

WHAT PSYCHICAL RESEARCH HAS ACCOMPLISHED.

IF to have one's name knocked about in conversation and in newspapers be fame, the "Society for Psychical Research" is famous. Yet it is probable that any real acquaintance with its history, its aims, and its work hardly exists outside the narrow circle of its membership. Believing, as I do, that the Society fulfils a function which, though limited, is decidedly important in the organization of science, I am glad to give a brief account of it to the uninstructed reader.

According to the newspaper and drawing-room myth, soft-headedness and idiotic credulity are the bond of sympathy in the Society, and general wonder-sickness is its dynamic principle. A glance at the membership fails, however, to corroborate this view. The president is Prof. Henry Sidgwick, known by his other deeds as the most incorrigibly and exasperatingly critical and sceptical mind in England. The hard-headed Arthur Balfour is one vice-president, and the hard-headed Prof. J. P. Langley, secretary of the Smithsonian Institution, is another. Such men as Professor Lodge, the eminent English physicist, and Professor Richet, the eminent French physiologist, are amongst the most active contributors to the Society's "Proceedings"; and through the catalogue of membership are sprinkled names honored throughout the world for their scientific capacity. In fact, were I asked to point to a scientific journal where hard-headedness and never-sleeping suspicion of sources of error might be seen in their full bloom, I think I should have to fall back on the "Proceedings" of the "Society for Psychical Research." The common run of papers, say on physiological subjects, which one finds in other professional organs, are apt to show a far lower level of critical consciousness. Indeed, the rigorous canons of evidence applied a few years ago to testimony in the case of certain "mediums" led to the secession from the Society of a number of spiritualists. Messrs. Stanton-Moses and Alfred Russel Wallace, amongst others, thought that no experiences based on mere eyesight could ever have a chance to be admitted as true, if such an impossibly exacting standard of proof were insisted on in every case.

The "Society for Psychical Research" was founded in February, 1882, by a number of gentlemen, foremost amongst whom seem to have been Professors Henry Sidgwick, W. F. Barrett, and Balfour Stewart, and Messrs. R. H. Hutton, Hensleigh Wedgwood, Edmund Gurney, and F. W. H. Myers. Their purpose was twofold: first, to carry on systematic experimentation with hypnotic subjects, mediums, clairvoyants, and others; and, secondly, to collect evidence concerning apparitions, haunted houses, and similar phenomena which are incidentally reported, but which, from their fugitive character, admit of no deliberate control. Professor Sidgwick, in his introductory address, insisted that the divided state of public opinion on all these matters was a scandal to science, absolute disdain on *à priori* grounds characterizing what may be called professional opinion, whilst completely uncritical and indiscriminate credulity was too often found amongst those who pretended to have a first-hand acquaintance with the facts.

As a sort of weather bureau for accumulating reports of such meteoric phenomena as apparitions, the "S. P. R." (as I shall continue briefly to call it) has done an immense amount of work. As an experimenting body, it cannot be said to have completely fulfilled the hopes of its founders. The reasons for this lie in two circumstances: first, the clairvoyant and other subjects who will allow themselves to be experimented upon are few and far between; and, secondly, work with them takes an immense amount of time, and in the case of the Society has had to be carried on at odd intervals by members engaged in other pursuits. The Society has not yet been rich enough to control the undivided services of skilled experimenters in this difficult field. The loss of the lamented Edmund Gurney, who more than any one else had leisure to devote, has been so far irreparable. But were there no experimental work at all, and were the Society nothing but a weather bureau for catching sporadic apparitions, etc., in their freshness, I am disposed to think its function indispensable in the scientific organism. If any one of my readers, spurred by the thought that so much smoke must needs betoken fire, has ever looked into the existing literature of the supernatural for proof, he will know what I mean. This literature is enormous, but it is practically quite worthless for evidential purposes. Facts enough are there, indeed; but the records of them are so fallible and uncritical that the most they do is to confirm the presumption that it may be well to keep a window open in one's mind upon that quarter.

