

AN ACAUSAL THEORY OF EXTRASENSORY PERCEPTION AND PSYCHOKINESIS

FREDERICK C. DOMMEYER

One of the major difficulties with parapsychology has been that it seems not to accord with the framework of scientific law. C. D. Broad has noted this by pointing out that psi violates "the basic limiting principles of science." J. B. Rhine and J. Gaither Pratt have directed attention to this same incompatibility of parapsychology with orthodox science by calling for a scientific revolution, such that the data of parapsychology can be subsumed under a more comprehensive theoretical structure than science now provides.

This seeming incompatibility creates a number of anomalies in parapsychology which make it impossible for large numbers of orthodox scientists and common-sense persons to accept its claims. It is absurd to believe, they would say, that what is in one person's mind can influence another mind except through a sensory route, e.g., by means of language. They would hold that it is nonsensical to suppose that a person can "see" an object or event except by means of his eyes. They would regard it as ridiculous to believe that one can know a future event will occur except on the basis of present, available data, rules of sequence, and reasoning by means of these. They would regard it as impossible that objects outside a person's own body could be caused to move or change other than by means of his muscular efforts or by some other physical means. These beliefs respectively place telepathy, clairvoyance, precognition and psychokinesis into the category of the absurd.

The "revolution" in science wanted by J. B. Rhine and J. Gaither Pratt has not occurred, nor are there any signs heralding its coming. A more pedestrian solution for these anomalies may therefore be ventured, namely, an acausal theory of ESP and PK. It is sometimes claimed that an acausal theory in psi is "metaphysical" in the bad sense of that term, meaning that it is capable neither of verification nor of disproof. This is, however, not so. The acausal theory could be

disproved by verifying empirically a causal theory of ESP-PK. And proof of the theory is possible, as will be observed later, by empirically establishing that the physical entity and its verifying referent are each causally explained without the necessity of citing any causal dependence of one on the other.

Let it be noted first that parapsychology makes use of such mentalistic elements as visions, images, dreams, hunches, and premonitions. I shall refer to these as *psychical entities*, simply to make it possible to discuss them in a general way. These psychical entities are not self-verifying; an hallucinatory premonition, for example, is not *intrinsically* different from a veridical one. If they were different intrinsically, one could tell by an examination of the psychical entity itself whether it was veridical or non-veridical, and this cannot be done. Whether veridical or not, however, psychical entities have an *intentional* aspect, meaning by this that they *intend* an object or event outside of themselves. Almost always, this intentionality is immediate and conjoined with the experience of the psychical entity. There are, however, instances where this characteristic is delayed in that it becomes apparent only sometime after the psychical entity has been experienced. The first case to be cited under precognition will be an example of this "delayed intentionality."

If psychical entities are not self-verifying, as is claimed above, how are they verified or, on the other hand, seen to be hallucinatory? It might be claimed that the psychical entity of Person A can be verified by those of Persons B, C, etc. That is, one might argue, say, that if five sensitives all claim to "see" clairvoyantly the same event E, that this congruence of ESP experience verifies A's belief that E occurred. It is conceivable, however, that this congruence is a result of one purported clairvoyant act and four telepathic ones, with the epistemic status of the belief in the event's occurrence thereby dependent entirely on the purported original clairvoyant act. It is the case, moreover, that parapsychologists depend for verification or disproof on ordinary experiences of the "intended object or event" or the lack of such experiences, e.g., in checking the score on an ESP card test, the experimenter uses ordinary perception in the reporting of his findings. If psychical entities are verified to any degree, it is because ordinary experiences and reports about them corroborate the intentionality of the psychical entities in question, thereby marking them off as special kinds of mental events, which are then called telepathic, clairvoyant, precognitive or psychokinetic. These verifying experiences are of events outside of the subject's mind, i.e., events in another person's mind or in the so-called external world. It is these outside events that

are generally believed to be causally related to their relevant psychical entities, though parapsychologists, harboring this belief tenaciously, have never been able to provide satisfactory empirical grounds for it.

