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A HALF-CENTURY OF PSYCHICAL RESEARCH

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When Professor Rhine kindly suggested that I might contribute an article to the number which marks the completion by the Journal of Parapsychology of its twentieth year, I gladly agreed. My own interest in the subject is much older than the Journal, for it goes back at least to the time when I entered Trinity College, Cambridge, as a freshman in October, 1906.

It happens to be the case that three of the "founding fathers" of the English Society for Psychical Research (viz., Sidgwick, Gurney, and Myers) were Fellows of Trinity. Mrs. Sidgwick, who was for many years one of the ablest and most balanced of English psychical researchers, had the luck to be born a Balfour. Both Gerald Balfour. one of her brothers, and Lord Rayleigh, one of her brothers-in-law. the former a distinguished classical scholar and the latter an outstanding mathematical physicist, had been Fellows of the College and members of the S.P.R. from the beginning. But Sidgwick, Gurney, and Myers were dead and Mrs. Sidgwick, Balfour, and Rayleigh had long left Cambridge when I became an undergraduate. and there was no strong or widespread interest in the subject among either the Fellows or the students of Trinity at the time. McTaggart, the Fellow of the College who directed my studies in philosophy, held that he could prove by purely philosophical reasoning the eternity of each human mind, and could show that its eternity would appear under the form of time as beginningless pre-existence and endless post-existence cut up into an infinite sequence of finite embodied lives. He was by no means hostile to psychical research or unreasonably skeptical about its findings. But he was quite uninterested in it, having a strong preference for the a priori over the empirical method of reasoning. I was not convinced by his arguments, and I feel in my bones that conclusions of that kind cannot be established in that way. But it is owing to McTaggart that I have come to take the doctrine of metempsychosis seriously.

At the time, the interest of those most actively concerned in the work of the S.P.R. (Mrs. Sidgwick, Miss Johnson, Sir Oliver Lodge, Gerald Balfour, and Mr. Piddington) was mainly directed to the very curious and complex phenomena, partly of trance-mediumship and partly of automatic writing, known as "cross-correspondences." I mention them here because they were linked in various ways with Trinity College, Cambridge. In the first place, the ostensible communicators in many of them (and the ostensible devisers of the whole method) were the deceased Myers and Gurney, and to a less extent Sidgwick. Secondly, one of the automatic writers who produced an important fraction of the scripts was Mrs. Verrall. Herself a distinguished classical scholar, she was the wife of Dr. A. W. Verrall, one of the most brilliant and ingenious classicists of his day, who was a Fellow and Lecturer of Trinity College at the time. Now the crosscorrespondences presented puzzles, for the solution of which a wide and readily available store of knowledge of ancient and modern classical literature was essential. Verrall, Gerald Balfour, and Piddington were admirably equipped in this respect, and they played an important part in tracking down and interpreting the allusions. After Verrall's death the scripts began to contain communications ostensibly from him, involving classical and literary puzzles of a highly recondite kind in a characteristically Verrallian manner. In this way, then, there was still a rather close though somewhat slender linkage between Trinity College and the main work of the S.P.R. at the time when I was an undergraduate. But I was not studying classics, and I never came into personal contact with Verrall or Mrs. Verrall.

I think I may fairly sum all this up as follows. Although I have been intimately connected with Trinity College for fifty years, and fairly intimately with the S.P.R. for more than thirty, and although there had been and still was a link between the two when I entered Cambridge University, my original interest in psychical research had

little or nothing to do with my membership in the College or with my teachers or contemporaries there.

When I reflect, I find it very hard to say what originated and what has sustained my interest in the subject. Unless I am very much deceived about my own desires and hopes and fears, it is not and has never been bound up with a wish to gain assurance of human survival of bodily death. I have never been able to take a cheerful view of men's capacity for happiness as compared with their susceptibility to suffer and their readiness to inflict pain and misery, and I cannot regard myself or most of my fellows as conspicuously appropriate candidates for immortality. For my own part I dread survival rather than hope for it, and should be relieved if I felt more certain than I do that death will be the end of me. Nor do I feel any keen desire that others should survive.

I cannot pretend, however, that my interest in the possibilities investigated by psychical researchers is *purely* scientific and philosophical. I do indeed hold, and I have argued in my writings, that the dispassionate investigation of these alleged phenomena is of extreme intellectual interest and importance, just because they seem prima facie to conflict with nearly all the most fundamental presuppositions of the natural sciences, presuppositions which have worked and do work extraordinarily well, both in theory and in practice, over an enormously wide range. That alone should suffice to call forth in a professional philosopher with a scientific background an active interest in psychical research. But I am fairly certain that this has not in fact been my only motive.