In the Society's "Proceedings," on the contrary, a different law

prevails. Quality, and not mere quantity, is what has been mainly kept in mind. The most that could be done with every reported case has been done. The witnesses, where possible, have been cross-examined personally, the collateral facts have been looked up, and the narrative appears with its precise coefficient of evidential worth stamped on it, so that all may know just what its weight as proof may be. Outside of these "Proceedings," I know of no systematic attempt to *weigh* the evidence for the supernatural. This makes the value of the seven volumes already published unique, and I firmly believe that as the years go on and the ground covered grows still wider, the Society's "Proceedings" will more and more tend to supersede all other sources of empirical information concerning phenomena traditionally deemed occult. If the Society could continue to exist long enough for the public to become familiar with its presence, so that any case of apparition or of a house or person infested with unaccountable noises or disturbances of material objects would, as a matter of course, be reported to its officers, who thereupon would take down the evidence in as thorough a way as possible, we should end ere long by having a mass of facts concrete enough to found a decent theory upon.

Those who are now sustaining the Society should accustom themselves to the idea that its first duty is simply to exist from year to year and perform this recording function well, though no conclusive results of any sort emerge in the first generation. All our learned societies have begun in some such modest way. Three years after the English Society was founded, Professor Barrett came to this country and stirred up some scientific men in Boston, so that the "American Society for Psychical Research" was founded as a separate organization. After five years this Society perished. Providence had raised up no one in its midst who had both leisure and aptitude for doing work of the sort required. But though the organization was abandoned, its associates for the most part joined the English Society, which thereupon constituted an "American Branch," with Professor Langley and the present writer as its "honorary vice-presidents" and Mr. Richard Hodgson as its salaried secretary and executive agent. The "American Branch" has suffered from the same defect as the American Society. The secretary is the only individual connected with it who is able to make any solid contribution to its work. It requires, moreover, a large increase of membership to become self-supporting.

One cannot by mere outward organization make much progress in matters scientific. Societies can back men of genius, but can never

take their place. The contrast between the parent Society and the "American Branch" illustrates this. In England, a little group of men with enthusiasm and genius for the work supplied the nucleus; in this country, Mr. Hodgson had to be imported from Europe before any tangible progress was made. What perhaps more than anything else has held the Society together in England is Professor Sidgwick's extraordinary gift of inspiring confidence in diverse sorts of people. Such tenacity of interest in the result and such absolute impartiality in discussing the evidence are not once in a century found in an individual. His obstinate belief that there is something yet to be brought to light communicates patience to the discouraged; his constitutional inability to draw any precipitate conclusion reassures those who are afraid of being dupes. Mrs. Sidgwick—a sister, by the way, of the great Arthur Balfour—is a worthy ally of her husband in this matter, showing a similarly extraordinary power of holding her judgment in suspense, and a keenness of observation and capacity for experimenting with human subjects which are rare in either sex.

The *worker* of the Society, as originally constituted, was Edmund Gurney. Gurney was a man of the rarest sympathies and gifts. Although, like Carlyle, he used to groan under the burden of his labors, he yet exhibited a colossal power of dispatching business and getting through drudgery of the most repulsive kind. His two thick volumes on the "Phantasms of the Living," collected and published in three years, are a proof of this. Besides this, he had exquisite artistic instincts, and his massive volume on "The Power of Sound" is certainly the most important work on æsthetics in the English language. He had also the tenderest heart and a mind of rare metaphysical power, as his volume of essays, "Tertium Quid," will prove to any reader. Mr. F. W. H. Myers, already well known as one of the most brilliant of English essayists, is the *ingenium præservidum* of the "S. P. R." Of the value of Mr. Myers' theoretic writings I will say a word later. Mr. Hodgson, the American secretary, is distinguished by a balance of mind almost as rare in its way as Sidgwick's. He is persuaded of the reality of many of the phenomena called spiritualistic, but he also has uncommon keenness in detecting error; and it is impossible to say in advance whether it will give him more satisfaction to confirm or to smash a given "case" offered to his examination. Other names in the "Proceedings" are those of Mr. Malcolm Guthrie, Mr. Frank Podmore, Prof. Oliver Lodge, Prof. Ch. Richet, and M. Léon Marillier.

It is now time to cast a brief look upon the actual contents of

these "Proceedings."¹ The first two years were largely taken up with experiments in thought-transference. The earliest lot of these were made with the daughters of a clergyman named Creery, and convinced Messrs. Balfour Stewart, Barrett, Myers, and Gurney that the girls had an inexplicable power of guessing names and objects thought of by other persons. Two years later, Mrs. Sidgwick and Mr. Gurney, recommencing experiments with the same girls, detected them signalling to each other. This makes it impossible to accept the record of their previous performances. It is true that for the most part the conditions had then excluded signalling, and it is also possible that the cheating may have grafted itself on what was originally a genuine phenomenon. Yet Gurney was wise in abandoning the entire series to the scepticism of the reader. Three other thought-transference subjects were experimented upon at great length during the first two years: one was Mr. G. A. Smith; the other two were young ladies in Liverpool in the employment of Mr. Malcolm Guthrie.