What has been called "objects or events outside the mind of the subject" will now be designated as "verifying referents," i.e., of the relevant psychical entities. It is necessary to distinguish between a "minimal verifying referent" and a "maximal" one. Let us imagine that a clairvoyant "saw" a snake dying in an impenetrable jungle. On this assumption, the dying of the snake would be a "minimal verifying referent" because we would admittedly *have* a clairvoyant act, even though it was incapable of verification except possibly by an omniscient God. Parapsychologists holding to a causal theory of ESP, would say that there must be some causal connection between the clairvoyant's psychical entity and the event in the impenetrable jungle. For a verifying referent to be "maximal," there must be a minimal situation and, in addition, an ordinary experience of the object or event intended by the psychical entity, along with a relevant relating of the two.

The desirability of a causal theory of ESP-PK is obvious. If one knew how to cause an instance of ESP or PK, and could repeat similar instances at will, then ESP-PK would have scientific status in the best sense of that term. Before excluding a causal theory with the introduction of an acausal one, some consideration of causal theories of ESP-PK will therefore be in order.

Telepathy is defined as the "extrasensory perception of the mental state or activity of another person."¹ What this means essentially is that Person A can know what is experienced by Person B *without* B conveying that to A by use of language or by any other method of sensory signaling, or by B's facial or bodily movements as they are observed by A, or by any other conceivable sensory channel of information between B and A. Telepathy thus falls completely outside the pattern of ordinary ways whereby A can become aware of B's ideas, images, percepts, emotions, willings. Telepathy is therefore categorically declared by many scientists to be impossible.

Telepathy has so far defied understanding, and one can at best philosophize about various explanations of it. Viewing the problem speculatively, one can imagine certain avenues of approach. One can suppose, say, that an image in B's mind is correlated with a certain physicochemical event in his brain and that electrical activity in his brain activates the brain of A and thereby produces a similar image in A's mind. The difficulty with this theory is well known. The electrical activity in B's brain, though present, is known to be insufficient to produce a change in A's brain. Moreover, there is evidence from

Faraday cage experiments that telepathy is not a result of electromagnetic waves passing from Person B outside the cage to Person A within it. Though the experimental work of those who produced this conclusion is questioned by some parapsychologists, those who question it have not been able to prove the electromagnetic theory of ESP.

But other hypotheses of a speculative sort suggest themselves. It has been noted earlier that there are psychophysical causal relations, which seem to be limited however to one's mind as it affects *its* body. If one extends the idea of psychophysical causation from one's mind to things *outside* of its own body, there comes into focus the notion of a psychokinetic explanation. Telepathy could be explained through this concept, i.e., a mental event in B's mind psychokinetically affects A's brain, producing in it a physicochemical event such that A experiences a state or activity of mind similar to B's. This explanation has the advantage over the previous one in providing a "force" sufficient to produce a physical change in A's brain. There are, in any case, accounts of psychokinetic activities in which heavy objects have been moved by psychokinetic "energy." A difficulty with this explanatory hypothesis, however, is that it "explains" telepathy by means of an even more incredible notion, namely, psychokinesis. It is also the case that established science finds no place for psychophysical causal relations between a mind and a body not that mind's own.

One might however try a psychopsychical causal hypothesis for telepathy, i.e., that the mental event in B's mind can directly affect A's mind in such a way as to produce a similar event in A's mind. If discarnate minds in the next world communicate with one another, as has been claimed by spiritists, it would have to be in such a fashion.

The view presupposed in this explanation of telepathy between embodied human beings would substantially argue for the complete independence of mind from brain so far as causal influence between two minds goes. This position has the handicap of being disbelieved by most scientists, for it violates their basic conviction that one mind can influence another mind only through sensory channels, e.g., by use of language. Another difficulty in the way of this explanation is that, even when there exists in *one* person a psychopsychical causal relation, say, the idea of "man" causing by association the idea "woman," it is highly doubtful that such association is a purely psychopsychical matter; it probably involves intermediary brain-state changes.

Another explanation of telepathy is perhaps even less plausible. There exists in dreams "spatial" relations such that dream-chairs may be in front of dream-tables. Such a situation entails the being of "mental"

space in distinction from physical space. There are no spatial relations between these two kinds of space; one is either in one space or the other. It follows that objects in a dream are not therefore spatially locatable in a brain, for a brain is in physical space. This line of thought suggests that things of the mind subsist in a separate realm, i.e., separate from physical things. Is it possible for the contents of the mental world of B to become one occasionally and partially with the mental world of A, in which case a telepathic relationship would occur reciprocally between B and A? This would involve a sharing of identical images, ideas or memories by B and A. If the sharing were complete, there would not be two minds, but only one. When incomplete, however, a telepathic relationship would exist, as was noted. Such a view could be, though it need not be, extended to include the notion of a "world mind." To these hypotheses, an objection can be offered. Both forms, the nonmetaphysical and the metaphysical versions, destroy the commonly accepted "privacy of mind" principle. It is generally maintained that one's experiences are egocentric and not immediately shareable. All sharing of human experiences, it is contended, must be *indirect*; one person cannot have another person's experiences, i.e., in the sense of having *identical* experiences. Also, the assumption, in this view, that things of the mind are in mental space is questionable. Pain, for example, seems to be locatable in a toe or tooth.