Unless I am much mistaken, I find in myself a positive wish that the orthodox scientific scheme should not be adequate, and that there should be room for something which I can only describe as "magic." Cardinal Newman, in his Apologia pro Vita Sua, confesses that when he was a child he had often wished that fairy tales might be true. The kind of "fairy tales" which Newman managed to believe when he grew up are very different from those which I am inclined to swallow. But religion and magic probably spring from a common root, and I think that I understand and share what he had in mind. I am sure that something of this sort, which I cannot describe more accurately, has been a motive more fundamental than mere intellectual interest in a few prima facie cracks in the otherwise seemingly water-

tight system of scientific presuppositions. Being well aware of this emotional bias, I have striven to allow for it. How far I have succeeded I do not know.

Before leaving the topic of emotions and wishes, other than the emotion of intellectual curiosity and the desire to get at the truth, I would like to revert for a moment to the subject of human survival and to make two remarks of a general nature.

- (1) I have said that, in my own case, I dread rather than welcome the prospect of survival. I doubt whether that would be the normal human reaction, unless the kind of survival in prospect were held to be predominantly and irremediably unpleasant. My own emotion is the reaction of an unusually timid, unenterprising temperament, moved more by fear than by hope or by any positive desire for experience, adventure, and self-assertion or self-sacrifice. Fortunately most men and women are wonderfully enduring and resilient, and many are surprisingly bold, enterprising, and adventurous. These characteristics are the outstanding virtues of quite ordinary human beings, and those who have them to a normal degree would almost certainly welcome the thought of survival and not dwell on its risks. I suspect that those who positively desire extinction fall into two very different classes. The one consists of those who, like myself, are subnormal in these respects. The other consists of a few élite, such as the Buddha, who have gained, through long and strenuous experience and effort, an effective intellectual and emotional realization of the futility of "the red mist of doing," and have thus earned, and (we may hope) won, their discharge.
- (2) Whether or not a man will in fact survive the death of his present body, I think that the conviction that one will do so is for most men a morally useful belief to have, provided that the following two conditions are fulfilled. The first is that it should be a really effective conviction, capable of influencing one's actions, and not the mere conventional parroting of a verbal formula. The second is that an essential part of the belief should be that those ways of acting, thinking, and feeling, which are known to be beneficial or to be harmful to one's character, personality, and intellect in this life, are likely to have similar effects on the character, personality, and intellectual equipment with which one will enter upon one's next life.

The latter proposition is almost a necessary consequence of any seriously held belief in survival. For there is no sense in saying that the mind of a certain person has "survived" unless there exists after his death a mind whose character and dispositions are fundamentally continuous with those which he had built up during his life.

Provided that these two conditions are fulfilled, the belief is likely to be morally valuable, whether it be true or false. It has the peculiarity that, if it should be false, no one who holds it will ever be in a position to discover his mistake and thus to suffer disappointment and disillusionment. Even if false, it will encourage behavior beneficial to one's character and intellectual equipment in this life; and, if it should be true, such behavior can hardly fail to improve one's prospects in the life to come. For these reasons, even if I were fairly sure that it is false (which I am not), I should hesitate to undermine it or to associate myself with measures tending to do so, unless it happened to exist in a specially terrifying or enervating form, or in such a form as to subserve (as it sometimes has done) sinister interests in a community.

I will now revert for a moment, and for the last time, to autobiography in the strict sense, and complete what I have to say of the history of my connection with psychical research. I joined the S.P.R. in 1920, became a member of the Council in 1931, and was President for the years 1935 and 1936. I am still a member of the Council, and, though I seldom attend its meetings, I give what help I can when consulted from time to time on particular matters. I have never actively participated in research myself, and I have good reason to think that I lack the energy, the alertness, the fertility in suggestion. and the technical skill needed in a good research worker. I have occasionally had anonymous sittings with trance-mediums, some of whom were of high reputation. I have never received any communication which seemed to suggest anything more than telepathy from myself. There were very few items which seemed to require even that for their explanation; the vast majority of them were plainly just the conventional tattle and twaddle of the séance room. I have never witnessed any physical phenomena which seemed prima facie to be genuine, and, even if I had done so, I know that I am so easily taken in by the simplest conjuring trick that I should not regard my own unchecked observation as having any value as testimony.

