbara, Cal.

- ORRICK, N. C., M.D., Canton, Mississippi.
- Osborn, General F. A.**, 236, Marlborough-street, Boston, Mass.
- OSBORNE, A. E., M.D., Ph.D., Eldridge, P.O., Sonoma Co., Cal.
- PARK, DR. ROSWELL, 510, Delaware-avenue, Buffalo, N.Y.
- PARKER, WILLIAM L., 339, Marlborough-street, Boston, Mass.
- PARSONS, A. J., 1,818, N-street, Washington, D.C.
- PARSONS, JOHN E., M.D., 6, Grove-street, Ayer, Mass.
- Peabody, Mrs. A. P.**, 47, Commonwealth-avenue, Boston, Mass.
- PECKHAM, ORVILLE, First National Bank, Chicago, Ill.
- PELLEW, MRS. HENRY E., 1,637, Massachusetts-ave., Washington, D.C.
- PERKINS, FRANKLIN R., 294, Linwood-avenue, Buffalo, N.Y.
- PERRY, JOHN G., M.D., 48, East 34th-street, New York, N.Y.
- PERRY, THOS. S., 312, Marlborough-street, Boston, Mass.
- PERRY, MRS. T. S., 312, Marlborough-street, Boston, Mass.
- PETERS, MRS. F. A., 541, Commonwealth-avenue, Boston, Mass.
- PETTIT, MISS EDITH, 2,205, Trinity-place, Philadelphia, Pa.
- PHILLIPS, MRS. J. C., JUNR., 299, Berkeley-street, Boston, Mass.
- PHILPOTT, A. J., *c/o Boston Globe*, Boston, Mass.
- PLATT, J. C., 333-335, Fourth-avenue, New York, N.Y.
- POST, C. W., Battle Creek, Michigan.
- PRATT, FREDERICK H., 53, West-street, Worcester, Mass.
- PRESCOTT, MISS, 78, Commonwealth-avenue, Boston, Mass.
- PRINCE, DR. MORTON, 458, Beacon-street, Boston, Mass.
- Putnam, Dr. Charles P.**, 63, Marlborough-street, Boston, Mass.
- PUTNAM, MISS ANNIE C., 63, Marlborough-street, Boston, Mass.
- PUTNAM, GEORGE, 50, State-street, Boston, Mass.
- PUTNAM, DR. JAMES J., 106, Marlborough-street, Boston, Mass.
- Quinby, Rev. John W.**, East Bridgewater, Mass.
- Quincy, Josiah P.**, 82, Charles-street, Boston, Mass.
- QUIRK, CHARLES H., M.D., *c/o Fred. H. Quirk, Casilla Correo, 825,*
Buenos Ayres, South America.
- RADCLIFFE-WHITEHEAD, RALPH, Santa Barbara, Cal.
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- RANSOM, FRANK H., 4, Buckingham-place, Cambridge, Mass.
- RAYMOND, MRS. HENRY E., Corey-road, Brookline, Mass.
- RAYSON, MISS AMY, B.A., 176, West 75th-street, New York, N.Y.
- REES, MRS. JANET E. RUUTZ, Studio 864, Carnegie Hall, New York, N.Y.
- RICE, MRS. DAVID HALL, 2, Wellington-terrace, Brookline, Mass.
- RICHARDSON, M. T., Ridgewood, New Jersey.
- Robbins, Miss A. M.**, 29, Pemberton-square, Boston, Mass.
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- ROLFE, ALFRED G., The Hill School, Pottstown, Pa.
- Ropes, John C.**, 99, Mount Vernon-street, Boston, Mass.
- Royce, Professor Josiah**, 103, Irving-street, Cambridge, Mass.

- RUDDIMAN, J. C., 247, 27th-avenue, North, Minneapolis, Minn.
Rumsey, Mrs. B. C., cor. Delaware-ave. and Tracey-st., Buffalo, N.Y.