It is the opinion of all who took part in these experiments that sources of conscious and unconscious deception were sufficiently excluded, and that the large percentage of correct reproductions by the subjects of words, diagrams, and sensations occupying other people's consciousness were entirely inexplicable as results of chance. The present writer confesses that the reading of the records leaves on him a similar impression. But the odd thing about this sort of "thought-transference" is that since the first three years of the Society's existence no new subjects have turned up with whom extensive and systematic experiments could be carried on. All the later reports are of brief series and semi-sporadic results, leaving no ground for certainty. Meanwhile the witnesses of Mr. Smith's, Miss Ralph's, and Miss Edwards' performances were all so satisfied of the genuineness of the phenomenon that "telepathy" has figured freely in the papers of the "Proceedings" and in Gurney's book on "Phantasms" as a *vera causa* on which additional hypotheses might be built. No

¹ The Society, in addition to the "Proceedings," prints privately a monthly journal, which is issued to members only. This contains what may be called raw materials, imperfectly corroborated interviews and provisional discussions only; whereas the "Proceedings," which appear thrice a year in parts numbering from 150 to 300 pages, contain worked-up reports of facts and such theoretical contributions as may receive the *imprimatur* of a special committee. The best way in this country to get the "Proceedings" regularly is to join the Branch. They may also be bought singly from the secretary, R. Hodgson, 5 Boylston Place, Boston, Mass., and from Damrell & Upham, booksellers, Washington and School streets, Boston.

mere reader can be blamed, however, if he refuse to espouse so revolutionary a belief until a larger bulk of testimony be supplied.

Volume I. contains another experimental paper, that on the divining-rod, by Mr. Edward R. Pease, with inconclusive results. The divining-rod has never again shown its face in the "Proceedings." Gurney's papers on hypnotism must be mentioned next. Some of them are less concerned with establishing new facts than with analyzing old ones, the papers on memory during hypnotism, for example. Omitting these, we find that in the line of pure observation Gurney claims to have ascertained in more than one subject the following phenomenon, of which the theoretic explanation is doubtful: The subject's hands are thrust through a blanket, which screens the operator from his eyes, and his mind is absorbed in conversation with a third person. The operator meanwhile points with his finger to one of the fingers of the subject, which finger alone responds to this silent selection by becoming stiff or anæsthetic, as the case may be. The interpretation is difficult, but the phenomenon, which I have myself witnessed, seems authentic.

Another observation made by Gurney seems to prove the possibility of the subject's mind being directly influenced by the operator's. The hypnotized subject responds or fails to respond to questions asked by a third party according to the operator's silent permission or refusal. Of course, in these experiments all obvious sources of deception were considered. But Gurney's most important contribution by far to our knowledge of hypnotism was his series of experiments on the automatic writing of subjects who had received post-hypnotic suggestions. For example, a subject during trance is told that he will poke the fire in six minutes after waking. On being waked he has no memory of the order, but while he is engaged in conversation his hand is placed on a *planchette*, which immediately writes the sentence, "P., you will poke the fire in six minutes." Experiments like this, which were repeated in great variety, prove that below the upper consciousness the hypnotic consciousness persists, engrossed with the suggestion and able to express itself through the involuntarily moving hand.

Gurney shares, therefore, with Janet and Binet, whose observations were made with widely differing subjects and methods, the credit of demonstrating the simultaneous existence of two different strata of consciousness, ignorant of each other, in the same person. The "extra-consciousness," as one may call it, can be kept on tap, as it were, by the method of automatic writing. This discovery marks a new era

in experimental psychology; it is impossible to overrate its importance. But Gurney's greatest piece of work is his laborious "Phantasms of the Living." As an example of the drudgery stowed away in the volumes, it may suffice to say that in looking up the proofs for the alleged *physical* phenomena of witchcraft, Gurney reports a careful search through two hundred and sixty books on the subject, with the result of finding no first-hand evidence recorded in the trials except the confessions of the victims themselves, and these, of course, are presumptively based on hallucinations. This statement, made in an unobtrusive note, is only one instance of the care displayed throughout the volumes. In the course of these, Gurney discusses about seven hundred cases of apparitions which he collected. A large number of these were "veridical," in the sense of coinciding with some calamity happening to the person who appeared. Gurney's explanation is that the mind of the person undergoing the calamity was at that moment able to impress the mind of the percipient with an hallucination.

