

ESP and Psychokinesis

A Philosophical Examination

Revised Edition

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*ESP and Psychokinesis:
A Philosophical Examination (Revised Edition)*

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In memory of my grandfathers,
Morris Braude and Benjamin S. Katz

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Preface

In the past 100 years scientists have lavished increasing attention on ostensibly paranormal phenomena, and in recent years it seems that the scientific examination of the paranormal has continued to gain momentum. Although I do not want to speculate, at least at any length, about why that is, I do have to remark that in some respects the growing scientific interest in the paranormal is not at all surprising. After all, science has continued to widen its scope by developing workable theories for a broad range of familiar phenomena. As a result, the sorts of scientific territories remaining to be charted have become more and more removed from the processes familiar to us in everyday life. These days, major theoretical advances in science seldom concern (at least directly) the sorts of mundane macroscopic interactions that occupied so much of Newton's time. Scientific theorizing nowadays is devoted largely to the study of the very small (as in atomic physics and microbiology) or the very large and distant (as in astrophysics).

But in the realm of things inspectible without the aid of microscopes, telescopes, cloud chambers, and so on, there is another range of phenomena to be studied, one whose mysteries cannot so easily be dismissed in favor of more pedestrian scientific enigmas. In this realm we find much of the data of parapsychology. And I suggest that at least part of the reason for recent scientific interest in the paranormal is that many scientists feel we haven't yet exhausted the important puzzles before our very eyes.

Of course that can only be part of the story. As Arthur Koestler is fond of observing (see, e.g. Koestler, 1973), many scientists have been as much humbled as encouraged by recent scientific advances, particularly those in physics. For example, for all its beauty and utility, quantum physics (and especially the received Copenhagen interpretation) has substantially added to our stock of major perplexities concerning the operations of nature. The so-called

“measurement problem” has provided the physicist and philosopher of science with as deep a set of puzzles (represented, e.g. by Schrodinger’s cat paradox, or the EPR paradox) as we have had at any time in the history of science. I also think that there is some justification for Koestler’s contention that the behavior and properties of the subatomic domain are initially as counter-intuitive as anything proposed by parapsychologists. So it would seem that physicists who object to parapsychology on the grounds of its *prima facie* peculiarity should heed Benjamin Franklin’s injunction, “Clean your finger before you point at my spots.”

Another and perhaps more important reason scientists are paying increasing attention to ostensibly paranormal phenomena is that in this century parapsychology has begun to establish itself more firmly as an empirical science. Although still somewhat in its infancy, parapsychology has progressed steadily from the early days of statistical research by gradually refining experimental designs, charting specific research goals, developing the technology to pursue well-defined lines of research, gathering data, and developing more sophisticated (though not always more adequate) conceptual tools. The fruits of these various lines of development have often been extremely interesting, and certainly interesting enough to warrant further investigation. In Part I of this volume I survey some of the best current research. Although unfortunately I have had to omit much that is worthwhile, I have tried to indicate how scientists have been probing the domain with ingenuity and sophistication.

In any event, whatever exactly the reasons for recent scientific interest in the paranormal, as far as my own perspective on parapsychology is concerned, it should be clear by now that I am sympathetic to the field. I think parapsychology’s area of research is perfectly legitimate. Numerous interesting phenomena have occurred in and out of the lab which seem to me clearly to warrant open-minded investigation, empirical and conceptual. Moreover, I am prepared to believe, and in fact I do believe, that there are natural forces or processes which science might not understand and which provide at least some of the material for parapsychologists to investigate.

I should add that this is not, as some might think, an especially bold position. I am simply saying that science still has much to learn about nature generally and human beings in particular, and that some of this may pertain to the data of parapsychology. Actually, as Part II of this book (especially II.A.2) will make clear, I am prepared to go

further and maintain that an enormous part of received scientific theory is disguised nonsense – in particular that area purporting to explain human behavior and cognitive abilities. But of course, my more general claim about science does not rest on that criticism. Science might still have plenty to discover about physical and human nature even if the theories I attack in Part II of this book are all on the right track.