There are, of course, other explanations of telepathy that have not been included here. But none of them has resolved the problem of how telepathy occurs, i.e., of what relationship exists between a psychical entity in the telepath's mind and the minimal verifying referent in another's mind.

In the light of these facts, an acausal theory of telepathy (and other forms of ESP and PK) is not unreasonable. It has moreover marked advantages: 1) It makes the revolution that Rhine and Pratt desire unnecessary, for an acausal theory is entirely compatible with ordinary science; 2) it eliminates the anomalies that cause both many scientists and commonsense persons to regard the claims of parapsychologists as absurd; 3) it takes away all bases for such linguistic criticisms as Peter A. French presents in his Introduction to *Philosophers in Wonderland*;² 4) it is in complete harmony with the state of affairs in parapsychology, for parapsychologists have been unable to provide a satisfactory (empirically verifiable) causal account of telepathy and other ESP-PK phenomena; and 5) it also fits in with the well-known "elusiveness" of psi phenomena and their rarity in the laboratory (when they are not pseudo-phenomena created by tricksters).

There are acausal events and uniformities in the world, some of

them artificial and others of them, natural. As an illustration, two clocks, one of them mechanical and in the United States and the other, electrical, and in Switzerland—let us postulate that they have nothing in common in their respective causal backgrounds in order to save a lot of additional description—will, if accurate time-keepers, show 12 N. together, or if set differently in a random way, show uniform differences in their readings. Each clock's time-keeping has its own separate and independent causal past, but neither clock is related causally such that one can correctly say that the 12 N. on the one clock is caused by the 12 N. on the other, or the other way around. The instances thus displayed are acausal and the uniformity is acausal. We may call this a Type I kind of acausality.

Such acausal instances and uniformities differ from causal ones. If a lighted match C, in situation S, is followed by explosion E, and the existence of E cannot be explained without reference to C and S, we have an instance of causation. Associated with causation is the principle that "similar causes in similar situations are followed by similar effects." It is causal explanation and uniformity of these kinds, and the ability to control and repeat work in a laboratory situation, that parapsychologists seek and which, up to this time, they have not achieved. By contrast, in an instance of acausality or in an acausal uniformity, we do not explain A's existence by reference to B, or B's by reference to A, nor is either a controlling factor over the other in the sense that one causally influences the other.

There are some acausal relationships (designated as Type II) where two events are causally independent but where they have some common causal antecedent or antecedents. A case in point—to put it in terms of a uniformity—would be the blooming of two apricot trees in a backyard each year, over a period of years and over the same intervals of time. The bloomings of tree A and tree B are thus a uniform occurrence, but obviously the blooming of A is not caused by the blooming of B, or the other way around. The two bloomings do have, however, the common causal antecedent each time they occur, say, of warm weather or the spring rains.

A third kind of acausality (Type III) is called here "intermittent acausal uniformity." In this sort, the uniform occurrence of the kinds of events that A and B are is not constant. It can be sufficiently present, however, to be statistically significant. For example, consider AB, CB, AD, AB, DB, AB, AE, AB, etc., where A is any veridical psychical entity when it is conjoined with its verifying referent B, and other combinations are neither of these. In CB, for example, B *would be* a verifying referent if C were veridical, but it is not. Or, in AE, A would be a veridi-

cal psychical entity if E were the verifying referent for it, but it is not. A is therefore in that case a non-epistemic psychical event. Such cases of synchronous or temporally off-set conjunctions of AB may sometimes be of the sort where A and B are causally independent in their respective causal backgrounds or A and B may have a common causal antecedent(s) in their respective causal pasts. An example of a Type III form of acausality might be a series of purported precognitions a person had, which were sometimes hallucinatory, but veridical often enough to produce statistical significance.