Apparitions, on this "telepathic" theory, may be called "objective" facts, although they are not "material" facts. In order to test the likelihood of such veridical hallucinations being due to mere chance, Gurney instituted the "census of hallucinations," which has been continued with the result of obtaining answers from some twenty-five thousand people, asked at random in different countries whether, when in good health and awake, they had ever heard a voice, seen a form, or felt a touch which no material presence could account for. The result seems to be, roughly speaking, that about one adult in ten has had such an experience at least once in his life, and of the experiences themselves 14 per cent coincide with some real distant event. In other words, one person out of every one hundred and forty in the community has had a veridical hallucination of some sort or other, vague or precise. The question is, Is this degree of frequency too great to be deemed fortuitous, and must we suppose an occult connection between the two events? My own position is still one of doubt, although I tend to accept the occult connection. In but few cases is the evidence as complete as one could wish, and the data themselves are all too crude for a mathematical computation of probability. The great use of the census is to have been the means of collecting an enormous amount of material for study. The admirable report upon it which Mrs. Sidgwick will make to the "International Congress of Experimental Psychology" next August will continue Gurney's labors, and put the entire subject of hallucinations on a new empirical basis.

The next experimental topic worth mentioning in the "Proceedings" is the discussion of the physical phenomenon of mediumship (slate-writing, furniture-moving, and so forth) by Mrs. Sidgwick, Mr. Hodgson, and "Mr. Davey." This, so far as it goes, is destructive of the claims of all the mediums examined. In the way of "control," "Mr. Davey" himself produced fraudulent slate-writing of the highest order, while Mr. Hodgson, a "sitter" in his confidence, reviewed the written reports of the series of his other sitters—all intelligent persons—and shows that in every case they failed to see the essential features of what was done before their eyes. This Davey-Hodgson contribution is probably the most damaging document concerning eye-witnesses' evidence which has ever been produced. Another substantial bit of work based on personal observation is Mr. Hodgson's report of Madame Blavatsky's claims to physical mediumship. This is adverse to the lady's pretensions; and although some of Madame Blavatsky's friends make light of it, it is a stroke from which her reputation will hardly recover. Although the "S. P. R." has thus found that the evidence for matter moving without contact is as yet insufficient, its observations on an American medium, Mrs. Piper, tend to substantiate the claim that hyper-normal intelligence may be displayed in the trance state. A tediously long report of sittings with Mrs. Piper in England, followed by a still longer ditto in America, gives proof (entirely conclusive to the present writer's mind) that this lady has shown in her trances a knowledge of the personal affairs of living and dead people which it is impossible to suppose that she can have gained in any "natural" way. A satisfactory explanation of the phenomenon is yet to seek. It offers itself as spirit-control; but it is as hard to accept this theory without protest as it is to be satisfied with such explanations as clairvoyance or reading the sitter's mind.

One of the most important experimental contributions to the "Proceedings" is the article of Miss X— on "Crystal-Vision." Many persons who look fixedly into a crystal or other vaguely luminous surface fall into a kind of daze and see visions. Miss X— has this susceptibility in a remarkable degree, and is, moreover, an unusually intelligent critic. She reports many visions which can only be described as apparently clairvoyant, and others which beautifully fill a vacant niche in our knowledge of sub-conscious mental operations. For example, looking into the crystal before breakfast one morning she reads in printed characters of the death of a lady of her acquaintance, the date and other circumstances all duly appearing in type. Startled

by this, she looks at "The Times" of the previous day for verification, and there amongst the deaths are the identical words which she has seen. On the same page of "The Times" are other items which she remembers reading the day before; and the only explanation seems to be that her eyes then inattentively observed, so to speak, the death-item, which forthwith fell into a special corner of her memory and came out as a visual hallucination when the peculiar modification of consciousness induced by the crystal-gazing set in.

Passing from papers based on observation to papers based on narrative, we have a number of ghost stories, etc., sifted by Mrs. Sidgwick and discussed by Messrs. Myers and Podmore. They form the best ghost literature I know of from the point of view of emotional interest. As to the conclusions drawn, Mrs. Sidgwick is rigorously non-committal, while Mr. Myers and Mr. Podmore show themselves respectively hospitable and inhospitable to the notion that such stories have a basis of objectivity dependent on the continued existence of the dead.

