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Philosophy and Psychical Research

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INTRODUCTION

When science brings forth a new body of knowledge - or even a new bit of knowledge - it is the duty of philosophy to examine it to see what implications it has for our overall understanding of the universe. Does it point to a new answer to some perplexing philosophical problem, or reinforce one of several alternative answers? Or does it present a new problem which a satisfactory system of metaphysics must be able to answer? Such questions should be asked. For the ultimate goal of philosophy is a complete understanding of the universe and man's place in it. It is proper for philosophy to provide tentative answers which may make man's life more acceptable in the meantime, but there can be no doubt that the goal is a complete understanding.[1]

It is the purpose of this thesis to examine an area of science which has been a center of controversy for over 75 years. The protagonists in this controversy maintain, on the one hand, that absolutely nothing has been proven, and, on the other hand, that this unwillingness to accept unquestionable proof is based on ignornace and prejudice. There are undoubtedly some who would say that we are not talking about an area of science at all, but merely delusion and superstition. While most of the phenomena investigated and reported by psychical researchers have been taken for granted by mankind for thousands and thousands of years, the age of science which Western man created has made such belief

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[1]This view of philosophy agrees with that of William James expressed in Some problems of philosophy, 1911. Cited in P. P. Wiener (ed) Readings in philosophy of science, (New York: Charles Scribner's Sons, 1953) p. 607.

almost untenable. While this science was fighting man's ancient superstitions, it also put to flight the possibility, for many people, of serious belief in the alleged occurrences with which psychical research now concerns itself.

This controversy points up the peculiar ambivalence of Western man which generates the supposed conflict between science and religion. While science has apparently won the day, it is nevertheless true that religious dogma is firmly embeded in our secular lives, and that old superstitions die slowly. Thus many people teach their children to believe in the virgin birth of Christ and the Easter Bunny: yet in general science class they learn things which imply that none of this can really be true. It seems that belief in psychic phenomena suffers from this same ambivalence which divides people into sharply differentiated camps. It is one aim of this thesis to examine both sides of the question in an attempt to clarify the real issues.

It should be mentioned at the beginning that any discourse on the subject of psychical research which suggests that psychic phenomena are fairly common and are easy to demonstrate is probably not worth serious attention. On the other hand, any discourse which suggests that all people who are willing to give serious attention to psychical research must therefore be soft-headed should be equally unconvincing. Obviously, if psychic phenomena were common, easily demonstrated occurrences, there could hardly be a controversy. But on the other hand again, any attempt to prove that such things do not occur will be extremely difficult.

Logical Difficulty in Proving the Impossibility of Psychic Phenomena

The logical difficulty in establishing such impossibility or improbability is discussed by J. W. N. Watkins,[2] The situation may be summarized briefly as follows, by borrowing an example from probability and decision theory. Suppose we have two bags of marbles. One contains only black marbles, while the other contains mostly black marbles but also contains at least one white one. Our task is to choose one bag, and then by sampling with replacement (that is, we shake the bag, withdraw one marble, look at it, replace it in the bag, shake the bag again, and repeat the procedure) determine whether it is the all-black bag or the other. Now if we have indeed chosen the all-black bag, we will feel compelled to draw a rather large sample before concluding with any assurance that we have the all-black bag. On the other hand, if we have chosen the other bag, the appearance of only one white marble in our sample will

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[2]"Between analytic and empirical," Philosophy, XXXII, (April, 1957) pp. 112-131.

conclusively prove that we have the other bag. Now science, in an attempt to prove the impossibility of psychic phenomena, for example, is in the position of proving it has the all-black bag. But the appearance ataany time of only one white marble will conclusively disprove the hypothesis. In the language of logic, a universal proposition can be disproven by a particular instance.

Psychical research, on the other hand, has not yet succeeded in pulling out a ball which everyone, even including a serious sceptic, is forced to agree is really white. Thus the critics who point to the fact that psychical research has not produced one single convincing experiment are on solid ground, logically.[3] This is certainly an issue which has a legitimate bearing on the basic question to be decided. But those who go on and say that psychic phenomena are impossible may not be justified in doing so.

Should We Believe in Psychic Phenomena?

What, then, should an open-minded person believe at this time? It does not seem reasonable to go very far beyond the view expressed by William James over 50 years ago.

> When . . . a theory gets propounded over and over again, coming up afresh after each time orthodox criticism has buried it, and each time seeming solider and harder to abolish, you may be sure that there is truth in it. Oken and Lamarck and Chambers had been triumphantly despatched and buried, but here was Darwin making the very same heresy seem only more plausible. How often has "Science" killed offall spook philosophy, and laid ghosts and raps and "telepathy"

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[3]See, for example, George R. Price, "Science and the supernatural," Science, CXXII, August 26, 1965, p. 359-367.

> away underground as so much popular delusion. Yet never before were these things offered us so voluminously, and never in such authentic-seeming shape or with such good credentials. The tide seems steadily to be rising, in spite of all the expedients of scientific orthodoxy. It is hard not to suspect that here may be something different from a mere chapter in human gullibility. It may be a genuine realm of natural phenomena.[4]

If this is the best that can be said for psychical research after 75 years, does not this poor showing itself constitute strong evidence that all alleged psychic occurrences are spurious in some way or other? Perhaps. But several points can be mentioned which might gainsay such a conclusion.

1) One is occasionally tempted to wonder whether there are some questions about the nature of things which simply do not lend themselves to scientific investigation. This very idea seems almost meaningless at first, to us who have been exposed only to Western civilization. But, phrased in more technical terms, it seems a perfectly ligitimate question: Is the scientific method of observation and inference the only possible means of acquiring genuine knowledge? (As opposed to mere belief which may also come from intuition and revelation.) We have very little in the way of sound reasons for saying yes.

2) A more concrete point is raised by Broad.

> If paranormal cognition and paranormal causation are facts, then it is quite likely that they are not confined to those very rare occasions on which they manifest themselves sporadically in a spectacular way or to those very special conditions in which their presence can be experimentally established. They may well be continually operating in the background of our normal lives. . . . In this connection it seems to me that the following physical analogy is illuminating. Human beings have no special sensations in presence of magnetic fields. Had it not been for the two very contingent facts that there are loadstones, and that the one element (iron) which is strongly susceptible to magnetic influence is fairly common

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[4] William James, "The confidences of a 'psychical researcher'" American Magazine, LXVIII, October 1909. Reprinted in Gardner Murphy and Robert O. Ballou (ed.), William James on psychical research. (New York: The Viking Press, 1960) p. 311 (subsequently referred to as Murphy and Ballou).

> on earth, the existence of magnetism might have remained unsuspected to this day. Even so, it was regarded as a kind of mysterious anomaly until its connection with electricity was discovered and we gained the power to produce strong magnetic fields at will. Yet, all this while, magnetic fields had existed, and had been producing effects, whenever and wherever electric currents were passing. Is it not possible that natural mediums might be comparable to loadstones; that paranormal influences are as pervasive as magnetism; and that we fail to recognize this only because our knowledge and control of them are at about the same level as were men's knowledge and control of magnetism when Gilbert wrote his treatise on the magnet?[5]

To appreciate the importance of the discovery of magnetism, to our existing technology, one need only reflect on the fact that without magnetism we would have no electric motors or dynamos.

3) Another point was made by William James:

> My deeper belief is that we psychical researchers have been too precipitate with our hopes, and that we must expect to mark progress not by quarter-centuries, but by half-centuries or whole centuries.

His reasons for feeling this way after 25 years of active interest in psychical research were the baffling character of "this department of nature," and the fact that there are "so many sources of possible deception."[6]

Should We Pursue Psychical Research?

Is psychical research, then, worth pursuing? Aside from the fact that man's basic thirst for knowledge and achievement will continue to drive some of us on even though others of us insist that a particular search is fruitless, the following might be suggested as reasons for answering this question affirmatively.

1) Investigation of psychic phenomena may produce some useful information about man or his environment, even though this might be only as a

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[5] C. D. Broad, "The relevance of psychical research to philosophy," Philosophy XXIV, (October 1949) 291-309. (Reprinted in C. D. Broad, Religion, philosophy and psychical research, New York: Harcourt, Brace, & Co., Inc., 1953.) (Subsequently referred to as Broad, RPPR.) p. 16

[6] William James, Ibid., p. 30. 310.

by-product. It could be pointed out that 75 years ago, hypnotism was as far beyond the borders of orthodox science as telepathy and clairvoyance are today. Investigation of hypnotism was one of the original objectives of the Society for Psychical Research; today it is accepted as a genuine and useful phenomenon.

2) It might be argued that science must expend a certain amount of effort on investigation of psychic phenomena so as not to leave a vacuum which would be filled entirely by crackpots. Some of the protagonists on both sides of the controversy agree that there is a "lunatic fringe" surrounding orthodox science; they merely disagree on whether or not psychical research is part of it. If this is the case, it seems that if science completely ignored the issue and said nothing about psychical research, then the only voices heard by the rest of the world would be those of the so-called lunatic fringe. At the same time, if paranormal phenomena really are impossible, and if this could be reasonably well established, then perhaps these age-old delusions could be laid to rest at last. The difficulty of establishing such a proof has been discussed above, however.

Should Philosophy Concern Itself with Psychical Research?

It might be considered enough to say that wherever science ventures, philosophy should follow. It might be more to the point to say that philosophy should more properly be ahead of science. This would be in accord with the definition of philosophy described by William James.

> As fast as questions got accurately answered, the answers were called "scientific," and what men call "philosophy" today is but the residuum of questions still unanswered.[7]

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[7]William James, Some problems of philosophy, 1911, cited in P. R. Wiener (Ed.) Readings in philosophy of science, p. 607.

"Do paranormal phenomena really occur?" is a question still unanswered, so far as the majority of philosophers and scientists are concerned. If the question gets accurately answered in the affirmative, psychical research will become a branch of science just as psychology and biology recently have. As a matter of fact, one of the main reasons for which the Society for Psychical Research was founded in 1882 was to answer a philosophical question. This question was, "Is materialism really the only acceptable view of the universe?"[8] Materialism, of course, denies the possibility of survival after death.

A recent rationale supplied by Broad is the following:

> . . . 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. . . .[9]

The Status of Psychical Research

Regardless of any reasons we might think of why psychical research should be pursued, or why its results have a bearing on philosophy, the fact remains that taking psychical phenomena seriously is not fashionable in Western society today. These occurrences have been branded with a blanket label as illusion, delusion, and deception, by the conservative body of orthodox science. Anyone who disagrees is usually judged guilty by association of being influenced by some or all of these. This is not to suggest that matters should necessarily be any different. Our

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[8] D. J. West, Psychical research today, (Harmondsworth, Middlesex: Penguin Books, Ltd., 1962) p. 19. (Originally published by Duckworth, 1954.)

[9] "A half-century of psychical research," Journal of parapsychology, XX (December 1956), 209-228.

progress in scientific knowledge has been won only by great effort and careful adherence to the rules of the game. This progress must be protected by continual vigilance against faulty practitioners. The burden of proof of any new idea must rest with the innovators.

It can, perhaps, be reasonably assumed that the vigor with which a new idea is resisted is an indication of the seriousness of its impact on the body of "established" knowledge. If the impact of psychical research is as great as appears possible, let us sincerely hope that those guarding the gates through which new ideas are accepted into this body of knowledge are doing their job well, as it seems they are. Let them leave no stone unturned in trying to prove these ideas untrue before accepting them. If some of the gate-keepers become over-zealous or emotional, as charged by the innovators in this case, this is perhaps a price we must pay to have good gate-keepers. To some it seems to make progress painfully slow, if not impossible, but it has so far proven to be the only way of assuring that change means progress rather than a step backward.

Three distinguished philosophers of the English-speaking world have been willing to be judged guilty by association with psychical research. It is largely through their work that we will examine the philosophical consequences of belief in psychical phenomena. These are William James, C. D. Broad, and C. J. Ducasse.

William James

For a graduate of Harvard medical school, William James had a rather unique career. Though he did not practice medicine, he became one of the great names in the field of psychology and one of the first

and foremost of American philosophers. His book Psychology is still required reading for any serious student of psychology, and his philosophy is read and respected around the world. It is less widely known, however, that he was also one of the founding fathers of the American Society for psychical Research and that he maintained an active interest in psychical research throughout the last 30 years of his life. He was a corresponding member of the (London) Society for Psychical Research from 1884 to 1889, a vice president from 1890 to 1910, and president during the years 1894 and 1895. He contributed articles to the journals of both societies, and personally investigated a number of spiritualist mediums.

The fact that this activity is less well known is certainly not because he tried to keep it a secret. It may be partly due to his being able to compartmentalize his thinking. When he wrote about psychology, he wrote for psychologists. When he wrote about philosophy, he wrote for philosophers, though it was far easier to read than most philosophy. It seems that, while the many areas of his interest -- medicine and physiology, psychology, philosophy, religion, and psychical research -- interplayed and cross-fertilized each other, they did not spill over and get mised up with each other.

But, one might ask, did James really believe in psychical phenomena? Would he still believe if he had all the evidence that is available today? Some present day psychologists might be inclined to suggest that he would not, and they might be right. But James' own words on this question are interesting. He did believe in the reality of telepathy and he did believe that there was something beyond ordinary sense perception involved in the mediumship of Mrs. Piper.[10] On the other hand, in his evaluation of a series of communications purported to have come from Richard Hodgson, he said:

[10]Gardner Murphy and Robert O. Ballou, (Ed.) William James on psychical research (New York: The Viking Press, 1960) p. 41.

> I myself feel as if an external will to communicate were probably there . . . but . . . I remain uncertain and await more facts, facts which may not point clearly to a conclusion for fifty or a hundred years.[11]

Only 60 years have passed, during which, according to the "psychic faction," considerably more favorable evidence has been accumulated. Moreover, the question of whether he believed or not is really rather beside the point. He was not demanding that anyone else believe in telepathy, for example, but merely that they take seriously these peculiar phenomena which are found universally throughout man's history.

> You find things recorded under the name of divinations, inspirations, demoniacal possessions, apparitions, trances, ecstacies, miraculous healings and productions of disease, and occult powers possessed by peculiar individuals over persons and things in their neighborhood. . . . look behind the pages of official history, in personal memoirs, legal documents, and popular narratives and books of anecdote, and you will find that there never was a time when these things were not reported just as abundantly as now. . . .
>
> Facts are there only for those who have a mental affinity with them. When once they are indisputably ascertained and admitted, the academic and critical minds are by far the best fitted ones to interpret and discuss them -- for surely to pass from mystical to scientific speculations is like passing from lunacy to sanity; but on the other hand if there is anything which human history demonstrates, it is the extreme slowness with which the ordinary academic and critical mind acknowledges facts to exist which present themselves as wild facts, with no stall or pigeonhole, or as facts which threaten to break up the accepted system. In psychology, physiology, and medicine, wherever a debate between the mystics and the scientifics has been once for all decided, it is the mystics who have usually proved to be right about the facts, while the scientifics had the better of it in respect to the theories. The most recent and flagrant example of this is "animal magnetism," whose facts were stoutly dismissed as a pack of lies by academic medical science the world over, until the non-mystical theory of "hypnotic suggestion" was found for them -- when they were admitted to be so excessively and dangerously common that special penal laws, forsooth, must be passed to keep all persons unequipped with medical diplomas from taking part in their production.[12]

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[11] William James, "Report on Mrs. Piper's Hodgson-Control," Proceedings of the society for psychical research, Vol. XXVIII, 1909, p. 17. cited in Murphy & Ballou

[12] William James, The will to believe and other essays, 1897. Reprinted in Gardner Murphy and Robert O. Ballou, (Ed.) William James on psychical research (New York: The Viking Press, 1960), p. 27.

In summarizing James' association with psychical research, Gardner Murphy, psychologist, Director of Research at the Menninger Foundation in Topeka, Kansas, and current president of the American Society for Psychical Research, had this to say:

> But it was not simply the research that James carried on, nor the views he expressed, which gave him the permanent place which he holds in psychical research. It was in large measure the courage and energy with which he stressed the importance of these inquiries; his eager insistence upon the definitive nature of the evidence that at least telepathy exists; his demand that the instruments of such research, such as spiritualist mediums, be respected, honored, and studied with an open mind; his emphatic recognition and insistence that an organized type of research enterprise must be set up, with continuity over the years; his deep conviction that a long-range empirical investigation, rather than anybody's religious or philosophical opinion, was the only guide which a thoughtful and literate public could accept. He believed that, regardless of the question whether the demonstration of continued existence beyond death is ever possible, psychical research has epoch-making implications for the extension of our understanding about the deeper levels of personality, and of the relation of personality to the universe in which it is placed.[13]

It should not be presumed that everyone who is connected with a society for psychical research is simply more gullible than most and believes in all manner of weird occurrences. Granted, there are some for whom such a supposition would be true; any group of people has its fantastically loyal supporters of dogma. But to attribute such a position to the leaders of the British and American societies for psychical research would probably be a serious mistake. Whatever one might finally judge the quality of their research to be, they have been notably successful in attracting respected and reputable scholars and scientists in their ranks.[14]

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[13] Murphy and Ballou, Ibid., p. 18.

[14] As an indication of this, it may be appropriate to mention the names of a few others who have held the largely honorary position of president of the British society. These include Sir William Crookes, Sir Oliver Lodge, Sir William Barrett, Professor Charles Richet, Professor Henry Bergson, F. C. S. Schiller, Lord Rayleigh, Professor H. H. Price, and Professor Gardner Murphy.

C. D. Broad[15]

C. D. Broad is a distinguished British philosopher who received his Ph.D. from Trinity College, Cambridge, in 1911. He became a Fellow of Trinity in 1922, and still was at the time of writing his autobiography, though he retired from the Knightbridge Professorship of Moral Philosophy in Cambridge University in 1953, at the age of 65.

According to Broad himself, his interest in "alleged paranormal phenomena" began before his undergraduate days at Cambridge. It received no encouragement from any of those whom he most admired at Cambridge, although he did join an undergraduate society for psychical research (approximately 1909). He joined the regular Society for Psychical Research in 1920, became a member of its council in 1930, and has remained on it ever since (at least up through 1956). He was elected as President of the Society in 1935 and 1936, and again from 1958 to 1960. During this association, apparently, he became convinced of the genuineness of at least some of the occurrences investigated and reported by the Society. He has made no secret of his belief in what he calls "paranormal cognition."

He makes little if any mention of psychical research in his earliest writings. His third major work, however,[16] is a comprehensive and detailed (over 650 pages) study of the mind-body problem, and in it he unrepentantly gives serious consideration to the evidence gathered by the Society for Psychical Research. He anticipates criticism from "certain scientists . . . and some philosophers" for this in the Preface, but makes no apologies.

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[15] Most of the biographical material below is from his autobiography in P. A. Schilpp (Ed.) The philosophy of C. D. Broad, (New York: Tudor Publishing Company, 1959).

[16] C. D. Broad, The mind and its place in nature, (New York: Harcourt, Brace, and Company, 1929).

Occasionally references to psychical research continue to appear in his writing, and by 1949 he had become rather caustic in his remarks about some of those who did not share his beliefs in the matter. For example, in an article in Philosophy,[17] he said, regarding paranormal cognition (a generic term he uses to describe what are commonly referred to as telepathy, clairvoyance, and precognition),

> So far I have dealt with paranormal facts which have been established to the satisfaction of everyone who is familiar with the evidence and is not the victim of invincible prejudice.

His most recent major work[18] is devoted entirely to psychical research. It is a critical discussion of all the evidence which it appears Broad feels has a bearing on the validity of belief in psychical research. Whereas he is usually quite explicit in stating his purpose and main points, in this case he leaves it largely to the reader to decide what it is that he should get out of the book. His only statement on the question is to the effect that the Perrott Lectures -- on which the book is based -- are "for the furtherance of psychical research." George A. Miller[19] suggests that his purpose is to convince the reader of the truth of the claims of psychical researchers. It also seems quite possible, however, that he is merely trying to generate intelligent interest in psychical research, and does not consider this book as containing enough evidence to constitute sufficient proof by itself. This is because in his earlier works, he has made references to the voluminous

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[17] C. D. Broad, "The relevance of psychical research to philosophy," Philosophy XXIV, (October 1949) 291-309. (Reprinted in Broad, RPPR.)

[18] C. D. Broad, Lectures on psychical research, (New York: The Humanities Press, 1962).

[19] George A. Miller, "Lectures on psychical research, by C. D. Broad," Scientific American, CCIX (November 1963) 171-176.

Proceedings of the Society for Psychical Research as containing the information required for establishing proof.

Miller also says

> When as distinguished a philosopher of science as C. D. Broad agrees to wrestle with them, we might hope at last to see the issues analyzed dispassionately and clearly set forth. Broad has lived a long time and has seen too many intellectual fashions come and go to be overly impressed by scientific prejudices. When he turns his philosopher's gaze on the disreputable domain of psychical research, he is not easily intimidated by the collective disdain of hardheaded scientists. He knows all too well that most of these critics have not even examined the evidence, because, like the Aristotelians who refused to look through Galileo's telescope, they know in advance that there can be nothing to it. To such as these Broad can give as good a sneer as he gets.

But he does not find Broad's arguments in favor of belief to be convincing.[20]

C. J. Ducasse

Curt John Ducasse was born in 1881, received his Ph.D. from Harvard in 1912, became a Professor of Philosophy at Brown University in 1926, and chairman of the department in 1930. He is now Professor Emeritus. He has been active in the American Society for Psychical Research and is currently vice president of the Society.

His first major work,[21] Philosophy as a science, is an explanation of what philosophy actually is. It contains little, of any, reference to psychical phenomena. His next major work,[22] Nature, mind, and death, is a large volume dealing with the mind-body problem. In it he specifically discusses the possibility of life after death, including the empirical evidence produced by psychical research. A philosophical

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[20] Ibid.

[21] C. J. Ducasse, Philosophy as a science, (New York: Oskar Piest, 1941).

[22] C. J. Ducasse, Nature, mind, and death, (La Salle, Illinois: The Open Court Publishing Company, 1951).

scrutiny of religion[23] makes only rather casual mention of psychical research. Finally, his latest work,[24] The belief in a life after death, is an elaboration of the latter part of Nature, mind, and death. Here he discusses the reasons for belief and for disbelief in life after death, the relation between mind and body, and he discusses in detail the ostensible empirical evidence for survival and for reincarnation.

Ducasse is less overt in his statements about his own belief in psychic phenomena,[25] but actually takes up a position which implies a rather stronger degree of belief than Broad's. He also moves somewhat beyond him on philosophical issues. He is certainly well acquainted with Broad's writings, and seems to accept most of his views.

Plan of Attack

Chapter I will describe some of the history of man's long belief in the supernatural -- ghosts, palm reading, witchcraft, etc., -- which were all accepted belief a few hundred years ago. It does not seem necessary to describe the birth and growth of science with the resultant decline of supernatural belief among rational men.

Chapter II undertakes an examination of the methods of psychical research, and of its status as a science. It is not appropriate to directly evaluate the work; anyway, this has already been done by orthodox

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[23] C. J. Ducasse, A philosophical scrutiny of religion, (New York: The Ronald Press Company, 1953).

[24] C. J. Ducasse, The belief in a life after death, (Springfield, Illinois: Charles C. Thomas, 1961).

[25] As an example of this restraint, the strongest statement of belief in Nature, mind, and death is a footnote on Page 410: "I make no apology for thus referring to 'telepathy' as a fact, even if one apparently rather rare. The evidence that it sometimes occurs is by this time both so abundant, and some of it so good, that anyone who rejects out of hand the possibility of telepathy can now fairly be regarded as simply uninformed."

science. What has seemed appropriate is to describe the nature of the controversy, giving the positions of both sides, and to attempt to provide a tentative answer to the question, "Who is right?" It is a long chapter. But, then, the controversy has been long, and each reader, if he is open minded on the basic question, will want to know enough about the pros and cons to make some rough evaluation of the opposing arguments for himself. However, the systematic appraisal of the bewildering array of conflicting evidence and opinion becomes almost impossible except in a project such as this. Therefore the inclusion of such a chapter, even though long and laborious, seems appropriate.

Chapter III, then, describes what the conclusions of psychical research are which have generated the controversy, and shows what areas of our philosophy seem to be affected by them. These areas are primarily the nature of time, the nature of causality, free will versus determinism, and the mind-body problem. Epistemology, of course, is also affected if we are to be faced with a new avenue of perception, but so little is yet known about any alleged method of operation that it seems premature to discuss this point at any length.

Chapter IV presents a more detailed examination of the history and present status of our philosophical beliefs regarding the four areas described, so that we may more intelligently discuss the implications of psychical research. It would be desirable to follow each section of this chapter with a discussion of how the conclusions of psychical research would affect our thinking on that subject. However, the subject matter does not yield gracefully to such treatment, and it seems more desirable to deal with the detailed implications in a separate chapter.

Chapter V then discusses the philosophical implications of the conclusions, if they be true.

Chapter VI presents a few speculations on what might be in the distant future if psychic phenomena should become proven facts.

It is not the purpose of this thesis to recommend belief in psychic phenomena, although it is suggested that psychical research does deserve serious attention. Its purpose is, rather, to examine the philosophical consequences of such belief, if one should decide to adopt it. It is impossible, of course, to do a thorough job of predicting the philosophical consequences of any new discovery. This is particularly true if some psychic phenomena should be proven to be genuine since we have presently no idea what modus operandi is involved, nor even any good hypotheses. But it does nevertheless appear that even without any sort of idea as to how it might work, there are significant implications which can be predicted and which are worthy of consideration.

CHAPTER I

MAN'S BELIEF IN THE SUPERNATURAL[1]

No doubt, man was for years, like other animals, a creature living in the present; but, at some stage of development, he became aware of the future. It is even possible that this awareness was one of the important features of budding humanness. We are speaking here of an intellectual awareness of the future as an abstract idea, rather than any sort of instinct which might appear to be aimed toward the future.[2] It would seem that we could safely assume this awareness to have begun at least 70,000 to 80,000 years ago, because we know that this long ago our ancestors buried their dead as though in preparation for some future existence.[3]

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[1]The term "supernatural" is used in this paper in the same sense as defined in Webster's new international dictionary, 2nd ed. Unabridged, (Springfield, Mass.: G. & C. Merriam Co.), 1960. "1. Of, belonging or having reference to, or proceeding from, an order of existence beyond nature, or the visible and observable universe; divine as opposed to human or spiritual as opposed to material; as, supernatural beings, forces, or revelations; a supernatural religion; the supernatural character of the soul."

[2]The sophisticated nature of this concept is indicated by what appears to be a three-stage development of time concepts in language, pointed out by Ernst Cassirer in The philosophy of symbolic forms, translated by Ralph Manheim (New Haven, Conn.: Yale University Press, 1953), I, 215-226. Also, within the Indo-European language group, which Cassirer would place at the third-stage of development: "There are many more discriminations in the past tenses (imperfect, preterit, perfect, pluperfect, etc.) than there are in the future. And there is less consistency in forming futures among Indo-European languages than in formingppast tenses," according to Hubert G. Alexander in Time as dimension and history, (Albuquerque: University of New Mexico Press, 1945) p. 33.

[3]There appears to be general agreement that, so far as is known, such burials are at least as old as the Middle Paleolithic era. Ivar Lissner in Man, God and magic, trans. J. Maxwell Brownjohn (New York: G. P. Putnam's Sons, 1961) p. 181 places the date more specifically at 70,000 to 80,000 years ago.

The concepts of animism must have been fairly well developed by this time in order for concern over the future comfort of spirits to be so obviously manifested. There is little need to concern ourselves with specific dates here, however: belief in some sort of life after death is obviously one of man's oldest cultural traditions.[4] This awareness of the future must have been closely associated with a belief that the events of nature (rain, wind, etc.) are under the control of supernatural forces. It also must have led to the desire to influence these supernatural powers, if possible, or at least to know something about the future, if influence was not possible. Again, we are not considering such things as accumulating a supply of food for the winter, but a direct appeal to the supernatural forces that shape the events of nature -- to make the coming winter mild, or game plentiful, for instance. There was, obviously, great utility in being able to influence or to learn about the future, and, consequently the practice of magic, sorcery, healing, and divination is probably the oldest of professions.[5] Various forms of magic and religion were developed to compel or persuade the powerful unseen forces to behave favorably.[6] One of the most spectacular evidences of such activity is in the cave paintings of southeastern Europe which

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[4]It is not altogether certain, of course, that such burials do indicate belief in a future existence. But Edward B. Tylor states in Primitive culture, (Boston: Estes & Lauriat, 1874) I, 486

> Regarding funeral offerings, from simple offerings of food, weapons, and ornaments, to elaborate burial with horses and chariots, servants, slaves and wives, "Their common purpose has become one of the most undisputed inferences of Archaeology."

[5]James G. Frazer, The golden bough, 1 vol. abridged ed. (New York: The MacMillan Co., 1951, originally published 1922), p. 121.