We know that the uniform time-keeping of the two clocks is acausal because we know enough of the causal background of each clock to understand that the uniformity can be accounted for fully without the requirement that one clock's time be a cause or a causal condition of the other clock's time. Analogously, in extrasensory perception—for an acausal theory to be plausible—one would have to make it reasonable at least that the psychical entity (dream, image, hunch, etc.) was not causally related to the verifying referent, and that two separate and complete causal explanations would be available for the psychical entity and the verifying referent respectively. This possibility is of course suggested by our inability to find a causal relationship between these two elements in an ESP situation. It would certainly not be difficult to ascertain the causal past of a great many verifying referents, for they are often nothing more than ordinary physical occurrences, e.g., physical events that have been predicted in a precognition. And, so far as the correlative psychical entity goes in ESP, there is no reason for supposing that it, too, could not have a causal past independent of its minimal verifying referent. The existence of hallucinatory psychical entities, which are *intrinsically* indistinguishable from veridical ones, is strongly suggestive of this possibility.

An acausal theory of telepathy would be something of the following sort. It would hold that when B is experiencing X in his mind, telepath A is experiencing X' (something similar to X) in his mind. If this happened only once, as might be the case in a spontaneous instance of telepathy, it would be viewed as such, though the percipient's assurance of that would no doubt depend on the degree of similarity between X and X', an assurance that would come, of course, by normal introspection on the part of the non-telepath and by normal communication between the two participants. Some parapsychologists do not give much credence to single spontaneous cases. If conjunctions of individually different X's and X's occurred in a series, even intermittently in such a way as to provide statistical significance, there would be a situation analogous to a successful laboratory ex-

periment in telepathy, even though it is held on this acausal view that there is no causal connection between X and X'.

Extrasensory perception is a term that subsumes under it telepathy, clairvoyance and precognition. Of these three kinds of ESP, clairvoyance *prima facie* most closely resembles a form of ordinary perception, i.e., seeing. In ordinary vision, the percipient is affected by light waves reflected from a physical object or event such that these waves produce changes in his retina which, in turn, cause a complicated sequence of changes in the optic nerve and then in the visual centers of the brain, finally resulting in his "seeing a table." There are many mysteries associated with this final effect, "seeing a table," but the general view of veridical vision is a *causal* one, i.e., by which physical objects or events outside of the percipient are causal conditions of the percept he experiences. There are, of course, visual hallucinations, in which the experience is ordinarily non-veridical precisely because an external physical object or event did not function causally as it does in veridical seeing.

Clairvoyance is defined as the "extrasensory perception of objects or objective events."³ It is, therefore, much like ordinary seeing in its end result. On the other hand, it is a more wondrous phenomenon in that one "sees" clairvoyantly objects or events without the use of one's visual apparatus, with these objects or events often at a great distance from the percipient. Yet, just as the ordinary percipient, when he sees with his eyes, does so through a percept, so also the clairvoyant has an image or some other psychical entity as the vehicle of his special kind of "seeing." The psychical entity, i.e., the vision, dream, etc., that "pictures" (more or less adequately) the verifying referent, doubtless has a causal past without which it would not occur. The immediate causal past would probably be the brain event with which it is correlated. But, in clairvoyance, this causal past of the psychical entity does not lead back to the verifying referent. It is for this reason that some scientists have refused to view clairvoyance as fitting within a scientific framework. Many of them would ask: Is it not absurd to say that one "sees" an object or event without the use of eyes, or in some cases without being anywhere near the object or event, and with no ascertainable causal relationship between the extrasensory cognizer and the verifying referent? (These are some of the anomalies that arise when a causal theory of psi is assumed.)

If one thinks speculatively about clairvoyance, he can hypothesize that, even though it has not been discovered as yet, there *must* be a psychopsychical causal relation between the verifying referent and the image or vision that the clairvoyant experiences and which is the ve-

hicle of his clairvoyance. But this is only a form of *a priori* reasoning. The facts are that there has been a study of clairvoyance by scholarly and scientific investigators in England and elsewhere from the middle of the last century. Yet, there has been no empirically grounded causal linkage established between the verifying referent and the psychical entity, by means of which the clairvoyant experience could be said to have occurred.

An acausal theory of clairvoyance is therefore not implausible. A Type III acausal uniformity between the psychical entities involved and their verifying referents can be postulated. There are no *a priori* reasons for excluding from nature that sort of acausal uniformity. Nor are there any facts of parapsychology that confute it, since no causal theory of clairvoyance has been empirically established. The empirical facts of parapsychology, indeed, support the acausal theory of clairvoyance.