I must close my gossip about the "Proceedings" by naming what, after all, seems to me the most important part of its contents. This is the long series of articles by Mr. Myers on what he now calls the "subliminal self," or what I have designated above as the "extra-consciousness." The result of Myers' learned and ingenious studies in hypnotism, hallucinations, automatic writing, mediumship, and the whole series of allied phenomena is a conviction which he expresses in the following terms:

"Each of us is in reality an abiding psychical entity far more extensive than he knows—an individuality which can never express itself completely through any corporeal manifestation. The self manifests itself through the organism, but there is always some part of the self unmanifested, and always, as it seems, some power of organic expression in abeyance or reserve."

The ordinary consciousness Mr. Myers likens to the visible part of the solar spectrum; the total consciousness is like that spectrum prolonged by the inclusion of the ultra-red and ultra-violet rays. In the psychic spectrum the "ultra" parts may embrace a far wider range, both of physiological and of psychical activity, than is open to our ordinary consciousness and memory. At the lower end, beyond the red, as it were, we have the *physiological* extension, mind-cures, "stigmatization" of ecstasies, etc.; in the upper or ultra-violet region, we have the hyper-normal cognitions of the medium-trance. Whatever the judgment of the future may be on Mr. Myers' speculations, the credit will always remain to them of being the first attempt in

our language, and the first thoroughly *inductive* attempt in any language, to consider the phenomena of hallucination, hypnotism, automatism, double personality, and mediumship as connected parts of one whole subject. No one seems to me to have grasped the problem in a way both so broad and so sober as he has done.

One's reaction on hearsay testimony is always determined by one's own experience. Most men who have once convinced themselves, by what seems to them a careful examination, that any one species of the supernatural exists, begin to relax their vigilance as to evidence, and throw the doors of their minds more or less wide open to the supernatural¹ along its whole extent. To a mind that has thus made its *salto mortale*, the minute work over insignificant cases and quiddling discussion of "evidential values," of which the Society's reports are full, seems insufferably tedious. And it is so; few species of literature are more truly dull than reports of phantasms. Cases which one collects one's self from the witnesses may acquire a personal interest; but cases merely found printed as having occurred to strangers are hard to read or to remember without some definite purpose in one's mind, such as trying to classify them, or seeing how they may affect a theory or fill gaps in a growing series. Taken simply by themselves, as separate facts to stare at, they appear so devoid of meaning and sweep that even were they certainly true, one would be tempted to leave them out of one's universe for being so idiotic. Every other sort of fact has some context and continuity with the rest of nature. These alone are contextless and discontinuous.

Hence I think that the sort of loathing—no milder word will do—which the very words "psychical research" and "psychical researcher" awaken in so many honest scientific breasts is not only natural, but in a sense praiseworthy. A man who is unable himself to conceive of any *orbit* for these mental meteors can only suppose that Messrs. Gurney, Myers & Co.'s mood in dealing with them must be that of silly marvelling at so many detached prodigies. And *such* prodigies! Whereas the only thing that really interests these "researchers" is the glimpse that they gain of the orbit itself. Thus between the spiritualists and theosophists, who have so much orbit that they are sickened by the methods, and the scientists, who have so little that they are sickened by the facts, of the "S. P. R.," the latter stands

¹ By "the supernatural" I mean, of course, anything that appears to transcend the "scientifically" recognized "laws of nature," from faith-cures up to theosophic Mahatmas.

in a rather forsaken position. And yet it is a position of peculiar merit, as I think that a little reflection will show.

Orthodoxy is almost as much a matter of authority in science as it is in the Church. We believe in all sorts of laws of nature which we cannot ourselves understand, merely because men whom we admire and trust vouch for them. If Messrs. Helmholtz, Huxley, Pasteur, and Edison were simultaneously to announce themselves as converts to clairvoyance, thought-transference, and ghosts, who can doubt that there would be a prompt popular stampede in that direction? We should have as great a slush of "telepathy" in the scientific press as we now have of "suggestion" in the medical press. We should hasten to invoke mystical explanations without winking, and fear to be identified with a by-gone *régime* if we held back. In society we should eagerly let it be known that we had always thought there was a basis of truth in haunted houses, and had, as far back as we could remember, had faith in demoniacal possession.