[6]Bronislaw Malinowski, Magic, science and religion, (Boston: Beacon Press, 1948) p. 1, says "There are no peoples however primitive without religion and magic."

date from the upper Paleolithic era. It seems to be generally agreed that these works of art had magical purposes, namely, to insure successful hunting.[7]

From these beginnings developed a wide array of techniques for controlling and foretelling the future. In general terms, magic was used to control events by enlisting the assistance of various supernatural powers; divination was used to foretell events by similar appeals to supernatural powers.

Magic

There is, of course, a large and significant literature dealing with the development of religion,[8] and since this includes thorough discussions of magic, we will not go deeply into the matter here. In the most primitive cultures we know about, magic is considered necessary to produce all the natural phenomena, from the rising of the sun to the coming of wind and rain. More advanced cultures require magic to produce growth of food crops, and to prevent or cure diseases. Magic apparently transforms into religious ritual in still more advanced cultures.[9]

Divination

There is far less serious literature dealing with the forms of divination; these are more definitely within the area of occult arts and are perhaps not as respectable as the history of religion. The Encyclopaedia

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[7]Frank C. Hibben, Prehistoric man in Europe, Norman: University of Oklahoma Press, 1958) p. 81.

[8]E.g.: Frazer, Malinowski, and Tylor.

[9]Bronislaw Malinowski, Sex, culture and myth, (New York: Harcourt, Brace & World, Inc., 1962) p. 300.

Britannica defines divination as "the process of obtaining knowledge of secret or future things by means of oracles, omens, or astrology."[10]

Oracles[11]

From somewhere in the time of unwritten history, into the earliest of written Greek history, came the belief in oracles -- "a shrine of a god or a hero at which inquiries may be made of him." Let us describe in some detail the most famous of Greek oracles; Delphi, as an example.

Its history was long and complicated, but it was believed that the oracle had existed since Minoan times. The usual procedure involved the powers of an inspired person, a woman who was called the Pythia, to see into the future to answer questions posed by the questioner. She was generally inspired during 9 months of the year, and only on the 7th day of the month; however, inspiration did not always occur on the prescribed dates. On the other hand, it was also possible for her to be inspired on other than the prescribed dates, and in places other than on the tripod on which she was normally seated while awaiting inspiration. Presumably, other methods of prophecy were employed at times when she was not inspired, such as divination by lot. The whole proceeding was surrounded by mystical practices and illusory beliefs which tended to enhance the magical appeal.

The Pythia was not an expert diviner, but a simple woman chosen, we do not know by what means, from the local area. Her qualifications would have included, at the minimum, a sincere belief in the efficacy of the oracles

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[10] "Divination," 11th ed., Vol. VIII.

[11] The bulk of the following account is from "Oracles," Encyclopaedia Britannica, 1964 ed., Vol. XVI.

and of such occult methods in general. On the appointed day, certain preliminary ceremonies were performed to determine Apollo's willingness to inspire her. If Apollo appeared to be so inclined, she then took her seat on the tripod and waited for inspiration. One of the popular ancient theories regarding the nature of this inspiration was that vapors escaped from a crack in the floor, and in the earth below, and somehow intoxicated her. At any rate, it seems quite likely that a trance of some sort constituted the "inspired" state.[12] While in this state, she spoke -- sometimes intelligibly, sometimes not -- in answer to the questioners. There was not direct communication, however; the official response of the oracle was a written document, prepared by the attending priests and given to the questioner. This arrangement obviously allowed the advice of the oracle to be controlled by the priests. This advice was, furthermore, frequently vague and ambiguous so that the infallibility of the oracle could be maintained regardless of what the future might bring. This oracle was a very important religious center, and enjoyed great prestige and popularity, through the reign of Alexander the Great, after which it declined. Traffic in religious questions continued after this time, but important political questions were no longer referred to it.

Such oracles were numerous in antiquity, but Delphi may be considered as fairly typical. Other primary methods of divination, as well as variations of the procedure described, were used in some cases. These included "incubation," where the inquirer slept in a certain holy area and received

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[12]According to Will Durant, in The life of Greece, the trance was aided by chewing narcotic laurel leaves, which would produce delirium and convulsions. (New York: Simon and Schuster, 1939.) p. 97. Another example of divination by means of a drug-induced trance may be found in Ruth Benedict's account of Zuni Indian culture in her Patterns of culture. (Boston: Houghton Mifflin Company, 1934), p. 81.

an answer in a dream, divination by lot, reading the stars, examining the entrails of sacrificed animals, and observing the flight of birds.

Omens

The list of omens which have been used for divination is almost endless. Some have already been mentioned above, and myriad special words have been coined to describe them, such as the following: (1) cartomancy - divination by the use of playing cards, (2) chiromancy - palmistry, divination by examining the hands, (3) coscinomancy - divination by observing the motion of a balanced or suspended sieve, (4) dactyliomancy - divination by means of finger rings, (5) haruspication - divination by inspecting the entrails of sacrificed animals, (6) hepatoscopy - divination by inspecting the liver of sacrificed animals, (7) oneiromancy - divination by means of dreams, (8) rhabdomancy - divination by use of rods or wands, and (9) scapulimancy - omoplatoscopy, or divination by examining a shoulder blade which usually has been subjected to fire. Another more familiar term is necromancy -- originally the determination of future events by communication with the spirits of the dead; later applied to magic in general.

Crystal-gazing

Surely almost anyone can conjure to himself a picture of a gypsy fortuneteller gazing into a crystal ball; it is one of the cliches of our time. Actually, it is also an example of one of the oldest and most common forms of divination.[13] By concentrating on "crystals, polished basalt,

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[13]G. N. M. Tyrrell, Science and psychical phenomena, (New Hyde Park, New York: University Books, 1961) p. 231.

obsidian mirrors, blood drops, ink, water, livers of animals, and so on, . . ."[14] the "scryer" attempts to induce visions of one sort or another. Lang also states that, "when I examined savage practice, and barbaric and ancient practice, I found that from the Australian black fellows to the Maoris, the Samoyeds, the Iriquois, the Incas, the Aztecs, the Malagasies, the negroes, the Arabs, the Egyptians, the Greeks, and the mediaeval European nations, all were crystal gazers.[15]

Palmistry (Chiromancy)

If the gypsy fortuneteller alluded to previously does not have a crystal ball, she will read your palm. Though somewhat less ancient and less widespread than crystal-gazing, palmistry is very old, and still widely practiced. It is based on the supposition that the lines and irregularities of the palm and fingers are related to one's disposition and character, as well as one's present and future life.[16] "It flourished in ancient Greece and Italy as it still does in India, where to say, 'It is written on the palms of my hands,' is a usual way of expressing a sense of inevitable fate."[17]

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[14]Northcote W. Thomas, Crystal gazing, (New York: Dodge Publishing Co., 1905)p. xxii of Introduction by Andrew Lang.

[15]Ibid., p. xxii.

[16]Modern evidence in support of this idea is offered in "Diagnosis by palm reading," Science news letter, Vol. LXXXIX (January 29, 1966) p. 69. Two Brooklyn pediatricians report that palm markings and fingerprints can often give a "first clue" to heart, brain, kidney, lung, and other disorders in newborn babies that otherwise would not appear until later. The technique is known as "dermatoglyphics."

[17]Edward B. Tylor, Primitive Culture, (Boston: Estes & Lauriat, 1874), Vol. I, p. 125.

Dowsing (Rhabdomancy)

Dowsing, or water-witching, with a divining rod is the only important form of rhabdomancy still practiced — if indeed it is a form of rhabdomancy. In spite of repeated scientific tests which purport to disprove its genuineness, it continues to be a respectable and profitable activity for a large number of people. So it has been for hundreds of years. It has been recently estimated that there are 25,000 people in the United States who are practicing water-witchers.[18]

The dowser, with a forked stick or sometimes other materials such as wire, metal rods, etc., held in his outstretched hands, walks across the property on which a well is desired. He usually gives the appearance of being in a trance. Suddenly the stick will move vigorously, indicating the presence of water immediately below. Dowsers often also predict how deep the water is.

It is interesting to note that of all the various occult arts discussed in this chapter, dowsing is the only one which is a product of European culture.[19]

The book Psychical physics[20] is a lengthy treatment of the subject which attempts to prove that dowsing can be explained by physical means.

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[18]Evon Z. Vogt & Ray Hyman, Water witching, U.S.A., (Chicago: University of Chicago Press, 1959) p. 3.

[19]Ibid., p. 19.

[20]Solco W. Tromp, Psychical physics, (New York: Elsevier Publishing Company, Inc., 1949)

Astrology[21]

Astrology is "the art or science which claims to forecast events on earth by observation of the fixed stars and of the sun, moon, and planets. It originated in Mesopotamia, perhaps in the 3rd millenium B.C." It spread to India, to China, and to Greece. "In its fully developed Greek form astrology was a vast, complex and apparently scientific system which for about 2000 years exerted a dominant influence on the religion, philosophy and science first of pagan and then of Christian Europe." Belief in astrology was held by some of our greatest thinkers in the past -- Hipparchus, Ptolemy, and Kepler among others -- but today is merely a "popular pastime and superstition." Just how popular is sometimes not realized.[22]

Spiritualism[23]

Communication with spirits of the dead has already been mentioned under Omens above, but the importance of this group of beliefs warrants separate treatment. It is another extremely ancient and extremely widespread practice. Such communication is made possible by "mediums" --

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[21]The quotations in the following paragraph are from "Astrology," Encyclopaedia Britannica, 1964 ed. Vol. II.

[22]Bergen Evans, in his irreverent book, The natural history of nonsense, (New York: Alfred A. Knopf, 1947) p. 6, says "Ideas of the Stone Age exist side by side with the latest scientific thought . . . The discoveries of the telescope, the spectroscope, and the interferometer are daily news, but the paper that carries them probably has an astrologer on its staff and would sooner omit the headlines than the horoscope."

[23]The term "spiritism" is sometimes applied to what is here called spiritualism. Actually, spiritualism is a broader term, and applies also to "a metaphysical theory which asserts the reality of a non-material spiritual world, which is a view common to all religions; . . ." according to "Spiritualism," Encyclopaedia Britannica, 1964 ed. Vol. XXI.

generally women -- who have special powers, and often are specially trained for the profession.[24] The communicating is usually done at a "seance" -- a gathering of a relatively small number of people, or sitters. The medium often enters a state of trance, and afterward does not have any conscious memory of his actions or speech while in trance.[25]

In addition to ostensible communication with the world of spirits, sometimes called mental mediumship, there are often a somewhat different type of occurrence -- the phenomena of physical mediumship. These involve physical objects and usually consist of levitation or other movements which cannot be explained by normal means. They also include the playing of musical instruments, raps,[26] and the appearance of ectoplasm.[27]

Another type of mediumistic activity is spirit healing. In such cases the medium acts as an agent, as it were, for a spirit who has some sort of curing power. Cures of ailments regarded as incurable by orthodox medicine have been claimed.

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[24]See e.g., Margaret Mead, Growing up in New Guinea, (New York: William Morrow & Company, 1930) p. 175.

[25]"Spiritualism," Encyclopaedia Britannica, 1964 ed. Vol. XXI.

[26]According to Tylor (I, 144-146), spirit-rapping, along with spirit-writing, is one of the two most popular means of communicating with the spirit world. It consists of knocking noises which are attributed to various spirits - elves, Poltergeists, human spirits - and have sometimes been considered a foreboding of death. It is sometimes alleged that codes have been established between such a spirit and a living person, and extensive communication has been possible. One such case resulted in a novel, published in 1853, which was alleged to have been dictated via a rapping-alphabet by a spirit.

[27]Ectoplasm is "a filmy substance which is generally supposed to be a quasi-material substance derived from the body of the medium which may take the form of a face, hand or complete body. ("Spiritualism," Encyclopaedia Britannica, 1964 ed. Vol. XXI.)

While mediumship was, and is, common among primitive people,[28] it was

> Virtually unknown in modern civilized society until March 1848, when there were odd happenings at the house of a farmer named Fox at a small town in New York state. Previous occupants of the house had been disturbed by unexplained raps at night. After a severe disturbance by raps during Mr. Fox's tenance, his youngest daughter, Kate, successfully challenged the supposed spirit to repeat the number of times she flipped her fingers. Once communication had apparently been established a code was agreed upon by which the raps given could answer questions, and the spirit identified himself as a man who had been murdered in the house.[29]

Kate Fox and her sister became the first mediums of "modern spiritualism," and "the 'spiritualistic' movement spread like an epidemic."[30]

There were at least three serious motives for this interest in spirit-communication: (1) the desire to find the answer to the question of whether survival after death was possible, (2) the desire to communicate with deceased loved ones, and (3) the desire to learn the nature of life-after death. There was also, no doubt, considerable curiosity for curiosity's sake; spiritualism was a fad. It also became the center of considerable controversy. Spiritualism had allied itself with religion as early as 1855;[31] the questions which spiritualism attempted to answer were questions which organized religions considered to be within their realm of interest. But spiritualism seemed to resemble witchcraft in

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[28] E.g. Margaret Mead in Growing up in New Guinea, (New York: William Morrow & Company, 1930) on pp. 45 & 67, describes seances among the Manus of the Admiralty Islands, and A. P. Elkin in Aboriginal men of high degree, (Sidney, Australia: Australasian Publishing Co., 1944), on p. 46, among the Australian aborigines. Malinowski, Magic, science, and religion, p. 111, describes visits to the spirit world among the Trobriand Islanders.

[29] "Spiritualism," Encyclopaedia Britannica, 1964 ed. Vol. XXI.

[30] "Spiritualism," Encyclopaedia Britannica, 11th ed. Vol. XXV.

[31] Ibid.

some ways, and for this and other reasons there was usually opposition from organized religion,[32] Spiritualism has never become a significant factor among organized Christian religions.

There was also, apparently, considerable fraud and trickery among practicing mediums; this was easy in the typical seance setting: a darkened room, with people anxious to believe in supernatural manifestations. It is also true that a medium can make quite a convincing demonstration (particularly to people who are not qualified investigators) by shrewd observation of the sitter, vague or ambiguous statements, and/or following a line of thought suggested unwittingly by the sitter. This is not to suggest that such a demonstration would necessarily be the product of deliberate fraud. On the contrary, it is possible that the medium would not consciously be aware of such tactics. The interaction of the medium, the sitter, and the situation must not be underestimated; the powers of suggestion are truly amazing, and are still far from being fully understood.

In this connection it may be pointed out that there is reliable evidence which shows that if a medicine-man or sorcerer casts a spell on another person, and if both of them <u>believe</u> in the power of the spell, the other person may very well die -- as a direct result of the spell.[33]

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[32]E.g. "A decree of the Holy Office of the Roman Catholic church in 1898 condemned spiritistic practices, although permitting legitimate scientific investigation of mediumistic phenomena." ("Spiritualism," <u>Encyclopaedia Britannica</u>, 1964 ed. Vol. XXI), and "Modern Spiritism is merely Witchcraft revived." according to Montague Summers in <u>History of Witchcraft and Demonology</u> (1926) p. 269, quoted in Geoffrey Parrinder, <u>Witchcraft: European and African</u> (New York: Barnes and Noble, Inc., 1963) p. 119.

[33]Silvano Arieti (ed.) <u>American handbook of psychiatry</u>, (New York: Basic Books, Inc., 1959) Vol. I, p. 558, also
W. B. Cannon, "Voodoo death," <u>American Anthropologist</u>, XLIV (April-June 1942), 169.

Another example is that medical doctors, in experimenting with different medicines and drugs, have found that the person who actually has contact with the subjects must not know what the conditions of the experiment are (which patient is receiving the genuine drug, and which the placebo) because he will unwittingly but invariably influence the results if he does know.[34]

The high level of interest which existed in the latter 19th and early 20th centuries gradually subsided, but is far from having disappeared. The decline of interest in mediumship was partly due to the natural dying of a fad, but was no doubt encouraged by the attacks of magicians such as Houdini and Dunninger,[35] who exposed many fraudulent mediums. A great number of mediums who have been investigated by qualified investigators have been declared fraudulent; but some have not. Others, who resort to fraud if they can without being detected, continue to exhibit unusual powers after the opportunity for fraud has apparently been eliminated.[36] Particularly among those who practice mediumship as a means of livelihood, it can be assumed that there is great temptation to augment unreliable genuine phenomena, if any, with dependable forms of trickery, which can be produced more or less on demand.

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[34]Burton S. Glick and Reuben Margolis, "A study of the influence of experimental design on clinical outcome of drug research," American Journal of psychiatry, CXVIII (June 1962) 1087-1096.

[35]H. Houdini, A magician among the spirits, (New York: Harper, 1924) and J. Dunninger, Inside the medium's cabinet, (New York: David Kemp, 1935) cited by George R. Price, "Science and the supernatural," Science, CXXII August 26, 1955) 367.

[36]An interesting example is Eusapia Palladino, who is generally conceded to have indulged in blatant fraud, but who also convinced several intelligent and supposedly competent scientists that she did nevertheless have genuine mediumistic powers. Her motives for such behavior are discussed by Hereward Carrington in Eusapia Palladino and Her Phenomena, (New York: B. W. Dodge & Co., 1909) pp. 327-329.

It is probably not possible to accurately estimate the number of practicing mediums in this country today (there is no "American Society for Spiritualistic Mediums"), but they do exist. A number of mediums are associated with spiritualist religions.[37] One of the best known of such mediums is Arthur Ford, whose experiences can probably be considered typical.[38] He allegedly communicates with all manner of spirits as easily as we communicate with each other by telephone. (More properly, it should be said that while he is in trance, his voice is used by the spirits to communicate with the sitters at the seance.) Furthermore, many spirits are anxious to communicate with living relatives -- so many that Ford was quite grateful when one spirit established himself as spokesman and coordinator, so to speak -- what is commonly called a "control."

Ford describes any number of occurrences of communication which are remarkable under any hypothesis except the alleged survival after death, or something equally improbable. An interesting example is the case of the Houdini code. Houdini, of course, in life, was one of the best known magicians. According to Ford, the supernatural also had a strong fascination for him. He spent many years, after his mother died, waiting for her to communicate with him. In the meantime he made a very successful career of exposing fradulent mediums. Ford alleges that his

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[37]The National Spiritualist Association of Churches (NSAC) is the oldest and probably the largest of such organizations. According to The summit of spiritual understanding (January 1965), official NSAC publication, they have 141 member churches in 29 states, and include in their "Declaration of Principles," (1) belief in "Infinite Intelligence" [God], (2) belief "that the existence and personal identity of the individual continue after the change called death," (3) belief "that communication with the so-called dead is a fact, . . ." and (4) belief in the Golden Rule. Prominent in these churches are many mediums and healers, a large proportion of whom are women.

[38]Arthur Ford, Nothing so strange, (New York: Harper & Bros., 1958).

mother did indeed attempt to communicate with Houdini, but that Houdini refused to acknowledge her; this was presumably because she did not use a certain code word. Subsequently, before he died, Houdini decided to demonstrate the truth of survival himself if it should happen to him. He arranged a simple experiment as follows: he would send a message to his wife through some medium, using a secret code known only to him and his wife -- a code which they had used years before in an act during his early stage career as a magician.

After his death, Houdini's wife was deluged with literally hundreds of claims by people who thought they had received the message from Houdini. It was not until a number of years later, however, that Arthur Ford did receive the message which was stated by Mrs. Houdini to be genuine. It was, strangely, preceded by the long-awaited message from Houdini's mother, sent now to his wife. She explained that, somehow, she could not get the code word through during his lifetime, but now that he had joined her in the spirit world, she was able to.

The truth of the matter rests entirely on the testimony of Mrs. Houdini, who suffered considerable defamatory publicity and personal abuse as a result of the episode, and who later repudiated her statement that Ford's communication was genuine.[39] But, intriguing as it is, such a case cannot be considered as coming near the requirements of serious investigators.

A more current example of the prominence of the supernatural in our modern, materialistic, and scientific society is that one of the best motion pictures of 1964, "Seance on a Wet Afternoon"[40] has a practicing medium as its central character.

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[39]Susy Smith, ESP (New York: Pyramid Books, 1962) p. 158.

[40]Allied Film Makers, 1964. Kim Stanley, the actress who played the central role, has been nominated for the Academy Award for best actress.

Shamanism

Frequently a number of different supernatural beliefs agglomerate and become attached to certain people, or classes of people. Thus we have the traditions of shamanism and witchcraft, for example.

A shaman is a particular sort of medicine-man and priest found among a number of primitive cultures. Principally, these are the Siberian and Ural-Altaic peoples, the peoples of southeast Asia and Oceania, and the Eskimos and other North American Indians. A shaman can cure sickness, escort the souls of the dead to the other world, and perform many other acts requiring supernatural powers. "He is able to do all this by virtue of his techniques of ecstasy; i.e., by his power to leave his body at will."[41] He is an important and highly influential member of his community. Though his supernatural powers are sometimes supplemented by trickery,[42] he enters the profession by means of an ordeal (typically recovering from a long and serious illness) that convinces him and his fellows that he enjoys direct communion with the gods. There does not appear to be complete agreement regarding the exact definition of shamanism, but it is nevertheless true that there is widespread belief among primitive peoples that certain individuals are much more highly endowed with supernatural powers than the average. According to Ruth Benedict, "Shamanism

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[41]"Shamanism," Encyclopaedia Britannica, 1964 ed. Vol. XX.

[42]Benedict, 195. It seems reasonable to assume that the development and use of much esoteric knowledge would have been for the purpose of demonstrating visible, immediately apparent, supernatural powers. Bits of magician's trickery, fire-walking (Benedict, 65), floating through the air (Elkin, 5) -- these are the sort of feats that shamans, and others similar to them, used to help convince themselves and others of their genuinely supernatural abilities.

is one of the most general human institutions."[43] Such supernaturally enriched individuals are found among the Zulus of Africa,[44] the Australian aborigines,[45] and numerous others.

Witchcraft

Whereas shamans are good, and are respected and necessary members of their communities, there are sometimes individuals believed to be in communion with the supernatural who are not good, but evil. Such people are generally called witches. We should add immediately that we are here referring to "black" witches, who practice "black" magic, as opposed to "white" witches who practice "white," or benevolent, magic.

Regarding the origins of belief in witchcraft, Tylor states

> Witchcraft is part and parcel of savage life. There are rude races of Australia and South America whose intense belief in it has led them to declare that if men were never bewitched, and never killed by violence, they would not die at all. . . . In West Africa, it has been boldly asserted that the belief in witchcraft costs more lives than the slave trade ever did.[46]

Although there is apparently a tremendous amount of literature on the subject, or perhaps because of it, the term witchcraft is so broad as to have little certain meaning.[47] A useful and enlightening distinction has been made by Dr. Margaret Murray between what she calls "Operative Witchcraft" and "Ritual Witchcraft." Operative Witchcraft consists of "all charms and spells, whether intended for good or for evil, for killing or for curing. Such spells and charms are common to every nation and

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[43] Ibid., p. 87.

[44] Ibid., p. 249.

[45] A. P. Elkin, Aboriginal Men of High Degree, (Australasian Publishing Co., Sidney: 1944) p. 5.

[46] Tylor, Ibid., I, 138.

[47] It is perhaps significant in this connection that Malinowski makes little, if any, use of the term.

country, and are practised by the priests and people of every religion." The term Ritual Witchcraft she applies to the "Dianic Cult," which "embraces the religious beliefs and ritual of the people known in late medieval times as 'witches'."[48] According to this terminology, then, the lucky rabbit's foot, the St. Christopher's medal, the horseshoe hung over a door,[49] and blessing with holy water, are but a few instances of operative witchcraft with which we are all familiar in our daily lives. On the other hand, it also makes more intelligible the claims that present day witches in England are quietly carrying on the traditions of a religion which antedates Christianity, and that the recent resurgence of black magic is the work of "hooligans" and "black witches."[50]

These definitions also leave out a vast amount of magic and superstition which are popularly attributed to witchcraft. This type of magic and superstition is exemplified by the powers demonstrated by the leading character in 1964's runaway favorite television show (American Broadcasting Company's "Bewitched."). She can turn people into animals and back again, prepare a meal or wash dishes with a mere snap of a finger, and restore broken vases or open windows with a twitch of her nose.

It seems likely that, in the past, the term witchcraft was loosely applied to many unusual occurrences, and that witches were thought to be directly responsible for all otherwise unaccountable happenings -- all except religious miracles, of course. This view seems to be substantiated

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[48]Margaret A. Murray, The witch-cult in western Europe, (Oxford: 1921), pp. 11 f., quoted in Parrinder, p. 12.

[49]According to Tylor (I, 140), the virtue of horseshoes is in the fact that they are made of iron, which was considered highly effective in driving away elves, fairies, and witches.

[50]See Albuquerque Journal, "Is British witchcraft real?" July 6, 1964, and "Real witches at work," Life, November 13, 1964, p. 55 and "Scorcery," Time, December 27, 1963, p. 53.

by Richard Bovet, who describes Part II of his book as being concerned with "Apparitions, Spirits, and Witches; . . ." and "Giving an Account of divers most Remarkable Witchcrafts. Also a further Account of Daemons, and Spectres, . . ."[51] It consists, in fact, of a collection of fifteen "Relations" or accounts of apparitions, communication with spirits of the dead, poltergeists, magic (killing by sticking pins into a wax image) and also probably hallucinations and suggestion.

There is little need to try to further unravel the complex history of witchcraft; this would be a project in itself. There are few fine distinctions commonly made between the definitions of witchcraft, sorcery, magic, conjuring, etc. This was, no doubt, particularly true during the amazing witch-hunts of the 15th through 18th centuries in Europe and North America.[52] Estimates of the number of people executed as witches during this period generally run from the hundreds of thousands,[53] into the millions.[54] One of the most popular ways of doing away with witches was by burning, although, according to Tylor,

> One of the best known of English witch ordeals is the trial by "fleeting" or swimming. Bound hand and foot, the accused was flung into deep water, to sink if innocent and swim if guilty, and in the latter case, . . . to be hanged only for not being drowned.[55]

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[51]Richard Bovet, Pandaemonium, 1648, reprinted, with introduction and notes by Montague Summers, (Aldington, Kent: The Hand and Flower Press, 1951), pp. 1 and 98.

[52]"Witchcraft," Encyclopaedia Britannica, 11th ed. Vol. XXVIII. These witch hunts lasted longer in other places -- e.g., "In South America and Mexico witch-burning seems to have lasted till well on into the second half of the 19th century, . . ." Witch hunting continues to the present day in much of Africa (Parrinder, p. 9).

[53]Parrinder, p. 35.

[54]"Witchcraft," Encyclopaedia Britannica, 11th ed. Vol. XXVIII.

[55]Tylor, I, 140.

The theory behind this test, which was a survival of an ancient practice, was that the water would refuse to accept one who had renounced the water of his baptism. The complete, all-pervading belief in things supernatural, as well as the highly emotional attitude toward them, can be seen clearly here. Another example which shows this is a simple but illuminating passage from Bovet's book

> . . . Crows, Ravens, and Screech Owls, which generelly resort to the Windows, or tops of Houses, where people are a dying; and most usually the resort of them to Houses, and places, is attended with an unanswerable Fatality. Nor is it unusual for people to have presages of their approach into the other World, . . .[56]

The point is that a broad belief in supernatural forces and beings was the accepted belief, as it had been as far back as we can trace man's history.

There were probably a number of reasons for the mass hysteria of witch-hunting. The plage of Black Death, which is estimated to have killed one third of the population of Europe in its first 3 years, recurred almost every 10 years.[57] It need hardly be added that the survivors were, in general, uneasy. There were also reform movements within the Church, which needed to be branded as heresies and eliminated. These, and, no doubt, other factors seem to have combined into the panic that followed. Whoever the chosen scapegoats, or heretics, were, they were accused of being witches. It was not so much association with the supernatural or the psychic that marked the witch, as this in combination with association with the devil. One of the favorite practices of witches, which was believed by one and all, was the kidnapping of children, particularly

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[56] Tylor, p. 131.

[57] Parrinder, p. 21.

unbaptised children, for use in their rites, which included cannibalism along with worship of the devil.[58] Antagonism toward witches was thus a highly subjective matter, and emotionally loaded.

Fear, then, appears to be the primary motivating factor behind witch-hunts -- fear compounded of a fear of supernatural powers and a fear of people who are somehow in league with these supernatural powers for evil purposes.

Thus we see that belief in witchcraft is another extremely ancient belief, but one which is still very much alive in the 20th century world. Not only the people of "backward" or"primitive" countries, but technically unsophisticated people everywhere seem to be susceptible to it.[59]

Poltergeists

There is another term which should be discussed here because it appears in almost any general discussion of the supernatural. Poltergeist means, literally, noisy ghost or spirit. It is a general term, and is sometimes applied to the supernatural forces or beings that are assumed to be responsible for the various phenomena of physical mediumship. However, their activities are not limited to mediumistic seances, but can

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[58]Parrinder, pp. 18-31.