 RUSSELL, ARTHUR J., *Minn. Journal*, Minneapolis, Minn.
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 SARGENT, MRS. WINTHROP, 207, Commonwealth-avenue, Boston, Mass.
Savage, Rev. M. J., Church of the Messiah Study, 34th-street and
 Park-avenue, New York, N.Y.
Sawyer, Hon. Chas. H., Dover, New Hampshire.
 SCHILLER, PROF. F. C. S., 72, Huestis-street, Ithaca, N.Y.
 SCRIBNER, H. D., 1,008, Central-avenue, Alameda, Cal.
 SEDGWICK, MRS. H. D., 31, West 10th-street, New York, N.Y.
 SHAW, MISS EMMA G., 14, Rockville Park, Roxbury, Mass.
Shaw, Mrs. G. H., 23, Commonwealth-avenue, Boston, Mass.
 SHAW, MRS. QUINCY A., Jamaica Plain, Mass.
 SHED, Z., Room 3, Masonic Temple, Denver, Colorado.
 SHEETS, JOHN C., College Hill, Station, Cincinnati, Ohio.
 SHERMAN, MRS. B. W., Riverside, Cook County, Ill.
 *SHUFELDT, DR. R. W., Smithsonian Institution, Washington, D.C.
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 SMITH, HERBERT W., 320, Corn Exchange, Minneapolis, Minn.
 SMITH, HORACE J., 6, East Penn., Germantown, Phila., Pa.
 SMITH, J. HEBER, M.D., 279, Dartmouth-street, Boston, Mass.
Smith, Philip Sherwood, 46, Johnson Park, Buffalo, N.Y.
 SMITH, WILLIAM HAWLEY, Peoria, Ill.
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 SOMERVILLE, REV. T. E., 709, West Adams-street, Chicago, Ill.
 SPARKHAWK, DR. SAMUEL, Burlington, Vermont.
 STEEDMAN, J. G. W., A.M., M.D., 2,803, Pine-street, St. Louis, Mo.
 STEPHENS, MISS MARY, 2,713, Prairie-avenue, Chicago, Ill.
 STERLING, MRS. E. C., 22, Westmoreland-place, St. Louis, Mo.
 STILLMAN, MRS. W. O., 287, State-street, Albany, N.Y.
Stokes, J. N. P., 30, Rue St. Dominique, Paris, France.
Stone, Charles W., 68, Chestnut-street, Boston, Mass.
 STONE, MRS. RICHARD, JUNR., 18, Chestnut-street, Boston, Mass.
 STREET, MISS IDA M., 703, Euclid-avenue, Des Moines, Iowa.
 STRONG, CHARLES A., Box 208, Lakewood, N.J.
 STURGIS, CHAS. RUSSELL, 63, Beacon-street, Boston, Mass.
 STUYVESANT, MRS. J. READE, 29, West 19th-street, New York, N.Y.
 SUMNER, DR. A. M., 336, Beacon-street, Boston, Mass.
 SUTHERLAND, J. G., 135, B-street, Salt Lake City, Utah.
 SWEETSER, L. H., Yale, Idaho.
 SWENSON, J. H., 811, 25th-avenue, N., Minneapolis, Minn.
 SWIFT, WILLIAM H., Wilmington, Delaware.

- SYMONDS, BRANDRETH, M.D., 128, W. 59-street, New York, N.Y.
 TAPPAN, MISS M. A., 73, Beacon-street, Boston, Mass.
 TAYLOR, FREDK., 121, School-street, Lowell, Mass.
 TEMPLE, REV. H. W., 400, Locust-st., Washington, Pa.
Thaw, A. Blair, M.D., Montecito, Santa Barbara Co., Cal.
Thaw, Mrs. A. Blair, Montecito, Santa Barbara Co, Cal.
 THAYER, MISS MARY A., Stoughton, Mass.
 THOMAS, DR. H. J., 836, Buxton-street, Winston, N.C.