Now, it is certain that if the cat ever does jump this way, the cautious methods of the "S. P. R." will give it a position of extraordinary influence. As, one after another, the fashion-setting converts dropped in and the popular credulity began, its efforts at exactitude about evidence and its timidity in speculating would seem supremely virtuous. Sober-headed scientists would look to its temper as a bulwark; whilst its poor little detached facts, no longer so idiotic and neglectable, would prove the least of possible entering wedges for theosophists and others who had ready-made supernaturalistic philosophies to propagate. In short, the "S. P. R." would be a surprisingly useful mediator between the old order and the new.

All this on the supposition that the Helmholtzes and Huxleys *did* become converted. Now, the present writer (not wholly insensible to the ill consequences of putting himself on record as a false prophet) must candidly express his own suspicion that sooner or later the cat *must* jump this way. The special means of his conversion have been the trances of the medium whose case in the "Proceedings" was alluded to above. Knowing these trances at first hand, he cannot escape the conclusion that in them the medium's knowledge of facts increases enormously, and in a manner impossible of explanation by any principles of which our existing science takes account. Facts are facts, and the larger includes the less; so these trances doubtless make me the more lenient to the other facts recorded in the "Proceedings." I find myself also suspecting that the thought-transference experiments,

the veridical hallucinations, the crystal-vision, yea, even the ghosts, are sorts of thing which with the years will tend to establish themselves. All of us live more or less on some inclined plane of credulity. The plane tips one way in one man, another way in another; and may he whose plane tips in *no* way be the first to cast a stone! But whether the other things establish themselves more and more or grow less and less probable, the trances I speak of have broken down for my own mind the limits of the admitted order of nature. Science, so far as science denies such exceptional facts, lies prostrate in the dust for me; and the most urgent intellectual need which I feel at present is that science be built up again in a form in which such facts shall have a positive place. Science, like life, feeds on its own decay. New facts burst old rules; then newly divined conceptions bind old and new together into a reconciling law.

And here finally is the real instructiveness of Messrs. Myers and Gurney's work. They are trying with the utmost conscientiousness to find a reconciling conception which shall subject the old "laws of nature" to the smallest possible strain. Mr. Myers uses that method of gradual approach which has performed such wonders in Darwin's hands. When Darwin met a fact which seemed a poser to his theory, his regular custom, as I have heard an ingenious friend say, was to *fill in* all round it with smaller facts, and so mitigate the jolt, as a wagoner might heap dirt round a big rock in the road, and thus get his team over without upsetting. So Mr. Myers, starting from the most ordinary facts of inattentive consciousness, follows this clew through a long series which terminates in ghosts, and seeks to show that these are but extreme manifestations of a common truth, the truth that our normal conscious life is but the visible segment of a spectrum indefinitely long, of which the invisible segments are capable, under rarely realized conditions, of acting and being acted upon by the invisible segments of other conscious lives. This may not be ultimately true (for the theosophists, with their astral bodies and the like, may, for aught I know, prove to be on the correcter trail), but no one can deny that it is *scientific*.

Science always takes a known kind of phenomenon and tries to extend its range. Sensorial hallucination is a known phenomenon; and it is also a known phenomenon that impressions received by the "subliminal"¹ strata of consciousness may be hallucinatory in their intensity—witness the phenomena of dreams and the hypnotic trance.

¹ Subliminal, from *sub* and *limen*: "beneath the threshold."

Mr. Myers accordingly seeks to interpret mediumistic experiences and ghostly apparitions as so many effects of the impact upon the subliminal consciousness of causes "behind the veil." The *effects*, psychologically speaking, are hallucinations; yet so far as they are "veridical" they must be held probably to have an "objective" cause. What that objective cause may be Mr. Myers does not decide; yet from the context of many of the hallucinations it would seem to be an intelligence other than that of the medium's or seer's ordinary self, and the interesting question is, Is it what I have called the extra-conscious intelligence of persons still living, or is it the intelligence of persons who have themselves passed behind the veil? Only the most scrupulous examination of the "veridical" effects themselves can decide. I do not myself see how any candid mind can doubt that Mr. Myers' scrupulous testing of the minutest cases is in the line of the best scientific tradition. I do not see, whatever prove the fate of his hypothesis, how his "working of it for all it is worth" can fail to mark a distinct step onward in our knowledge of the truth.