[59]According to Evans (p. 13), "Millions -- probably the majority of mankind -- still believe in witchcraft. Between 1926 and 1936 the New York Times carried stories of more than 50 cases of witchcraft. Fifteen of these were in the United States, distributed among New York, New Jersey, Pennsylvania, New Mexico, Minnesota, Wisconsin, and Massachusetts. They came into the news not because witchcraft in itself constituted news, but because the supposed witch was injured or killed by those who thought themselves victimized by his or her art."

occur anywhere, at any time. Poltergeists in some cases supplant belief in witchcraft; in some cases are complementary to it.[60]

Summary

We see man's belief in the supernatural as something which has been an important part of his cultural tradition as far back as we can trace his culture. It persists, undiminished, among primitive and unsophisticated peoples of the world, and it persists in more subtle forms even in our modern, scientific culture.[61] While it is true that every mention of supernatural things (in books, movies, television, etc.) does not necessarily mean that anybody takes these ideas seriously, it would seem to be true that the acceptance of these things in our everyday lives must indicate some substantial degree of receptivity. It may seem appropriate to ask why man traditionally believes in the supernatural. Let us add that it is equally pertinent to ask why there is such great pressure, in our society, not to believe. The answers to these questions unfortunately are not within the scope of this thesis.

Let us conclude here with the statement that there are, bound up and almost inextricably intertwined with all of the above-mentioned beliefs about things supernatural, the various paranormal phenomena with which psychical research concerns itself. It is likely that these

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[60] According to Sacheverell Sitwell, Poltergeists, (New York: University Books, 1959) p. 57, "The boundaries between ghost and witch, and Poltergeist are ever in dispute. No history of the one subject can but take into account the other two."

[61] The First National Bank Building in Albuquerque, New Mexico (completed by the Del Webb Corporation in 1962) is 17 stories high, but does not have a floor numbered 13. As Evans (p. 5) says, "Hotels boast of express elevators and a telephone in every room, but omit 13 from all floor and room numbers lest their guests be ill at ease.

truly paranormal phenomena, if any, constitute at ~~least~~ most a small core or thread concealed, disguised, and all but totally obscured by superstition, delusion, trickery, inaccurate observation, hypnosis, suggestion, and perhaps other as yet undiscovered factors. Separating the truth, if any, from all of these is the job which psychical research undertakes.

CHAPTER II

HISTORY AND PRESENT STATUS OF PSYCHICAL RESEARCH

A history of psychical research properly begins with the founding of the Society for Psychical Research in London in 1882. Perhaps the best short description of this event is by the psychologist, Gardner Murphy.

> The primary factor launching modern psychical research was the existence at Cambridge University, England, of a group of scholars who felt that it was "nothing less than a scandal in this enlightened age" (Henry Sidgwick's words) that the serious reports of serious people regarding such experiences [". . . telepathy, prevision, apparitions of the dying and deceased, the movement of objects in a manner unknown to the physical sciences . . ."] should have received no scientific investigation. The physicist, William Barrett, the clergyman, W. Stainton Moses, the classical scholar, F. W. H. Myers, succeeded in launching in London, largely with help of this group of Cambridge scholars, a strong and effective research group which within a few years numbered in its ranks many of the outstanding British intellectuals, with a definite program of investigation into problems varying as widely as experimental telepathy, a census of hallucinations, and the observation of spiritist mediums in or out of trance. William James played a major role in launching a similar organization in the United States. Such societies have until recently been the major instruments in the investigation of paranormal phenomena.[1]

It is described as follows by Robert H. Thouless, a prominent British psychical research worker.

> In 1882 the Society for Psychical Research was founded in England. Its first task was to study objectively the evidence for the various paranormal phenomena, in order to discover whether they were real or merely results of fraud or errors of observation. Its second task was the scientific investigation of any paranormal phenomena that were proved to be real, in order that their nature might be more

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[1] Gardner Murphy, The challenge of psychical research, (New York: Harper & Bros., 1961), p. 2.

> fully understood and that they might take their place with the accepted data of science.[2]

This is not to suggest, of course, that systematic investigation of such alleged occurrences originated at this time and place. But it was an extremely important landmark because it was the beginning of an era of greater "respectability" for such investigations. Men and women of unquestioned intellect and integrity were willing to treat the matter seriously and expressed a willingness to believe, if the evidence appeared favorable. The American Society for Psychical Research was founded in 1885 and similar societies were founded in most European countries. The British society has published its Proceedings and Journal more or less continuously since its founding, as has the American Society.

The work of some of these earliest pioneers is still among the most important in the field, according to Gardner Murphy

> I must emphasize the extraordinary pioneer leaders of the Society for Psychical Research in London, the reading of whose works is absolutely fundamental for serious knowledge of psychical research, especially Frederick W. H. Myers and Eleanor Mildred Sidgwick.[3]

Among these early pioneers, in addition to Myers and Mrs. Sidgwick, were Henry Sidgwick, Sir William Barrett, Edmund Gurney, Sir Oliver Lodge, and Frank Podmore.

Some of their better known works included Phantasms of the living,[4] Studies in psychical research,[5] and Human personality, and the possibility of its survival of death.[6]

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[2]"Psychical Research," Encyclopaedia Britannica, 1964 ed. Vol. XVIII.

[3]Murphy, p. xvi.

[4]Edmund Gurney, F. W. H. Myers, Frank Podmore; 2 volumes, 1886.

[5]Frank Podmore, 1897.

[6]F. W. H. Myers, 1920.

Much of the early work of both societies was devoted to qualitative investigations, particularly in connection with spiritist mediums. As mentioned in the previous chapter, this was a time of great interest in spiritism. Some of the best known mediums of this time were Mrs. Eileen J. Garrett, Mrs. Gladys Osborne Leonard, Mrs. Leonore Piper, Eusapia Palladino, and D. D. Home.

It might be dangerous to hypothesize a simple cause and effect relationship between the decreasing enthusiasm for spiritist mediums and the greater attention to quantitative experimentation; but the emphasis did change. The first genuinely quantitative experimentation carried on at an American University, however, seems to have resulted in a setback to the pro-psychic faction, rather than progress.[7]

John E. Coover

In 1912, Stanford University received an endowment of 10,000 Pounds for the investigation of spiritualism and psychical research. Apparently there was some reluctance about the matter on the part of the administration, and particularly the Department of Psychology, because

> In the first place the problems to be investigated were intimately connected with religious beliefs and opinions of many devout persons, . . . outside the methods of scientific investigation. . . . In the next place the situation was further complicated in the country at large and especially in California by the presence among the devout Spiritualists of many false teachers who sought to exploit spiritualistic procedure for pecuniary profit with the natural result of injuring and discrediting the cause of Spiritualism
> . . . . . .
> The question then arose of whether in view of Professor Sidgwick's authoritative utterance to the effect that Psychical Research so far as he could tell, had made no discernable progress

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[7] J. B. Rhine, New frontiers of the mind, (New York: Farrar & Rinehart, 1937), p. 33.

> in the last twenty years, the field was not a slough of despond through which no scientific progress was possible.[8]

But, at length, the endowment was accepted, and Dr. Coover, a psychologist, was selected to head the project. Coover remained the Fellow in Psychical Research for many years -- until about 1936.

He performed telepathy experiments using lotto-blocks and regular playing cards which included approximately 12,000 guesses. He also had ten subjects make somewhat over 2,000 guesses as to whether or not they were being stared at from behind. These tests were somewhat crude compared to later experiments; for example, there was no attempt to separate the effects of telepathy, clairvoyance, and precognition. Considering the state-of-the-art at that time, however, they appear to be perfectly satisfactory. He concluded that the results of all these tests were negative. He then conducted a somewhat longer series of experiments on "subliminal impression." Most of these involved use of a tachistoscope to flash an image for a length of time which was too short to give any conscious impression, but it was felt, might enable the subject to score better than chance on later tests. Also included were tests of the subliminal perception of whispering.

Coover's interest in subliminal perception was prompted by the fact that this was one of the most popular "explanations" for so-called psychic phenomena at that time. And there was enough evidence for this explanation to warrant serious consideration. It seemed that what we might call "subliminal stimulation" was fairly common; therefore, why

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[8]John E. Coover, Experiments in psychical research at Leland Stanford Junior University. (Stanford University, California: Stanford University Press, 1917), p. xix-xx of Introduction by Frank Angell.

not also subliminal perception? One of the most interesting cases of such "subliminal stimulation" was that of Clever Hans, the intelligent horse.[9] In Coover's words

> Pfungst found that this horse, popularly credited with an education equivalent to that of a seventh- or eighth-grade boy, could paw the answers to problems in higher mathematics, . . . provided only his fine old master von Osten knew the answer and was in his field of vision.[10]

According to Vogt and Hyman's account,[11] it was discovered that sometimes Hans could perform even when his master was not present. Investigating committees were completely baffled. Finally, Pfungst, a psychologist, was given the job of conducting a "serious and incisive investigation." Pfungst soon confirmed the horse's ability to perform his marvelous feats even in his master's absence. He clearly was not responding to any surreptitious commands from his trainer, nor to any involuntary cues of which Pfungst was aware. This would, no doubt, have convinced many investigators that the horse was not responding to any normal sensory stimuli,[12] but Pfungst continued his investigation. He eventually discovered that the horse could answer almost any question (by tapping with his hoof, shaking his head, or pointing to letters or objects) provided the questioner knew the answer. After much more experimentation and observation of other questioners, Pfungst discovered that Hans reacted to almost imperceptible involuntary movements of which the questioner was completely unaware.

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[9]Oskar Pfungst, Clever Hans (New York: Holt, 1911). Cited in Coover, p. 171.

[10]Coover, p. 171.

[11]Evon Z. Vogt and Ray Hyman, Water witching, U.S.A. (Chicago: University of Chicago Press, 1959), p. 95.

[12]See below, p. 54, J. B. Rhine's investigation of Lady, the telepathic horse.

Coover also cites a case of a young girl, Beulah Miller, who was investigated by Professor H. Munsterberg.[13] Her remarkable feats of mind-reading failed completely when either (1) she was blindfolded, or (2) neither her sister nor mother were in the room. With these cases as background, he cites considerable earlier investigation of subliminal perception.[14]

Regarding his own experiments, Coover gingerly concluded there was "some experimental evidence" that unconscious perceptions could influence conscious judgments, and that "it must be regarded as more than probable that this sort of perception has played a role in the evidence for telepathy gathered from thought-transference experimentation and from the seance-room." Thus, it seemed that not only could cues be unconsciously given, but they could also be unconsciously received. If it were true, this would, of course, have serious implications with respect to the methods by which psychical research was conducted.

As another example of subliminal influences on judgment, Coover discusses "mental habit."[15] He then discusses the merits of probability theory and statistics in interpreting results of experiments. In Part IV he discusses his experiments (mostly in hearing) and other evidence which support the phenomenon, well known to psychologists, that

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[13] Psychology and social sanity (New York: Doubleday, 1914), pp. 162-164. Cited in Coover, p. 172.

[14] Coover, pp. 172-189.

[15] Ibid., pp. 230-311. One of his many examples of how this phenomenon operates is shown on pages 232 and 233. These are graphs of the population of the United States by ages, from the 1900 and 1910 censuses. In each there are pronounced concentrations of population at ages which are multiples of 10 years and, to a lesser degree, 5 years. Obviously these concentrations do not exist in the population, but are the spurious effect of some sort of reporting bias.

> Whilst part of what we perceive comes through our senses from the object before us, another part (and it may be the larger part) always comes out of our own mind. . . .
>
> In the ordinary hearing of speech half the words we seem to hear are supplied out of our own head.[16]

In other words, one often hears what one wants, or expects, to hear rather than what is actually said.

In an appendix titled "Grounds for scientific caution in the acceptance of the 'proof' of thought transference," Coover reviews the earlier experiments with the Creery sisters,[17] their later detection in using a secret code, and the admission by at least one of the sisters that they had used similar trickery in some of the earlier experiments; confession of complete fraud by Douglas Blackburn of the Smith-Blackburn experiments,[18] and the "n-ray delusion."[19] Coover concludes

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[16]William James, The principles of psychology (New York, c. 1890), II, pp. 103 and 97 respectively. Quoted in Coover, p. 405.

[17]Investigations of thought-transference among four young sisters and their female servant, conducted prior to 1882 by Professor Barrett, Professor and Mrs. Sidgwick, Professor Balfour Stewart, Professor Alfred Hopkinson, Mr. & Mrs. F. W. H. Myers, and Edmund Gurney. A second series was conducted by Gurney and Mr. Myers in 1882, using greater precautions. (Apparently this was the first important series of experiments conducted by the Society for Psychical Research.) According to Gurney, Myers, and Podmore, in Phantasms of the living, (I, 29, quoted in Coover, 463.) these experiments were crucial in convincing the authors of "the possibility of genuine thought-transference . . ."

[18]Coover, pp. 477-493. This was apparently the second important series of experiments conducted by a sepcial committee of the Society for Psychical Research. Smith later was for many years intimately connected with the Society, and was the hypnotist and agent "in all of the later principal series of officially conducted experiments in thought-transference which the Society regards as the most successful . . ." (Coover, p. 491).

[19]Coover, pp. 495-499, Vogt & Hyman, pp. 50-53. In 1904, an eminent French physicist discovered what became known as n-rays. The discovery was confirmed by other French scientists, and there followed a flurry of investigation to further describe the various effects caused by these rays. It seems, however, that there were, from the beginning, skeptics - other scientists who were unable to reproduce the experiments. It soon appeared, moreover, that n-rays could not be found outside of France, and not always

> The best of evidence, that which won over the agnostic members of the Committee of the Society for Psychical Research to the belief in thought-transference to a normal percipient, and which occupied first place in the Society's authoritative Proceedings, has suffered a fatal decline.[20]

While maintaining that the Society had justified its existence, he roundly criticises it for its ". . . failure to realize the difficulty of thought-transference investigation, . . . its fatal overestimation of the capacity of astute observers to cope with collusionists, . . ." and its adoption of the "fagot theory."[21] Finally, ". . . it is certainly true that the Society, on account of its fiascoes and its persistent lack of psychological vision, is immeasurably farther from its goal today than it was in 1886, in its efforts to produce proof of thought transference."[22]

He recommended (1) that the Society persuade experimental psychologists to "take up the investigation in laboratories all over the world," and (2) cooperation with a psychological laboratory.

In another appendix, titled "Catalogue of literature in the library of Leland Stanford Junior University relating directly or indirectly to psychical research," he lists over 2000 books and approximately 250 proceedings of societies and periodicals. It should be added that the list is not padded by the inclusion of a disproportionate number of titles which are only indirectly related.

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there. It was ultimately demonstrated, to the satisfaction of the scientific community at large, that the entire matter had been an illusion, - "the results of faulty human observation combined with suggestion, . . ." according to Vogt and Hyman.

[20]Coover, p. 499.

[21]See Page 50 below for a discussion of the fagot theory.

[22]Coover, p. 502.

Coover has been praised by nonbelievers,[23] and criticised by believers in psychical research.[24] Actually, his book is a detailed and thorough analysis of the problems and questions raised by psychical research. He reports research investigating the phenomena themselves, as well as the competing hypotheses; he seems to use the latest available statistics; and he offers conclusions and recommendations which certainly appear valid. Furthermore, in addition to presenting his conclusions, he also includes his data and enough details so the reader may perform his own evaluation. This evidence of scientific good faith is utterly lacking in much of the literature purporting to prove paranormal phenomena.

The Fagot Theory

In the discussion above of Coover's work it was mentioned that he severely criticised the early researchers of the Society for Psychical Research for adopting the fagot theory. He quotes the following words in definition of this theory.

> The proof must depend on the number of persons, reputed honest and intelligent, to whom dishonesty or imbecility must be attributed if the conclusions are wrong, i.e., it must be a cumulative proof . . . enough sticks must be collected and tied together to make a fagot of a strength which shall defy suspicion.[25]

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[23]Martin Gardner, In the name of science (New York: G. P. Putnam's Sons, 1952) p. 308.

Chester E. Kellogg, "New evidence (?) for 'Extra-sensory perception,'" The Scientific Monthly, XLV, (October, 1937), p. 331.

[24]J. B. Rhine, Extra-sensory perception, (Boston: Bruce Humphries, 1964 - originally published 1934), p. 26-27.

S. G. Soal, "On 'Science and the supernatural,'" Science, CXXIII, (January 6, 1956), p. 9.

[25]The words are those of Myers, Gurney, and Podmore in Phantasms of the living, pp. 19-20, quoted in Coover, p. 494. G. N. M. Tyrell in Apparitions (London: Gerald Duckworth & Co. Ltd., 1943) p. 29, attributes the dilemma over the "faggot" theory to dividing evidence "into two false classes, or at least into two classes which have no relevance to practical

Coover's objection seems to be well taken, but it is still a crucial point at issue. The fagot theory cannot ever prove the genuineness of psychic phenomena nor anything else. If Coover's selected quotation is a fair representation of Myers, Gurney, and Podmore's words, William James gives a better explanation of the value of this theory. It should be noted first that elsewhere James states that he does not believe that evidence strong enough to convince the skeptics will be found very soon, although he himself does believe in paranormal cognition and is inclined to believe in survival.[26] Therefore he no doubt considers the fagot theory to be an answer in response to the logically subsequent question, "What other supporting arguments can we find in the meantime?"

> And most of the would-be critics of the Proceedings [of the Society for Psychical Research] have been contended to oppose to the phenomena recorded the simple presumption that in some way or other the reports must be fallacious —for so far as the order of nature has been subjected to really scientific scrutiny, it always has been proved to run the other way. But the oftener one is forced to reject an alleged sort of fact by the use of this mere presumption, 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 rumors 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 Gurney called a fagot and not a chain—that is, if they were independent of one another, and came from different quarters. Now, the evidence for telepathy, weak and strong, taken just as it comes, forms a fagot and not a chain. No one item cites the content of another

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experience, namely the perfect and the imperfect." He says that quality of evidence is a matter of degree, and a strong faggot cannot be made from rotten sticks. But if strong sticks are used "they will be to some extent stronger collectively than singly."

[26] See the discussion of James in the Introduction above.

> 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 anyone's intellect that has not come in through ordinary experiences of sense.[27]

James then goes on to say that it is a miserable state of affairs for a question of truth "to be confined to mere presumption and counter-presumption" and admits that the foregoing was an ad hominem argument.

So the fagot theory is, at best, merely a means for believers to reassure themselves that their belief is rational, and few have the insight of James into the true nature of the argument. But psychical researchers, convinced that the disbelief of their critics is based on irrational prejudice, went off on their own course of investigating the nature and necessary conditions for reliable operation of psychic powers, while the critics continued to deny that there was anything to be investigated. This situation still prevails.[28] And psychical researchers are probably right in concluding that this is the only practical course open to them because convincing proof, if any, may be many years in the future.

J. B. Rhine

Coover had recommended experimental psychologists and psychological laboratories. What psychical research got was not exactly an experimental psychologist, and not exactly a psychological laboratory, but Dr. Joseph Banks Rhine, his wife, Dr. Louisa E. Rhine, and the Parapsychology Laboratory at Duke University in Durham, North Carolina.

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[27] William James, The will to believe and other essays, 1897. Reprinted in Murphy and Ballou, p. 40.

[28] Gardner Murphy, "Trends in the study of extrasensory perception," American Psychologist, XIII (February 1958) pp. 69-76. (Subsequently referred to as "Trends..."

If there is one name, particularly in this country, which is universally associated with psychical research (more popularly known by his term, extra-sensory perception, or ESP) it is that of J. B. Rhine. Critics and friends alike agree that he is probably the most important single individual connected with such research.[29] Rhine and his wife received doctorates in biology (botany) at the University of Chicago. According to Martin Gardner, it was a lecture on spiritualism by Sir Arthur Conan Doyle which guided them into psychical research. "'If there was a measure of truth in what he [Doyle] believed,' Rhine has written, '. . . it would be of transcendental importance. This mere possibility was the most exhilarating thought I had had for years.'"[30]

At any rate, the Rhines soon appeared on the doorstep of Professor William McDougall, a former president of the British Society for Psychical Research, who was then at Harvard University. They spent a year at Harvard, studying psychology and philosophy, and then followed McDougall to Duke University. There, in 1927, McDougall became head of the psychology department, and Rhine became an associate professor of psychology. Rhine immediately began experimenting in extra-sensory perception, and has continued to the present day. In 1940, he became head of the Parapsychology Laboratory, which position he still holds. Since its founding in 1937, he has been an editor of the Laboratory's Journal of Parapsychology, which is "probably the most important journal in the history of scientific psychic

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[29]According to Gardner (299), Rhine "has done more than any one man in history to give scientific respectability to the investigation of psychic forces."

Murphy, Challenge of psychic research, (p. 5) says, "Rhine's influence has not only transformed the experimental approach used in most psychological laboratories which have investigated such problems; it has made a considerable dent upon thoughtful scientists."

[30]Gardner, p. 300.

investigation."[31] This journal is now affiliated with the Parapsychology Association and published by the Duke University Press.[32]

Few people have generated more controversy in one lifetime. Among his very first experiments was the investigation of an allegedly telepathic horse which performed feats very similar to those of Clever Hans.[33] Rhine referenced Pfungst's book in his articles, and appears to be familiar with Pfungst's conclusion (as reported by Coover) that Hans was responding to unintentional cues. One must assume, therefore, that he read it, but he does not seem to have taken it seriously. Although he was unable to get any satisfactory results with the horse's trainer completely out of the area, and had even established that the horse could perform in response to deliberate cues from other people, including himself, he concluded that the horse was indeed telepathic.

After Lady lost her powers, Rhine tried to find other telepathic animals, but having no success, turned to humans in 1930.[34] In 1934, Rhine's first book, Extra-sensory perception, appeared, outlining approximately 3 years work in ESP research with human subjects. Since this book was something of a landmark, it is appropriate to discuss it in some detail.

In the Foreword, Professor William McDougall says

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[31]Gardner, p. 301.

[32]Rhine, ESP, xliii.

[33]J. B. Rhine and L. E. Rhine, "An investigation of a 'mind-reading' horse," Journal of abnormal and social psychology, XXIII (January-March 1929), 449-466, and Ibid., "Second report on Lady, the mind-reading horse," XXIV (October-December 1929), 287-292.

[34]Rhine, ESP, p. 46.

> I found J. B. Rhine to be a ruthless seeker after truth, almost, I may say, a fanatical devotee of science, a radical believer in the adequacy of its methods, and in their unlimited possibilities. . . .
>
> He has devoted much thought and study to the history of science and to the problem of scientific method. And he manifests in every relation the scrupulous honesty and regard for truth that befit such a student.[35]

In the Introduction, Dr. Walter F. Prince, who was connected with the Boston Society for Psychic Research, and was a past president of the British Society for Psychical Research, says:

> I early learned that he was keen to discover the indicia of deception within the field of psychic research, and at the same time, while open-minded, only to be convinced of any of its claims by the slow process of evidence and sound reasoning. . . . Many admirable series of experiments for extra-sensory perception have been made by men of science and other men of university education and high mental endowment, . . . but in none . . . of the particulars stated above can any of them compare with the great task accomplished at Duke University.[36]

Glowing praise, to say the least. In the preface, Rhine himself says, regarding the last 2 of the 3 years of work reported in the book:

> These two years have been spent in making sure "ten times over," in testing and retesting at every reasonable point of doubt, and in going on beyond the point of proof into the discovery of natural relationships or laws that will make the capacity for this mode of perception more understandable and acceptable to those who must understand somewhat before they can believe.[37]

The skeptic will probably already have become suspicious of anything heralded by such fanfare. This suspicion will be further aroused by Rhine's stated motive

> The work reported here is motivated largely by what may be termed an interest in its philosophical bearing - by what it can teach us of the place of human personality in nature and what the

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[35] Ibid., xv.

[36] Ibid., xix.

[37] Ibid., xxvii.

> natural capacities are that determine that place. . . . The need felt for more definite knowledge of our place in nature is no mere academic one. Rather it seems to me the great fundamental question lying so tragically unrecognized behind our declining religious system, our floundering ethical orders and our unguided social philosophies. This work is, then, a step, a modest advance, in the exploration of the unrecognised boundaries and reaches of the human personality, with a deep consciousness of what such steps might lead to in the way of a larger factual scheme for a better living philosophy.[38]

In the mind of our backpedaling skeptic, such words might seem appropriate coming from some sort of "philosopher," perhaps, but hardly from a scientist. Furthermore, these paragraphs have a distinct flavor of spiritualism, to the skeptic. In short, Rhine gives the appearance of one who knows what he is trying to prove, and what he expects to find in order to prove it; such an attitude is not normally considered compatible with a scientific frame of mind.

What, then, of the actual research? One would hope that Rhine might have taken into careful consideration the problems and criticisms so ably pointed out by Coover, for example. We are disappointed, however, for although he is familiar enough with Coover's book to criticise his conclusions,[39] Rhine seems to have missed the main points completely.

We get down to specifics in Chapter V, which discusses the first of several important subjects, A. J. Linzmayer. We need not discuss these experiments in detail; a short quotation will suffice

> On the occasion in which Linzmayer got his largest series of consecutive successes, 15, he also got 21 correct in the whole 25 trials. He was seated in my car with the engine going. We had been driving for the purpose of resting him. He was leaning back over the seat so that his eyes saw only the roof of the

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[38] Ibid., xxviii.

[39] Ibid., 26-27.

> car - no mirrors, no shiny surfaces in line or at the angle necessary for him to see. . . . The easy informality of this situation may have made the brilliant run of 15 unbroken hits possible. But there was no lack of caution, nevertheless.[40]

Chapter VI discusses the tests involving Charles E. Stuart. Rhine says

> His own experiments were, I believe, very carefully conducted. He always impresses me as being very cautious and responsible. I think no one of our Departmental staff would have the least hesitation in taking his report of his own unwitnessed experiments in ESP . . . . . I have witnessed . . . 140 trials. . . . All the rest of his work is unwitnessed but, since he does not on the whole rise beyond the level of these witnessed results and since he is the responsible man he is, I feel that we may unhesitatingly offer his work to the public as fully worthy of consideration.[41]

Out of a total of almost 10,000 trials reported, only 140 were witnessed by another person!

Hubert E. Pearce, Jr. is the third subject, and is discussed in the next chapter.[42] At first glance, this series promises to be more impressive.

> All of Pearce's work has been carefully witnessed; but I wish to state in addition that I have fullest confidence in his honesty. . . . . . his totals up to April 1, 1933, were 11,250 trials with an average of 8.9 hits per 25. Such results as this are positively

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[40] Ibid., p. 82-83.

[41] Ibid., p. 91-92.

[42] Since this section will be the only place where Rhine and his work will be discussed in detail, it is appropriate to mention the Pearce-Pratt distance series because it has come to be considered highly significant by proponents of ESP. This series was still under way when Extra-sensory perception was finished, and is described briefly on the last page of the chapter about Pearce. Pratt, the agent, and Pearce, the percipient making calls by pure clairvoyance, were 100 yards apart in separate buildings. Pearce scored better than usual under these conditions: An average of 9.9 hits per 25 as opposed to an average of 7 in a similar series with Pearce only a few feet from the cards. A later series, at 250 yards, gave similar results.

> breathtaking, when one calculates their mathematical significance. These alone sky-rocket the value of X up to above 60, with odds against chance now enormous beyond our capacity to appreciate.[43]

However, in the description of the working conditions, it turns out that Pearce was allowed to shuffle the cards ("He felt it gave more real 'contact.'"). Furthermore, during the checking procedure, Pearce was allowed to handle the cards again. But Rhine assures the reader

> There is no legerdemain by which an alert observer can be repeatedly deceived at this simple task in his own laboratory. (And, of course, we are not dealing even with amateur magicians.)[44]

Perhaps this confidence is partly the result of a few trials witnessed by a magician, Wallace Lee, who was unable to detect any tricks or duplicate Pearce's scores. Rhine concludes

> It does not seem possible that any reasonable and honest doubt can exist in the mind of the reader . . . that there is amply demonstrated in these tests an extra-sensory mode of perception, of the type popularly known as clairvoyance. . . . What more, indeed, can be asked for simple proof's sake?[45]

Rhine then continues merrily sawing off the branch on which he is perched, by pointing out that, of those tests which were witnessed by persons in addition to the experimenters and the subject, the lowest are those in which the magician, Wallace Lee, was the witness. Furthermore

> Another factor that upsets Pearce's scoring, as a rule, is any change that he does not easily and spontaneously accept as likely to work. A few changes he has taken without a considerable drop, those apparently in which he has taken part in the planning and in which he felt sure of success.[46]

The whole account, from Pearce's unimpressive beginning which gradually improved, through the points mentioned, is sprinkled with

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[43]Rhine, ESP, pp. 97-98.

[44]Ibid., p. 98.

[45]Ibid., p. 99.

[46]Ibid., p. 103.

"evidence" which proves trickery just as well as it proves ESP.