As I conceive it, this volume serves two main functions. First I intend it to be a source book for philosophers on the experimental evidence of parapsychology. In fact, in some ways I regard it as a sequel to C.D. Broad's monumental *Lectures on Psychical Research* (Broad, 1962). In case that seems intolerably arrogant, I should add that my book is a considerably more modest enterprise than Broad's. But since philosophical theorizing about the subject of parapsychology would be intellectually irresponsible if conducted in ignorance of the data, Broad's book definitely needs to be updated. When Broad wrote his lectures, around 1960, the quantity, quality, and variety of experimental evidence in parapsychology was, despite some undeniably important work, considerably poorer than it is today. Moreover Broad's discussion of the experimental data concentrated mostly on card-guessing experiments (some of which are now discredited, or at least held to be suspect – e.g. the Soal-Shackleton experiments) and also on research conducted in England, giving little attention to the work of J.B. Rhine and his associates and successors. Furthermore, due to recent innovations in automated scoring and generating targets, today's experimental evidence is, for the most part, methodologically cleaner than that surveyed by Broad.

The relative paucity of good experimental evidence also forced Broad to concentrate heavily on anecdotal material. I don't think this material should be discounted; on the contrary, I encourage the reader to study it carefully. And in fact, for reasons outlined in my discussion of experimental replicability (I.A.7), I suspect that anecdotal material might ultimately be of greater value than experimental data. In any case, the experimental evidence is still important. In fact, by now there is so much evidence of this kind for the various forms of ESP and PK that I will restrict my attention to laboratory material. One need no longer rely on evidence gathered under non-controlled conditions, subject to the usual charges of faulty memory, mass hallucination, mis-description, and outright mendacity. The current proliferation of controlled data also provides one reason why I will have nothing to say about topics concerning life after death (for

instance, the intelligibility of the notion of discarnate survival) or such topics as possession, xenoglossy, and ghosts, the evidence for which is still largely anecdotal. I certainly think these topics are interesting and important. But there is now so much to be grasped about ESP and PK alone that, in my opinion, the subject of survival should be treated separately.

The second principal function of this book is to explore the conceptual foundations and some philosophical implications of parapsychological research. As far as the philosophical implications of the data are concerned, I cannot yet bring myself to hazard any big, deep, and sweeping metaphysical claims about the meaning of it all. Personally, I find the data extremely difficult to manage conceptually. I am principally concerned with presenting the evidence as clearly as possible, hoping to stimulate in philosophically-minded readers fruitful metaphysical speculations. I have, it is true, considered how some of the parapsychological evidence throws certain problems into sharp relief (for instance, problems regarding materialistic and reductionistic theories of the mental). I also present an array of arguments against psychophysical identity theories and mechanistic accounts of the mental. But I do not feel that the evidence of parapsychology is required in order to expose the weaknesses of those positions (though it might help); and the reader looking for large alternative theories (as distinguished, say, from the sketchy remarks made at the end of II.A.2) – especially theories that can also make clear sense of the data of parapsychology – will be disappointed.

I have tried to write for a fairly wide audience (even though this book is addressed primarily to philosophers). In doing so, I have run certain risks. I would like this book to be useful to students (undergraduate and graduate) as well as professional academicians (philosophers and non-philosophers). But in order to make it accessible to an audience varying greatly in philosophical sophistication, I have had to face a problem familiar to all teachers. I fear I have written a book too advanced for some readers, yet too elementary for others. For example, the exercises in philosophical clarification in section I.A will probably strike some professional philosophers as needlessly detailed, while my arguments against mechanism in I.B.4.d and II.A may be too advanced and abstract for those unaccustomed to philosophical polemic. Moreover, I am aware that my audience varies not simply in philosophical sophistication but also in familiarity with the parapsychological literature itself. Many parapsychologists are bound to find parts of this book (especially my survey of the evidence and of

certain methodological issues) painfully elementary or cursory. I know of no happy solution to this problem, and I trust only that readers will be tolerant of passages aimed at readers at some other level of philosophical or parapsychological proficiency.