The prediction and anticipation of future events are commonplace in ordinary experience and in science. From available data and rules of sequence, an inference (prediction) can be made. Such predictions vary in their probable truth. Some are true and some, false. The Glossary of *The Journal of Parapsychology* defines precognition as the "prediction of random future events the occurrence of which cannot be inferred from present knowledge." Ordinary predictions and precognitions are thus markedly different, the latter having no basis in ordinary available data or on inferences from them.

Looking at the matter parapsychologically, one can say that there seem to be different forms of precognition, not only in regard to degree of similarity of what the precognitive psychical entity "pictures" and the object or event "pictured," but also in certain other respects. A dreaming man, for example, had an experience of great anxiety as he stood at the side of a very wide walkway over which hundreds of people were rapidly passing in one direction, while he frustratedly sought out a particular person among them. The dream had no immediate intentional quality in that it had no future reference during the dream or upon the dreamer's awakening. Yet, three weeks later, on the University of California campus at Berkeley, this same man found himself in waking life in a precisely similar situation to that experienced in the dream. Only in this campus experience, three weeks after the dream had occurred, was the precognitive and intentional character of it recognized. This was in fact an experience of the writer.

A second example of precognition, cited by Milan Ryzl,⁴ represents another degree of it. In this instance, a man employed at a railway

terminal had a dream that two trains had collided at his place of work, with much loss of life. The dream was vivid and had alarmed him, but nothing occurred relevant to the dream at his place of work on the next day. But, on the day following, an overdue train got on the same track on which an express was arriving. Remembering his dream, he waved a red flag and succeeded in stopping both trains when they were only a few yards apart. A collision would have occurred except for his action. In this case, Ryzl contends that the precognized parts are those that occurred and that the remaining parts of the dream can be viewed as hallucinatory.

A third example⁵ of precognition has neither of the limitations noted in the foregoing instances. It is the case of a woman who, over a period of years, had dreams at irregular intervals of time. A constant in these psi dreams was the appearance of animal or human feces. Such dreams were invariably followed by her receiving or finding money, usually in small amounts (one cent to \$10.00), with no signs of such events other than the feces in the dreams. The money usually came to her several hours after awakening, with the longest period being four days. The predictive character of these dreams was based simply on this woman's generalization that, whenever such a dream occurred, she thereafter came into otherwise unexpected money. The puzzling aspect of the dreams is, of course, the presence of the dream-feces as an invariable antecedent of the monies.

Additionally, there are, of course, many reports of non-symbolic precognitions where the verifying referent is "pictured" literally and where there is also a future reference associated with the experience, i.e., an immediate intentional quality.

The puzzling aspect of all precognitions is that there is a totally different kind of ground for the foreknowledge involved, from that in cases of ordinary commonsense and scientific predictions. In precognitive cases, there are impulses, hunches, premonitions, dreams, visions, etc., that serve as the precognitive psychical entities. The epistemic element in these mental occurrences is inexplicable by any ordinary means, i.e., by reference to existing data and inference from them by means of rules of sequence. Because of an inability to give any explanation for the epistemic element in these precognitive mental events (i.e., the dreams, etc.) in terms of antecedent causal or other factors, some parapsychologists have theorized that there can be only one sort of cause for such psi awareness of a future event, namely, the future event itself. This is suggested by analogy with ordinary sense perception, where the physical object or event perceived is an originating causal condition of the perceptual experience. In the case of precogni-

tion, however, this would entail that a future event can be a cause of a present precognition. This view violates the generally accepted principle that "a cause must always temporally precede its effect." Douglas Dean, in a brave gesture, asserts: "Thus, instead of a cause preceding the effect, it seems that the effect precedes the cause. Logic has broken down . . . Effects coming before causes are not forbidden in nature; they are only forbidden in our brains, which work with logic circuits composed of neurons like computer logic circuits. Thus, we should not flinch . . . to use breakdowns of logic if they explain precognition."