I have myself, during the past two years as American agent for the census, collected some five hundred cases of "hallucination" in healthy people. The result is to make me feel that we all have potentially a "subliminal" self, which may make at any time irruption into our ordinary lives. In its lowest phases it is only the depository of our forgotten memories; in its highest, we don't know what it is at all. Take, for instance, a series of cases. During sleep many persons have *something* in them which measures the flight of time better than the waking self does. It wakes them at a preappointed hour; it acquaints them with the moment when they first awake. It may produce an hallucination, as in a lady who informs me that at the instant of waking she has a vision of her watch-face with the hands pointing (as she has often verified) to the exact time. Whatever it is, it is subconscious.

A subconscious something may also preserve experiences to which we do not openly attend. A lady taking her lunch in town finds herself without her purse. Instantly a sense comes over her of rising from the breakfast-table and hearing her purse drop on the floor. On reaching home she finds nothing under the table, but summons the servant to say where she has put the purse. The servant produces it, saying: "How did you know where it was? You rose and left the room as if you didn't know you'd dropped it." The same subconscious something may recollect what we have forgotten. A lady used to taking salicylate of soda for muscular rheumatism awakens one early

winter morning with an aching neck. In the twilight she takes what she supposes to be her customary powder from a drawer, dissolves it in a glass of water, and is about to drink it down, when she feels a sharp slap on her shoulder and hears a voice in her ear saying, "Taste it!" On examination, she finds she has got a morphine powder by mistake. The natural interpretation is that a sleeping memory of the morphine powders awoke in this quasi-explosive way. A like explanation offers itself as most plausible for the following case: A lady, with little time to catch the train, and the expressman about to call, is excitedly looking for the lost key of a packed trunk. Hurrying upstairs with a bunch of keys, proved useless, in her hand, she hears an "objective" voice distinctly say, "Try the key of the cake-box." Being tried, it fits. This may well have been the effect of some long-eclipsed experience.

Now, the *effect* is doubtless due to the same hallucinatory mechanism, but the *source* is less easily assigned as we ascend the scale of cases. A lady, for instance, goes after breakfast to see about one of her servants who has become ill over night. She is startled at distinctly reading over the bedroom door in gilt letters the word "small-pox." The doctor is sent for, and ere long pronounces small-pox to be the disease, although the lady says, "The thought of the girl's having small-pox never entered my mind till I saw the apparent inscription." Then come other cases of warning; *e.g.*, that of a youth sitting in a wagon under a shed, who suddenly hears his dead mother's voice say, "Stephen, get away from here quick," and jumps out just in time to see the shed roof fall.

After this come the by no means infrequent experiences, usually visual, but sometimes both visual and auditory, of people appearing to distant friends at or near the hour of death. Then we have the trance-visions and utterances, which (as in the case of a circle of private persons with whom I have recently become acquainted) may appear astonishingly profuse and continuous and maintain a superior level intellectually. For all these higher phenomena, it seems to me that whilst the proximate mechanism is that of "hallucination," it is straining an hypothesis unduly to name any ordinary subconscious operation, such as expectation, recollection, or inference from inattentive perception, as the ultimate cause that starts it up. It is far better tactics to brand the narratives themselves as unworthy of trust. The trustworthiness of most of them is to my own mind far from proved. And yet, in the light of the medium-trance, which *is* proved, it seems as if they might well all be members of a "natural kind" of fact of

which we do not yet know the full extent. Thousands of "sensitive" organizations in the United States to-day live as steadily in the light of these experiences and are as indifferent to modern "science" as if they lived in Bohemia in the twelfth century. They are indifferent to science, because science is so callously indifferent to their experiences. The essential "point" I wish to make to my readers is that by taking the experiences of these persons as they come and applying the ordinary methods of science to their discussion, the "Proceedings" of the "S. P. R.," whatever be their theoretic outcome, form a department of empirical natural history worthy of all encouragement and respect.

A final word about the *practical* outcome of inquiries into the extra-consciousness may not be out of place. I remember saying, at a public meeting in Boston three years since, that a good psychical researcher let loose in an insane-asylum would be likely to discover facts in the patients which the doctors had overlooked. M. Pierre Janet, on the whole the most brilliant French inquirer into the extra-consciousness, gave a pretty verification of this prediction last year by the "*Études sur un Cas d'Aboulie et d'Idées Fixes*," which he published in the "*Revue Philosophique*." He is only a professor of philosophy, but he pursues his studies in the Paris hospitals, and in the *Salpêtrière* he had a patient named Marcella, aged nineteen, handed over to him.