My decision to think seriously about the data of parapsychology is relatively recent and was made in the summer of 1975. I decided then to become part of the community of parapsychologists, in order to learn as much as possible about the latest experimental and conceptual developments in the field. I must thank the many scientists working in parapsychology who have aided me in my attempt to master the data and who have graciously and enthusiastically welcomed me into their fold. I have the utmost respect for the intellectual honesty and flexibility they have shown in encouraging me to express my philosophical perplexities and misgivings about their own theoretical work. Despite my continued effort to comply with these invitations, I fear I have rendered them less of a service than they have rendered me. Among the many parapsychologists to whom I am indebted, I want especially to thank the team at SRI (Harold Puthoff, Russell Targ, Edwin May), Charles Honorton, John Palmer, and Charles Tart; also, John Beloff and my colleague Bruce Goldberg, whose suggestions and criticisms have been invaluable in writing the theoretical portions of this book; also Jan Ludwig, for his comments and criticisms of an early draft of the manuscript. For their helpful criticisms and suggestions, and for their willingness to discuss issues with me, I want also to thank Gerald Barnes, Jule Eisenbud, Michael Hooker, and my UMBC colleagues Thomas Benson, Audrey McKinney, and Alan Tormey. I want also to acknowledge several very distinguished philosophers, who unlike many of my colleagues (I'm sorry to say) have displayed the intellectual courage and open-mindedness to support my interest in investigating the subject of parapsychology. In particular I want to thank Bruce Aune, Roderick Chisholm, Wilfrid Sellars, Hector-Neri Castañeda (who invited me to submit my paper 'Telepathy' to *Noûs* [v. 12 (1978): 267-301], which I have revised and woven into the text), and Joseph Margolis, who invited me to prepare this book for *Philosophical Monographs*, and whose labors as editor I greatly appreciate. Thanks are due also to Paul Kurtz and Prometheus Press for allowing me to reprint, with revisions, my paper "On the Meaning of 'Paranormal,'" which appeared in Ludwig, 1978. Finally, I would like to express my gratitude to Wallace and Virginia Reid, owners of the Green Heron Inn in

Kennebunkport, Maine, for providing, summer after summer, an atmosphere in which I could collect my thoughts.

My progress in researching and writing this book was aided considerably by several fellowships. These were a Faculty Research Grant for Spring 1977 and Summer Fellowship for 1978, both from the University of Maryland Baltimore County, and a Research Fellowship from the National Endowment for the Humanities for 1979-80.

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Preface to the New Edition

For this new edition, I've resisted the temptation to make substantive or sweeping changes, even though my thinking has evolved on a number of central issues. So I'm treating this work now as partly an historical document. Besides, although the empirical landscape has broadened in the past twenty or so years, the underlying conceptual issues are largely the same, and many of my critical comments are as apt now as they were originally. For example, writers on parapsychology remain confused about the nature and importance of experimental repeatability, the coherence of the concept of synchronicity, and the inadequacies of mechanistic accounts of the mental. Readers interested in more up-to-date presentations of the experimental evidence should consider the excellent discussions in Broughton, 1991 and Radin, 1997. Those who want to trace the evolution of my own thinking should begin with Braude, 1997. Moreover, while I believe I could now make the book much more readable, I've confined my revisions largely to typographical and grammatical corrections, the clarification of sentences here and there, and very modest efforts to improve on a stupefyingly academic prose style.

I've also decided not to meddle with what is now an amusing anachronism – namely, my reference to energy-transfer theories of telepathy as *ET* theories. Clearly, this pre-Spielbergian abbreviation resonates with today's readers in a way I couldn't anticipate (or recognize) at the time. So be it.

Finally, I'd like to thank Carolyn Steinberg and Nidhi Tiwari for their help in preparing this book for republication.

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Part I

A. Conceptual Foundations

1. Preliminary Terminological Remarks

The phenomena investigated in experimental parapsychology fall into the now familiar categories of ESP (which includes telepathy, clairvoyance, and precognition) and psychokinesis (PK). As we will see shortly, these categories might be profoundly misleading, and insistence on a sharp division between them might seriously hinder research. In fact, appreciation of that point alone represents a conceptual milestone in parapsychology, and we would do well to consider the reasons for questioning these familiar categories. Let us begin, then, with a quick survey of the traditional classification of phenomena in parapsychology, and then consider why both theory and practice render it suspect.