In Chapter VIII, Rhine lumps together five more successful subjects. In case there is any doubt that he considers the tests described in the previous chapters as constituting scientific proof of the existence of ESP, he states in the beginning of this chapter:

> In presenting the data in this chapter, I shall not give consideration to the question of fraud or deception, since that has been perhaps overdone in the earlier chapters. . . . and because we are beyond the question of proof and are after the explanation and conditions.[47]

The reader has already been introduced to such terms as B.T. and D.T. (types of clairvoyance tests), P.C. (pure clairvoyance), and P.T. (pure telepathy), and spectacular series of 25 consecutive correct guesses. The P.T. method should be described here, however. Rhine's description is somewhat vague, but in essentials, it consists in the agent concentrating on one of the standard ESP symbols, the percipient making a guess, and then the agent recording what symbol he was concentrating on. In other words, there is no objective record whatsoever of the correct target at the time the percipient is making his guess. It need hardly be mentioned that such a procedure is among the most unreliable sort that could be devised. This chapter describes various witnessed and unwitnessed tests in B.T., D.T., P.C., and P.T., which are juggled and compared in order to define the nature of ESP, and then reaches a climax with the description of the long distance tests in pure telepathy performed by two young ladies 250 miles apart. At prearranged times the percipient was to try to guess what symbols the agent was thinking of. The results were truly spectacular: 19 correct in the first 25, and

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[47] Ibid., p. 116.

[48] Ibid., p. 139.

16 correct in each of the next two groups of 25. However, although the agent and percipient were supposed to send their separate records, independently, to Dr. Rhine, the percipient mistakenly mailed her records for these first 3 days to the agent, who then brought them directly to Dr. Rhine. Of this, he says:

> For the benefit of the reader, I will state that the recording was unmistakably in Miss Turner's own hand and ink, and no changes were evident. The notes that were written under the record were unmistakably those of Miss Turner. The point is, that if one of these excellent young ladies were to be suspected, both would have to be. Besides any motive to deceive me, difficult as it is to conceive it in these two, they would never aspire so absurdly high as to give me 19 in 25 on the first run!
>
> Thereafter, the records came directly to me, from each one independently, but the scoring fell off seriously.[48]

Results so absurdly high as to make deceit unbelievable, but which could not be repeated when the meagerest of experimental precautions were observed! This series, along with the shorter range P.T. tests at 10 feet and 30 feet separation between the agent and percipient in which "there is no sensory contact between the two, except for the methodical and uniform tapping of the telegraph key, and the calling aloud of the percipient," apparently constitutes the main evidence for Rhine's conclusion that ESP is unaffected by distance.[49] In excusing the later failure to duplicate the success of the first 3 days of the long distance test, Rhine says:

> And Miss Turner's brilliant series of P.T. at 250 miles cannot be statistically impaired by a score of such failures.[50]

Chapter IX is devoted to the "Elimination of negative hypotheses." Rhine disposes of the possibility that the results are due to chance by

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[48] Ibid., p. 139.

[49] Rhine, New World, p. 16.

[50] Rhine, ESP, p. 144.

pointing to the runs of 25, 23, and 21 straight correct calls, the 250 mile P.T. series, and quoting odds against a run of 25 to be 5 to the 25th power. He disposes of fraud by complete reliance on the "fagot theory." Incompetence is ruled out by more fagoting, plus the point that the earliest results were among the poorest, and improved "with improvement in technique and judgment." Next is unconscious sensory perception, which was one of Coover's main points of investigation. This is ruled out by such things as having the car engine running while Linzmayer was making his 21 consecutive correct calls, using a new deck of cards occasionally, having an electric fan going during P.T. tests, the fact that some percipients at times did not even look at the cards, and by referring to the 250 mile P.T. series. However, regarding the possibility of cues from the cards themselves, he says

> There is the simple obstacle that I, too, can see such marks and have looked for them frequently during the thousands of hours I have spent in this work. I have never discovered marks that might have been purposely made, except once, on the backs of some of one old pack of cards, and these were not consistent. . . . In one lot of cards, also, Stuart showed me that the rectangles were on slightly broader cards than were the other figures. Thereafter we had the cards cut better and more evenly.[51]

The last hypothesis considered is that of rational inference, that is, that the percipient can improve his score by using his knowledge of results during a run of 25 calls. (During some B.T. runs, the percipient was given knowledge of the target cards after each group of five cards.) This is dismissed by referring to analyses of high scoring series, and to the runs of 25 consecutive correct calls. The remainder of the book is concerned primarily with the physical, physiological, and psychological factors affecting ESP, and some general conclusions. The first of the major conclusions is that

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[51] Ibid., p. 152.

> It is independently established on the basis of this work alone that Extra-Sensory Perception is an actual and demonstrable occurrence.[52]

It should be fairly obvious to the reader why orthodox science has not been impressed by Rhine. This negative reaction has perhaps been stronger among psychologists because psychology was the branch of science which, logically enough, psychical researchers chose to be their "sponsor." This young science, however, had job enough making its own way. It was, no doubt, felt that association with anything as unscientific as Rhine made belief in ESP appear could sink the whole ship.[53]

This discussion of Rhine has not been for the purpose of derogating but for the purpose of partly explaining the rather violent reactions with which he has been received by "orthodox science." It could easily be concluded that Rhine has done ESP a great disservice with this book. If a genuinely interested person of reasonable intelligence wants to find out about ESP for himself, what better way than to read the major work of the acknowledged leader in the field? If he goes no further than reading this book, what other conclusions will he draw than that ESP is little more than speculation? On the other hand, the reaction of many really scientific-minded persons is completely predictable and, to them, quite reasonable: ESP is unfounded nonsense.

A more charitable treatment is given by R. R. Willoughby. He corresponded with Rhine in an attempt to satisfy himself if the experiments really did indicate some possibility of paranormal results. He says

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[52] Ibid., p. 218.

[53] For an earlier reaction to the attempts of "psychical researchers" to associate themselves with the science of psychology, see C. A. Ruckmich, "Pseudo-psychology," Science, XLVIII (August 1918), 191-193.

> It is very difficult to determine from the presentation exactly what was done, or to be certain one has not overlooked important conditions; correspondence with the author has been helpful in supplementing these deficiencies, but we are still in some trepidation . . .
> . . . . . .
> In conclusion, there seems little to commend about these investigations except their industry and their conscious sincerity . . . [no conclusion] that is defensible can be drawn from the material presented; . . .[54]

Rhine's sincerity and enthusiasm do appear unquestionable, and it seems that, for the time being at least, he has outflanked the opposition. First of all, he has wrapped the cloak of scientific method around himself, and, as it were, gone "over the heads" of orthodox science in a direct appeal to the public. (This is particularly true of his later books.)[55] Secondly, he has, perhaps favorably, influenced the course of psychical research by providing simple and repeatable tests to replace the use of playing cards, drawing of pictures, etc., and by forcing recognition of clairvoyance as a possibility, in place of a complete reliance on telepathy to explain all psychic phenomena.[56]

In addition, and somewhat aside from our subject here, one can surmise that Rhine has furthered the spiritualist cause. They can now say to a doubter, with more conviction than before, "If you don't believe it, look, here is scientific proof that ESP is a fact!"[57]

Of course, it is still possible that Rhine really did have ESP working for him at Duke. And even if it could be proven that he did not,

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[54]"A critique of Rhine's Extra-sensory perception," Journal of Abnormal and Social Psychology, XXX (July-September 1935), 199-207.

[55]E.g., Rhine, New World, p. 11.

[56]Coover reflected this latter attitude when he used irregularly spaced trials, in which clairvoyance was perfectly free to operate, as a control series for those trials where telepathy was being tested.

[57]See, e.g., Harold Sherman, How to make ESP work for you, (Los Angeles: De Vorss & Co., Inc., 1964), pp. 14 & 19.

this still would obviously not prove the nonexistence of ESP. For it can hardly be denied that false premises can lead to true conclusions, although it is hardly a desirable procedure.

Then what of the years since 1934? Has Rhine tightened up his experimental procedures, and proved ESP to his critics? The answers are "yes" and "no." The procedures have been tightened up somewhat, but this seems to frighten ESP away. The situation is probably best indicated in his preface to the republished edition of Extra-sensory Perception:

> Following the publication of the book, other investigators undertook to do some sort of repetition. Arguments began, controversy followed, . . . and, in the years of tension and contention, the wonderful good fun of the early Duke days was lost and forgotten. It never came back to the Duke Laboratory, . . .
>
> But can we take these early tests of the 1930's seriously? If there has been this long period of debate over the adequacy of test procedures, may not these early experiments have been so loosly conducted from today's point of view as to be relatively worthless? No, and I say it with emphasis! . . . here is just where the value of this early report comes in. It tells me, for one, what I want to know today - how long we were able to keep those early subjects scoring well in spite of the monotony of the procedure, . . . and what sort of program we had that kept so many productive for so long. What would we not give today for the like of that?

Gradually, over the years, Rhine appears to have improved his experimental controls in response to his critics. At any rate, he has become fluent in the language of science and makes a rather convincing case. It would be interesting to know how much of the present resistance to his work is still legitimate and how much is of the "once-a-thief, always-a-thief" class. It is truly unfortunate for the cause of psychical research that he should have undertaken his original attack on such basic scientific doctrine with such puny weapons. But perhaps such enthusiasm and determination are required in the heretic who occasionally is responsible for spurring an advancement in science.

S. G. Soal

The other leading figure in modern experimental psychical research is S. G. Soal. Through his book reporting a series of telepathy experiments,[58] Soal seems to be largely responsible for reviving the hope of a multitude of ESP enthusiasts, as well as for the most recent flurry of interest in ESP among the scientific community. This renewed interest among the scientific community is evidenced, for example, by an excellent and incisive article by Edwin G. Boring,[59] one of the grand old men of psychology, which was prompted by his reading of Modern experiments in telepathy and by a controversial nine page article by George R. Price in Science[60] which was followed by about twelve pages of replies and rebuttals.[61] The appearance of Price's article fulfilled Henry Sidgwick's prediction made in 1882. He said in the first presidential address to the Society for Psychical Research in 1882 that "We have done all that we can when the critic has nothing left to allege except that the investigator is in the trick. But when he has nothing else left to allege, he will allege that."[62]

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[58]S. G. Soal and F. Bateman, Modern experiments in telepathy (New Haven: Yale University Press, 1954).

[59]Edwin G. Boring, "The present status of parapsychology," American Scientist, XLIII (January 1955), 108-117.

[60]George R. Price, "Science and the supernatural," Science, CXXII (August 26, 1955), 359-367.

[61]D. Wolfle, "Extrasensory perception," [editorial] p. 7, S. G. Soal, "On 'Science and the supernatural,'" pp. 9-11; J. B. Rhine, "Comments on 'Science and the supernatural,'" pp. 11-14; P. E. Meehl and M. Scriven, "Compatibility of science and ESP," pp. 14-15; P. W. Bridgeman, "Probability, logic, and ESP," pp. 15-17; G. R. Price, "Where is the definitive experiment?" pp. 17-18; and J. B. Rhine, "The experiment should fit the hypothesis," p. 19, Science, CXXIII (January 6, 1956).

[62]G. R. Price, Ibid.

Price does not actually allege fraud, but attempts to demonstrate that it was possible, and that therefore Soal's work is not convincing.

What, then, did Soal have to say in this book? The first six chapters comprise a brief history of telepathy and psychical research, with emphasis on laboratory-type experiments as opposed to investigation of spontaneous occurrences, spiritist mediums, etc. In this section he takes Coover to task for overlooking or ignoring the significant results of his "unimportant experiments," and says that even today they are cited by psychologists who are ignorant of the extensive literature of card-guessing as furnishing a disproof of telepathy. He mentions that "S. G. S. did thirteen times as many trials as Coover before he found two good percipients."[63]

Regarding Rhine's work, he says:

> To sum up, we feel that we must reluctantly reject those experiments described in this chapter in which the percipient had any opportunity, either to handle the cards, or to see their backs while he made his guesses. . . . But after this rejection is made, there still remains a very considerable residuum of results including the Pearce-Pratt series, for which, if the reporting is accurate, it is difficult to imagine any normal explanation.[64]

He devotes one chapter in this section to the criticisms and objections raised by psychologists and deals almost exclusively with the criticisms of Rhine's early work. As Boring says, "its authors [Soal and Bateman] do let a few barbs show when they discuss the psychologists' criticisms of parapsychology."[65]

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[63]Soal and Bateman, pp. 13-14.

[64]Ibid., p. 36.

[65]Boring, Ibid.

The seventh chapter begins with a description of a very interesting series of experiments with a vaudeville telepathist which demonstrated some of the amazing feats which can be accomplished by muscle reading.[66] Awareness of this and other difficulties and pitfalls of laboratory-type psychical research makes Soal's research far more impressive than much of Rhine's work. In addition, a much better adherence to the rules of scientific reporting, and less preoccupation with "explanations" of observed results, and their philosophical implications, is evident in the writing of Soal. Of course, it also makes far less exciting reading for the layman; Boring, again, says, "Actually the book is deadly dull, . . ."[67]

The bulk of the book is a detailed description of the experiments conducted over a period of approximately 15 years by Soal and others, and their results. The book then concludes with a chapter on the current attitudes of scientists and philosophers toward ESP research.

Other Experimental Work

Perhaps some of the most impressive work done recently -- in this country at any rate -- is that reported by Gertrude R. Schmeidler, a clinical psychologist. Articles describing her work have been published in the Journal of experimental psychology[68] and the Journal of abnormal

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[66]This is a method which, for example, enables the performer to find hidden objects by watching the unconscious movements of people in the audience -- provided they know where the hidden object really is. According to Vogt and Hyman, this is also the technique used by Clever Hans and other performing animals having similar abilities.

[67]Boring, Ibid.

[68]Gertrude R. Schmeidler and Gardner Murphy, "The influence of belief and disbelief in ESP upon individual scoring levels," Journal of experimental psychology, XXXVI (June 1946) 271-276.

and social psychology[69] as well as the Journal of personality, the Journal of the society for psychical research, the Journal of the American society for psychical research, and The journal of parapsychology. The work is also described in a book.[70] She credits Gardner Murphy with the suggestion that such research might be fruitful. He also made available financial support from the Richard Hodgson Fund at Harvard University, where some of the work was performed.[71] R. A. McConnell, a physicist, did not take part in any of the experiments, but contributed the statistical analyses which appear in the book. He has also performed ESP experiments of his own, however.[72]

What seems to have been demonstrated by Schmeidler is that scores made by subjects in apparently well-controlled tests[73] are dependent on the individual subject's attitude toward ESP. Before a subject was tested, his attitude toward ESP was determined. Those who accepted the possibility that ESP could occur in this experimental situation were classified as "sheep" while those who did not were classified as "goats." The results indicated that sheep scored higher, to a statistically significant degree,

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[69]Gertrude R. Schmeidler, "Personal values and ESP scores," Journal of abnormal and social psychology, XLVII (1952) 757.

[70]Gertrude R. Schmeidler and R. A. McConnell, ESP and personality patterns (New Haven: Yale University Press, 1958).

[71]Ibid., ix.

[72]R. A. McConnell, R. J. Snowden, and K. F. Powell, "Wishing with dice," Journal of experimental psychology, L (1955), 269.

[73]For example, to eliminate the possibility of subliminal cues, the experimenter, who was with the subject at the time he was making his guesses, had no knowledge of what the correct answers were. The target lists were prepared ahead of time by an assistent and remained concealed until the subject had finished his guesses.

than goats, and slightly above chance expectation, while the goats scored slightly below chance expectation. There was, furthermore, some indication, based on clinical evaluations, that the relatively high average scores of the sheep group and the relatively low average scores of the goat group might be contributed almost entirely by "well adjusted" sheep and "well adjusted" goats, respectively. Much of the later work has involved the use of various tests such as the Rorschach Test and Rosenzweig's Picture Frustration Study in an attempt to find some reliable method of predicting a subject's ESP performance from his personality pattern.

Another example of laboratory experimental work is that being carried on at the Cambridge Research Laboratories of the United States Air Force.[74] Here a team made up of a psychologist, an electronics engineer, a physicist with a background in statistics, and a mathematician, ahve developed an experimental technique which they consider to be scientifically rigorous and capable of being repeated by other experimenters. With the number of reports of apparently significant ESP experiments increasing, they consider it the obligation of "objective and emotionally unbiased scientists" to "test the ESP hypothesis." If the hypothesis should be proven, it would be of tremendous significance; on the other hand, if the hypothesis can be conclusively disproven, a great saving of time and effort could result.

They have built an electronic and electromechanical system called VERITAC, which consists of the subject's console installed in one room, and the control section installed in another room. The control section

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[74] William R. Smith, Everett F. Dagle, Margaret O. Hill, John Mott-Smith, Testing for Extrasensory perception with a machine (May 1963) Data Sciences Laboratory Project 4610, prepared by Air Force Cambridge Research Laboratories, Office of Aerospace Research, United States Air Force, L. G. Hanscom Field, Mass.

consists of a random number generator plus the necessary equipment to automatically time, score, and record the subject's performance. The subject's console has a pushbutton switch which he uses to start, and then stop, the random number generator. When the generator stops, the last number generated is displayed on a console in the control section. The subject then guesses what the number is, and indicates his choice by pushing one of ten similar pushbuttons on his console. The machine then compares the subject's guess with the actual number and gives a printed read-out in the control section and a visual read-out (whether correct or incorrect) on the subject's console. The sequence as described would be for a clairvoyance test. By requiring the subject to make his guess before operating the random number generator, a precognition test can be performed; by placing a second person at the console in the control section to act as agent, a test of general extrasensory perception can be performed.[75]

The system seems to overcome practically all of the objections which have been made against ESP experiments conducted in the past, so far as experimental design is concerned. The proposed technique also includes a pre-test analysis of each subject's personality, including Schmeidler's sheep-goat classification. Some preliminary testing has been completed, and the referenced report gives the results of 1500 guesses from each of 37 subjects, or a total of 55,500 responses. The report

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[75]General extrasensory perception, or general ESP, tests are those where no attempt is made to distinguish between telepathy and clairvoyance, but both are given an opportunity to function.

concludes that no results beyond chance expectation were observed.[76]

It is not within the scope of this thesis to attempt a serious criticism or evaluation of the validity of any of the evidence for or against ESP. Our purpose here has been merely to point out that (1) seemingly competent researchers have produced fairly strong evidence that ESP does sometimes occur under laboratory conditions, and (2) this evidence is significant enough to generate heated controversy within the ranks of orthodox scientists. As Rhine said, "Price could hardly have kicked a dead horse . . . through nine full pages of the world's leading scientific periodical."

Spontaneous Occurrences

If one cannot say that ESP has been reliably demonstrated in the laboratory, is there any other sort of evidence which may bear on the question?

Yes, in addition to the laboratory experimentation which has been going on for over 30 years, and the qualitative studies which preceded them, we are also still faced with continuing reports of many of the same sorts of things which have been mystifying people for thousands of years. They are called spontaneous cases in the literature of ESP.

Many of the things which caused primitive man to believe in the supernatural have been explained: such things as earthquakes, storms,

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[76] Unfortunately, this work has been discontinued. According to Marjorie D. Kern in "Symposium on ESP at the University of California," Journal of the American society for psychical research, LX (January 1966) 63-73, "Mr. Dagle reported briefly on the experiments which he undertook on behalf of the Air Force, with testing done by a machine built by himself called 'Veritac.' . . . he obtained results which, although they seemed to fit predicted curves, gave no direct indication of ESP. The effect on the goals of advocates of the ESP theory was damaging and money was not allocated for further study because of it."

lightning, volcanoes and tidal waves are understood to be simply the normal forces of nature rather than the wrath of some gods; shamans resort to trickery; at least most spiritist mediums are fraudulent; and voodoo death, along with miraculous spirit healing and faith healing, is believed to be evidence of the power of the mind over the body. But some things have not been explained, it seems.

Spontaneous cases of so-called ESP continue to occur regularly. This author's experience exactly parallels that of Suzy Smith. She suggests that if one shows an interest and a willingness to listen credulously, one finds that a truly astonishing number of people have had apparently psychic experiences or know someone who has. "Mention the subject to your elevator man, or to the lady next door. If they haven't a personal experience to relate, very likely they know someone who does."[77]

Most serious believers in psychical research seem perfectly willing to admit that practically all such reports can be explained without recourse to ESP. But some apparently cannot.[78]

But while spontaneous cases may be extremely tantalizing and thought-provoking, they cannot be considered convincing proof of anything paranormal. As Boring aptly says,[79] such thinking "puts a premium on

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[77] Suzy Smith, ESP (New York: Pyramid Books, 1962).

[78] Laura A. Dale, Rhea White, and Gardner Murphy, "A selection of cases from a recent survey of spontaneous ESP phenomena," Journal of the American society for psychical research, LVI (January 1962).

[79] Boring, Ibid.

stupidity." That is, if one lacks the ingenuity to find a normal explanation, then he has proven the paranormal hypothesis.

In trying to assess the value of such evidence, we soon find that we are faced with some very fundamental questions. For example, what is the difference between a coincidence or an improbable event, and a paranormal event? If I dream that my grandmother has died, and then later find out that she actually did die at about the same time my dream occurred, I will be strongly inclined to believe that the dream was paranormal. In fact, such things are enough to convince most people, and have convinced many presumably intelligent and hard-headed persons. The truly scientific mind, however, will ask at least two highly pertinent questions: (1) How many other times have I dreamt that my grandmother has died, when she really did not? and (2) How many other people had similar dreams that night, and how many came true?

It is extremely difficult to get a satisfactory answer to these questions. Most skeptics are content to take refuge in the knowledge that it is simply human nature to forget or overlook dreams which do not come true, while making a big issue of those that do. But even if it were possible to find satisfactory answers to these questions, we would simply regress to the original question, namely, how improbable must an event be to qualify as paranormal rather than a coincidence?[80]

This, of course, is the impasse at which psychical research found itself many years ago, and is the reason why laboratory experiments have been considered so important.

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[80] As several authors have pointed out, if ESP was a common occurrence, there could hardly be a controversy.

Nevertheless, the list of people who have been convinced of the occurrence of paranormal phenomena, or who are at least willing to seriously consider the possibility, is a long and impressive one. It would read very much like some sort of "Who's Who" of Anglo-American and European history. No doubt an equally impressive list could be made of people who have not taken ESP seriously, but these people have apparently not written as many books about their belief.

It seems likely that many, and perhaps a majority, of people who believe in ESP, or are favorably inclined to do so, are influenced most by spontaneous experiences. These experiences may have happened to the person himself, or to close friends or family. It may also be that a person has experiences which alone would not be convincing, but which make other people's alleged experiences more believable. Such spontaneous experiences may or may not be genuine, but if genuine and not coincidences, they apparently must be classified as paranormal.

Present Status of ESP Research As a Science

What, then, can be said regarding the present status of psychical research in the scientific community? Can it be summed up in a simple statement? It seems not. In some ways, its status has changed relatively little during the past 75 years: Many proponents seem to believe that significant breakthroughs are just around the corner, while conservative scientists still maintain that not one single convincing experiment has been reported.

People come in roughly four shades of belief, as they have for many years. There are those who believe; for them, whatever proof they require has been furnished long ago, and they merely wonder when the rest

of the world will catch on. There are those who are inclined to believe, but who have not seen enough proof. There are those who definitely do not believe, but are withholding judgment until they see some convincing evidence one way or the other. Finally, there are those who do not believe, and who cannot even seriously consider the possibility.

Some proponents of ESP have accused scientists of being intolerant and prejudiced toward the issue and ignorant of the facts.[81] To some extent, this criticism seems justified.[82] For their part, psychical researchers have persisted, from the beginning, in being less than rigorous in a field of investigation which by its very nature, as well as because of the far-reaching implications of its conclusions, demands greater-than-usual rigor. And they have seemed preoccupied with berating orthodox science for not being impressed enough with their work to take up the pursuit itself.

On the other hand, science, represented mainly by experimental psychology (properly so), has insisted (properly so) that the burden of proof is on the innovator. In the meantime it has offered space in its journals (though certainly not enough to please the parapsychologists), has conducted research to either verify or otherwise account for the alleged facts, and has stated its position with apparent candor.

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[81]For example, see Rhine, New world, p. 53, and Soal and Bateman, p. 24.

[82]Gardner, p. 200, says "There is obviously an enormous, irrational prejudice on the part of most American psychologists - much greater than in England, for example - against even the possibility of extra-sensory mental powers. It is a prejudice which I myself, to a certain degree, share." A psychologist of McGill University, Donald O. Hebb, in "The role of neurological ideas in psychology," Journal of personality, XX (September 1951) 39, said: "Rhine has offered enough evidence to have convinced us on almost any other issue where one could make some guess as to the mechanics of the disputed process. Some of his evidence has been explained away, but as far as I can find out, not all of it. . . . Personally, I do not accept ESP for a moment, because it does not make sense. . . . Rhine may still turn out to be right, improbable as I think that is, and my own rejection of his views is - in the literal sense - prejudice."

It would seem that one could safely say that, on the whole, science has been reasonably tolerant and fair toward ESP. In Volume I of the American journal of psychology, editor, G. Stanley Hall, professor of psychology at Johns Hopkins University, devoted eighteen pages of fine print to a review of Gurney, Myers, and Podmore's Phantasms of the living. He reviewed the history of psychical research in general, and described some of the pitfalls to be avoided as follows:

> The conditions [of psychic experiments] are as infinitely complicated as the psycho-physic constitution of man, and the sources of error are as much more numerous than those in physical science as man is more complex than the substances and forces it studies. What individual can catalogue all the scattered known sources of error, to say nothing of those as yet unknown, in this vast field? Fallacies of observation, of evidence, of language and statement, defects of character and heredity, tricks of our automatic nature, subtle and manifold far beyond all conception, the countless possibilities of illusion conscious and unconscious, . . . the unfanthomable passion for deceit, both conscious and unconscious . . . all these and many more are involved and must be exhausted before telepathy can be positively demonstrated as a residual fact. . . . Add now the extreme rarity of all those qualities of mind which make a good observer, and the strangeness and perhaps great rarity of the phenomenon, and the probability of error in so hasty conclusions is vast.[83]

Is this sour grapes, or hardheaded scientific thinking?

In 1900 Joseph Jastrow, professor of psychology at the University of Wisconsin, undertook a detailed analysis of psychical research and other related subjects. He included a description of the admission of hypnosis as a scientific fact after many years of controversy. In the Preface, he states

> It may happen that the astronomer finds an interest in noting popular conceptions in regard to comets and life on other planets

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[83] G. Stanley Hall, "Review of phantasms of the living," American journal of psychology, I (November 1887), 128-146.

and beliefs about meteors and eclipses, but such interest forms no essential part of his occupation. . . . The psychologist is in a less fortunate position. His topic has neither that exclusive definiteness of content nor that position of hereditary prestige nor the general acknowledgment of its essentially technical character, which belong to astronomy. All men have their own psychological experiences and notions about mental phenomena, but opinions concerning astronomy are admitted to belong to those who have specially fitted themselves for such pursuits.

There is thus a natural reason why it should be particularly difficult in psychology to bring about a wholesome and right-minded and helpful interest on the part of the layman,--a difficulty further aggravated by the encouragement of well-meaning but logically defective publications claiming to substantiate by quasi-scientific methods the popular belief in the peculiar personal and mysterious significance of events. In the face of this situation, the professional psychologist cannot but take heed of the dangers which imperil the true appreciation of his labors and his purpose, on the part of the sympathetic layman. It is a matter of serious concern that the methods of genuine psychological study, that the conditions of advance in psychology, that the scope and nature of its problems should be properly understood.[84]

Is this irrational prejudice?

The work of Coover has already been discussed earlier in this chapter. In 1927, the pro and con were gathered between the covers of one book by Carl Murchison, professor of psychology at Clark University.

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[84] Joseph Jastrow, Fact and fable in psychology (Boston: Houghton, Mifflin and Company, 1900) vi & vii.

Indication that Jastrow's message has not been received by all within the ranks of psychical researchers is the book, Handbook of tests in parapsychology (Durham, North Carolina: Parapsychology Laboratory, Duke University, 1948) by Dr. Betty M. Humphrey, one of Dr. Rhine's former students, later a research assistant, and finally his colleague on the staff of the Parapsychology Laboratory at Duke University. In the introduction, on page 10, she says, "An attempt has been made to describe these tests simply and fully so that the average lay reader may repeat the experiments with the hope of adding new information to this branch of science."

A similar handbook is available from the Society for Psychical Research: D. J. West, Tests for extrasensory perception (London: Society for Psychical Research, 1953). West says, "It is the purpose of this pamphlet to outline a few of the simpler experimental techniques, so that anyone who is willing to take the necessary pains can make a useful contribution to research."

The book was made up of contributions from people who were divided into four categories of belief. "Convinced of the multiplicity of psychical phenomena" were Sir Oliver Lodge, Sir Arthur Conan Doyle, and others. "Convinced of the rarity of genuine psychical phenomena" were William McDougall, Walter F. Prince, and others. "Unconvinced as yet" were John E. Coover and Gardner Murphy. "Antagonistic to the claims that such phenomena occur" were Joseph Jastrow and Harry Houdini.[85]

Following the flare-up of controversy generated by Rhine in the Thirties, this attitude of watchful waiting seems to have prevailed again. Thus, we have such things as Boring's article in American Scientist[86] and Price's in Science,[87] and Gardner Murphy's status report published in The American psychologist.[88]

Perhaps part of the difficulty is that the time for ESP just has not yet arrived. It is James B. Conant's ninth principle of the tactics and strategy of science that a scientific discovery must fit the times or it may be ignored.[89] Another of Conant's principles which many proponents of ESP could profitably ponder is his tenth: "If a conceptual scheme is highly satisfactory to those who use it, neither a few old

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[85]Carl Murchison (Ed.), The case for and against psychical belief (Spencer, Massachusetts: Heffernan Press, 1927).