I think I may sum up by describing myself as an experienced and highly interested onlooker at the game of psychical research, who has known a good many of the players and is aware of their form and of some of their personal peculiarities, and who has been consulted in organizing some of the outstanding matches and in smoothing down some of the subsequent disputes with the umpires.

So much for autobiography and personal confession. I will devote the rest of my paper to more objective matters, and I will treat them in turn under the following three headings. First I will give a brief account of some changes *outside* psychical research which have had an important bearing on that subject since I became interested in it. Then I will mention what seem to me to have been some outstanding developments within psychical research during that period. Finally I will say something of its present state and its prospects in the immediate future, as they appear to me.

The first and most concrete of the relevant external changes is this. Certain developments in applied physics have made available to psychical researchers methods of automatic control, recording, and observation which were unknown at the beginning of the period, and

are of the utmost value. I will take two examples.

In all sittings with mediums, in which *oral* communications are received by the sitter through the medium, it is of extreme importance to have an absolutely *complete* record of everything that is said by the medium and by the sitter, which can be examined and reflected upon at leisure by the latter and by others. Formerly the only way to approximate to this was to have a stenographer present, thus introducing an additional personal factor which cannot safely be assumed to be irrelevant to the phenomena. Now that problem can be completely solved by the use of a tape-recording machine.

In sittings for *physical* phenomena the investigators formerly had the almost impossible task of combining the following activities, viz., (i) of controlling the medium's hands and feet in the hope of eliminating the possibility of cheating, (ii) of observing accurately what was happening at each moment of the sitting, and (iii) of getting their observations recorded at the moment when they were made. All this had to be done in semidarkness because it is alleged that a strong white light is destructive of the delicate quasi-organic substance by which telekinesis is said to be effected and out of which ma-

terializations are said to be formed. Some idea of these difficulties can be got by reading the account of one of the best investigations of physical mediumship on record, viz., the description by Messrs. Hereward Carrington, Woolley, and Baggaley of the sittings held by them in 1908 with Eusapia Palladino in Naples, which will be found in the S.P.R. *Proceedings* for 1909.

Nowadays, if a physical medium were available for investigation, all this complication could be eliminated. Physical mediums have (perhaps somewhat rashly, in view of unforeseen technical developments) committed themselves to the position that neither they themselves, nor the ectoplasm which they claim to extrude, are injured by red or infrared light. Such a medium, unless consciously fraudulent, could therefore have no reasonable objection to being kept under constant observation throughout the séance by means of an infrared telescope. The ideal method would be to leave the medium completely free to move, to let him or her operate in the conditions of total or partial darkness which are alleged to be favorable or even essential to the phenomena, and to make a continuous infrared film of the whole proceedings. I understand that this already is, or in the near future will be, technically possible. If a medium should decline to submit to these conditions, which are plainly less irksome and less humiliating than the older methods involving physical control of hands and feet, I should not hesitate to draw the obvious conclusion.

A second important change which has benefited psychical research is the vast development in the theory and practice of statistical methods and what is technically termed "the design of experiments." Modern researches in "extrasensory perception," with their elaborate randomization of the material and the use of various accepted methods for estimating quantitatively the degree of significance of the results obtained, make the older experiments on what was then undiscriminatingly described as "telepathy" look very amateurish.

The use of these methods has at least two advantages, one intrinsic to it and the other adventitious. The intrinsic advantage is this. Suppose that the subject has a genuine and consistent, but very weak, tendency to write down on each occasion what is actually on the face of the target card. Then, by continuing the sequence long enough, the deviation of the actual number of correct guesses from the number which is most probable on the hypothesis of chance-

coincidence will pile up until the improbability of obtaining so great a deviation by chance becomes colossal.

The adventitious, or what I might call "tactical," advantage is this. Professional scientists, especially those who study biology and psychology, are used to statistical methods and statements, and have perhaps an exaggerated respect for them. Hardly any such men will pay attention to alleged facts of an extremely bizarre kind, presented in a non-quantitative form, and admittedly incapable of precise appraisal in respect of their significance. But a few of them may be moved at least to non-rational irritation (which is far better for the subject than blank indifference) when they are presented with numerical results of extremely high statistical significance, obtained under conditions which seem prima facie to exclude a normal explanation. Of the few who are thus moved to curse, a small proportion may remain, if not to bless, at least to make sensible criticisms and perhaps even to coöperate.