But before we embark on this project, a few terminological points merit attention. Most parapsychologists now concede that the term “extrasensory perception” is an unfortunate expression, because it suggests that the phenomena in question are of a perceptual, or quasi-perceptual, nature. Now unless our views of ordinary perception are seriously mistaken (a possibility which ought to be left open), the various forms of ESP apparently involve processes quite different from those of the familiar sense modalities. I am not suggesting that we abandon the term “ESP.” By now it is too well-entrenched to be usefully excised. But we should guard against being seduced into thinking that ESP must be anything like ordinary perception.

Even the term “parapsychology” is somewhat unfortunate, because it suggests that the proper domain of the parapsychologist is a certain range of *psychological* phenomena rather than physical or physiological phenomena. In fact, Rhine originally intended to use the term this way (Rhine, 1964). The term “psychical research,” used more

widely in Great Britain than in the United States, similarly links this domain with psychology. However, since the phenomena investigated in parapsychology often concern occurrences that are largely physical or physiological (for instance, random number generator outputs and moving objects, or blood flow and brain waves), and since the task of interpreting those phenomena might bear directly on the deepest issues in metaphysics, we must be careful from the start about how to characterize them. For at least this reason, C. J. Ducasse coined the somewhat more neutral adjective “paranormal” to replace “psychical” and “parapsychological.” Of course, “paranormal” is not entirely unproblematic; but its difficulties are of a different sort, and they will be examined later in II.C.

One final caveat. The forms of ESP and PK are often called *psi abilities*. The use of “psi” is supposed to designate more neutrally what the more psychologically tinged term “psychic” signifies. Although this replacement seems unobjectionable (if not especially effective), a certain danger still lurks in the use of the term “ability.” It is one thing to speak of *psi functioning* and another to speak of *psi abilities*. If a person accurately described remote locations with great reliability or moved objects without touching them and without magic, then those performances would properly be described as instances of *psi functioning* and the processes involved would properly be labeled “*psi processes*.” But by speaking of *psi abilities* in connection with ESP and PK, we risk obscuring an important issue. Although an instance of ESP or PK would presumably be an instance of *psi functioning*, *psi functioning* need not involve abilities at all. For example, we do not regard metabolic or gastrointestinal functioning as kinds of abilities. But for all we know at this stage, *psi functioning* might be as fundamental a biological activity as these. If so, we would presumably not regard *psi functioning* as an ability either.

That possibility suggests why talk of *psi abilities* might be misleading. Many people assume (and even explicitly claim) that psychic superstars are (say) rather like musical virtuosi. We tend to think that musical abilities are not uniformly distributed among members of the human race, that those who have musical abilities have them in varying degrees of competence, that these abilities are of different sorts (e.g., those of the instrumentalist, the composer, and the conductor), and that a person might have one such ability without having another. And many take a similar view of ESP and PK. They

would say that not everyone is psychic, that some are more psychic than others, and that not all psychics are psychic in the same way.

But as I just observed, for all we know psi functioning might be as automatic, as involuntary, and as uniformly distributed among humans as metabolic functioning. It might be something all of us do all the time, simply as part of our repertoire of organic activities, and the processes involved might be as remote from everyday conscious awareness as those involved in metabolic functioning. But if that is so, then we could ask: What distinguishes psychic virtuosi from the rest of us? Perhaps psychic superstars are analogous to advanced practitioners of yoga who can consciously experience, or at least control, biological functions that are ordinarily imperceptible and beyond human control. If we took that line, then in effect psi functioning would be regarded as no more a skill or talent than spleen functioning. What is marvelous and skillful in a yogi's control of his blood flow, heart rate, or body temperature is his command of these apparently autonomic processes. The skill involved here is, so to speak, a *meta*-skill. Similarly, psychic superstars would be special, not merely because they function psychically (from this perspective we all do), but because of their ability to harness or alter such common functions.

Clearly, the two perspectives sketched above would orient parapsychological research in different ways. For instance, if psi functioning is not universal but is instead confined to a fairly small segment of the human population, there would be little point in trying to garner statistical evidence for psi phenomena by means of randomly selected subjects. Of course, success with properly selected subjects would not entail that psi abilities were like musical abilities. The evidence (as I see it) does in fact show that, on the whole, tests involving subjects selected by screening procedures yield better results than tests with randomly selected subjects. But that fact is compatible both with the picture of psi as a gift or talent (like an artistic gift) and with the view of psi as a form of universal functioning. Psi functioning might well be universal even if few people could control it in ways suitable for laboratory research.