[86]Boring, Ibid.

[87]Price, Ibid.

[88]Gardner Murphy, "Trends..."

[89]James B. Conant, "On understanding science," (New Haven: Yale University Press, 1947), p. 103.

facts which cannot be reconciled nor a few new ones will cause the concept to be abandoned."[90] It might be profitable if some of the people who belabor science would make a greater effort to understand it. Conant's book is a valuable contribution toward such understanding.

Gardner Murphy states that critics of ESP seem to consider probability theory fine for ordinary science, but not suitable for proving ESP.[91] He suggests that if we question the results obtained when applying such theories to ESP, we should question their results in other cases as well. Interestingly enough, this is exactly what Bridgman does in his comments on ESP. He finally concludes

> The situation covered by the word probability is a desperately complex situation, mostly of our own making and in our own minds with a fragile and fleeting dependence on time, and never coherently connected with concrete "objective" events. I personally can now see so much here that needs to be thrashed out and clarified that I am unwilling to accept the genuineness of any phenomenon that leans as heavily as does ESP on probability arguments.[92]

It should be noted, however, that neither Rhine nor Soal appear to believe that the arguments for ESP lean heavily on probability arguments. But let us use this question to examine a more basic issue.

One wonders to what extent the differences between the opposing factions are due simply to some sort of lack of communication.[93] ESP proponents have complained bitterly for years that orthodox science rejects ESP without taking the trouble to read the literature. It would

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[90] Ibid., p. 103.

[91] Gardner Murphy, "Trends ..."

[92] P. W. Bridgman, "Probability, Logic, and ESP," Science CXXIII (January 6, 1956) 15-16.

[93] James complained more than 60 years ago that "While official science practically refuses to attend to subliminal phenomena, the circles which do attend to them treat them with a respect altogether too undiscriminating--every subliminal deliverance must be an oracle. The result is that there is no basis of intercourse between those who best know the facts and those who are most competent to discuss them." (Murphy & Ballou, p. 221)

seem that they have a case (though it must be conceded that much of this literature is enough to scare most serious scientists away on account of its lack of rigor). As a specific example, Boring disclaims being "an expert in this voluminous literature," and therefore confines his comments to Soal and Bateman's book. He then says, at one point, that

> In a good experiment you would turn telepathy on and note the number of hits. Then you would turn it off - the control experiment - and note the number. If the difference were large enough to show that you are probably not in the two series dealing with the same populations of guesses, then you have ESP and also an indication of how surely you have it. But how do you turn telepathy on or off, controlling the independent variable? The best you can do is to take a good scorer and a poor scorer and compare them, or perhaps get a few guesses from each member of a huge sample of the population and use those frequencies as the norm. Yet not until we get away from this a priori conception of chance are we going to be able to write a good operational definition of telepathy.[94]

Now, it would seem that the method reported by J. A. Greenwood in The journal of parapsychology in 1938[95] is a fairly ingenious and quite satisfactory method of turning ESP on and off. Greenwood describes the following method. He extracted from the records at Duke University the first twenty recorded call runs of each of five of the best ESP subjects. An ESP "run" of the type involved consisted of a sequence of twenty-five symbols which was the record of the actual sequence of a deck of shuffled ESP cards - the target run - plus the call run, a sequence of twenty-five symbols which was the record of guesses made by the subject as to what each symbol in the card sequence or target run was. The subject's score on a given run is obtained by comparing each item in the call run with its corresponding item in the target run and counting all "hits," or cases of agreement.

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[94] Boring, Ibid.

[95] J. A. Greenwood, "Analysis of a large chance control series of ESP data," Journal of parapsychology, II (June, 1938) 138-146.

He then shuffled 30 decks of ESP cards using a procedure he describes that has three separate people performing three different operations. Thus he had 30 new target runs and 100 call runs. The 100 call runs when compared with the target runs which the original guesses were aimed at give data for ESP "turned on." These same call runs when compared with the 30 new target runs give data for ESP "turned off." After the 100 call runs were compared with each of the 30 decks, or target runs, making 3000 runs or 75,000 call-target comparisons, the cards were presumably reshuffled and 3000 more runs made. 20,000 runs were accumulated.

One purpose of this exercise was to investigate the suggestion, apparently made by some ESP critics, that there was something inherent in the high-scoring call runs which would produce a high score regardless of what target run they were compared with. Greenwood concludes that the suggestion is not true. "Previous observations that call series with which subjects obtained phenomenally high total scores are not necessarily intrinsically conducive to extra-chance scoring is herein substantiated."[96] He reports close agreement between his results and both the binomial and normal distributions and two other approximations of chance expectation.

Unfortunately the article is much too concise to compel serious attention on the part of a skeptic. For example, Greenwood does not tell us the original scores of the 100 call runs used, nor even state clearly that they were high-scoring (i.e., above-chance) runs. This would seem to be a fatal flaw so far as proving the hypothesis is concerned. However, the method seems satisfactory. The article is also full of ESP jargon and statistical jargon, but the description above seems to be a straightforward amplification of what the author was trying to say.

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[96] Ibid.

Now, Soal and Bateman mention Greenwood's results several times and list the article as a reference. What, then, is Boring's objection to this method? Is he politely avoiding the situation of being forced to suggest some sort of fraud or incompetence if he admits the possibility that non-chance results have been demonstrated in the original call runs? Is he politely refraining from lecturing Soal and Bateman for being dullards in statistical and probability theory? We do not know; but the ESP proponents will, undoubtedly, simply say that he has not read the literature and is criticising from a position of prejudice.

And so the battle has gone for about 75 years. But it seems that the picture is changing. Psychical research seems to be coming of age. The change has been primarily one of degree of acceptance of psychical research by the scientific community. This in turn has been brought about by more careful application of scientific method to ESP research; this research appears to be of higher quality than ever. And the article by George R. Price, with the follow-up series of letters in response to it, seems to indicate that there is communication between the opposing positions. (In this series, the position taken by Bridgman in the quotation above is criticised by Price himself.)

Each individual's final opinion seems to depend more on subjective issues than anything else. If one who is genuinely curious diligently attempts to read a balanced sample of the literature, both pro and con, it seems likely that he will either become thoroughly confused or simply return to whatever his original inclination toward belief may have been.

However, according to surveys of members of the American Psychological Association conducted by Warner[97] in 1938, 1952, and 1955, there is a clear trend toward greater acceptance of ESP as a possible fact, especially among the younger members. These surveys also unquestionably indicate that a majority of members consider the investigation of ESP to be a legitimate scientific undertaking.[98] Another illuminating fact is that a number of new books on psychology include discussions of ESP.[99] Still another is the article on Psychical Research in the 1964 edition of the Encyclopaedia Britannica, written by Robert H. Thouless, a British psychical researcher. It states flatly, regarding "thought transference or telepathy," that ". . . it is known that they really take place and the present concern is to find out more about their nature." On the other hand, Boring's final comment regarding parapsychology is that "Of its importance in the developing scientific skein, posterity will be able to judge, and you cannot hurry history."[100]

Summary

The controversy between the "pro-psychic" faction and "orthodox science" has been going on for many years. In general, orthodox science has accused psychical researchers of being unscientific and of extrapolating too much from their data. John L. Kennedy, who was the Fellow in

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[97]Lucien Warner, "What the younger psychologists think about ESP," Journal of parapsychology, XIX (December 1955) 228-235.

[98]Even if one assumed that all nonrespondents would have answered negatively, there would still remain a simple majority of members who did consider the investigation of ESP a legitimate scientific undertaking.

[99]E.g., Bernard Berelson and Gary A. Steiner, Human Behavior (New York: Harcourt, Brace and World, Inc., 1964) pp. 126-130.

[100]Boring, Ibid.

Psychical Research at Stanford University from 1936 to 1938, explains this first objection as follows:

> ESP evaluation is not easy for the amateur in experimental psychology, no matter how eminent or well trained he may be in other fields of science, the arts or the humanities. There is no substitute for the humility toward one's own limitations as an observer which is the hallmark of sound training in experimental psychology.
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> It is the writer's conviction now, as it was fourteen years ago, that conscious fraud is not the explanation of these data. We are dealing here with a common failing of human beings, namely that they are not trustworthy recording devices. Excitement and desire for particular results biased the recording. Official science, and particularly experimental psychology, learned this lesson many years ago. It is the first and most difficult lesson in science.
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> Some years ago, the writer reviewed the literature of ESP from the point of view of experimental methodology. The great majority of reported experiments were suspect for recording-error reasons. . . . At Stanford, we were able to find ESP only when the controls were lax. ESP was eliminated when the necessary independent records were made. It appears that satisfactory experimental controls are not routine in ESP and PK experiments because too much reliance is placed on the objectivity of the experimenter in recording.
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> . . . . . .
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> Official science is based upon observations concerning which both the believer and the skeptic can and do agree. In other words, scientific data which are sensitive to the preconceived convictions of the experimenter are always suspect.[101]

The second objection is described by Edwin G. Boring:

> All we know about ESP is that it is a difference in frequencies. Soal and Bateman offer us a little magic when they imply that our ignorance of the nature of ESP should make us hospitable to the acceptance of some strange new principle that contradicts current physical law, when they urge that mind is not necessarily bound to the body, as K. S. Lashley's failure to establish the mind-brain correlations leaves possible.
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> Right here, I am convinced, lies the reason for all the heat of this controversy. The experimental method, which includes control, was invented and used by the natural philosophers because they mistrusted their own free inductive intuition. Such people are nowadays called scientists. Professionally they are humble, for they accept this constraint upon the free range of their imaginations. Personally scientists are egoists, for thus they get the drive that

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[101] John L. Kennedy, "An evaluation of extra-sensory perception," Proceedings of American philosophical society, XCVI (October, 1952), 513-518.

> keeps them at research, but they fight the magic that is uncontrolled imagination. They sense magic in Soal and Bateman's addiction to dualism and they are angered when the public, preferring the magic of the free interpretation of ignorance to the solidity of observed fact, departs from positivistic safety to accept intuitive unobserved mystery. They are angered because uncontrolled intuition is what they as scientists are fighting, and they see in the way that parapsychology transcends its observed data a threat to what is basic in science. They are not angry, I think, because new scientific hypotheses are being proposed, but because they think the parapsychologists transcend their observations, finding mystery more exciting than fact. This anger does neither the scientists nor science any good, I should say, and it may well be diminished on both sides by understanding it.[102]

In the meantime, psychical researchers have complained that conservative scientists are prejudiced toward the subject, and ignore the results of valid experiments. On the whole it seems we must agree with the scientists, although there does appear to be some truth in the counter-allegations of psychical researchers.

The two factions are coming closer together, however; as psychical researchers have become more rigorous, scientists have been more favorably impressed, and it still seems that ESP has not entirely vanished. Gardner Murphy has said

> But, after noting the fallibility of mankind in this as in other fields, one excludes not only the "stage telepathist" but all who insist on working in substandard conditions. One doubles and redoubles one's precautions and still finds the essential phenomena recurring. The ESP hypothesis is tested like any other hypothesis, and the hypothesis is supported. Is there any other hypothesis today in competition with it? Only, so far as I know, the hypothesis of fraud.[103]

Thus it seems that psychical research has become an infant science -- a somewhat reluctantly accepted stepchild of psychology. It may not be fully accepted for a number of years, if at all. Furthermore, psychical researchers in general are no longer engaged in a frontal assault on

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[102] Boring, Ibid.

[103] Gardner Murphy, "Trends ..."

the gates of orthodox science. Gardner Murphy says, "There is practically no experimentation being done anywhere to 'prove ESP.'"[104] Instead they are trying to discover what conditions are favorable to ESP and how to predict and control it. No doubt some are taking this course because they believe their conservative scientist critics are the victims of invincible prejudice and will not be convinced by any sort of evidence. But it seems that the more responsible leaders in the field do recognize the extreme difficulty of valid experimentation in this area, and are trying to learn how to devise repeatable experiments. They are taking the advice implied in Broad's latest book

> It seems to me unlikely that there will be progress in the study of paranormal phenomena [such as that in the study of electricity and magnetism during the last 150 years, for example] unless and until someone hits upon methods of inducing paranormal powers in ordinary persons and sustaining them thereafter at a high level for some considerable time.[105]

Thus psychical research remains outside the gates of orthodox science and may continue to do so for many more years. But in the meantime it goes on investigating the nature of its subject matter and hoping for eventual recognition to come as a by-product of these labors.

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[104]Gardner Murphy, "Trends ..."

[105]C. D. Broad, Lectures on psychical research (New York: The Humanities Press, 1962). p. 10.

CHAPTER III

THE CONCLUSIONS OF PSYCHICAL RESEARCH AND THEIR IMPLICATIONS

It is not the purpose of this thesis to recommend belief in the conclusions of psychical research. It is our purpose only to examine the philosophical consequences of such belief, if one should decide to adopt it. Does it seem premature to undertake such an examination? Such an objection could be answered in at least two ways: (1) If the implications of psychical research are nearly as serious as some of its proponents would have us believe, philosophers had better be prepared in self-defense. If ESP, for example, does suddenly become a proven fact, many of our presuppositions about the nature of our universe will presumably have been swept away and it will take some hasty review and overhauling to repair the damage. (2) The philosophical implications of psychic phenomena are already being described by others.[1] It was pointed out in Chapter II that this is part of the reason why there has been such heated controversy over the occurrence or non-occurrence of the phenomena themselves. Many proponents of psychic phenomena are apparently quite willing to make metaphysical inferences based on their beliefs. As

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[1]Those interested in a discussion of Rhine's philosophical statements are referred to Ducasse's brief but decisive treatment in The belief in a life after death (Springfield, Illinois: Charles C. Thomas, 1961), particularly to page 133.

scientists were compelled to investigate the alleged phenomena in an attempt to determine their validity, so philosophers are compelled to investigate the validity of the alleged philosophical implications.

It is the aim of this thesis to undertake an exploration of the philosophical implications of psychical research. First, then, we must determine what conclusions this infant science has to offer.

Telepathy, Clairvoyance, and Precognition
(Extrasensory Perception)

The conclusion which is stated with the highest degree of confidence is the occurrence of telepathy or clairvoyance, or both. One must say "telepathy or clairvoyance or both" because the picture is somewhat muddled. The two cannot be easily isolated from each other. Until the work of J. B. Rhine, little importance was attached to clairvoyance. Most supposedly paranormal occurrences were explained on the basis of telepathy -- the transference of knowledge from one mind to another by some means independent of the normal senses. Clairvoyance was largely ignored as a counterhypothesis to telepathy. Whereas telepathy is the transmission of information to one mind from another, clairvoyance is the transmission of information to a mind from a physical object or an event.

The problem involved in isolating the two from each other can be described as follows. If an experimenter wanted to set up an experiment in ESP, he might typically instruct the person acting as agent to concentrate on some object such as a card drawn from the top of a pile which the agent has before him. The percipient is to guess what card the agent is thinking of or concentrating on. After a specified interval of time, the agent lays the top card aside and draws and concentrates on the next

one, etc. Now it is obvious that if we consider both telepathy and clairvoyance to be possible, we have no way here of distinguishing between them. If the results of the test should be positive, we would merely know that some form of ostensibly paranormal occurrence seems to have taken place. The percipient may have been influenced by the agent's mind, or he may have been influenced by the cards directly. This type of test is nowadays called a "general ESP" test in recognition of this ambiguity. If our experimenter then decided to test for the two modes of ESP separately, he might eliminate the actual deck of cards and instruct his agent to merely concentrate on one card at a time. The agent would attempt to generate a random sequence as he progressed, rather than using any sort of prepared list. He would probably write down the name of the card he had been concentrating on before going on to the next one. Such a test would presumably demonstrate pure telepathy. On the other hand, our experimenter might eliminate the agent, and instruct the percipient to guess the cards directly. This would presumably demonstrate pure clairvoyance. The problem that enters the picture at this point, however, is the apparent occurrence of precognition. That is, during general ESP tests, it sometimes occurs that the percipient does not score highly at guessing the card he is supposed to -- the target card -- but does score above chance on the one which is to be the next target card. In fact, this was precisely the nature of the performance of one of Soal's two outstanding percipients. Thus, our "pure" tests for telepathy and clairvoyance are also contaminated. For if we must seriously consider the possibility of precognition, our percipients in either of the "pure" tests described above could be precognizing the checking off procedure performed after the test to determine the number

of correct guesses. It is not likely that a satisfactory test for pure telepathy has been devised, but procedures similar to that used by Smith et al, described in Chapter II, appear to be a satisfactory test for pure clairvoyance.[2]

Practically all of the "good" laboratory experimentation is in the area of ESP; therefore, if psychical research has "proved" anything, it is apparently among these: Telepathy, clairvoyance, precognitive telepathy, and precognitive clairvoyance. Many of the spontaneous cases indicate the occurrence of these same phenomena, and it is held that the laboratory experiments reinforce the spontaneous cases, making them more believable.[3]

The following example will illustrate the types of spontaneous cases of precognitive clairvoyance and/or telepathy which allegedly occur. Information regarding this case was obtained by the American Society for Psychical Research in response to an appeal for such reports which appeared in This Week magazine, a Sunday newspaper supplement, in 1957. It is a case of an allegedly precognitive dream reported by a woman from Birmingham, Alabama.

> During the night (sometime in November, 1952) I dreamed that I walked into my grandson Bobby's room and picked him up from his bed and sat down in a rocking chair. I kissed his forehead and he was burning with a fever. He seemed to be very limp and he did not know me. While I was sitting there rocking Bobby, I was crying because he seemed almost dead.
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> My son, Bud, came to the door of Bobby's room and leaned up against the frame of the door with his hand to his head. I asked him what was wrong and he said he fell from a telephone pole. Actually I had had a secret fear of his falling since he took the job as lineman with Southern Bell Telephone Company. In the dream

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[2]See Page 69 above.

[3]C. D. Broad, Religion, philosophy and psychical research (New York: Harcourt, Brace & Co., 1953) p. 16; and Lectures on psychical research (New York: The Humanities Press, 1962) pp. 19-20.

he said, "I fell and I feel a little sick at my stomach." Then he moved his hand and blood began pouring from a hole above his eye. In the dream I screamed, and he said, "Now I think I'm going to be alright."

It was a terrible dream, one of those dreams when the feeling of terror lasts even after awakening. I didn't sleep any more and I got up very early the next morning and went home. The dream I had was re-enacted completely. I went directly to my daughter's house hoping the whole thing had been only a dream but I did go into Bobby's room and picked him up. I kissed his forehead and he was burning with fever and did not know me. While my daughter dressed so we could take Bobby to the doctor, I asked about Bud and she told me he was alright.

In the meantime Bud had fallen from a pole while he was at work and had been brought home. His wife was terrified when she saw him. As she knew we had returned home, she ran across the backyard screaming for me, and my son followed her. When they came into the house, I saw that the second part of my dream had come true.[4]

The woman's daughter sent the following account.

Two years ago my parents went away on a short vacation. Shortly after they left on their trip, my small son became very ill and had an extremely high temperature. Early the next morning I was surprised to see my mother and father driving in the driveway. Mother rushed in and said, "I had a terrible dream. I dreamed I kissed Bobby and he was burning with fever and when I turned around Bud (my brother) was standing there with a big hole in his head, pouring blood." I told her that Bobby was terribly sick but that my brother Bud had gone to work as usual that morning and was just fine. In less than an hour my brother, a lineman for Southern Bell Telephone Company, had been brought home by his foreman with a big hole cut above his left eye and bleeding profusely.[5]

Sensitives

Another sort of occurrence are those attributed to well known "sensitives" who are allegedly able to foresee future events in the lives of people and locate lost objects and missing persons, for example. They do this by looking into a crystal ball, touching the person, or

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[4]Laura A. Dale, Rhea White, and Gardner Murphy, "A selection of cases from a recent survey of spontaneous ESP phenomena," Journal of the American society for psychical research, Vol. LVI (January 1962).

[5]Ibid.

touching something which belonged to the person. Among these are Peter Hurkos,[6] Arthur Ford,[7] Gerard Croiset,[8] and Jeane Dixon.[9]

Postcognition

There is also some evidence for what is called postcognition. This is simply the knowledge of past events by means other than normal sense perception or inference. It's genuine occurrence is even more difficult to establish than that of precognition because it is almost impossible to prove the absence of opportunity for normal -- or subliminal -- acquisition of particular information.

Psychokinesis

A much more controversial subject of seemingly valid laboratory experimentation is psychokinesis -- the influence of mind over matter -- familiarly known as PK. Perhaps part of the reason for the greater reluctance of many people to accept psychokinesis as a possibility is the fact that practically all spiritist mediums were so thoroughly discredited. Nevertheless, it was J. B. Rhine again who brought some degree of respectability to laboratory tests for this effect. He used dice and an inclined runway which was equipped with baffles to "randomize" the fall of the dice. The experimental subject attempted to influence the fall of the dice by "wishing" for a particular side to turn up. Refinements of the procedure have included an automatic machine to throw the

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[6]Peter Hurkos, Psychic (New York: Bobbs-Merrill Co., 1961).

[7]Arthur Ford, Nothing so strange (New York: Harper & Bros., 1958).

[8]Jack Harrison Pollack, Croiset the clairvoyant (New York: Doubleday & Co., 1964).

[9]Ruth Montgomery, A gift of prophecy (New York: William Morrow & Co., 1965).

dice, and automatic photographic equipment to record the results.[10] Here again, psychical research claims results beyond the expectation of chance, although the greater emphasis is laid on a particular pattern of scoring called the "decline effect."[11]

Except for the claims of the discredited physical mediums, there is little, if any, significant evidence for psychokinesis from sources outside the laboratory.

Out-of-Body Experiences

Since the spontaneous cases indicating some form of telepathy or clairvoyance are reinforced by laboratory experiments, there would seem to be some small compulsion to believe that spontaneous cases which indicate other paranormal occurrences are also reinforced to a lesser degree. Among these are so-called out-of-body experiences. These are cases where a person, usually in a dream or dream-like state, has the sensation of seeing his own body from the outside as though he were seeing some other person. In other cases the person has the sensation of floating through the air, and sometimes of traveling great distances.[12] In the most impressive of these, one or more persons in the distant place visited has the sensation of seeing the person who is "visiting."

The following example, also from the ASPR-This Week survey, illustrates the latter type of case. A woman writes

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[10]See R. A. McConnell, R. J. Snowden, and K. F. Powell, "Wishing with dice," Journal of experimental psychology, L (1955) 259.
L. A. Dale, Journal of the American society for psychical research, XL (1946) 123 (Cited in Gardner Murphy, Challenge of psychical research, p. 158.)

[11]This scoring pattern is characteristic of almost all of Rhine's work in all phases of ESP and of practically all reported experiments in PK. It consists of a higher rate of scoring in the early part of a test run with a decline in scoring rate in latter parts of the run.

[12]This latter characteristic is also true of cases of so-called "traveling clairvoyance."

Let me say that this experience is extremely hard to set on paper as the sensations are very hard to describe--especially certain phases --in mere words. This report will no doubt sound fantastic, but I give you my word I am reporting it exactly as it occurred.

Before I go into the actual report, I will tell you a little about myself so you may have a better insight [into] my personality and character.

I am 26 years old, single, and of average intelligence. After graduating from high school in 1949, I worked for Northwest Airlines in their main offices. After a short time I found I was not interested in office work and did not like the city; so I returned to the country where I now live. I breed, raise, train, and show registered Palomino horses. Training these horses occupies most of my time. I spend a great deal of time out of doors. I also maintain the house and prepare the meals for my Father and myself. My Mother is a school teacher and is employed in northern Minnesota. She is located 30 miles from the nearest town and railroad. She is in the heart of the ranching and wheat country. We see her approximately three months in the summer and two weeks at Christmas... I hope this short summary will give you a little idea of myself and may help in evaluating this report.

On January 26th, 1957, or rather the night of January 26th [Saturday] 1957, there no unusual or disturbing factors. My Father and I retired about 10:30 p.m. [9:30 in Minnesota] as usual. During the course of the night I had this "dream" (which in itself was not unusual as I dream quite often). My dreams are usually in color and full detail... much like stories.

This particular time I seemed to be very angry. My anger was about something concerning the horses. At length I became so angry I was determined to go and tell my Mother about it. Then I was walking. It seemed that as I walked I covered the distance very rapidly, and the sensation was more as you would imagine floating, although you were walking.

Let me explain that as a child I had a many-times-recurring dream. In this dream I would try to walk several inches above the ground, and when I didn't quite think about it, I could; the sensation was the same. Then in this childhood dream I could only go a short way and would slowly settle to the ground. Then I would retrace my steps up the hill (our house [is] set on a hill above the barns) with the normal effort of walking. As I had these recurring dreams, each time I could walk farther and farther off the ground and go a longer distance from the house. When I was about 14 years old, I ceased to have this dream.

Now on with this experience. As I walked on, I seemed to be going through a place that was neither light [n]or dark; there were brown tones. The distance was like high banked, soft, drifting brown clouds. There were people on either side. Not many, but a goodly number. Some were sitting, some standing, some visiting with each other. They spoke in quiet tones; they seemed very content, and in a way sort of "waiting." Someone asked me something and I gestured with

my arm (this is a natural habit for me) and replied, "Well, I'm just going to tell her, it makes me so mad!" Then I laughed a little and continued on my way.

After a little while I seemed to be alone going through a great blackness. Then all at once way down below me, as though I were at a great height, I could see a small bright oasis of light in this vast sea of darkness. I started on an incline toward it as I knew it was the teacherage (small house by the school) where my Mother lives.

I shall now try to describe the walls of the building. They appeared to be soft films of cobwebby, greyish, smoky material you might view from a distance. It is extremely difficult to find words that describe these things accurately. The furniture of the room was just as it is. After I entered, I leaned up against the dish cupboard with folded arms, a pose I often assume. I looked at my Mother who was bending over something white and doing something with her hands. She did not appear to see me at first, but she finally looked up. I had a sort of pleased feeling and then after standing a second more, I turned and walked about four steps. Then this same thing happened that has happened to me in dreams before. I hope you will understand as there is a feeling involved that I am just at a loss to set on paper.

About eight feet above me, or so it seems, there will appear a black vibrating "mist" composed of millions of tiny particles though each one seems to be very independent of the others. It is usually about four feet long by two feet wide and seems to have an irregular[ly] shaped edge; the inside is continually in motion. It gives you the impression of some "living" thing. Whenever this mist appears I am compelled to rise toward it whether I wish to or not, although the feeling is not demanding nor unpleasant. At this point I immediately awake. In this case I looked at my bed-side clock and noted the time to be 2:10 a.m. [1:10 a.m. in Minnesota.]

This dream nagged my mind for several days as it had been so clear in every detail. Then I received this first letter from my mother. I replied and told her approximately what I have stated here. I asked her how I looked and what I was wearing as I was highly interested. Thus the second letter.

In the first letter you will find reference to the dream or occurrence... In the second, reference is made [to the dream] throughout the letter...[13]

The relevant parts of the mother's letters read as follows

You said you couldn't sleep, well, why don't you stay home and not go gallivanting so far from home when you do sleep? Did you know you were here for a few seconds? I believe it was Saturday night, 1:10, January 26th, or maybe the 27th. It would have been 10 after two your time. I was pressing a blouse here in the kitchen --I couldn't sleep either. I looked up and there you were by the cupboard just standing smiling at me. I started to speak and saw you were gone. I forgot for a minute where I was. I think the dogs

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[13]Dale, White, and Murphy, Ibid.

saw you too. They got so excited and wanted out--just like they thought you were by the door--sniffed and were so tickled. It's a terribly lonely feeling when you go like that--you could at least have said something. Did you dream?

Received your letter today and was glad to hear all the news. I was real glad to know you had thought you dreamed of seeing me, for you did.

There isn't much to tell you, only I was bending over the ironing board trying to press out a seam. I just looked up and seemed to know you were watching me. You were standing with your back to the cupboard (the front of it) between the table and the shelf, you know, just sort of sitting on the edge of the lower part of the cupboard. I saw you and smiled. You were looking at me. Your face was solemn--not mad-looking. Then in a flash your face and eyes were smiling. I started to speak to you and you just vanished instantly. I really didn't make any sound I guess--just opened my mouth to speak. Then I realized what I had seen and a terrible loneliness came over me. I looked at the dogs and they were just looking at you. I'm sure they saw you longer than I did. I knew you were here and I said to the dogs, "Marty came to visit us." Then I knew I was going to cry when I realized how far away I was and yet so near. I turned to go in the bedroom and you must have started to go out the door then. That's when the dogs went wild. I just watched them--didn't say anything to distract them. They just (Blackie) clawed at the bottom of the door. Cuddles just sort of whined--you know, just funny little squeaks, and then they ran and smelled where you had stood and had walked to the door. Then they ran to me, jumped on me, and were so tickled, ran to the door and jumped and wanted to go out. I said, "You can't follow her, she's gone to see Spice Cake and Muffins." They wagged their tails and lay down.