A third change which has been highly relevant to certain branches of psychical research is the vast development in the psychology of personality and its disturbances and diseases, and in the study of unconscious mental processes, which has been one of the most characteristic features of the last fifty years. It should never be forgotten that Myers, who was a pioneer in psychical research, developed his theories on the basis of an extremely wide knowledge of the work which had been done up to his time, mainly by French psychologists and psychiatrists, in this field. But the subject has grown and changed almost out of recognition since those days.

The typical manifestations of trance-mediumship, with a single recurrent "control," who takes charge at each sitting, and a number of occasional "communicators," who vary from sitting to sitting according to the sitter present, need no longer be seen in isolation. They can and should be viewed against the background of what is known about multiple personality and of hysterical symptoms, uncomplicated by claims to paranormal cognition and action. That, of course, is no good reason for treating any less seriously, or investigating any less carefully, the prima facie paranormal features which present themselves in typical cases of trance-mediumship. Nor should it make us ignore the prima facie differences in certain re-

spects between the phenomena of the séance room and those of dissociated personality in other contexts.

I think that this increased knowledge of the psychology of personality and of its disorders has combined with another tendency external to psychical research to produce a certain change of attitude among intelligent psychical researchers towards the question of human survival of bodily death. The other tendency, which has been especially active in recent years, has been more careful reflection by critical philosophers on the notion of personality, and in particular on the criteria for deciding questions of personal identity and personal diversity. My impression is that for the earlier psychical researchers the alternatives of "extinction" or "survival" after bodily death seemed fairly clear-cut, mutually exclusive, and collectively exhaustive. It might be difficult or impossible to get evidence which would conclusively decide between the two, but it was not felt to be difficult to say what kind of evidence would be conclusive, if it were available. Nowadays, on the logical and linguistic side, it might be doubted whether the words "personally identical" and "personally diverse," respectively, have the same meanings in the following two contexts: (i) when applied to minds embodied in ordinary human bodies, (e.g., to the mind of Mr. Jones as an elderly man and the mind of Mr. Jones as a schoolboy, or again to the mind of Mr. Jones and that of his contemporary Mr. Smith); and (ii) when applied to a mind embodied in an ordinary human body, on the one hand, and a mind altogether unembodied or embodied in an altogether different kind of body, on the other. It has been questioned whether any clear meaning can be attached to them in the latter kind of context.

Again, on the empirical side, when we combine the normal facts of our dreaming and waking personalities, the abnormal facts of multiple personality, and certain well-attested paranormal facts which seem to suggest a kind of fusion at the unconscious level of the embodied minds of contemporary individuals, the alternatives cease to seem collectively exhaustive. All kinds of intermediate possibilities loom up, such as the persistence of fragments of Mr. Jones's mind and fragments of Mr. Smith's, and their fusion with each other and with other psychical flotsam and jetsom.

In this connection it seems to me important to note that we must be prepared to consider possibilities which simply cannot be formulated without verbal inconsistency and paradox in ordinary language. Ordinary language, which some contemporary philosophers treat as an oracle, is in fact a rough and ready expression for a kind of normalized extract from human experience, viz., that which is involved in our everyday practical dealings with large-scale bodies and physical processes and with other embodied minds. It serves us extremely well in the former capacity, and not too badly (though not conspicuously well) in the latter. But there is no reason to expect that it would work well outside those rather narrow limits, and it is known to break down, e.g., if applied to those aspects of nature with which modern atomic physicists are mainly concerned. Leaving atomic physics and paranormal phenomena out of the question, I doubt whether it is possible to describe in ordinary language, without verbal paradox and contradiction, some of the introspectable features of one's mental imagery and of one's dream experiences.

The above reference to atomic physics leads naturally to yet another external development which has certainly had some influence on the climate of opinion within which the psychical researcher works. During the period in question there have been two revolutionary changes in the concepts of theoretical physics, viz., those associated with the Principle of Relativity and with the Uncertainty Principle.

At the beginning of the period the commonsense concepts and principles, which are embodied in ordinary language, seemed adequate, not only to the macroscopic things and processes in connection with which they had arisen, but also to their ultra-microscopic constituents, the atoms, light-waves, etc., of theoretical physics. Nowadays every physicist knows that this is utterly false, and this knowledge has filtered down in highly distorted forms to the man in the street. The effects of this revolution in physics on the attitude of the rest of the world to psychical research are best considered under three headings, viz., their influence on expert physicists, on other scientists, and on the non-scientific general public.