Marcella was a melancholic girl whose character had gradually become so changed for the worse as to be unrecognizable, and whose life was a picture of invincible apathy and inertia, varied by occasional spells of violence—a sort of case that in our asylums is generally "let alone" as much as possible, in the hope that time may of itself effect a cure. M. Janet patiently and lovingly studied all her symptoms, and describes them at great length. The essential facts for my present purpose are these: He soon observed that she had periods of absent-mindedness, which he calls her "clouds." During these "clouds" she responded to no questions, and after them had no memory of what had taken place in them. But by piecing together various partial clues which he elicited, he discovered that although so outwardly impassive, she was a prey throughout these "clouds" to monotonous hallucinations of a terrifying sort. When I say that what she told when hypnotized was one of his clues, and that her automatic writing was another, the reader will see why I speak of M. Janet's methods as those of a psychical researcher.

The next thing which he made out was that her inertia and melancholy were in great part after-effects of these hallucinations. M. Janet

tried all usual methods, including ordinary hypnotic commands, with only transient success. Only when he *entered into* her hallucinations, confining them in part, but mixing other elements with them and giving them new terminations, did marked benefit result. But here a fresh difficulty came up. After each successive delusion that was exorcised, the patient became better than ever before; but each one was replaced after some days by another more obstinate and bad. At last there came a delusion, based on hallucinations of hearing, which made her refuse her food. It persisted so long that, at the end of his resources one day, M. Janet put a pencil into her hand to see if she might not automatically prescribe for herself. "*Il faut la forcer, et ce sera fini,*" the hand "unconsciously" wrote. But when force was applied, Marcella fell into an alarming hystero-epileptic attack which lasted two hours and made the experimenter momentarily regret his rashness.

From this attack she unexpectedly emerged *quite well*, and remained so for twelve days. Then she relapsed into the same delusion coupled with the additional refusal to speak; and this condition, terminating by a similar convulsive crisis, never returned again. Before long, however, a frenzied attack of suicidal mania set in, lasted fifteen days, and then spontaneously disappeared, leaving the girl practically *cured* and oblivious of all that had happened in the previous weeks. Her condition, for several months at least, was *normal*. But the remarkable aspect of the case is one of which M. Janet saw the significance only late in the series of his operations. The hallucinations were largely based on painful experiences in the girl's life, which came up, as if present again, in her "clouds." Her morbid waking state was a sort of resultant effect of the accumulation of these influences; and each later hallucination that was peeled off, so to speak, by M. Janet gave an older one a chance to become more acute, until the whole regressive series was run through. Her mind was thus gradually freed of a deposit of obsessions that had accumulated during five years. The refusal to eat and the suicidal frenzy were repetitions of crises that she had gone through at the beginning of her malady, and once having thrown them off she got entirely well. Might not such a case well lead our younger medical men to explore their patients' "subliminal selves" a little more than they yet do?

WILLIAM JAMES.

THE WESTERN TRAFFIC ASSOCIATION.

THE purpose of this article is to state in a concrete and practical way the economic reasons for the existence of the Western Traffic Association. On December 15, 1890, the presidents of various Western railway companies met in the city of New York, and unanimously agreed to recommend to their respective boards of directors the passing of certain resolutions, which were soon after duly ratified. The organization thus established became effective January 31, 1891.

The resolutions were brief; they provided for the formation of an association between the several companies whose lines were situated west of Chicago and St. Louis, its affairs to be managed by an advisory board consisting of the president and one member of the board of directors of each company, which should have power to establish and maintain uniform rates between competitive points and decide all questions of common interest. It was further provided that the rates established and the policy adopted by the advisory board at any time should continue in force and be binding upon all companies composing the association until altered by subsequent action of the board; that the vote of at least four-fifths of the members of the association should be required to make its action binding upon all; that the advisory board should appoint proper arbitrators, commissioners, and other representatives, and adopt by-laws to carry out the purposes of the association; that no company should withdraw from the association except after giving ninety days' notice to other members by vote of its board of directors; and that if any officer or representative of any company should authorize or promise, directly or indirectly, any variation from established tariffs he should be discharged from the service, with the reasons stated.

The lines composing this association are as follows: Atchison, Topeka & Sante Fé; Burlington, Cedar Rapids & Northern; Chicago & Northwestern; Chicago, Burlington & Quincy; Chicago, Milwaukee & St. Paul; Chicago, Rock Island & Pacific; Denver & Rio Grande; Great Northern; Illinois Central; Iowa Central; Missouri Pacific; Northern Pacific; Rio Grande Western; Southern Pacific;