Your hair was combed nice--just back in a pony tail with the pretty roll in front. Your blouse was neat and light--seemed almost white. Saw your arms, but just can't remember how they were. Your face and complexion were very white--a beautiful clear smooth healthy white. You were very solid--JUST like in life. Didn't see you from the lower bust down--that I can remember, anyway.

Well, now we know that the "you" in you really can go places, and I'll bet anything you really did tell me about Hilda's baby.[14]

When Near Death

A slightly different type of out-of-body experiences are those where the person is very near death. He has out-of-body experiences while apparently dead and remembers these afterwards.[15]

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[14]Dale, White, and Murphy, Ibid.

[15]G. N. M. Tyrell, Apparitions (London: Gerald Duckworth & Co.Ltd, 1943) p. 149.

Survival of the Spirit After Death

By far the most difficult implication of some spontaneous cases for many people to accept is the idea of survival of the spirit after death. Nevertheless there are persistent types of spontaneous cases involving people who have died. Some of these are similar to the case previously described, so far as the mother's experience is concerned. An example is the case below.

> The Bowyer-Bower case is an interesting one, for four people had visual hallucinations of him at different times. The evidence was collected by Mr. Hubert Wales. Eldred Bowyer-Bower, aged 22, was an airman and was shot down and killed early in the morning of March 19, 1917. On the same day, and within 12 hours of his death, his apparition was seen by his half-sister in India, to whom it appeared so real that she thought at first he was there in the flesh. She turned to put her baby down in a safe place, and, turning back, held out her hand to him, but he was not there. She did as everybody does on these occasions, called and looked everywhere, and only gradually was it borne in upon her that she had seen an apparition. About the date of the death and before the fact was known, his sister's child of nearly three (in England) came into her mother's room and said, 'Uncle Alley Boy is downstairs.' On the same day, March 19, before the fact of the death was known, a friend of the family wrote saying that she was in a state of great anxiety over Eldred. In December 1917, some nine months later, the airman's fiancee awoke and saw his apparition sitting on the bed beside her. She spoke to him and records that 'His lips started to move,' and he made a reply 'just above a whisper.' She tried to touch the apparition but her hand went through it.[16]

The genuineness of these types of cases, however, is particularly difficult to prove. This is largely because where any appreciable length of time has passed since the death of the supposed communicant, there is the possibility for normal acquisition of knowledge. In addition to this is the possibility that telepathy and clairvoyance in combination with hallucination can also explain many such unusual occurrences.

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[16] G. N. M. Tyrell, Ibid. p. 139

There are also cases reported where mediumistic communications apparently provide information which could only have come from the surviving spirit of someone who has died.

Summary

These alleged psychic occurrences do indeed present a perplexing array of strange ideas. Little wonder that one common reaction is to reject them all with the thought that they must simply be due to some type of faulty observation or reporting. But on the other hand, it would seem difficult to completely eliminate the nagging fear that there might be some truth in some of them. How can we go about the job of attempting to evaluate their significance in terms of our established philosophical thinking?

Basic Limiting Principles

Broad points out the relevance of psychical research to philosophy by describing what he calls Basic Limiting Principles, and then gives examples of how the conclusions of psychical research conflict with these. The Basic Limiting Principles, he believes, are assumed without question by practically everybody who has been brought up within or under the influence of Western industrial societies. They fall into four main divisions as follows:[17]

1. General Principles of Causation
   a. It is impossible for an event to have any effects before it has happened.

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[17] C. D. Broad, Religion, philosophy and psychical research, (New York: Harcourt, Brace & Co., Inc., 1953) p. 9. Broad does not claim either that this list is exhaustive or that they are all logically independent.

b. It is impossible for an earlier event to affect a later event unless there is an intervening series of related events.

c. It is impossible for an event happening in one place to have effects in another place unless there is a finite interval of time between them and this interval is occupied by a series of related events.

2. Limitations on the Action of Mind on Matter

"It is impossible for an event in a person's mind to produce directly any change in the material world except certain changes in his own brain." Movements of certain parts of his own body follow "only as rather remote causal descendants" of such brain changes.

3. Dependence of Mind on Brain

"A necessary, even if not a sufficient, immediate condition of any mental event is an event in the brain of a living body."

4. Limitations on Ways of Acquiring Knowledge

a. "It is impossible for a person to perceive a physical event or a material thing except by means of sensations which that event or thing produces in his mind." The immediate cause of such a sensation is an event in the brain which is a rather remote causal descendant of the object perceived.

b. It is impossible for one person to know anything in another person's mind except insofar as that other person can communicate by means of language, gestures, facial expressions, etc., or by means of permanent records such as tools or pictures.

c. It is impossible for a person to forecast a particular event except by chance or by inference from present data and knowledge of past sequences of events.

d. It is impossible for a person to have detailed knowledge of an event in the past except by memory, testimony of other witnesses, or inference from present data and knowledge of past sequences of events.

We will now examine the conflicts between these basic limiting principles and the conclusions of psychical research, along with some other basic conflicts.

Time

Probably the first serious conflicts one notices have to do with our notions of time. Psychic occurrences have a peculiar way of ignoring our rigid distinction between past and future. It appears, for example, that people having clairvoyant dreams often have no idea whether the events of the dream are past, present, or future; there simply is no such distinction.[18]

Now, our common sense notion of the future is that it is something that has not happened yet. How, then, is it possible to have knowledge about something which has not yet happened? Such knowledge would violate Items 1a and 4c, and perhaps 1c, of Broad's limiting principles.

Causality

Closely related to difficulties with the nature of time are the difficulties with causality. Of the precious little that can be said with assurance about the concept of causality, one of the things which seems most sure is that a cause must always precede its effects. But in the case of precognition of any sort, an event in the future--the event being precognized--is presumably causing an event in the present

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[18]John W. Dunne, An experiment with time (London: Faber and Faber Ltd., 1927) p. 74.

--the precognition of that event; that is, a cause follows its effect. This is highly irregular when viewed within the framework of causality described above, and would violate Items 1a and 1c.

Again, if telepathy and clairvoyance occur, they violate Items 1c, 4a, 4b, and perhaps 3. Post-cognition would apparently violate Items 1b and 4d. Psychokinesis would violate Item 2 and, presumably, Item 1c.

Free Will

Another matter which has been perplexing philosophers for many years, particularly religious philosophers, is the question of free will versus determinism. Briefly, the question may be stated as follows: Is man capable of acting as he pleases, or is he compelled by some supernatural force to act according to a predetermined plan, and unable to act on any spontaneous decisions of his own? Now if, as indicated by precognition, events of the future can be known to someone before they happen, then we would seem to have strong evidence for the view that things are predetermined. Though it might be held that only some things are predetermined, or that only a rough outline or general plan is predetermined, there would still seem to be a severe restriction placed on man's free will.

Mind-Body Relationship[19]

The relationship between the mind and the body has perplexed men since before the days of philosophers. Many primitive cultures believe that some ethereal part of a person's being has the power to leave its body and go wandering about while that person is asleep; this part, generally called soul in this context, leaves the body permanently when the person

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[19]No distinction will be made in this thesis between the terms "mind" and "soul." They are synonymous with each other, as well as with "spirit" when used in this similar sense.

dies. But such a view is not popular in modern Western society. There is some doubt as to just when a body becomes infused with that spark of something which is called human life, but once this happens, whether at the moment of conception, or sometime during gestation, it and its body are considered to be permanent companions -- each a prisoner of the other -- until death of the body. What happens then is not too clear, but Christianity, along with most other religions, holds that this is not the end for the non-material portion.

Out-of-the body experiences and survival appear to conflict with Items 3 and 4a, as well as the above-described common-sense notion of the inseparability of the mind and the body.

Let us presume now to have demonstrated a genuine conflict between the conclusions of psychical research and our beliefs about time, free will, causality, and mind-body relationships. We will go on to examine each of these areas of belief in greater detail in the following chapter.

CHAPTER IV

DISCUSSION OF AFFECTED PHILOSOPHICAL ISSUES

Time

Let us first examine our traditional beliefs about time. Broad says that "temporal characteristics are among the most fundamental in the objects of our experience, and therefore cannot be defined."[1] Among the first of these fundamentals is the idea of succession: Some things happen before (or after) others. This idea is easily demonstrated. Consider, for example, a baseball game: If the batter hits the ball, the fielder's job is to catch the ball and put the batter out at first base. Now the point is, that no matter how hard he tries, there simply is no way the fielder can throw the ball to first base before he has caught it. The throw to first base must invariably and inevitably occur after the catch, just as the catch must come after the hit, which must come after the pitch. One of the next most basic of these fundamentals is the idea of duration, which is derived from succession. There is time (duration) between the time (moment) the batter hits the ball and the time (moment) the fielder catches it. Not only was there succession with respect to the two events, but there was also duration between them.

The complexities of time have perplexed philosophers since the time of Parmenides and Heraclitus and continue to do so. Time has also

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[1]C. D. Broad, "Time," Encyclopaedia of Religion and ethics, ed. James Hastings, XII (New York: Charles Scribner's Sons, 1922).

perplexed mathematicians and scientists. For example, the Nobel prize for physics in 1961 was awarded to a German physicist, Rudolf L. Mossbauer, for the discovery of a characteristic of atoms now known as the Mossbauer Effect.[2] One of the major reasons this was considered a significant contribution was that it provided an extremely accurate means of measuring time and made possible for the first time laboratory tests of the theory of relativity.[3]

Regarding the history of the development of our conceptions about time, Broad says

> Our knowledge of time as of space owes more to the labours of mathematicians and physicists than to those of professed philosophers. . . . To the Greeks we owe much less with regard to time than with regard to most matters of philosophic or scientific speculation.[4]

Nevertheless, a different point of view regarding the importance of time and change was at the root of the difference between the pre-Socratic philosophies of Parmenides and Heraclitus, and the famous paradoxes of Zeno involved the nature of time and motion. The first definitive statement of the nature of time was made by Plato, and this is a rather obscure statement. He described time as a "moving image of eternity" which is regulated by "number," and he considered time and the universe to be co-extensive. That is, time came into existence at the same time the universe did, and would cease to exist if the universe ceased to exist.

Aristotle considered time in some detail, and appears to have been well aware of the strange complexities involved. He concluded that time

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[2]Rudolf L. Mossbauer, "Recoilless nuclear resonance absorption of gamma radiation," Science, Vol. 137.(September 7, 1962) 731-738.

[3]Science, Vol. 134,(Nov. 10, 1961) p. 1513.

[4]C. D. Broad, "Time," Ibid.

is "number of movement in respect of before and after," and that it is continuous since it is an attribute of what is continuous, namely motion. It is a continuum made up of before and after which are both divided at, and made continuous by, an ever-moving indivisible "now." Aristotle seems to have confused the question of the metaphysical nature of time with the problem of measuring it, and Broad says "there seems no reason to think that Aristotle was really clear as to the distinction between time and motion."[5] Plotinus also wrestled with the problem, and pointed out some of the confusions of Aristotle.[6]

Augustine, in his first "confession" writes

> Who can readily and briefly explain this? Who can even in thought comprehend it so as to utter a word about it? But what in discourse do we mention more familiarly and knowingly than Time? And we understand when we speak of it; we understand also when we hear it spoken of by another. What, then, is Time? If no one asks me, I know; if I wish to explain it to one that asketh, I know not.[7]

St. Thomas also discussed the question of time with some thoroughness[8]

> Descartes looked upon time as arising from motion, and on our temporal experience as due to a comparison of the durations of certain regular motions, and as a manner of conceiving of duration in general.[9]

While Descartes apparently had some appreciation for the importance of time, but was unable to work it into his scheme, Spinoza dismissed it as "devoid of ontological significance.[10]

To support the quotation above by Broad regarding the important contributions of non-philosophers, we can point to the major contribution

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[5] C. D. Broad, "Time," Ibid.

[6] J. Alexander Gunn, The problem of time (London: George Allen & Unwin Ltd., 1929) p. 31.

[7] Ibid., p. 33.

[8] Broad, "Time," Ibid., Vol. XII

[9] Descartes, Principia I. 57. cited in Gunn, 45.

[10] Gunn, Ibid., 47.

made by Galileo. "He established the notion of objective mathematical time, the pure 't' of physics with which we are today so familiar," according to Gunn. Gunn then goes on to say

> Thus time came to be given an importance which the mediaevals (and Descartes and Spinoza) never bestowed on it. Time was no longer merely the measure of motion, but rather something independent of motion (but measured by motion), and flowing on its course for ever and ever as enduring as God Himself - an objective reality independent of our perception of it.[11]

Hobbes and Barrow both contributed to the understanding of time, and then came Newton, whose ideas on the subject dominated both scientific and philosophical thought for the next two centuries.[12] Newton identified Absolute Time which was a metaphysical notion of something which flowed on evenly independent of any events taking place within it. He also clearly distinguished this from "popular" time, as measured by days, weeks, etc. It is to a large degree Newton's Absolute Time which is our present-day common-sense idea of time with which we have so much trouble reconciling the concepts of relativity.

Newton was criticised by Locke, Berkeley, Hume, and Leibniz. The disagreement of the latter culminated in a series of ten letters between Leibniz and Dr. Samuel Clarke, a friend and disciple of Newton's whom Newton chose as his champion. These letters were published by Clarke in 1717.[13] Leibniz held a relational theory of time; that is, that events are more fundamental than moments.[14]

The next major contributor to the understanding of time was Kant. He disagreed with Leibniz as well as Newton, and one of his main ideas,

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[11] Gunn, Ibid., p. 51.

[12] Ibid., 57.

[13] Ibid., 71.

[14] Whitrow. G. J., The natural philosophy of time, (London, Thomas Nelson & Sons, Ltd., 1961) p. 36.

of course, was that time (along with space and causality) is an *a priori* form of our perception. However, according to Gunn, "Kant's doctrine of time is highly unsatisfactory and contradictory."[15] Part of his difficulty was apparently due to his attempts to relate time to causality.[16] At any rate, his major contribution was not in his attempted solutions of problems connected with time, but rather in his statement of the problems.[17]

Hegel joined Parmenides, Plato, Plotinus, Aquinas, and Spinoza in judging time to be irrelevant and inapplicable to his idea of ultimate reality.[18]

Now we approach the eve of relativity, and the names of physicists are once again important in connection with time. Men such as Michelson and Morley, Lorentz and Fitzgerald, Mach, Minkowski, and Einstein pointed out acute paradoxes regarding time, and fused space and time into something called space-time. Time has never been the same since. According to Einstein, for example, absolute simultaneity does not exist and clocks do not all run at the same rate, but at different rates depending on their location and velocity. The philosophers of this period who had something important to say about time are Samuel Alexander, Bergson, Broad, Cassirer, Reichenbach, Russell, and Whitehead.

On first encounter, a systematic comprehension of the subject of time in the 20th century seems almost hopeless. But fortunately the

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[15] Gunn, *Ibid.*, p. 95

[16] *Ibid.*, p. 111.

[17] *Ibid.*, p. 119.

[18] *Ibid.*, p. 129.

job has been made much easier by such writers as Broad and Gunn. First of all, the subject may be approached from any of three major points of view. These can be called the subjective, objective, and metaphysical points of view.

Subjective Time

Subjective time is time as we directly experience it, and is also called psychological time. It is time as percept rather than concept. Bergson deals almost exclusively with this aspect of time. A study of time from this aspect tells us such things as the following: When we awaken from a period of sleep, we are not directly aware of the time that has passed while we were asleep. Many people have an intensified awareness of the passage of time while under hypnosis, and some have a phenomenal ability to measure time accurately while hypnotized or in a post-hypnotic state.[19] On the other hand, almost everyone is aware that in the normal state time seems to pass more quickly when we are busy than when we are idle. This aspect of time is, of course, the first of which man is aware, and is thus prior to the other aspects with respect to order of discovery.

Objective Time

Objective time is the time that we measure with clocks and calendars. It is also called physical time. It is, generally speaking, time as concept rather than percept. Failure to make this distinction between subjective and objective time has caused a number of treatments of the

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[19] Ibid., 385.

subject to be unnecessarily cloudy. According to Gunn, both Aristotle and Newton, for example,[20] failed to make this distinction. Plotinus hinted at the distinction,[21] but the notion of objective time was first established by Galileo.[22] Locke discussed the issue[23] but it was not until Kant and his successors studied the problem that the distinction between subjective and objective time was clearly recognised.[24] Newton's Absolute Time is a view of objective time, as is the relativistic time of modern physics.

Metaphysical Time

Investigations of neither psychological time nor physical time will give us conclusive ideas regarding the true nature of time considered as a whole. This is the job of metaphysics. Metaphysics must attempt to integrate the findings of both psychologists and physicists, and any other available knowledge, and come up with an intelligible metaphysical concept. "Is time real, or purely a subjective notion?" "Can time run backwards?" are questions which concern the metaphysical aspect of time.

Summary

Within each of these aspects there are perplexing problems, and they are often confounded by the failure of writers to understand or take account of these different aspects. There have been two main classes of theories about time. These are relational theories and absolute theories.

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[20] Ibid., p. 26 and 62.

[21] Ibid., p. 32.

[22] Ibid., p. 30.

[23] Ibid., p. 66.

[24] Ibid., p. 171.

Relational theories, exemplified by Leibniz, hold that time is created by events. Absolute theories, such as Newton's, hold that time is independent of events.

Which of the three aspects of time is affected by the conclusions of psychical research? Psychologists are concerned with subjective time, and they are also concerned with psychical research. Thus there is some connection between the two. Perhaps some day there will be serious concern over such questions as the time-awareness of a mind which is having an out-of-body experience, but for the present there does not seem to be any direct relation between subjective time and psychical research.

Similarly, there does not appear to be any direct relation between objective time and psychical research. It is conceivable that some day psychical research might make some contribution in the area of time measurement, but for the present there is no obvious connection.

Thus, if there is any connection between psychical research and time, it must be in the area of metaphysical time. And, clearly, this is the case. But let us defer further discussion of this question to Chapter V.

Causality

Webster[25] defines cause as "a person, thing, fact, or condition that brings about an effect or that produces or calls forth a resultant action or state: . . ." And the column-long definition of effect begins as follows: "Something that is produced by an agent or cause." This circularity illustrates dramatically the state of our understanding of

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[25] Webster's Third New International Dictionary of the English Language Unabridged (Springfield, Massachusetts: G. C. Merriam Company, 1961.)

the concept of causality. It is one of the fundamental characteristics of our experience,[26] yet neither philosophers nor scientists have worked out a clear understanding of what it really consists of.

One of the oldest statements of causality, and also of determinism, was made by Democritus: "By necessity are forecordained all things that were and are and are to come."[27] Plato held that the Idea of the Good was the final cause of phenomena.[28] But similarly to the concept of time, the first comprehensive description of causality was made by Aristotle. He identified four types of causes: material, formal, efficient, and final causes.[29] These may be described as follows: (1) the material cause of an object is the material from which it is made, as a statue made of bronze. (2) The formal cause of an object is its prior-existing pattern or shape (Platonic "form"). (3) The efficient cause of a thing is the immediate agent which brought it about, as the sculptor who created the statue. (4) The final cause is, roughly speaking, the reason or purpose for which the statue was created. Within each kind of cause, some are prior to others, as "both 'the ratio 2:1' and 'number' are causes of the Octave, and the classes that include any particular cause are always causes of the particular effect."[30] Aristotle also provides room for chance to operate -- through "accidental causes."

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[26]According to William James (Pragmatism, New York: Meridian Books, Inc., 1955) p. 119; "This, if anything, seems to have been an antediluvian conception; for we find primative men thinking that almost everything is significant and can exert influence of some sort."

[27]Cited in Henry Margenau, The nature of physical reality, (New York: McGraw-Hill Book Company, Inc., 1950) p. 395.

[28]Wilhelm Windelband, A history of philosophy, Vol. I (New York: Harper & Bros., 1958) p. 128 (Originally published in 1892.).

[29]Aristotle, Metaphysics Book V, Chapter 2, 1013a24 - 1014a26.

[30]Ibid., 1013b33.

> Again, there are accidental causes and the classes which include these, e.g., while in one sense "the sculptor" causes the statue, in another sense "Polyclitus" causes it, because the sculptor happens to be Polyclitus; and the classes that include the accidental cause are also causes, e.g., "man" - or in general "animal" - is the cause of the statue, because Polyclitus is a man, and man is an animal.[31]

Furthermore, things can be causes of one another, as exercise is the efficient cause of good physical condition and good physical condition is the final cause of exercise. Also, it is possible for two or more kinds of causes to coincide.[32]

According to Margenau, Aristotle's treatment gave rise to considerable confusion in later times, and "the problem, whatever it may be, was rendered incapable of solution by Aristotle's dissection."[33] At any rate, little new was said about causality for over 2000 years; that is, until David Hume's Treatise on human nature. For example, according to F. R. Tennant,

> At the beginning of the modern period of philosophy we find Descartes, who sets out to develop a system of knowledge from the principle of contradiction alone, compelled to call in the aid of the principle of causality, which he nowhere deduces or proves. Descartes held the scholastic conception of the causal relation, according to which the effect is contained in the cause after the model of the logical connection of ground and consequence; . . .[34]

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[31] Ibid., 1013b34-1014a4.

[32] Aristotle, The Physics (Trans. P. H. Wicksteed and F. M. Cornford) Vol. 1, The Loeb Classical Library (New York: G. P. Putnam's Sons, 1929) p. 165.

[33] Margenau, Ibid., p. 395.

[34] F. R. Tennant, "Cause, causality," Encyclopaedia of religion and ethics, ed. James Hastings, III, (1922).

Early scientists, such as Newton, attributed a metaphysical necessity to the connection between cause and effect.[35] The everyday concept of causality thus had two characteristics: Temporal succession and necessary connection. It was felt that a sort of force operated between cause and effect, and that causes could be deduced from their effects, as well as effects deduced from causes.

Several attempts were made to eliminate this idea of interaction between cause and effect: one of them was Malebranche's doctrine of Occasionalism. Briefly, this doctrine held that on the occurrence of an event which was ordinarily called a cause, God produced the other event, ordinarily called the effect. Thus the first event was an occasional cause but not a true cause of the later event. Of similar intent was Leibniz' doctrine of pre-established harmony, which substituted for the continual intervention of God a single original act of creating harmony among the elements of reality. Such schemes, however, did not gain great acceptance.

Hume probed deeper into the idea that there was a necessary connection between cause and effect.

> My practice, you say, refutes my doubts. But you mistake the purport of my question. As an agent, I am quite satisfied in the point; but as a philosopher, . . . I want to learn the foundation of this inference.[36]

His conclusion was that

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[35]Victor F. Lenzen, Causality in natural science, (Springfield, Ill., Charles C. Thomas, 1954) p. 11.

[36]David Hume, An enquiry concerning human understanding and selections from a treatise of human nature, (Chicago, Ill.: Open Court Publishing Co., 1921) p. 38.

> All these objects, of which we call the one cause and the other effect, consider'd in themselves, are as distinct and separate from each other, as any two things in nature, nor can we, ever, by the most accurate survey of them, infer the existence of the one from that of the other. 'Tis only from experience and the observation of their constant union, that we are able to form this inference; and even after all, the inference is nothing but the effects of custom on the imagination. . . . the necessary connection is not discovered by a conclusion of the understanding, but is merely a perception of the mind. . . . Motion in one body in all past instances, that have fallen under our observation, is follow'd upon impulse by motion in another. 'Tis impossible for the mind to penetrate farther. From this constant union it forms the idea of cause and effect, and by its influence feels the necessity. . . .[37]

Thus did Hume attack one of the two major characteristics of causality. He also questioned the other. By using the collision of bodies, such as billiard balls,[38] as an example, he pointed out some ambiguity in the idea of temporal succession. If a moving ball strikes a stationary one, what precisely was the cause of the latter's movement? Was it the moving ball? Was it the motion of this ball? Or was it the event which was the collision of the one with the other? The first two alternatives are antecedent causes, but the true cause was the collision. Another interesting point is demonstrated here; as a result of the collision, the motion of the moving ball as well as the stationary ball was altered. Thus, the stationary ball was a cause while the change in motion of the moving ball was an effect. And for all practical purposes, the center of these causes and effects -- the collision -- is an instantaneous event.[39]

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[37] David Hume, A treatise of human nature and dialogues concerning natural religion, Vol. 2, Ed. T. H. Green and T. H. Grose (London: Longmans, Green, & Co., 1886) p. 186.

[38] Lenzen, Ibid. pp. 6 & 7.

[39] One might argue that the collision can be broken down into smaller elements -- initial contact, elastic deformation, etc. -- but the essential problem would still remain at the microscopic level.

Hume's treatment marked the beginning of modern thinking on the subject of causality. Not long after his demolition of traditional causality came Kant, who attempted to rescue some sort of meaningful concept from the wreckage.

Obviously, causality was not something which could be thrown on the trash heap as worthless, invalid, or a figment of man's imagination. Science and most of our daily activities require it as a basic assumption; without it we would be thrown into hopeless confusion. And yet, Hume had clearly demonstrated that we cannot find a philosophical explanation of it through an empirical approach. How, then, could we explain it?

Kant's startling but ingenious conclusion was that causality is an a priori concept. That is, that causality, along with space and time, is a built-in bias in our minds which subtly impresses itself on our experiences and orders them into the patterns which we perceive.

> But though all our knowledge begins with experience, it does not follow that it all arises out of experience. For it may well be that even our empirical knowledge is made up of what we receive through impressions and of what our own faculty of knowledge . . . supplies from itself. If our faculty of knowledge makes any such addition, it may be that we are not in a position to distinguish it from the raw material, until with long practice of attention we have become skilled in separating it.[40]

Thus causality can be neither verified nor disproven by experience. It should be mentioned, of course, that for Kant, these conclusions, like all of his metaphysics, applied only to the phenomenal world. We can know nothing of the noumenal world. Nevertheless, it was an impressive rescue of causality from Hume's attack.

In the discussion of the development of the concept of time, it was pointed out that after Kant it passed back to the hands of mathematicians

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[40] Immanuel Kant, Critique of pure reason, (New York, Willey Book Co., Revised Edition) Trans., J. M. D. Meiklejohn; p. 1.

and physicists. Similarly, the development of causality passed to the hands of the physicists. Most authoritative works dealing with causality after Kant consider it in association with science.[41] What, then, do the scientists have to tell us about causality? We find many words, but very little illumination since the days of Hume and Kant. We find Henry Margenau, Professor of Physics and Natural Philosophy at Yale University, saying in his preface to the English translation of Cassirer's Determinism and indeterminism in modern physics, "As to the meaning of causality, or the principle of causality, current literature is so rich in divergent interpretations that a mere catalogue of meanings would require a volume."[42] He had said earlier that "The words cause and effect are among the most loosely used in our language," and furthermore that "Science uses them with no less a variety of meanings than does common speech, and it may at once be noted, the more sophisticated mathematical investigations of science do not use them at all."[43] This essentially agrees with Bertrand Russel's statements

> I . . . maintain that the word "cause" is so inextricably bound up with misleading associations as to make its complete extrusion from the philosophical vocabulary desirable; . . . To me it seems that . . . the reason why physics has ceased to look for causes is that, in fact, there are no such things. The law of causality, I believe . . . is a relic of a bygone age, surviving, like the monarchy, only because it is erroneously supposed to do no harm.[44]

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[41]See for example Karl Pearson, Grammar of science (New York: Meridian Books, 1957)(Originally published in 1892),
Edwin A. Burtt, Metaphysical foundations of modern physical science (New York: Harcourt, Brace & Co., 1927),
Ernst Cassirer, Determinism and indeterminism in modern physics, (New Haven: Yale Univ. Press, 1956)(Originally published in Sweden in 1936),
Victor F. Lenzen, Causality in natural science, (Springfield, Ill.: Charles C. Thomas, 1954).

[42]Cassirer, Ibid., p. xi.

[43]Margenau, Nature of physical reality, p. 389.

[44]Bertrand Russell, Mysticism and logic (New York: W. W. Norton & Co., 1929) p. 180.

But Margenau goes on to say "But the interesting fact remains that at present all branches of science that have reached a satisfactory state of precision espouse causality as a principle of their methodology. . . ."[45] The principle, as it is usually employed, is temporal succession only, as left after the criticism by Hume. Thus, there has been little, if anything, added by science to our understanding of causality except perhaps to reinforce Hume's criticisms. As indicated earlier, in Chapter III, the only statement of causality which can be made with any degree of assurance is that a cause is something which invariably (so far as we know) occurs either simultaneous with or prior to a certain effect.[46]

Even this statement, of course, must be qualified because we recognize (1) some simultaneous occurrences as concurrent effects of a separate cause, as in the case of the heat and light produced by striking a match, and (2) cases of invariable succession where we feel sure there is no causal relation, as in Russell's example of the factory laborers in London going to work after the whistle in Manchester blows.

Determinism

Intimately related to the concept of causality, and somewhat less related to the status of time, is the much-discussed question of determinism versus free will. The paired terms determinism and indeterminism, necessitarianism and libertarianism, and predestination and freedom have also been used to describe the two choices. The literature on the subject is

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[45] Ibid., p. 412.