My impression is that the effect upon expert theoretical physicists, especially those of the younger generation, has been to make them much more tolerant and much readier to admit the prima facie possibility of phenomena which cannot be brought within the realm of hitherto accepted concepts and principles.

When we leave the physicists and pass to experts in the biological sciences and in experimental psychology, I think it must be admitted that, with a few notable exceptions, they remain either completely indifferent or else positively hostile to psychical research. Many of them seem to be wrapped in an impenetrable cocoon of obsolete scientific concepts which they acquired when they studied elementary physics and chemistry in their student days, and which were even then beginning to be obsolescent. In the case of some of them the hostile reaction to psychical research bears all those marks of violence and irrationality which suggest that some deep-seated emotional complex has been stirred. A psychoanalytic study of some eminent experimental psychologists might be illuminating, in view of this, if it could be undertaken.

Passing from the pundits to the public, I would make two remarks. In the first place, I suppose that the general impression that the scientists have shown the physical world to be a much odder place than one was inclined to think, might induce the plain man to view somewhat less unfavorably the professional investigators of such typical oddities as poltergeists, mediumistic trance, and so on. Whether that has in fact happened I do not know.

But of a second effect I am fairly certain. The plain man nowadays is familiar with the practice of wireless transmission of sounds and of scenes, and he has a vague knowledge of how it is done. He combines this with complete ignorance of the details of well-attested cases of telepathy or clairvoyance, whether sporadic or reiterated in the laboratory. This happy combination of partial knowledge with total ignorance causes him to accept claims to telepathy or clairvoyance much more readily than his predecessors of fifty years ago would have done. He thinks of them as due to some kind of "natural radiotransmission" from one brain to another. This cause, tending to facilitate acceptance, is in fact a very bad reason. For what little we know about "extra-sensory perception" and the conditions under which it happens seems almost to rule out analogy with wireless transmission.

So much for the influence on psychical research of certain changes in theory and practice outside it. I will now mention what seem to me to have been some of the most outstanding features within psychical research during the period in question. In the matter of physical phenomena of the traditional kind, whether sporadic or occurring repeatedly in the presence of a medium, there is almost no progress to report. The question whether there is anything genuinely paranormal in any of the numerous reported poltergeist cases still remains where it was when it was elaborately discussed in the pages of the S.P.R. *Proceedings* for 1901-1903 by Podmore and Andrew Lang. It still lacks a conclusive answer.

As regards the investigation of physical phenomena in the séanceroom, I know of one and only one case that seems to me prima facie genuine and important. That is the apparently telekinetic phenomena associated with Rudi Schneider and reported by Osty in his book Sur les Pouvoirs Inconnus de l'Esprit sur la Matière in 1932. Unfortunately Rudi's powers were rapidly waning by the time Osty came to apply his very ingenious method, with an infrared beam and flashlight photography, to investigating them. But they lasted long enough in a weakened form to show the occasional presence at a distance from the medium of something which interfered with infrared light but failed to appear in a simultaneous flash-photograph with white light.

On the other hand, a new kind of physical phenomenon has been reported from the U. S. A., and elaborately investigated in the laboratory at Duke and treated statistically there. This is an alleged influence of the volitions of ordinary non-mediumistic subjects on the fall of dice. There are many possible pitfalls in this field of research, and they have gradually been pointed out and (so far as I can judge) avoided in later work. It certainly seems hard to think of any normal explanation for the results of the best American experiments. So far as I am aware, we have not found in England many, if any, subjects capable of producing results significantly differing from chance expectation in properly conducted tests, but confirmatory results have been reported by Thouless, by Fisk and Mitchell, and by Knowles.

A similar curious difference between English and American experience existed for many years in reference to card-guessing experiments. It ceased only on the dramatic discovery by Dr. Soal, instigated thereto by Whately Carington, of two unsuspected "swans," Mr. Shackleton and Mrs. Stewart, among the hundreds of "ugly

ducklings" whom he had been patiently investigating for years with purely chance results.