Despite the extremity of Dean's problem, one does not have to suppose a breakdown in logic to accept his position. The logician can, in fact, offer Dean the needed tools to say what he wishes. The logician can point out that the meaning of the word *cause* in our languages entails that a cause necessarily comes before its effect. "A cause always precedes its effect in time" is therefore a tautology, an analytic truth: It says something about how language is used. But, as Morris Lazero-witz has often said,⁷ a tautology is trivial in that it says nothing about the world of fact. "All red things are colored" is analytically true, even though there might be a universe in which there were neither red nor colored things. These comments hold also for the tautology "Causes precede their effects in time." This is a proposition about the meanings ingredient in language, not a statement about anything in the factual world. One can go along with Dean to that extent.

I do not however regard Dean's view of backward causation as satisfactory. It appears to imply a peculiar view of time which, in fact, makes precognition, as that term is ordinarily conceived, into an impossibility. I shall only indicate here, however, that his view of causation is anomalous. An acausal theory of precognition eliminates this anomaly and returns us to a world in which causes always do temporally precede their effects.

Do these considerations suggest an acausal theory of precognition? Is it possible that a precognitive psychical entity is acausally related to its verifying referent, and even that a series of such psychical entities is acausally related to another series of verifying referents? If no intelligible sort of causal relation can be found between a precognitive psychical entity and its verifying referent, this may be a result of the fact that there is none. And if there is none, an acausal theory is the only possible outcome.

The history of psychical research is replete with reports of the strange movements of physical bodies. Reports of numerous spontaneous levitations and poltergeist cases testify, even if not scientifically, to the plausibility of such happenings. J. B. Rhine in 1934

began laboratory work on psychokinesis. It was slow in being replicated elsewhere and some psychologists, e.g., Edward Girden,⁸ wrote discrediting articles.

In a philosophical discussion of psychokinesis, it is rather the concept of it that is of interest and, in light of that concept, the raising of questions about possible explanations of such phenomena as it subsumes. Often PK is described as "mind over matter." Louisa E. Rhine's book⁹ refers to psychokinesis as resulting from the *will* of subjects. In the Glossary of *The Journal of Parapsychology*, PK is described as "the extramotor aspect of psi; a direct (i.e., mental but nonmuscular) influence exerted by the subject on an external physical process, condition, or object." On a commonsense view of nature, or on an orthodox scientist's conception of it, a causal relation between some aspect of one's mind and a physical occurrence *outside* of its body would be generally viewed as impossible. An occasional exception would be the gambler (with dice), the pinball player or the bowler; some of them act in ways that suggest they believe they can exert control over physical objects in the game *after* they no longer control them muscularly. On the other hand, there were Chicagoans who played "the 26 game" in bars for decades with ten dice, with the players trying for a specific number that they hoped would appear at least 26 times in thirteen rolls. The player was obviously willing—"trying"—to achieve his game objective, but the tally sheets, year in and out, showed the house-take to be what would have been expected on the laws of chance.¹⁰ It would hardly seem that willing for some objective change outside one's body is the key to producing that event. If PK occurs, certainly no one has given a satisfactory account of its causal conditions, though it is often suggested, as with ESP, that there are psychological factors in both subject and experimenter—likes, dislikes, frustrations, etc.—that affect the success of the results. Yet, no one can specify these psychological factors in such a way that strict scientific repeatability can be achieved.

The idea of psychokinesis suggests philosophically some possible explanations of it. A review of a few different kinds of psychokinetic occurrences will be useful in stating them. Bishop Pike and two friends (David Barr and Maren Bergrud), who were staying with him in Cambridge (England), noticed in their apartment inexplicable changes in the location and placement of physical objects upon returning from a weekend spent miles away.¹¹ None of the three had consciously willed these changes, for they were surprised by them. Many poltergeist cases certainly have no conscious antecedents. The result is that parapsychologists sometimes appeal to the "unconscious" as the causal

factor, but this seems unconvincing in the absence of any specification of what precisely it is in the "unconscious" that brings about the outside physical effects in question. Indeed, even explicit willings or wishings to move objects outside of one's body usually have no effect, as "the 26 game" in Chicago so well revealed. There are reports, however, that are based not only on noticed inexplicable dislocations of objects, but on the claim that objects have been seen in motion, with no normal explanation available. Were such "observations" hallucinatory or based on some abnormal state of mind? Was the inexplicable change in the physical object the result of trickery? After careful investigation of Uri Geller for some six weeks at the Stanford Research Institute, Targ and Puthoff were unable to have him achieve a single instance of psychokinesis when the objects were kept out of his hands.¹² Kulagina and Vinogradova have presented puzzling phenomena that suggest a psychokinetic interpretation. Those of Vinogradova, however, seem to be in line with electrostatic operations. Kulagina's phenomena, however, whatever their nature, cannot apparently be explained in that manner, but careful observers, e.g., J. G. Pratt, are hesitant to designate them as psychokinetic.¹³