Moreover, if we supposed that all humans function psychically but not necessarily in ways demonstrable in the lab, we might quite naturally ask whether psi processes served some fundamentally (possibly continual) subtle organic function. We might even wonder whether we were asking the wrong question in asking: What conditions must obtain for psi to occur? For, if psi were a fundamental

and universal organic function, we might ask instead: Why are manifestations of psi so infrequent? Does anything *inhibit* psi? (Do we for instance suppress a continual bombardment of psi information for the sake of our own sanity?) or, Why are we not confronted with more numerous apparent instances of psi functioning? And such questions lead to various others – for instance: Has psi functioning played an important role in evolution? Is it perhaps a vestige of an earlier evolutionary stage in which linguistic communication had not yet developed?

As I read the evidence, we have as yet no reason to prefer either of the two viewpoints sketched. Nevertheless, from time to time, I will speak rather loosely and treat psi as an ability. Indeed, there do seem to be similarities between psi functioning and recognized abilities (especially with respect to the conditions under which they are encouraged or inhibited). But for the moment, I simply wish to caution the reader against obscuring this potentially important distinction.

Let us now consider the standard classification of phenomena in experimental parapsychology. I will provide definitions for each of the familiar categories, but I warn the reader that they should be taken as provisional only. They are intended merely to help us orient ourselves conceptually. Ultimately, we will see why these familiar categories of phenomena are problematical, if not downright unacceptable.

2. Telepathy

The term “telepathy” was coined by F.W.H. Myers. Literally, it means “feeling at a distance.” One might think, then, that all we need to do is to make that definition more precise. But as Broad noted (in “Normal Cognition, Clairvoyance, and Telepathy” in Broad, 1953), we must distinguish telepathic *cognition* from telepathic *interaction*. In telepathic cognition, one individual *A* comes to know what another individual *B* is thinking or experiencing. But for telepathic interaction, we need only posit some sort of causal link between the minds of *A* and *B*, whether or not one of them comes to know anything about the other.¹ So presumably we can have telepathic interaction without telepathic cognition, though the converse is impossible. Perhaps, then, we should define “telepathic cognition” along the following lines:

- (D1) *telepathic cognition* =df the knowledge of another person’s thoughts or mental states gained independently of the five senses.

A number of points concerning this definition seem worth making. First, (D1) may be too restrictive in limiting telepathic cognition to knowledge of a *person's* mental states. Some would allow for the possibility of telepathic interaction and telepathic cognition involving lower organisms,² and accordingly they would want to substitute "organism's" for "person's" in (D1). I have no quarrel with that adjustment, and nothing that follows hangs on it.

Another questionable feature of (D1) is that it takes telepathic cognition to operate independently of just the *five* senses. No doubt some readers would not have been tempted in the first place to relativize telepathic cognition to five senses only. But it is instructive to consider why that move would be ill-advised. Actually, several different issues are involved here. Some might feel that telepathy, if it exists, would operate independently of a range of physiological processes wider than that restricted to the five senses. In fact, (D1) could be satisfied by a number of (admittedly bizarre) cases that we would not take to be instances of telepathy. Suppose, for example, that *A* and *B* are unseparated Siamese twins, and suppose that whenever *A* is feeling anxious a certain characteristic sequence of neural events occurs in (*A* & *B*)'s body, producing a characteristic sensation in *B*. After a while, *B* might come to recognize this sensation as the one he feels when and only when *A* is feeling anxious. But since that bit of cognition about *A*'s mental state is mediated by intra-somatic physiological processes not involving any of the five major senses, *B*'s coming to know that *A* feels anxious satisfies (D1).

So perhaps we should say that telepathic cognition is the knowledge of another individual's mental states gained independently of *any* sensory information. But that suggestion surely goes too far. It would be question-begging to assume from the start that telepathy is *in no way* sensory, just as it would be to assume that telepathy operates like one of our familiar senses. After all, there is nothing intrinsically objectionable in the *idea* that telepathy has some sort of sensory component. Moreover, there is no ready way to specify in advance which particular set of possible sensory responses telepathy would be independent of, once we allow for sense modalities beyond the big five. So perhaps we should say that telepathic cognition operates independently of the *known* senses. But then our definition would be useful only as long as we failed to discover a telepathic sense or a sensory component to telepathy.