I think that the most palpably important achievement of psychical research during our period has been the establishment of extrasensory perception in the laboratory, under conditions which seem to leave no reasonable possibility of normal explanation, with deviations from chance expectation so great that the odds against their occurring by chance are billions to one. The credit for initiating this line of work is due to Professor Rhine, and he and his associates and pupils have assiduously pursued it at Duke and at other places in the U. S. A. In England the American results have been confirmed and extended in a masterly series of experiments, performed over many years by Dr. Soal with his subjects Mr. Shackleton and Mrs. Stewart.

I would like to mention here the work of two Englishmen who sometimes tend to be overlooked in this connection, viz., Tyrrell and Whately Carington. Tyrrell's elaborate series of researches on the powers of his subject, Miss Johnson, are reported in the S.P.R. *Proceedings* for 1936-37. He devised, constructed, and employed an extremely ingenious automatically recording and electrically operated lamp-system, with a device for altering the connections between the keys and the lamps in ways unknown to himself or any other living being. The results, which are of high statistical significance, seem to me to be of great interest and importance. They certainly seem to establish the occurrence of extrasensory perception under conditions which rule out telepathy.

It was the results of Whately Carington's experiments (S.P.R. Proceedings, Vols. 46 and 47, 1940-45) on the paranormal guessing of pictures, chosen by the experimenter by a random method, which suggested to him that the successful hits tend to cluster on the picture which will be the target on the next occasion in a particular sequence rather than on that which is being exposed as target when the guess is made. It was a suggestion made by Carington to Soal, on the basis of these observations, which led the latter to discover the powers of Shackleton, whose extrasensory perception takes a mainly precognitive form.

The problem of what used to be called "telepathy" has become very much more complex in consequence of the findings of Rhine and his colleagues, of Tyrrell, of Carington, and of Soal. The point may be stated as follows. Let us say that a series of significantly successful guesses is "evidence for pure clairvoyance," if and only if no living person ever has been or ever will be aware of the nature of the targets of the guesses. Let us say that a series of significantly successful guesses is "evidence for pure telepathy," if and only if the targets existed and will exist only in the mind of some person and never in the physical world. It is evidently difficult to design an experiment which, if successful, would be evidence for pure clairvoyance; and it is still harder to design one which, if successful, would be evidence for pure telepathy. The vast majority of experiments, however successful they may be, are not such as to enable us to decide between pure clairvoyance, pure telepathy, and a mixture of the two, when we allow that both telepathy and clairvoyance may work precognitively. As I have said, I think that some of Tyrrell's experiments provide strong prima facie evidence for pure clairvoyance. And Dr. Soal has designed with great ingenuity, and carried out with some success, experiments which are prima facie evidence for pure telepathy. The problem of deciding between alternatives is made still harder if we admit the possibility of paranormal telekinetic action. whereby the subject may be affecting the order in which the targets are presented to him.

A very important feature in Dr. Soal's work (Modern Experiments in Telepathy by S. G. Soal and F. Bateman. Yale Univ. Press, 1954) is that, for the first time so far as I am aware, there has been genuine experiment, as distinct from organized and pre-arranged observation and recording. By this I mean deliberate variation of certain conditions in order to discover whether these changes enhance, diminish, or inhibit the phenomena, or alter their character in a systematic way. I would mention, in particular, experiments in which one part of the total information needed by the subject in order to make a correct guess was in one mind and the rest of it in another mind. The positive results thus obtained are not only of great intrinsic interest. They are important also as making still more desperate the already desperate case of those who seek to dismiss all the alleged evidence for extrasensory perception, based on card-guessing, as statistical artifacts.

Turning from work in the laboratory to sporadic cases of the classical kind, viz., the so-called "phantasms of the living" and

"phantasms of the dead," I think that the most important single contribution in the period is Mrs. Sidgwick's admirable paper in the S.P.R. *Proceedings* for 1923, with its summary account and critical appraisal of the cases reported since the publication of Gurney's *Phantasms of the Living* in 1886.

The most important work on trance-communication occurs at the beginning of the period. It consists in the collation and the interpretation of automatic scripts, produced independently by a number of non-professional automatists, and supplemented by communications through the professional medium Mrs. Piper. The scripts and Mrs. Piper's communications contained elaborate cross-references to each other, and literary allusions which could be traced only when the various independently produced scripts were collated. The communications purported to come from Myers, Gurney, and Sidgwick, and it was claimed in the scripts that the whole method had been designed and put into action by those scholars after their deaths, in order to provide evidence for their continued existence which could not be explained away as due to telepathy between the living. These are the so-called "cross-correspondences."