[46] Broad, C. D., The mind and its place in nature (New York: Harcourt, Brace & Co., 1925) p. 454.

more voluminous than that on either time or causality.[47] It will not be necessary to discuss it in as great detail. The basic question can be put in the following simple form for our purposes, and a brief discussion will suffice. Notwithstanding this apparent simplicity, the problem is quite perplexing.

It was previously mentioned that the quotation from Democritus was one of the oldest statements of determinism; however, another quotation has been for many years considered to be the classical statement of determinism.[48] It was made by Laplace and is quoted frequently.

> An intelligence which knows at a given instant all forces acting in nature, as well as the momentary positions of all things of which the universe consists, would be able to comprehend the motions of the largest bodies of the world and those of the smallest atoms in one single formula; provided it were powerful enough to subject all data to analysis. To it, nothing would be uncertain, both future and past would be present before its eyes.[49]

The meaning which this statement was presumed to have is that all events in the universe, large and small, past, present, and future, occur according to some predetermined master plan which, furthermore, cannot be changed. Indeterminism, then, is the opposite: There is no master plan; some events occur by chance.

The issue between determinism and indeterminism has been of interest to both religion and ethics throughout the years. Western religion has

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[47]According to Encyclopaedia of religion and ethics, ed., James Hastings, Vol. VII, ("Libertarianism and Necessitarianism") "The literature on this subject is well nigh unlimited; . . ."

[48]Cassirer disagrees that it is a valid statement of determinism. (Determinism and indeterminism in modern physics, p. 3.)

[49]Laplace "Theorie analytique des probabilites," cited in Margenau, p. 397.

in general tended toward a genuine Laplacian determinism with God as the "intelligence." On the other hand, ethics, nothwithstanding various attempts to reconcile determinism and indeterminism by semantic jugglery, tacitly presupposes what in plain language can only be called indeterminism. After all, if a person's actions are all predetermined, why bother exhorting him to do otherwise than what he must? Why punish a criminal for doing what he must?[50]

But what is the practical significance of a belief in one or the other of the alternatives? On analysis, there seems to be very little difference. Suppose I believe in determinism. If the future be determined, but unknown, how can it have any influence on my actions today? I can set my course in any direction I choose, change my mind five times, or five hundred times -- take any conceivable action -- and still be completely confident that I am at all times doing what has been predetermined. Are my actions necessarily any different from what they would be if I believed in indeterminism? It does not seem so. The only practical significance, then, of a belief in determinism as opposed to indeterminism, is an inclination to accept the world as it is -- to accept the past as something which cannot, or could not, have been undone, and to accept the present and future, insofar as they are beyond our influence, as they are. Thus, determinism would seem to be a slightly more comfortable belief because it limits one's responsibility for one's actions. What is done is done, and could not have been otherwise. Therefore, one need feel no guilt for his past actions nor remorse that the general state of the world is no better.

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[50]An obvious answer (but not a very satisfactory one) is, of course, that the punishment is also predetermined.

But the question is still important from a metaphysical point of view. Characteristically, Broad brings more than the usual degree of clarity to the matter. His major treatment is in a paper presented at a symposium of the Aristotelian Society and the Mind Association in 1931.[51] He begins by defining determinism as follows. He lays down rigorous definitions, and then concludes that

> For any substance S, any characteristic ψ, and any moment t, there are three and only three mutually exclusive and collectively exhaustive alternatives, viz., (i) that S has not ψ at t, (ii) that S continues to have ψ at t, and (iii) that S changes with respect to ψ at t.

Determinism, then

> is the name given to the following doctrine. Let S be any substance, ψ any characteristic, and t any moment. Suppose that S is in fact in the state σ with respect to ψ at t. Then the compound supposition that everything else in the world should have been exactly as it in fact was and that S should instead have been in one of the other two alternative states with respect to ψ is an impossible one.

He goes on to say that

> The determinist need not, and generally does not, assert either the necessity or the impossibility of the separate items of this compound supposition. . . . What he says is that the combination of sameness in the rest of the world up to this moment with difference in the state of S with respect to ψ at this moment is impossible.

Indeterminism can then be defined as the doctrine that there is at least one substance, one characteristic and one moment for which the above compound supposition is possible. He points out that

> It has commonly been held by indeterminists that rational beings are the only substances which are known to be exceptions to determinism, and that the characteristic of voluntarily deciding on a certain alternative is the only one in respect to which they are known to be exceptional.[52]

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[51] C. D. Broad, "Indeterminacy and indeterminism," Aristotelian Society Proceedings, Supplementary Volume X, 1931, p. 135-160.

[52] Ibid.

He calls this volitional indeterminism.

Broad makes one more clarification before leaving this section

> Before leaving the subject of definitions I must point out one distinction, which is really quite clear, but which, I cannot help thinking, has sometimes been ignored by writers on the present topic. The distinction is this. It is one question whether voluntary decisions are or are not completely determined. It is an entirely different question whether they do or do not themselves determine effects. I have explained what the first question means; and it will be seen from my definitions that it has no reference to any moment later than that at which the decision takes place. The second question refers wholly to what happens after the occurrence of the decision. It is therefore plain that they must be different questions. . . . I will now define the proposition that a state of a substance is causally ineffective. The definition is as follows:
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> (1, 5) "The state σ of a substance S with respect to a characteristic ψ at a moment t is causally ineffective" means "No subsequent state of any substance would have been other than it in fact was even though S had been in one of the two other logically possible states with respect to ψ at t."
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> It is plain from our definitions that it is logically possible that a volition should be completely determined and effective, or completely determined and ineffective, or incompletely determined and effective, or incompletely determined and ineffective.[53]

Broad then goes on to conclude that the arguments for determinism were never particularly convincing in the first place, and have become somewhat less so with the advent of Heisenberg's Principle of Uncertainty. Eddington, in the same symposium, states his belief that "Heisenberg's principle is one of the great fundamental principles of the physical universe (or of our mode of apprehending it) comparable with the principle of Relativity," and indicates that this implies a rather low probability for the existence of mental determinism.[54]

Thus modern physics leans heavily toward indeterminism. We will not discuss in detail such things as Heisenberg's Principle of Uncertainty.

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[53] Ibid.

[54] A. S. Eddington, "Indeterminacy and indeterminism," Aristotelian society proceedings, Supplementary Volume X, p. 161.

or how an atom decides when it is going to erupt in a radioactive explosion, but it is appropriate to establish a nodding acquaintance with the state of affairs in modern physics. As physicists have pursued their quest for knowledge, the extent of the universe, both microcosm and macrocosm, has increased at an alarming rate. Each increase in the ability to probe the distant reaches of space has simply increased the known size of the universe. Each advancement in the ability to build more powerful atom-smashers seems to raise more questions than it answers. And, according to Capek, these advancements in our knowledge have come faster than our ability to cope with them. Thus he says, regarding determinism

> The classical concepts of space, time, matter, motion, energy, and causality have been radically transformed recently; although the words used by contemporary physicists are the same, their connotations are altogether different from those of their classical counterparts. There is hardly any similarity between the "matter" of modern physics and the traditional material substance of the classical period, and this is true in varying degrees of other concepts as well.
> . . . . . .
> In biology, psychology, and the social sciences the classical form of determinism, modeled consciously or unconsciously on the Laplacian pattern, remains practically intact. But even within physics, notwithstanding our declarations to the contrary, the classical habits of thought persist and the fact that they are driven into subconsciousness by being consciously rejected makes their influence only less easily detectible and far more insidious.[55]

Hopefully, this very brief discussion of determinism will be sufficient for our purposes.

Mind-Body Problem

We now turn to a subject very close to some of the subject matter of Chapter I. A cursory study is enough to reveal that the problem of the relationship between the mind and the body, or the soul and the body,

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[55]Milic Capek, The philosophical impact of contemporary physics. (Princeton, New Jersey: D. Van Nostrand Co., Inc., 1961) pp. xi & xv.

or spirit and matter, is a rather formidable one. It is also an ancient one. Belief that body and soul are different seems to be one of man's oldest cultural beliefs.[56] The problem has occupied philosophers more or less continuously throughout the history of philosophy. On the other hand, it has tended to be ignored by scientists. From the standpoint of Western religions, and of religions in general, there is little, if any controversy: The mind or soul is of the spiritual realm, while the body is of the material realm, and the two realms are different. Nevertheless, this problem, like time, causality, and determinism, is an active problem. This is particularly true for philosophy; but it is also true for science which, hopefully, will be able to offer some empirical data which will bear on the matter. And it is true for religion because of the many people on its borderlines who are seeking answers but who are not willing to be convinced by orthodoxy and revelation alone.

Among philosophers, the name Descartes immediately comes to the forefront in connection with the mind-body problem. This is not so much because he formulated lasting solutions to questions pertaining to the problem, but because he stirred the pot. In doing so, he brought to the surface in a provocative manner a number of important issues. Consequently, much subsequent discussion of the mind-body problem has been for the purpose of either elaborating or discrediting various things he

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[56]According to William McDougall in Body and mind (London: Methuen & Co., 1911) p. 1, "It would seem that from a very remote period men of almost all races have entertained the belief that the living man differs from the corpse in that his body contains some more subtle thing or principle which determines its purposive movements, its growth and self-repair, and to which is due his capacity for sensation, thought, and feeling. For the belief in some such animating principle, or soul, is held by almost every existing race of men, no matter how lowly their grade of culture nor how limited their mental powers; and we find evidences of a similar belief among the earliest human records."

said. He espoused dualism, which in spite of some incompatibilities with experienced reality, remains a popular belief.

Dualism is an answer to a question as old as Thales. What are things made of? This is the question of substance. Descartes said there were two types of substances -- bodies and minds. According to him the identifying characteristic of bodies is that they occupy space; of minds, that they are conscious, or capable of thought.[57] "The world falls thus into two completely different and completely separated realms."[58] This independence presents one of the most serious problems within dualism, because it is obvious that within each human being the two are intimately associated with each other. Descartes' not too satisfactory solution was that the point of interaction between the soul and its body is the pineal gland located in the middle of the brain.

> Let us then conceive here that the soul has its principal seat in the middle of the brain, from whence it radiates forth through all the remainder of the body by means of the animal spirits, nerves, and even the blood, which, participating in the impressions of the spirits, can carry them by the arteries into all the members.[59]

One of the first variations of Descartes' scheme of things was the doctrine of Occasionalism, attributed to Geulincz and Malebranche among

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[57]It should be noted that this is a "dualism of substances," according to Wilhelm Windelband in A history of philosophy, Vol. II (New York: Harper & Bros., 1958) p. 404. In a broader sense, Descartes' system was really a pluralism because he posited a God in addition to the two types of substances. It is possible that this reference to God was merely a concession to the Church; he was certainly aware of the price a philosopher or scientist could pay for refuting dogma.

[58]Wilhelm Windelband, A history of philosophy, Vol. II (New York: Harper & Bros., 1958) 405. (Originally published in 1901.)

[59]From "The passions of the soul," Part First, Article XXXIV. Ralph M. Eaton (Ed.) Descartes selections (New York: Charles Scribner's Sons, 1927) p. 374.

others.[60] This doctrine held that interaction between body and soul was impossible, and explained the apparent interaction as follows: Upon the occurrence of one event, generally referred to as a "cause," God produces another event, generally referred to as "effect."

Leibniz developed a doctrine of "pre-established harmony," which stated that the apparent interaction was really due to God's original creative effort which set things in such perfect motion that body and soul proceeded independently but in perfect harmony just as two clocks might both keep perfect time. Spinoza said that body and soul are merely two different attributes of one basic substance -- God. These attributes may be compared to the sight and the sound of an event, which while concurrent do not have any direct causal relation between them. Hobbes held a strict materialism which said that man's body was real, but his soul was a product of his imagination. Berkeley, of course, propounded just the opposite -- that man's soul or mind was real, but that his body was illusory, while Hume said that both were illusory.[61]

It is apparent that quite a number of different answers have been proposed, by philosophers of highest reputation, to this question which strikes at the very heart of metaphysics. It is beyond our scope here to give a more detailed account of the matter. However, it is appropriate to describe briefly the major theories of the present day. According to the Encyclopaedia Britannica,[62] these are interactionism, epiphenomenalism, behaviorism, and parallelism. Interactionism, which is the more or

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[60] McDougall, Body and mind, p. 13.

[61] McDougall, Ibid., p. 76.

[62] Encyclopaedia Britannica, 1964, Vol. 3, "Body and mind."

less common sense theory and is a presupposition for much religious thinking, maintains that the mental and the physical are causally related. That is, "that in sensation the physical causes the mental and in volition the mental causes the physical event."[63] (We seem to be left at the doorstep of causality, which has been discussed previously.) Epiphenomenalism maintains that only physical events can cause other physical events, and mental events are merely by-products of physical events. Behaviorism, in its strictest form, denies mental processes. There is a more subtle form, however, which maintains "that the language that we use in referring to 'mental processes' in fact refers not to events different in kind from bodily processes but to these same processes in a more complicated way."[64] Parallelism, like epiphenomenalism, maintains that only physical events can cause other physical events, but also that only mental events can cause other mental events. The physical and mental are thus concurrent but causally unrelated.

Ducasse, in his most recent book, devotes a chapter to the conception for which he suggests the name hypophenomenalism. This is in a certain respect the converse of epiphenomenalism, and says that the body is dependent on the mind.[65]

Summary

If these are the philosophical issues on which psychical research promises to shed new light, it does indeed promise to have important

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[63] Ibid.

[64] Ibid.

[65] C. J. Ducasse, The belief in a life after death (Springfield, Ill.: Charles C. Thomas, 1961) pp. 81-98.

implications for philosophy. An area of endeavor which claimed to make significant contributions toward resolving even one of these complex and long-standing problems would be worthy of notice. If psychical research can contribute toward all of them, it will undeniably demand serious attention.

CHAPTER V

DISCUSSION OF PHILOSOPHICAL IMPLICATIONS

We have described in Chapter IV the philosophical problems on which it appears the conclusions of psychical research will have some bearing. Now we are ready to examine the specific philosophical implications of those conclusions. We have seen that the philosophical problems involved are complex and interrelated. Because of this no single obviously logical approach to the subject of this chapter presents itself when one considers it from the standpoint of the problems. Therefore, it seems reasonable to approach the matter from the standpoint of the conclusions of psychical research. We shall consider these conclusions one at a time and discuss their implications individually in so far as possible. This approach has the added advantage of being the most desirable from the point of view of the person who is willing to accept only some of the conclusions. We shall consider the conclusions in order of increasing uncertainty.

Telepathy and Clairvoyance[1]

We have here to consider the philosophical implications of a mind's being able to obtain information from another mind without the use of the ordinary modes of sense perception -- that is, direct mind-to-mind communication (or perhaps mind-to-brain or brain-to-brain communication). We have

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[1]C. D. Broad, Religion, philosophy and psychical research (New York: Harcourt, Brace & Co., 1953) p. 16, refers to both telepathy and clairvoyance, as well as precognition, as "paranormal cognition" for the reason described on p. 88 above.

also to consider a mind's being able to obtain information from some state of affairs without recourse to either the ordinary modes of sense perception, or to another mind. This is direct object-to-mind (or object-to-brain) communication. The implications of such communication are in the area of epistemology. At least one new channel for acquiring knowledge is implied and it would probably result in a reconsideration of the exact method of functioning of the other modes. Such a reconsideration is undertaken by Broad in "Normal cognition, clairvoyance, and telepathy."[2] However, these occurrences cannot yet be classified as highly significant so far as their impact on philosophy as a whole is concerned. Of more interest to us here, perhaps, are the implications of telepathy and clairvoyance for psychical research itself. If one assumes that telepathy and clairvoyance are facts, then they can be used to explain other more radical types of allegedly paranormal occurrences. Broad suggests that many (of the very few) genuine mediumistic phenomena may be explained on the basis of paranormal cognition,[3] where otherwise they would strongly indicate some form of human survival.

The mediumistic phenomena in question are those where the medium allegedly reports information which the sitter feels could be known by nobody else except himself and the deceased communicator. Obviously if clairvoyance or telepathy between the sitter and the medium is possible, this provides a more plausible explanation than survival after death.

An interesting speculation in this area is suggested by the possible occurrence of telepathy and clairvoyance. Broad credits Bergson with the

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[2]Proceedings of the Society for psychical research, XLIII, (October 1935) pp. 397-438. Reprinted in RPPR.

[3]Broad, LPR, p. 426 and RPPR, pp. 25 and 236.

ideas, and it is a beginning assumption for Jainism and several other Oriental philosophies.

> The suggestion is that the function of the brain and nervous system and sense-organs is in the main eliminative and not productive. Each person is at each moment potentially capable of remembering all that has ever happened to him and of perceiving everything that is happening anywhere in the universe. The function of the brain and nervous system is to protect us from being overwhelmed and confused by this mass of largely useless and irrelevant knowledge, by shutting out most of what we should otherwise perceive or remember at any moment, and leaving only that very small and special selection which is likely to be practically useful.[4]

On such a theory, the mind functions rather like a radio receiver, tuning in only a small intelligible fraction of the multitude of electromagnetic signals which pervade our atmosphere. Telepathy and clairvoyance, then, could be likened to tuning in a different frequency, or perhaps to some sort of interference on the same frequency as our normal sense perception.

Precognition

The implications of precognition are much more dramatic. They involve time, causality, and determinism.

Time

If any part of the future can be known in any way (except by inference) then it must follow that the future is in some sense existent prior to its being actualized by passing through the present. What can this mean? One might be led to conclude that the future is somewhat like that portion of a reel of movie film which has not yet run through the projector, where the present is that portion which is being projected, and the past

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[4]Broad, RPPR, p. 23.

is that portion which has already been projected. An interesting example of such a theory is found in Dunne's An experiment with time.[5] It is too complex, with its four and five dimensional manifolds, to warrant detailed discussion here, but it is nevertheless extremely interesting and provocative.[6] Dunne's ideas might even be characterized as outrageous, but we should not be afraid of them for this reason alone. If precognition is indeed a fact, we may find ourselves forced to accept Dunne's or some other equally outrageous ideas about reality.[7]

One might also hypothesize that the future is developed in a probabilistic manner. That is, that future events, being causally dependent on past and present events, have certain probabilities of occurring certain ways. As the present moves closer, then, these probabilities increase as less and less time is available for low probability contrary occurrences. As an example, we might have on a Monday morning the possible event of my arriving on time for work at my office. Just prior to the accustomed time for my alarm clock to go off, this probability might be fairly high or fairly low depending on such things as whether I remembered to set it the night before, and whether there was a power failure during the night (if it is an electric clock). If my alarm does indeed go off on schedule, the probability

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[5]John W. Dunne, An experiment with time (London: Faber and Faber Ltd., 1927).

[6]For an excellent description and discussion of Dunne's theory of time and its ability to account for precognition, see C. D. Broad, "Mr. Dunne's theory of time in An experiment with time," Philosophy, Vol. X, (April 1935) pp. 168-185. (Reprinted in RPPR)

[7]Bertrand Russell is alleged to have said that "whoever would be a philosopher must learn not to be afraid of absurdities."(Professor Price's remarks in "The philosophical implications of precognition," Aristotelian society proceedings, Supplementary Volume XVI, 1937, p. 211).

of my being on time suddenly is increased. The magnitude of this increase will be influenced not only by the level of the probability of the alarm clock going off, before it did so, but also by such things as what time I retired the night before, how sound a sleeper I am, etc. In short, the probability of my being on time can be either increased or decreased by numerous possible events, but the closer my scheduled arrival time approaches, assuming I am on schedule, the greater this probability becomes. This probability does not become a certainty, however, until the instant I do in fact arrive on time. A low probability event such as an accident could happen at any time to prevent a highly probable event from actually occurring. The only thing that is certain prior to the occurrence of my arrival time is that I will either be on time or I will not.

Under such a probabilistic hypothesis, the future would be a pattern of events moving (relatively) toward the present. The pattern would be continuously changing, but the sum-total of the probabilities of individual key events would be steadily increasing. Such a hypothesis could comfortably accommodate precognition, because it provides a sort of existence of the future which can be precognized. It could also very comfortably accommodate false precognitions because any future event, no matter how probable, may still fail actually to occur.

Another of the relatively few speculations which have been made on this subject is one by Broad himself. This was presented in 1937 to the Aristotelian Society and was published in their Proceedings.[8] Broad introduces the idea by calling it a "perfectly fantastic suggestion,"

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[8] C. D. Broad, "The philosophical implications of foreknowledge," Aristotelian Society Proceedings, Supplementary Vol. XVI (1937), pp. 177-209.

and it is perhaps significant that this article was never reprinted in any of his later books.[9]

Broad's interest was plainly in what he called "critical philosophy" in his book Scientific thought, so he rarely indulged in what he called in this book "speculative philosophy." This, for him unusual, speculation was that time had a second dimension. He prefaced it by saying

> I believe that this suggestion is of some interest on two grounds: (i) So far as I can see, it is the one and only way in which the prehensive analysis of ostensible foreseeing, which was rejected long ago, could possibly be made intelligible and rehabilitated. And (ii) even if we continue to reject the prehensive analysis, the suggestion would enable us to deal with the causal difficulty in a way which we have hitherto shunned as impossible.[10]

The idea may be briefly summarized in the following way. If we let our ordinary dimension of time be represented by the x-axis of a set of two-dimensional rectangular coordinates, then the second dimension of time would be represented by the y axis. Let the present move from right to left along the familiar x coordinate dimension, and from top to bottom in the second dimension. Then if we let the origin coincide with any event for which we are interested in making comparisons, we have the following possibilities:

1. Events in the upper right quadrant will be past in both dimensions.
2. Events in the lower right quadrant will be past in the first dimension but ~~further~~ future in the second dimension.

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[9]That he still does not consider the idea to be completely without merit is indicated by the fact that he devotes several pages to describing a theory of two-dimensional time in 1956, in "A reply to my critics," in The philosophy of C. D. Broad, P. A. Schilpp (ed.) (New York: Tudor Publishing Co., 1959) p. 769.

[10]C. D. Broad, Ibid.

3. Events in the lower left quadrant will be future in both dimensions.

4. Events in the upper left quadrant will be future in the first dimension but past in the second dimension.

5. Events along the x axis, the only situation with which we are familiar, are either past or future in the first dimension but simultaneous in the second dimension.

6. Events along the y axis are either past or future in the second dimension but simultaneous in the first dimension.

Broad elaborates little further on the theory, but does point out that its main appeal to him is as an answer to what he calls the Causal Objection to the idea of veridical supernormal precognition. This Causal Objection, very briefly, says that an event in the future cannot cause effects at a point in time earlier than its own. The theory of a two-dimensional time, on the other hand, allows the interpretation that an event may have causal relations if it is earlier in at least one of the two dimensions. Thus, in terms of the familiar dimension of time, a cause could be earlier than, later than, or simultaneous with, its effects.[11] This proposal preserves the orthodox definition of causality. It is also possible, of course, to imagine a different sort of causal relation.

There have, no doubt, been other speculations regarding the nature of the future, but our purpose here is not to enumerate existing philosophical systems or possible systems which would be compatible with

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[11]The concept of two-dimensional time is discussed further by H. H. Price and by Broad in the same volume of the Proceedings. "The philosophical implications of precognition," Aristotelian Society Proceedings, Supplementary Volume XVI, pp. 211-245.

precognition. Our purpose is to point out the implications for any system of the new facts of experience which would follow if we were to accept precognition as genuine. One of these is clearly that the future must in some sense exist in order to be precognized.

Causality

So much for the implications of precognition for our ideas about time. What of causality? It seems that two radically different interpretations are possible, depending on our judgments regarding time. If we assume that something like Broad's two-dimensional time prevails, then there is very little, if any, difficulty reconciling it with our traditional idea of causality. The slight alteration of the relation between time and causality was described above. If we assume a highly deterministic doctrine -- that is, that events in the future are already determined -- we again have very little difficulty reconciling this with our traditional idea of causality. All future events, including any precognitions, will be held to be the effects of causes in the past.

However, if we should decide to assume some relatively indeterministic doctrine, precognition would be completely at odds with our idea of causality. Under such a doctrine an event in the future might be causally related to its precognition in the present. This appears to be a typically straightforward case of causality as we know it, except for one extremely important point. According to our traditional view, an effect cannot precede its cause in time. Thus, if we persisted in this indeterministic view, temporal sequence -- the very essence of causality -- might have to be abandoned. We would presumably be left in the uncomfortable position of having no way to describe causality

except as necessary connection between cause and effect, knowing very well the devastating character of Hume's criticism of this idea. Perhaps we would be forced to abandon our traditional view altogether and adopt a different understanding of causality.

Broad examines this point, apart from psychical research, in The mind and its place in nature.[12] He points out that

> our extreme unwillingness to admit that causation is nothing but regular sequence, and the extreme paradoxes to which any such views lead . . . suggest strongly that there is something in causation beside merely regularity of sequence.

He suggests that regular sequence may not be any part of what we mean by causation, but merely a sign by which we sometimes judge that a causal relation is present. Unfortunately, he does not give any suggestion as to what the evidence for causation may in fact consist of. In a symposium before the Aristotelian Society and the Mind Association in 1935,[13] Broad made a lengthy theoretical analysis of causation. Again, it is entirely apart from any mention of psychical research. It is concerned primarily with a comparison of the "regularity analysis of causal laws" and what he calls the "entailment analysis of causal laws." The regularity analysis is essentially the notion of regular temporal succession, while the entailment analysis is very close to the notion of necessary connection. He seems to favor the entailment analysis. Ducasse does propose a new explanation of causality.[14] He starts by

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[12]Broad, The mind and its place in nature, pp. 453-456.

[13]C. D. Broad, "Mechanical and teleological causation," Aristotelian society proceedings, Supplementary Volume XIV (1935), pp. 83-112.

[14]C. J. Ducasse, Nature, mind, and death (La Salle, Illinois: The Open Court Publishing Company, 1951) Chapters 7 and 8.

examining Hume's analysis of causality, which, he says, is not entirely satisfactory but is still the most influential. After demonstrating necessity to be "but an internal impression of the mind," Hume offers two definitions of cause: (1) "We may define cause to be an object, followed by another, and where all the objects similar to the first are followed by objects similar to the second," and (2) "an object followed by another, and whose appearance always conveys the thought to that other."[15] The first is the more basic. But Ducasse believes that the analysis of our ordinary notion of cause as simply regular succession is incorrect. He proposes to demonstrate this by pointing out cases which conform to Hume's definition but which we do not judge to be cases of causal relation, and cases which do not conform to Hume's definition but which we do nevertheless judge to be cases of causal relation. An example of the first type of case was mentioned in Chapter IV.[16] Ducasse cites as an example of the second type of case an experiment he has sometimes performed with students.

> I bring into the room and place on the desk a paper-covered parcel tied with string in the ordinary way, and ask the students to observe closely what occurs. Then, proceeding slowly so that observation may be easy, I put my hand on the parcel. The end of the parcel the students face then at once glows. I then ask them what caused it to glow at that moment, and they naturally answer that the glowing was caused by what I did to the parcel immediately before.
>
> In this case it is clear that what the spectators observed, and what they based their judgment of causation upon, was not repetition of a certain act of mine followed each time by the glow, but one single case of sequence of the latter upon the former. The case, that is to say, does not conform to Hume's

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[15] David Hume, An enquiry concerning human understanding, Open Court Edition, p. 79. Cited in Ducasse, p. 93.

[16] See p. 117 above.

definition of causation as constant conjunction but is nevertheless judged by unprejudiced observers to be a case of causation.[17]

He then asks why they judge this to be a case of causation, and answers that it is because his action is "the only change introduced into the situation immediately before the glowing occurred."[18] He allows the possibility that the students may be mistaken -- that there may actually have been some other change which they did not observe, and which was the true cause of the glowing. To raise this objection, however, would not be to question their conception of causality, but merely to question whether they had observed accurately.

Ducasse credits Hume with being aware of the difficulty implied in this latter type of case, and describes his rules for discovering a cause by a single experiment. Hume's error was in not seeing that he was here dealing with the true nature of causality rather than merely a means of discovering causality. Hence, as Broad suggests, regular sequence appears to be merely one test for causality, and one which is not conclusive by itself.

Ducasse then devotes a chapter to the development of his concept of causality. It is a relation between events; it is a triadic relation between a state of affairs and only two changes which occur in it -- the one being cause, and the other effect -- the relation between cause and effect is empirically observable. He also devotes several chapters to developing the implications of this concept.

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[17] Ducasse, Ibid., p. 95.

[18] Ibid., p. 95.

Determinism

What implications would precognition have for the question of determinism? It would appear that given precognition as a fact, with its implication that the future must in some sense exist, determinism logically follows. In fact, does it not mean the same thing to say that the future must in some sense exist, and to say that it is determined? If so, it would put psychical research squarely in opposition to ~~psychics~~ physics on this question. While it is possible that indeterminacy may not be the last word in physics, as Eddington himself admits,[19] it seems prudent to attempt to reconcile the conclusions of psychical research with those of physics, rather than to let them stand in opposition. At any rate, there is little profit in holding a philosophical position which implies that the physicists must be wrong on so fundamental an issue. Let us then try to maintain the same sort of open-mindedness that is implied by Bertrand Russell when he says

> We all regard the past as determined simply by the fact that it has happened; but for the accident that memory works backward and not forward, we should regard the future as equally determined by the fact that it will happen.[20]

If we are able to adopt such a state of mind, it may turn out that the two statements (that the future must in some sense exist and that the future is determined) do not necessarily mean the same thing. It may also turn out that, while a conclusion that precognition implies determinism may appear a reasonable one, it is not the only one. First of all,

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[19] A. S. Eddington, "Indeterminacy and indeterminism," Aristotelian Society Proceedings, Supplementary Volume X, (1931) p.161.