We might also ask: Should telepathy be construed as something lying forever outside the domain of science? For example, if we

discovered some currently unknown type of physiological process that explained the phenomenon, should we say that telepathy had been *explained away*, or should we say that we now know what telepathy is? My inclination would be to take the latter alternative and say that we now understand a phenomenon that we could describe previously only with respect to our ignorance.

Moreover, what if it turned out that the evidence supporting the existence of telepathy could be accounted for in terms of *already familiar* sensory processes – processes hardly novel, but whose connection with telepathy had gone unnoticed? The important difference between this situation and the one just mentioned is that, in the former but not here, the *explanans* is some hitherto unrecognized process. There, we could comfortably label the newly discovered processes as telepathic. But here, we are dealing with processes already familiar from putatively non-telepathic contexts. In this case (I think), we might be justified in saying *either* that we now know what this hitherto mysterious phenomenon (telepathy) is, or that there is no telepathy after all, only another instance of an already familiar physiological process. Which alternative we choose would probably express no more than a preference for a certain linguistic convention. We might continue to speak of telepathy but alter its status from the paranormal to the normal or abnormal. Or, we might continue to treat telepathy as a phenomenon involving processes unknown to science, but then concede that the class of telepathic phenomena was empty.

With all this in mind, I suggest that we redefine “telepathic cognition” as follows.

(D1') *telepathic cognition* =_{df} the knowledge of another person's mental states gained independently of the known senses.

But in fact none of these issues surrounding (D1) seem especially important. They arise simply because in our ignorance we can do little more than characterize psi phenomena negatively – as phenomena which, despite superficial similarities to familiar sensory and motor phenomena, seem to be quite different. At this point, we can do little more than say (for example) that telepathy involves a certain kind of interaction-I-know-not-what that is nevertheless distinct from certain related but widely recognized processes. In fact, psi phenomena are (if genuine) so little understood and apparently so unreliable in the lab that they cannot even be adequately characterized operationally. Among the obstacles parapsychologists must face in sorting psi phenomena in terms of experimental operations and outcomes, are: (a)

that experimental procedures are ambiguous and do not conclusively discriminate between the customary categories of phenomena (see I.A.6), (b) that it is difficult both to replicate an experiment in parapsychology and also to determine when an experiment *counts* as a replication (see I.A.7); and (c) that experimental results are often surprising – that is, too little is known about psi phenomena to yield (in most cases) accurate predictions about experimental outcomes. We simply lack a detailed (much less a mathematically formalized) theoretical framework in accord with which (as is often in the case of physics) the prediction of experimental effects before their observation becomes feasible.³

In any case, since the main purpose of the definitions I propose is to orient us to the subject of parapsychology, let us be content for the moment with relativizing the forms of ESP to the known senses, and thus let us be content, for the moment at least, with (D1') as it stands. For our immediate purposes that will present no difficulties.

Before leaving the topic of telepathic cognition, I should mention that there is little evidence that telepathy is a form of cognition or, as some put it (retaining the traditional scare quotes), a form of anomalous “knowledge” (see, e.g., Gauld, 1976). There is, however, plenty of evidence for mere telepathic interaction. We will see in due course that the experimental data are not plausibly interpreted as evidence for a form of paranormal cognition. Naturally, that does not make the subject of telepathy any less interesting philosophically. If no case of telepathic interaction is a case of telepathic cognition, that might mean that telepathy has less relevance to epistemology than many have supposed, although its relevance to the philosophy of mind would still remain considerable. So rather than linger on a definition of a phenomenon whose existence has virtually no experimental support, and with an eye to avoiding unnecessary disputes over what might count as knowledge, paranormal or otherwise, let us consider how best to define “telepathic interaction.”

In “Normal Cognition, Clairvoyance, and Telepathy” (p. 48), Broad defines it as follows:

(D2) *telepathic interaction* =df the supernormal causal influence of one embodied mind on another.