As a supplement to this must be mentioned Gerald Balfour's long and important paper, in the S.P.R. *Proceedings* in 1935, entitled "Psychological Aspects of Mrs. Willett's Mediumship." In this he describes and comments upon the elaborate series of communications received by him through one of the ladies who had produced automatic scripts in connection with the cross-correspondences. Here the ostensible communicator was Gurney, with some assistance from Myers, and the main content is a very elaborate attempt to explain to Balfour various operations said to be involved in the process of communicating through a medium with those still living in this world.

It must be said, both of the cross-correspondences and of these communications through Mrs. Willett, that they are on an extremely high intellectual level. They plainly involve the operation of some mind or minds, whether of living persons or the spirits of the dead, possessed of unusually wide literary and classical knowledge and of strong philosophical interests.

This kind of communication gradually ceased, and in the years immediately after the first world-war the most important professional trance-medium in England was probably Mrs. Osborne Leonard, with her control, "Feda." Among the numerous papers in the S.P.R. Proceedings dealing with Mrs. Leonard's mediumship I would specially mention those by Dr. Drayton Thomas, who had regular sittings with her for many years on end. I do so because here again we have a long and coherent series of statements, on quite a high level of intelligence, purporting to describe from the other side the methods used and the difficulties encountered in communicating through a medium. The ostensible communicators in this case were Drayton Thomas's deceased father and sister. A good deal of the communications took the form of "direct voice," i.e., speech coming from the medium's lips in the voice and intonations and mannerisms of the alleged communicator, as distinct from the more usual method of indirect communication by way of the regular control Feda.

The last item that I will mention is closely connected with this. It is the extremely interesting work reported by Whately Carington in his papers entitled "The Quantitative Study of Trance Personalities," in the S.P.R. Proceedings for 1934, 1935, and 1936-37. Here Carington applied personality tests to Mrs. Leonard in her normal state, to her when in trance and ostensibly controlled by Feda, and to her when in trance and ostensibly controlled by one or the other of Drayton Thomas's deceased relatives. He then tried to work out statistical correlations between the results of these various tests, and to draw from them conclusions as to the nature and interrelations of the various personalities concerned. Carington's statistical methods and his inferences based on them have been critically examined and largely rejected by Dr. Thouless in his paper in S.P.R. Proceedings for 1936-37. I have no doubt that his criticisms are justified. But the ideas behind this work of Whately Carington's seem to me highly interesting and important, and it is to be hoped that such investigations will be repeated, with better methods and sounder logic, when an opportunity presents itself.

Looking back on the various lines of research summarized above, I would like to make the following comments:

(1) I suppose that, in a sense, the establishment of the reality of extrasensory perception in the laboratory should do something to diminish the antecedent improbability of reports of sporadic cases which seem to involve telepathy or clairvoyance or both. But we ought not to overlook the extreme unlikeness between successful card-

guessing, on the one hand, and veridical hallucinations corresponding in detail with what is happening or will happen to a person in a distant place, on the other. The so-called "extrasensory perception," which is established by card-guessing experiments, bears no resemblance to seeing, hearing, or touching, whether normal or hallucinatory. All that the subject does is to record automatically and unthinkingly on each occasion the name of one or another of a limited number of alternative symbols, which he knows beforehand to be the only ones depicted on the faces of the cards used in the experiment. If the casual processes involved here be the same as those involved in the production of veridical telepathic or clairvoyant quasi-perceptions, it must be admitted that the final results are extremely different.

(2) The question whether a person's mind ever survives the death of his body is affected in two opposite ways by the discovery that human beings in this life have the capacity for telepathy and clairvoyance, both simultaneous and precognitive. On the one hand, this may be held to diminish the antecedent improbability of survival in the following way. It constitutes a prima facie exception to the immense mass of evidence which suggests that processes in the living brain or nervous system are necessary and sufficient conditions of every kind of mental process. On the other hand, it weakens the prima facie evidence for survival based on the content of mediumistic communications, purporting to come from the spirits of the dead and containing verifiable information which the medium could not have obtained by normal means. For such information may have been obtained telepathically or clairvoyantly by the medium from living persons and existing physical objects, and then worked up into the dramatic form of a communication from a surviving personality. I do not say that this is a plausible explanation of the most impressive mediumistic communications, but it is always a conceivable one.