[20] Bertrand Russell, Mysticism and logic, p. 202.

it should be pointed out that when we say that events are determined we are using words which are emotionally loaded insofar as we are aware of them. At the same time, the idea of determinism is deeply ingrained at the subconscious level.[21] The word determinism automatically brings to mind associations of old ideas -- such concepts as time with its knife-edge present moving between the past and future. On the other hand, when we say here that the future must in some sense already exist, we are suggesting a relaxation of these old hardened ideas so that we may look for new ideas.

Let us proceed in this way to try to make the matter more understandable. Determinism is commonly held as a corollary belief ~~in~~ to the idea of God as causal agent in determining what is to be. This God is omnipotent, omniscient, etc. Now it is certainly logically possible that a God might only be omniscient. Such a God would know what was to happen in the future, but would neither be responsible for it nor able to change it. Would the existence of such a God imply that the future was determined? It might seem to be a reasonable conclusion that it did, but it is perhaps not a necessary conclusion. We are all familiar with countless ~~casual~~ causal relationships in our daily lives which enable us to see into the future. We feel quite sure that the sun will rise tomorrow; this is an inference based on thousands of years of accumulated experience. We feel quite sure that some people will die tomorrow, and that others will be born. These are also inferences based on years of experience. There is, of course, no causal influence attributed to us for knowing these things, if they are indeed knowledge. Now if I were asked to name some one individual

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[21] See p. 122 above.

who was going to die tomorrow, I would be face-to-face with the fact that a low-probability event may occur at any time and prevent a high-probability event from happening. I would therefore be inclined to say that we must wait until tomorrow to find out. But if I were an extremely knowledgeable creature, by careful observation of the state of the world today I could probably infer with a high degree of accuracy a few individuals who would be among those to die tomorrow. I could theoretically, for instance, visit all the penitentiaries and similar institutions in the world and find out who is scheduled for execution tomorrow. We would be inclined to say that these deaths were predetermined. But still we will not know for certain until tomorrow whether these events will occur as scheduled. So we have difficulty accepting the idea that events of the future could be known unless they are rigidly predetermined, which would be one way of saying that such events of the future existed in some sense. But we may still be victims of our own presuppositions. The question remains whether our point of view would reflect the true state of affairs in the world, or whether it would be the result of a too-narrow perspective. For it does not appear to be more than a short logical step from here to the idea of an intelligence which could know the outcome of events even though these could otherwise not be known until tomorrow. And if we assumed that such an intelligence were possible, the next step would be to ask whether the existence of such would imply that events were predetermined in some explicit sense. There does not appear to be any clear reason to believe that it would.

Then, if there is no compelling reason to believe that an omniscient being would imply that events were predetermined, there should be no

compelling reason to believe that clairvoyance would imply it. Perhaps the viewpoint of another will help bring clarity to this issue. Ducasse says, on this point regarding "preperception" and "retroperception"

> But the point of importance in the present connection is that those faculties - whether possessed by God or by man - would not presuppose determinism rather than indeterminism in the universe. Since they are conceived as faculties not of inference but of observation, they would operate equally well in a chaos and in a cosmos. They would presuppose only that the events, which today are as yet future, will be such as they will have been when, eventually, they have occurred. But this, being a tautology, is true no matter whether the universe is deterministic or indeterministic in any of the several senses of these terms.[22]

There is one other aspect of the problem which will only be mentioned here. This is the question of whether, if a precognitive vision or dream occurs, can anything be done to prevent it from happening as foreseen? Some reported spontaneous cases imply that precognized events can be prevented or at least altered.[23]

How can we summarize the implications of precognition on the question of determinism versus indeterminism? At first glance, it seems that precognition would weigh strongly in favor of determinism. But it has been suggested that matters may not be so simple. In fact, Bertrand Russell maintained that "The problem of free will versus determinism is . . . mainly illusory, . . ."[24] Therefore we suggest that precognition has no certain implications on this question at all.

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[22] C. J. Ducasse, Nature, mind, and death, p. 180.

[23] J. W. Dunne, An experiment with time, p. 27.

[24] Bertrand Russell, Mysticism and logic, p. 208.

Psychokinesis

Next, if psychokinesis does occur, what will be its implications for the philosophical questions mentioned? On the question of time there does not appear to be any effect. In the area of causality we would seem to have a causal relationship previously thought to be impossible, but it would not require any overhaul of our concept of causality. Occurrence of psychokinesis might be used as evidence to support free will versus determinism, but it would not be very convincing evidence. If an indeterminist said that psychokinesis demonstrated the power of the will, a determinist could counter that the willing was determined.

Psychokinesis would, however, seem to constitute important new evidence bearing on the relationship between mind and matter. Except in the mind-brain relationship, which will be discussed below, there are no other phenomena of which we are aware that give any indication that mind can affect matter. While there is no logical reason to presume such an effect impossible, the idea is typically relegated to mythology and religion. Therefore it would be a truly monumental development if we had empirical evidence for such action of mind over matter. However, since the mind-body relationship which we will discuss in detail below is a special case of mind-matter, we will not go into more detail here.

Out-of-Body Experiences and Survival After Death

We come finally to the subject for which there is the least substantiating evidence, but which has been more tantalizing and has invited more speculation than any of the other conclusions of psychical research. A desire to provide evidence on this subject was, moreover, a major reason for the founding of the Society for Psychical Research.[25] If we were,

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[25]D. J. West, Psychical research today (Harmondsworth, Middlesex: Penguin Books Ltd., 1962) p. 19. (Originally published by Duckworth, 1954.)

then, to accept these conclusions, what would be their cash value in terms of philosophical implications?

First, we must note that a belief in the reality of out-of-body experiences does not necessarily entail a belief in survival after death. However, it does seem reasonable to suppose that belief in out-of-body experiences is a "lesser included offense" in a belief in survival after death. Therefore, let us consider first the more inclusive belief, and, when we have finished with that, point out those things which are not applicable to the lesser included belief. It seems most reasonable to approach the matter from the viewpoints of our several interested philosophers, considering each of them separately.

Neither James, nor Broad, nor Ducasse was a proponent of a self-consistent philosophical "system" attempting to accommodate all of our experience. For example, pragmatism was not a system, but a method for settling metaphysical disputes[26] in philosophical knowledge. Broad claims to see no particular virtue in attempting to reconcile his later works with views expressed in earlier writings, saying that he considers it a virtue to learn as well as to live.[27] Ducasse maintains that philosophy has a distinct subject matter and should proceed in its investigation just as any science does.[28] Hence, we will not point to any system and say that here is the sort of system that results if one believes thus-and-so about psychical research. Such systems may very well exist, but our concern is more general, namely, what specific implications will psychical research have for any system.

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[26]William James, Pragmatism (New York:Meridian Books, Inc., 1955) p. 42. (Originally published in 1907)

[27]C. D. Broad, Examination of McTaggart's philosophy, Vol. II (Cambridge: University Press, 1938) p. lxxiii.

[28]C. J. Ducasse, Philosophy as a science, (New York: Oskar Piest, 1941).

James on Survival

James was convinced, early in his career, that psychic phenomena, if admitted, "must make a great revolution in our conception of the phytical universe."[29] No doubt he was referring here to the question of materialism versus spiritualism as the ultimate characteristic of reality. He favored spiritualism, if only for pragmatic reasons, and felt that psychic phenomena in general could provide evidence in favor of it. But the question, "What did James consider the philosophical implications of survival to be?" is almost too specific to be answered satisfactorily. He felt that scientific advancement was made by those of genius who concerned themselves with the unusual occurrences which do not quite fit within the existing scheme of things. Such things are more likely to be ignored by those who find more appeal in the orderliness of closed systems. He also felt that the strange occurrences called telepathy, clairvoyance, faith healing, and communications from the dead constituted a ripe field for new discoveries about the physical universe. Hence, all of his philosophy would have been subject to influence by these things, because he wanted to leave the door open for anything that might be proven true.

The question of survival itself was not one of those uppermost in his mind, but he did consider it closely related to religion which was one of his major interests. "Immortality is one of the great spiritual needs of man," he said in his Ingersoll Lecture.[30] In this lecture he discussed two objections to the possibility of life after death, attempting

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[29]William James, "A review of Planchette," Boston Daily Advertiser, (March 10, 1869). Reprinted in Murphy & Ballou, p. 23.

[30]Murphy & Ballou, p. 281.

to show that they are not valid. The first of these objections has to do with the relation between mind and body. Our spiritual life, as we know it, is absolutely dependent on the brain; then how can anything persist after the body, including the brain, has perished? For the sake of argument, James concedes that thought is a function of the brain, and then goes on to question whether this really means giving up the idea of immortality. He maintains that those who offer this objection to immortality are considering only one of several possible types of functional relationship between the mind and the brain, namely, the productive function, exemplified by "steam is a function of the tea-kettle."[31] By thus limiting their field of view, they arrive at the notion that thought is a (productive) function of the brain. If this were the case, it would be entirely reasonable to conclude that thought must cease when the brain perishes, and the soul must die along with the body. The truth of the matter is, however, that there are also two other functions which are possible. These are the releasing or permissive function, exemplified by the action of the keys of a pipe organ.[32] This means that to maintain a position which says that when a person's brain ceases to exist, then his thought also ceases to exist, may be similar to saying that if the keys of an organ are destroyed, the air in the air-chest ceases to exist. James suggests on the contrary, that when a brain ceases to exist, its particular stream of consciousness will disappear, but the "sphere of

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[31] Ibid., p. 288.

[32] Though he speaks here in terms of dualism, he explains that this is merely because this objection has arisen on the "ordinary dualistic plane of thought."

being which supplied the consciousness would still be intact."[33] He states, in the preface to the second edition, that this need not be a pantheistic view and that it is possible "that every memory and affection of his present life is to be preserved."[34]

The other objection which James considers is the population explosion which has occurred in whatever place immortal souls exist. Prior to the theory of evolution there was no problem; those humans who had inhabited the earth during the 6000 or so years it was believed to have existed constituted a relatively small number. But the advent of the theory of evolution changed the complexion of things drastically. If man is immortal, then this characteristic must extend back also to some of his ancestors. But how far? And if these ancestors be also immortal, why not others of the lower animal kingdom?

> Life is a good thing on a reasonably copious scale; but the very heavens themselves, and the cosmic times and spaces, would stand aghast, we think, at the notion of preserving eternally such an ever-swelling plethora and glut of it.[35]

But this view harbors a tremendous fallacy, says James — the fallacy of seeing the possibilities only through human eyes with selfish and human values. One may just as well suppose that each new mind brings its own space along with it. And "the space of my imagination, for example, in no way interferes with yours."[36] Therefore this objection is of no consequence.

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[33] Murphy & Ballou, Ibid., p. 292.

[34] Ibid., p. 279.

[35] Ibid., p. 304.

[36] Ibid., p. 306.

Thus, in this place, James concluded that a belief in survival would indicate something on the order of the transmission theory for the relation between the mind and the body, and an unlimited sort of place for survival to occur.

Broad on Survival

Broad is not particularly impressed with the idea of human survival, either as a personal desire or as a valid conclusion,[37] but he discusses it in his characteristically penetrating manner in several places.

In Chapter X of Mind and its place in nature, he arrives at the need for evidence whether minds can exist and function after their bodies have been destroyed. This evidence would be useful in making a decision on the difficult question of epiphenominalism versus a type of theory which involves "traces and dispositions." (Interactionism and parallelism have been previously disposed of as unlikely.) It is not appropriate to attempt an explanation of Broad's theories of traces and dispositions (he devotes a full chapter to it) but it can be stated that he believes even a faint probability for survival would make it rash to accept epiphenominalism. He then devotes one chapter to the ethical arguments, and one to the empirical arguments produced by psychical research, for the truth of human survival.

In this latter chapter he suggests another theory about the mind-body relationship which is compatible both with ordinary experience and scientific knowledge, and with the possibility of survival. This is the "Compound Theory," which holds that what we ordinarily call the "mind"

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[37] See for example, LPR, p. 430.

may in reality be a compound of two separate factors. These two are a "psychic factor" and a "bodily factor," and the characteristics of the compound would differ from the characteristics of the two factors just as a chemical compound differs from its elements.

In an article in Philosophy,[38] Broad examines the consequences of psychical research for religion. He considers this as part of a more general question, namely, "What bearing, if any, recent scientific developments have on the validity of religious beliefs." Human survival is a basic assumption for Christianity and "perhaps a necessary condition of any religion."[39] But, he concludes, all of the sciences produce only evidence which favors the belief that there is no survival after death. "None of the sciences tells us anything which lends the least probability to human survival." He also says that "if science does make human survival impossible or very improbable, it does, in my opinion, deliver a fatal blow to all religion."[40]

Now, in the absence of such convincing proof from science of the impossibility of human survival, what other evidence can we find that bears on the question? He points to psychical research as a "doubtful exception" to the other sciences. But even so, this evidence is of dubious character. On the one hand, if telepathy, clairvoyance, and precognition were established,

> It would tend to throw doubt on the adequacy of the theory (which all other known facts seem to support so strongly) that the human

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[38] C. D. Broad, "The present relations of science and religion," Philosophy XIV, April, 1939, pp. 131-154. (Reprinted in RPPR, p. 220.)

[39] Ibid.

[40] See p. 3 of Introduction regarding the logical difficulty of establishing such proof.

> mind is one-sidedly and completely dependent on the brain and nervous system both for its existence and for every detail of its actions. Now it is this apparently well-established fact which makes the hypothesis of human survival antecedently so incredible.

On the other hand, the establishment of such paranormal cognition would, as discussed earlier in this chapter,[41] offer an explanation less radical than survival for the mediumistic communications which constitute the "only direct evidence for survival." He concludes

> My conclusion is that, for this essential doctrine of religion, psychical research is the only possible gift-horse in the field of the sciences, and that even it is quite likely to prove to be a Trojan horse. In spite of the ambiguous character of the animal, I should hesitate, if I were a religious man, to look it quite so superciliously in the mouth as the leaders of religion commonly do.[42]

That these views essentially comprise the entire substance of his opinions on the philosophical significance of survival is indicated by the fact that in his most recent book, which is devoted entirely to psychical research,[43] he neither adds to nor subtracts from them.

Ducasse on Survival

Ducasse takes the view, in his major work,[44] that all theoretical problems of philosophy will simply disappear if the semantic confusion is cleared away. Furthermore, answers for many of the rest become fairly obvious, or must merely be referred to the facts for an answer, once they are stated unambiguously. Following this approach, he arrives at the view of causality described earlier in this chapter.[45] We will not attempt to guess whether this view of causality is influenced by his belief in psychic phenomena -- precognition in particular -- or his

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[41] Broad, RPPR, p. 23.

[42] Ibid.

[43] C. D. Broad, Lectures on psychical research, (New York: The Humanities Press, 1962).

[44] C. J. Ducasse, Nature, mind, and death, p. 51.

[45] Ibid., Chapter 4. p. 136

belief in psychic phenomena is influenced by this view of causality. The fact remains that the two are compatible. Ducasse also dissolved the problem of determinism versus indeterminism by untangling the semantic ambiguities involved. Again, the result has been mentioned earlier.[46] in this chapter. He has little to say about the implications of psychical phenomena for time, other than that precognition seems to require a rather drastic revision of the ordinary ideas of our relation to it.[47]

Among the questions we are interested in, Ducasse devotes most of his attention to the question of survival. In Chapter 19 of Nature, mind, and death, he examines the reasons commonly given for believing that survival after death is not possible, and finds them unconvincing. Having previously established the theoretical possibility of survival, he then goes on, in Chapter 20, to discuss the empirical evidence for survival. This consists of (1) apparitions of the dead, and (2) communications from the dead coming through mediums. By determining what are the necessary preconditions to allow the theoretical possibility of survival, we can arrive at what, in his view, are the philosophical consequences of belief in survival.

It should be pointed out at the beginning that Ducasse does not specifically recommend such belief in survival. He points out (1) the difficulty created by telepathy, clairvoyance, and retrocognition for interpreting the facts ordinarily considered to be the evidence for survival, and (2) the apparent need to overhaul our ideas about time

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[46] ~~Ibid., p. 180.~~ p. 142

[47] Ibid., p. 483.

to accommodate precognition, and concludes that "nothing both definite and well evidenced can yet be concluded concerning the actual, as distinguished from the theoretical, possibility of partial survival." He has said earlier in the same paragraph, however, that "there is strong prima facie evidence that in some instances something survives, which appears to be some part or some set of capacities of the mind whose body has died."[48]

But let us assume a willingness to believe that the evidence does lend credence to the survival of some part of the mind. What will this mean to our philosophy? If a mind, or some part of it, can survive the death of its body, then the mind must be of some sort of durable substance -- specifically, a "psychic" substance -- and not utterly dependent on its body for its existence. We must adopt some form of dualism. Epiphenomenalism is clearly untenable, and like Broad, Ducasse has previously disposed of parallelism and behaviorism (along with hypophenomenalism) on other grounds. He proposes "direct causal interaction" as the obvious answer to the question, once it is analyzed. The meaning of the question "as to the relation between a mind and 'its' body" is (as he has previously demonstrated) "How is a mind related to the particular human body with which alone it immediately interacts?"[49]

Thus we have a mind-body relation which is compatible with survival. A mind and its body interact causally with each other during the life of the body. When the body dies, the mind continues to exist, and, if we can believe all of the evidence, can still have causal relations. These

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[48]Ducasse, Ibid., p. 483.

[49]Ibid., p. 429

causal relations can be within itself, with other minds, or with other matter.

In his most recent work,[50] which is devoted exclusively to the question of survival, Ducasse examines the mind-body problem in greater detail. He devotes considerable space to what he calls hypo-phenomenalism (mentioned only very briefly in Nature, mind, and death) which is the view that brain activity is causally dependent on mental activity. He does not pursue the matter to a conclusion, however, because it is not necessary in order to decide the issue at hand, namely the relation between the two, whatever their nature may be. To this question he develops the same answer as before, calling it now psycho-physical interactionism.

Out-of-Body Experience

What, now, regarding out-of-body experiences? If we assume that survival is a fact, it certainly seems reasonable to suppose that a mind could be capable of existing independently of its body during the life of the body. However, it does not seem reasonable to suppose that such existence, if demonstrated by itself, would lend weight to the probability of the truth of survival. This is because it seems more reasonable to suppose that an out-of-body experience could be fabricated out of materials in the subconscious mind, as is the case with dreams. Even cases where the out-of-body entity is purportedly seen by another do not lend much weight. For here, we can simply hypothesize a telepathic influence by the mind having the out-of-body experience on the other mind to produce a visual hallucination.

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[50] C. J. Ducasse, The belief in a life after death, (Springfield, Ill.: Charles C. Thomas, 1961).

Regarding philosophical implications, it would seem that everything which has been said about survival applies equally well to out-of-body experiences, with one exception. Survival after death appears to be a significant feature of all religions,[51] but religions would undoubtedly not consider out-of-body experiences to be equally valuable in supporting their beliefs as proof of survival would be. There is something infinitely more dramatic about the idea of survival of death which gives it tremendous appeal to most people.

Summary

It was suggested in the Introduction that it is impossible to do a thorough job of predicting the philosophical consequences of any new discovery, and that this seems particularly true of psychical research. However, it seems that the following general conclusions can be reasonably drawn at this point.

We have not found any well-established philosophical doctrine which psychical research threatens to undermine. On the contrary, it seems that those questions on which it might have a bearing are in areas where confusion and disagreement are dominant. Time and causality are two of the greatest enigmas in philosophy as well as in science; psychical research suggests a clear-cut position with respect to each of these. Some part of the future must have enough existence to be the object of precognition, whatever sort of perception this may be. Several suggestions have been discussed, but they seem to be rather fantastic speculations.

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[51] C. D. Broad, "The present relations of science and religion," Philosophy XIV, (April 1939) p. 131-154. (Reprinted in RPPR, p. 220.)

The two-dimensional theory of time, for example, can accommodate precognition with only a minor change in our concept of causality as invariable temporal succession. But it seems quite likely that precognition would constitute fairly strong evidence in favor of something similar to the necessary connection concept of causality, with temporal succession being merely a fairly dependable indicator of causal relation.

The question of determinism versus indeterminism has engrossed philosophers for many years, and recently the physicists have reopened the issue. The degree of existence for the future which is implied by precognition might seem to imply, in turn, some form of determinism. The problem of determinism was therefore examined, and it was concluded that this implication is not the only one possible. Therefore it does not seem that psychical research has anything certain to say on this subject.

The mind-body relationship is closely related to the very fundamental question of metaphysics -- the nature of reality. This is among the oldest questions of philosophy, but a generally acceptable conclusion has not yet been worked out. Here again, psychical research suggests a particular answer. If the spirit does survive the death of the body, this would seem to strongly imply a mind-body dualism of some sort. Interactionism then appears to be the only reasonable description of the relationship between mind and body.

Hence, it seems that if psychical research is a threat to anything, it must be only to some of our prejudices or poorly-founded assumptions. If this is true, we should hope that it lives up to some of its promise to tell us important new things about the nature of reality.

CHAPTER VI

SPECULATIONS

It is tempting to speculate on what might be some of the long-range developments if psychical research should some day become a part of orthodox science. But we need only look to that branch of speculative scientific philosophy which is called "science fiction" to find them worked out in detail. In the higher caliber work in this field one finds some thoughtful and extremely provocative reading. Only two examples will be cited.

In a science fiction novel,[1] Robert A. Heinlein weaves a story around a pair of twins who participate in an experiment which is part of a deep space probe that takes place some years in the future. The twins are among a number who have been selected because of superior telepathic ability for research into the nature of time. It had previously been established that telepathy exceeded the speed of light by experiments using a pair of twins -- one on earth and one on Ganymede, the largest satellite of Jupiter. It had also been demonstrated that telepathic signals, whatever they were, did not obey the inverse-square law. (This is the law that says the strength of an electromagnetic signal decreases inversely as the square of the distance from its source.) So, in the words of one of the more earthy scientists explaining the experiment to the twin who was on board the space ship,

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[1]Robert A. Heinlein, Time for the stars (New York: Chas. Scribner's Sons, 1956).

> These laddies want to measure how fast you do it. They don't care how fast - they've already recovered from the blow that you do it faster than light - but they want to know exactly how fast. They can't accept the idea that you do it 'instantaneously,' for that would require them to go to a different church entirely. They want to assign a definite speed of propagation, such-and-such number of times faster than the speed of light. Then they can modify their old equations and go right on happily doing business at the old stand.[2]

As it turned out, however, after several years of constantly accelerating travel through space it became apparent that telepathy was still operating instantaneously, so far as could be determined. Soon the twins on the space ship were communicating with the children and grandchildren of their twins on earth who were aging much faster, and intensive use of hypnosis and drugs were necessary to keep the earthbound link in operation.[3] So the concept of simultaneity was re-established for the first time since Einstein's day, and physics was revolutionized.

> The concept of simultaneity was forcing a complete new look at physics. "Up to now," she told me, "we've concentrated on the relative aspects of the space-time continuum. But what you m-r people do is <u>irrelevant</u> to space-time. Without space-time there can be no conservation of energy-mass. Heavens, there's <u>nothing</u>. . . . But now we are beginning to see how you people may possibly fit into physics - the new physics, I mean; it's all changed."[4]

This eventually made possible space travel which was almost instantaneous by the use of "null field generators." As Dr. Whipple explained,

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[2] <u>Ibid</u>., p. 84.

[3] It seems to be established now that the "clock paradox" has been resolved and that the relativistic transformation of time will take place as indicated. Edwin M. McMillan in "The 'Clock Paradox' and space travel," <u>Science</u> CXXVI (August 30, 1957) pp. 381-384, reviews the earlier discussions in <u>Nature</u> on the subject, and calculates that "For example, a man traveling for 21 years under a constant acceleration of 1 g would go a distance of 1.2×10^9 light years!" Apparently all that is required to accomplish such travel is some new source of energy to supply the equivalent of that released in the fission of 10^{12} tons of uranium.

[4] Heinlein, <u>Ibid</u>., p. 142.

> If we had not had it proved beyond doubt that telepathy is truly instantaneous, proof measured over many light-years, our scientists might still be looking for errors in the sixth decimal place and maintaining that telepathic signals do not propagate instantaneously but simply at a speed so great that its exact order was concealed by instrumental error.[5]

Isaac Asimov, in a variation of a theme as old as H. G. Wells' Time Machine,[6] attributes some of the events called ghosts, and apparitions, to visitors from another spectrum of time coming back into their past to make minor changes in it in order to change the course of history.[7] Considering some of the developments of the last few years, such as interplanetary space probes, manned satellites, "anti" particles discovered by atomic physicists, men living 600 feet below the surface of the ocean, and talk of "anti-gravity" devices, it is tempting to consider the possibility that anything that man is capable of imagining is capable of being realized.[8] The audacity of such a speculation does not seem quite so great if it is viewed in comparison with the audacity of speculation which would have been required, let us say, in Galileo's day, to imagine the technological developments that we are familiar with. The supporting hypothesis for such a view would be quite simple, and similar to, but slightly more convincing than, the ontological argument for the existence of God. It is this: Man's mind, being a product of the universe, is not capable of imagining anything which is not capable of being realized in that universe.

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[5] Ibid., p. 182.

[6] H. G. Wells, The time machine (New York: Henry Holt & Co., 1932).

[7] Isaac Asimov, The end of eternity, (Garden City, New York: Doubleday Co., Inc., 1955).

[8] Jules Verne, an old master of science fiction, answered this suggestion affirmatively, saying that "Everything that a man is capable of imagining, other men will be able to realise." (Peter Lennon, "Yesterday's man of tomorrow," Manchester Guardian Weekly, April 7, 1966.)

But let us return to our main subject. If psychic powers should turn out to be possessed only by a rare few individuals, then it should still be a simple matter, by using controlled evolution,[9] to develop this power in selected individuals. It would then make little difference who is right in the occasional debate among believers in psychic powers as to whether this power is a vestigal remnant or a budding new faculty. And if all the reports of psychic powers should turn out to be illusory, it is perhaps not too preposterous to suppose that evolution might be a powerful enough tool to produce it.

As some of the more speculative members of the psychic fraternity have already pointed out, one person at the service of each major government who was able with considerable reliability to discern from a distance the contents of other minds would go a long way toward eliminating future wars. Obviously, there could be no more military secrets, and no more surprise attacks.

It is, perhaps, easier to envision the bomb warning system described by George R. Price. He suggests a system for giving warning of a nuclear attack which would be far more effective and less expensive than radar. In this system a number of special cards are placed inside cameras with open shutters located near anticipated targets. These cards contain ESP symbols, but will react to the thermal flash of a nuclear explosion in such a way that the original design is bleached out and is replaced by a different one. The cards will be guarded and the symbols kept secret, and each day several thousand percipients will try to guess the symbols 10 days ahead. Therefore, if a statistically significant number of the

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[9] "Control of life," Part IV, Life Magazine (October 1, 1965) pp. 59-68.

"different" designs were guessed, this would constitute a 10-day warning of a nuclear explosion. With proper randomization of the card symbols it would be virtually impossible to have a false alarm if ESP was not operating.

> "Does this suggestion seem absurd? No. If information theory and Rhine's conclusions are both valid, this is a practical suggestion of high importance."[10]

In the meantime, we still have such people as Jeane Dixon to ponder. This middle-aged American woman is alleged to have predicted, among other things (some of which did not occur) (1) danger of an airplane crash for Carole Lombard. She tried to persuade the movie star not to travel by airplane for the next 6 weeks, a few days before she was killed in a plane crash. (2) Danger of an airplane crash for her husband. She succeeded in pursuading her husband to take the train to Chicago on one particular occasion, and it later developed that the plane on which he had held a ticket crashed and killed all passengers. (3) The approximate time of President Franklin D. Roosevelt's death, at his request. (4) The Communist take-over of China. (5) The separation of Pakistan from India, including the exact date, 2 years before it happened. (6) The assassination of Mahatma Gandhi within 6 months of its happening. (7) The re-election of President Truman in 1948, in April of that year. (8) The succession of rulers of Russia after Malenkov, and the launching of Sputnik I 4 years before it happened, and (9) the assassination of President Kennedy 7 years before it happened. She tried to send him

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[10]George R. Price, "Science and the supernatural," Science, CXXII (August 26, 1955, pp. 359-367.

a warning 3 months before it happened.[11] Many of these and similar predictions were allegedly reported by the author in newspaper articles.

How improbable must a series of events be in order not to be judged as coincidence? It is an interesting question.

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[11]Ruth Montgomery, A gift of prophecy (New York: William Morrow & Co., 1965). This book has been listed among the top ten best sellers (non-fiction) in Time magazine for many weeks.

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