But this is not quite satisfactory. Two terms in (D2) seem initially problematical – namely, “supernormal” and “mind.” We needn't worry about the second of these, however. Presumably, we can talk about minds without presupposing any philosophical analysis of what

minds are. We can also safely ignore Broad's Cartesian reference to *embodied* minds; at this stage, dualistic assumptions are gratuitous. However, the use of the term "supernormal" is somewhat more suspicious. We should, at least initially, leave open the possibility that the processes of telepathic interaction are in principle neither different from nor simply more extraordinary than those currently recognized by science. If "supernormal" were intended to rule out that possibility, it would therefore beg an important question. But if it were not, then the meaning of the term would be correspondingly obscure (I explore possible analyses of the presumably synonymous term "paranormal" in II.C).

In any case, I think we can avoid this problem with Broad's use of "supernormal." Perhaps the main reason telepathic interaction interests us is that ordinarily we assume that a person's mental state cannot change another person's mental state except by means of processes which at some point involve the operation of one or more of the known (actually, in this case, the five) senses. For example, we believe that my present mental state can cause a change in yours only by means of a causal sequence which at some point involves your sensory contact with your environment (cf. Broad, *op. cit.*, p. 46). We believe that my mental state must first issue in some overt behavior or other publicly observable state of mine. Then that behavior or state must have an effect on your body and thereafter produce a change in your mental state. For instance, I can change your mental state by talking directly to you, or in virtue of your hearing or reading my recorded or written words (or copies of them), or in virtue of your observing my expressions, gestures, etc. (or reproductions of them), or in virtue of your coming into contact with some object or artifact I produced or used (or reproduction of them).⁴ So one reason telepathic interaction is interesting is that the telepathic process is supposed to operate independently of the familiar sensory mechanisms involved in these complex causal chains.

Of course the sensory mechanisms involved here are those of the five extra-somatic senses. But that does not mean we should say that telepathic interaction is the causal influence of one mind on another independently of those five senses. The reason here is somewhat different than that discussed in connection with telepathic cognition, and it concerns the possibility of another form of paranormal interaction. In fact, it bears on a problem we will encounter in defining the forms of clairvoyance. Suppose that *A* tries, merely by willing, to increase the acidity in *B*'s stomach, and that subsequently (as a result

of *A*'s willing), *B* develops an excessively acid stomach and experiences stomach pain. Since the physiological causes of *B*'s feeling a stomach pain are wholly intra-somatic, this would be a case of one mind's causally influencing another independently of the five (extra-somatic) senses. It also counts as the influence of one mind on another by granting the transitivity of causes. But I prefer to postpone the transitivity issue until the next section. So for the moment, we can tentatively define "telepathic interaction" as

(D3) *telepathic interaction* =_{df} the causal influence of one mind on another independently of the known senses.

Although there is hardly a philosophical tradition with respect to telepathy, philosophers tend to focus on the possibility of one person coming to *know* telepathically what another's mental state is. The supposition that telepathy fundamentally concerns this (or at least some) sort of cognitive process might even explain why telepathy has traditionally been considered a form of extrasensory *perception*. But as I remarked earlier, that is at least a partially, and perhaps wholly, misleading approach to the topic. There appear to be interesting forms of telepathic interaction which could not properly be described as cases of cognition. For example, some evidence suggests that a person's mental state can produce a *similar* mental state in someone else, independently of channels of communication involving the known senses, and without producing an awareness of the similarity. Thus, *A*'s thought of the Queen of Spades might merely produce in *B* the thought of the Queen of Spades, or the Queen of Hearts, or Queen Elizabeth. And as we will see, the possibility of that sort of interaction alone raises important philosophical problems, even though we would not describe these cases as cases of one person's telepathically coming to *know* what another's thought or mental state is.