If one takes the definition of PK, quoted earlier from the Glossary of the *Journal* or L. E. Rhine's notion of willing as the psychic entity preceding movement of physical objects or even the notion that "unconscious" psychic entities are antecedent to psychokinetic occurrences, or just the meaning of the word "psychokinesis," one can fit the laboratory work of Rhine, Cox and others into an acausal theory (Type III). Such acausal uniformities as are discovered can be statistically significant and noted as evidence for this acausal form of PK.

To summarize, the bases for attacking the credibility of belief in telepathy, clairvoyance, precognition and psychokinesis are the following: 1) That it is not possible for one person to know what another is experiencing except by sensory means (excludes telepathy); 2) that physical objects or events can be perceived only through the senses (excludes clairvoyance); 3) that one cannot know the future except through present data and inferences from them (excludes precognition); and 4) that it is not possible for an event in one's mind directly to cause any physical event other than in his own brain (excludes psychokinesis). All of these objections, which have been crucial in causing scientists and others to regard ESP and PK as impossible, if not nonsensical, are eliminated by the acausal theory.

But perhaps the most important consequence of the acausal theory of ESP-PK is the realization that the anomalies in present-day para-

psychology are not a result of the facts that parapsychologists are discovering but of the interpretative framework into which they are placed. Change that interpretative framework, as was done in this paper, and the anomalies disappear.

REFERENCES

- ¹ See Glossary of *The Journal of Parapsychology*.
² See his Introduction to *Philosophers in Wonderland*, edited by P. A. French. Saint Paul: Llewellyn Publications, 1975.
³ See Glossary of *The Journal of Parapsychology*.
⁴ *Parapsychology, A Scientific Approach* by Milan Ryzl. New York: Hawthorn Books, Inc., 1970. p. 173.
⁵ See *Some Ostensibly Precognition Dreams* by F. C. Dommeyer, *JASPR*, Vol. XLIX, No. 3, July, 1955. Also, *Another Veridically Significant Dream* by same author, *JASPR*, Vol. L., No. 4, Oct., 1956.
⁶ *Psychic Explorations, A Challenge for Science*, edited by John White. New York: G. P. Putnam's Sons, 1974. p. 171.
⁷ See *Logical Necessity in the Structure of Metaphysics* by Morris Lazerowitz. London: Routledge and Kegan Paul, 1955. pp. 254-256.
⁸ Girden, E., *A Review of Psychokinesis* *Psychological Bulletin*, Vol. 59, No. 5, Sept., 1962.
⁹ Rhine, L. E. *Mind Over Matter* London: The Macmillan Co., 1970, p. 359.
¹⁰ Gardner, Martin. *Fads and Fallacies* New York: Ballantine Books, Inc. 1957. p. 212.
¹¹ Pike, James A. with Diane Kennedy, *The Other Side* Garden City: Doubleday & Co., 1968. p. 81.
¹² From a conversation the writer had with Russell Targ, April, 1976.
¹³ In a letter of April 14, 1976, to the writer.

DISCUSSION

EDGE: It seems to me that the names that we have in parapsychology — telepathy, PK, etc., — really are not explanatory concepts at all. Rather, they are concepts which merely designate, for the time being, a kind of uniformity. Now, it seems to me that what you have been doing is to point out the problem that there does *not* seem to be any causal connection, but from that I would draw the conclusion that these are not explanatory concepts and therefore the putting together of the words, as you have, of an acausal explanation, seemed to me somewhat odd, because I'm not sure then what the nature of the explanation would be, if it is not connected in any way with a causal connection.

DOMMEYER: I grant your point that the terms, telepathy, clairvoyance, etc., carry with them certain connotations, but I thought I had to start somewhere and I started with the definitions that one finds in the Glossary of the *Journal of Parapsychology*, feeling that that was as good a place as I could go for such definitions. Of course, starting out with those definitions, I then proceeded by my acausal theory. Now, when you ask for an explanation of telepathy on my view, I would say

that I am making an assumption about nature. Of course, Leibniz, as you may recall, postulated a preestablished harmony, that nature operates in a preestablished way. Well, I don't have to go that far, but I am saying that in nature there are acausal uniformities, and, if you asked me what a clairvoyant act was, I would say, "Well, nature is just working in such a way that if I, the clairvoyant, have an image and then nature reveals the verifying referent, that's clairvoyance." That would be my explanation.