 THOMSON, DR. W., 1,426, Walnut-street, Philadelphia, Pa.
 THORNDIKE, S. LOTHROP, 19, Pemberton-square, Boston, Mass.
 TIGHE, JUDGE J. G., 337, Fulton-street, Brooklyn, N.Y.
 TOTTEN, MRS. ENOCH, 1,708, I-street, Washington, D.C.
 TRACEY, DR. PAUL H., 469, West 152nd-street, New York, N.Y.
 TURNBULL, MISS K. E., 113, East 39th-street, New York, N.Y.
Tweedy, Edmund, Newport, Rhode Island.
 TWITCHELL, H. E., M.D., 24, S. "B."-st., Hamilton, Ohio.
 TYSON, MRS. GEORGE, 314, Dartmouth-street, Boston, Mass.
Van Norden, Rev. C., D.D., LL.D., 1,827, H-st., Sacramento, Cal.
 WAIT, MARSHALL, 5,144, Madison-avenue, Hyde Park, Chicago, Ill.
 WAKE, C. STANILAND, 411, East 45th-street, Chicago, Ill.
 WARD, REV. DUREN J. H., PH.D., 205, Central-avenue, Dover, N.H.
 WARD, DR. J. N., Auburn, California.
Ward, W. E., Port Chester, N.Y.
 WASHBURN, OSCAR F., Reading, Mass.
 WATSON, PROFESSOR WILLIAM, 107, Marlborough-street, Boston, Mass.
 WATTS, H. M., "The Press," Philadelphia, Pa.
 WEBB, MRS. W. G., 34, Chestnut-street, Salem, Mass.
 WEBSTER, DAVID L., 334, Beacon-street, Boston, Mass.
 WHEELER, MRS. STEPHEN, 504, Sixth-avenue, Fort Smith, Ark.
 WHEELER, WILLIAM, Concord, Mass.
 WHIPPLE, L. E., 326, Madison-avenue, New York, N.Y.
 WHIPPLE, MRS. SHERMAN L., Walnut-place, Brookline, Mass.
 WHITESIDE, MISS H., c/o A. A. Carey, 29, Fairfield-st., Boston, Mass.
Whiting, Miss Lilian, The Brunswick, Back Bay, Boston, Mass.
Whitman, Mrs. Henry, 77, Mount Vernon-street, Boston, Mass.
 WHITON, REV. J. M., PH.D., c/o Outlook Co., 13, Astor-place, New York, N.Y.
 WHITTAKER, THOMAS, 71, East 66th-street, New York, N.Y.
 WILKINS, MISS M. L., cor. Carver and Museum-sts., Cambridge, Mass.
 WILLIAMS, MARSHALL S. P., 1,372, Beacon-street, Brookline, Mass.
Wilmarth, Mrs. Mary H., The Auditorium, Chicago, Ill.
 WILSON, MRS. JOHN L., P.O. Box 19, Framingham, Mass.
 WILSON, MISS MARTHA, 564, Dearborn-avenue, Chicago, Ill.
 *WILTSE, DR. A. S., Lansing, Morgan Co., Tenn.
Wing, Isaac H., Bayfield, Wisconsin.

- Wolcott, Mrs. Roger**, 173, Commonwealth-avenue, Boston, Mass.
WOODBRIDGE, PROFESSOR F. J. E., Univ. of Minn., Minneapolis, Minn.
Woodman, Walter, M.D., Hubbard-park, Cambridge, Mass.
WRIGHT, MISS HENRIETTA C., Old Bridge, New Jersey.
Wyatt, Melvin H., Sparkill, Rockland County, N.Y.
WYLLYS, MISS R., 18, Louisburg-square, Boston, Mass.
WYNNE, MRS. M. Y., 63, Marlborough-street, Boston, Mass.
ZUG, C., P.O. Box 1,053, Sable Iron Works, Pittsburgh, Pa.
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