In fact, as we will soon see, most (if not all) of the best evidence supporting the existence of telepathic processes supports telepathic interaction but not telepathic cognition. Nevertheless, there are significantly different *kinds* of experimental evidence for telepathy. Much of the evidence concerns cases of the sort just mentioned – that is, cases in which an agent's mental state appears to produce a similar mental state in someone else. Let us refer to these as cases of *ostensible telepathic content-simulation*. Clearly, once we grant that there might be telepathic processes in which one person's mental state produces a similar mental state in someone else, and once we grant that these need not be described as cases of telepathic knowledge, then

even if the relevant mental states were qualitatively *identical* (although we have no evidence for anything like this), we would not be compelled to describe the second person as knowing the mental state of the first. This would simply be a limiting case of telepathic content-simulation. In the language of Information Theory – which is often employed to describe paranormal goings-on – our case would be the analogue of the transmission of a signal in the absence of noise. Other studies suggest that subjects exhibit subtle physiological responses to telepathic stimuli even though they are not consciously aware of any such interaction. These cases likewise suggest the existence of telepathic interaction without cognition, and they can be classified as cases of *ostensible pre-conscious telepathic interaction*. Some of the much-debated experiments in card guessing might provide evidence for this form of telepathy (see I.B.4.a), because subjects report that guesses are not based on conscious subjective experiences of the target’s identity. Most of the remaining good cases suggesting the existence of telepathy are cases of *ostensible hypnotic telepathic interaction*. These concern such phenomena as the inducing of hypnotic trances at a distance, apparently by means of telepathic command or suggestion. Here, too, we seem at best to have a form of telepathic interaction, but no telepathic cognition.

3. Clairvoyance

Parapsychologists often contrast the term “telepathy” with “clairvoyance.” Whereas telepathy is supposed to involve a causal sequence between two minds, clairvoyance (literally, “clear seeing”) is supposed to involve a causal sequence running from some physical state of affairs to a mind. Usually this is taken to be a distinction between two forms of cognition. Whereas the object of telepathic cognition is supposed to be a person’s thoughts or mental states, the object of clairvoyant cognition is supposed to be a physical state of affairs. But clairvoyance needn’t be analyzed this way. In principle, we can distinguish various kinds of clairvoyance corresponding to at least some of the aforementioned kinds of telepathic phenomena.

To begin with, we can distinguish clairvoyant cognition from clairvoyant interaction, and we can formulate tentative definitions of these two classes of phenomena modeled after (D1’) and (D3).

(D4) *clairvoyant cognition* =df the knowledge of a physical state of affairs gained independently of the known senses.

(D5) *clairvoyant interaction* =df the causal influence of a physical system on a person's mental states independently of the known senses.

Again, we do not want to relativize clairvoyance to the five extra-somatic senses only; otherwise, for example, a stomach pain would count as an instance of clairvoyance. Presumably, then, we should yield again to our ignorance. We should relativize the definitions to known sensory processes and then be prepared to revise them in case we discover how to explain the phenomena in question.

We are now in a position to distinguish forms of clairvoyant interaction corresponding to some of the forms of telepathic interaction already classified. For example, suppose that an event – say, a fire in a house (or a person drowning) – is an immediate causal antecedent of a person's having, at some remote location, a mental image of a house on fire (or a person drowning). These would seem to be cases of ostensible *clairvoyant content-simulation*. Or, suppose that a person exhibits subtle physiological responses – but not conscious responses – to remote physical events (like a light flashing in another room). These would be examples of *ostensible pre-conscious clairvoyant interaction*, and there is, as we will see, evidence for this sort of phenomenon (see I.B.3.c). Without trying to provide a complete list of possible forms of clairvoyant interaction, let us observe, therefore, that – as with telepathy – there can be forms of clairvoyant interaction that are not also forms of clairvoyant cognition.

Regrettably, the distinction between telepathy and clairvoyance – useful as it might have been in the early stages of conceptualizing parapsychological phenomena – is far from clear. For example, if we compare (D1') with (D4), and (D3) with (D5), we must concede that telepathy might prove to be a *special case* of clairvoyance – if that is (as reductionistic materialists insist), mental states are simply kinds of physical states. On the other hand, if idealists are correct in taking the physical world to be a construct out of inner episodes, then clairvoyance would turn out to be a special case of telepathy. At this stage, however, we needn't take a stand on such global metaphysical issues, and so we may tentatively accept the traditional distinction between telepathy and clairvoyance.

However, there is a different way of challenging the distinction. It is a familiar fact that we often come to know another person's mental state by observing that person's bodily states (e.g., his behavior, gestures, expressions, etc). But if we can *clairvoyantly* come to know those sorts of things about a person, then it seems we can clair-