It is now time for me to conclude my paper with some remarks on the present state of psychical research and its prospects in the immediate future.

In the first place, I must mention one very unfortunate change which has taken place in the latter part of the period under review. (Here I am referring primarily to what I know about in England, but I suspect that much the same holds good elsewhere.) At the beginning of the period, and well on into the middle of it, there were

several professional trance-mediums of outstanding gifts and integrity, in full vigor. These have either died or retired from professional activity, and, so far as I can see, they have not been replaced by anyone comparable to them.

Doubtless the mean number of gifted mediums born per annum bears so small a proportion to the total population that relatively large random fluctuations in the total number alive and active may be expected from time to time. But there has been another and associated change for the worse, which I suspect can be accounted for by certain social changes. In the earlier years of the period the S.P.R. included among its members several ladies of high intelligence and culture who had mediumistic powers but were not professional mediums. Mrs. Verrall and Mrs. Willett, whom I have already mentioned, are two instances among others. So far as I am aware, this most valuable source of mediumistic material for investigation has now almost completely dried up.

I think that this can be plausibly accounted for by the enormous decrease in leisure and domestic amenities which Englishwomen of what used to be the comfortably situated classes have suffered since 1914. Mrs. Verrall and her contemporaries would have had two or more servants to attend to the cooking and the housework, and a nurse to look after the children when they were young. An Englishwoman in a corresponding position at the present day, especially if she be the mother of young children, leads a life which seems to a person of my generation to be one of domestic squalor and drudgery. However great one's innate mediumistic gifts may be, they will have little chance to manifest themselves in a milieu of saucepans, wash-tubs, and squalling babies. A sibyl needs either to be a vestal virgin or to have an adequate domestic staff, and it is a distinct advantage if she can combine both qualifications.

Inflation and heavy taxation have had other consequences detrimental to psychical research, and I cannot regard the foreseeable future of the subject with any great confidence. Much of the best work in the past has been done by persons of independent means, such as Myers or Mrs. Sidgwick, or by professional scholars, such as Sidgwick or William James or Oliver Lodge, in their leisure. The class of intelligent and instructed amateurs, living on private means, which contributed so enormously to every branch of learning in England,

will soon be extinguished by surtax, death-duties, and inflation. Professors and other university teachers are now so burdened with administrative work that they have little enough time and energy left to contribute anything important even to their own subjects, and hardly any leisure to devote to extraneous fields.

On the other hand, a young and promising scientist could hardly be expected to take up psychical research as his profession. For he cannot live on ectoplasm, and at present there are no prospects of eventually occupying a well-paid and responsible post in that subject in any university or comparable institution. And a reputation for having taken an active interest in psychical research would certainly not be helpful, and might easily be harmful, to a young scientist seeking an appointment in one of the more orthodox scientific subjects.

One might be inclined to say that the solution is endowment of departments for psychical research in universities. I need not enter here into the difficulties of finding a suitable benefactor and of getting a university to accept such an endowment, and then ensuring that it is not afterwards diverted by some plausible subterfuge to other purposes. There seems to me to be a prior difficulty. In view of the extreme shortage at the present time of subjects with appreciable paranormal powers, could one honestly ask for large endowments? Is there not a serious risk that the highly qualified and paid investigators, with their elaborate and expensive equipment, might find themselves in that most depressing situation known as "all dressed up and nowhere to go"? And, if there were a prolonged period of such psychic drought, would not those elements in the university which are hostile to psychical research have a golden opportunity for diverting the endowment once and for all to other ends?

In view of this, I am rather inclined to think that the best use that could be made of an endowment would be to establish a fund, out of the income of which substantial grants could be made from time to time to particular individuals or institutions for particular bits of research. The schemes might either be proposed by the managers themselves or submitted to them for their approval by those who sought such grants. It would be essential to start with a good body of managers, and to have a trust-deed which would ensure, so far as is humanly possible, that each should retire before he becomes fossilized,

and should then be replaced by a reasonably sane, competent, active, and honest successor.

The managers of such a fund would not have an easy task, for many of those submitting proposals to them would be lunatics, cranks, or ignoramuses, and some who were neither would be temperamentally prickly and egotistical. But, judging from my own experiences on a microscopic scale with the Perrott Fund, administered by Trinity College, Cambridge, on these lines, I should say that their task would not be impossible, and might combine general usefulness with the occasional excitement of "spotting a winner."

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