THAKUR: "I'm not convinced that the examples you gave of acausal uniformities can in fact be taken as such. For example, the case of the clocks. It is true that the two clocks are in vastly different places and are not causally related, but then the uniformity is displayed because of certain laws operating about springs and pendulums and balances.

DOMMEYER: Each clock has a causal background.

THAKUR: I'm not quite sure whether it remains acausal, because there is a cause as to why each one of these clocks is behaving or will behave in the future.

DOMMEYER: The acausal relation is between the 12 o'clock on one clock and the 12 o'clock on the other. These are acausally related. I grant fully that the 12 o'clock on clock I is based upon a lengthy causal past and also on clock II, but nonetheless a uniformity of clock I and II cannot be explained as a causal relation between the two clocks.

THAKUR: If I were to say that in the situations where, when it strikes 12 o'clock in New York, it also happens to do so in London—if I were to say that's simply a convention and nothing else?

DOMMEYER: Oh, I don't say it's a convention, that isn't so at all. I simply say that the clock's striking in New York doesn't cause the clock to strike in London.

THAKUR: Assuming that there is ground to talk about acausal uniformities, my question is how does this concept of acausal uniformity explain anything beyond sort of pointing out or drawing attention to the fact that something like this does occur?

DOMMEYER: Well, I think that's about all one can do. For example, this happened to me. I had a dream in which I dreamed of a wide walkway with crowds of people going by and I was very frustrated in my dream, looking for someone. When I awakened, it didn't have any future significance at all and neither did the dream have future significance when I experienced it. But three weeks later I was on the

Berkeley campus. I had taken my son over there to take an English test, to see whether he'd have to take "bonehead" English and he did have to take it, I might say. Well, he came out much later than I had expected after the English exam and I was uneasy waiting there. Here were all these people passing, and it was an exact duplication of the dream, and then I thought to myself, "My goodness, that's exactly what I dreamt." Now, I would say that this would be an acausal kind of case of a precognitive dream, and my explanation of it is simply that nature operated that way. There are acausal instances and uniformities in nature.

FRENCH: What you've done is taken the causal problem and turned it into a uniformity problem and I wonder if after I've said a few words, you might comment on them. It seems to me some of us are still worrying about how we determine cause for some of these extra-sensory events or psychic events. Now, our problem is one of finding out whether or not an event is uniform with another. It seems to me in your I and II types of acausal uniformities, that the problem of uniformity is more or less taken care of by a theory of some kind that accounts for the uniformity. In the case of the clocks, I assume that's a theory of chronometry or something of that sort, but what will count as uniformity in precognitive cases? I'm particularly concerned here where obviously there is no general awareness or knowledge of the one event, that is, the psychic event, other than on the part of the experiencer or individual.

DOMMEYER: Well, I would explain the background of the psychical event in broad terms just as I did the background of the clock. The psychical event might be a dream, and some physiologists or neurologists, I suppose, might give the background of that dream in synaptic connections in my brain, etc., etc. I don't deny that the psychical entity has its causal past just as the clock does, nor do I deny that what I precognized, the events over in Berkeley that I viewed there, also have a causal past. You can explain why those people happened to be walking along there at the time that I was standing there; you can explain why I was standing there frustrated, looking for my son. So I would say the situations are analogous, in that the psychical entity has its causal past and so does the verifying referent have its causal past, and I would simply say that nature operated this way. Obviously it did or the events wouldn't have happened. But the dream was not the cause of the Berkeley event, or that event the cause of the dream.

BELOFF: I have somewhat of a problem in expressing my objections,

because in point of fact I think I can say I disagree with practically everything Professor Dommeyer has said in his paper. Perhaps I could start by saying that I'm still terribly unclear as to how Dommeyer's acausal theory would differ from the position of, say, a radical skeptic about parapsychology, who would simply assert that everything which isn't explainable by trickery, which, of course, is a causal theory of its own kind, is explainable by chance. And it would seem to me that adopting Professor Dommeyer's position would, if I have not misunderstood him, be equivalent logically to an explanation as coincidence. Now, perhaps the crucial point of disagreement between myself and Professor Dommeyer is that he seems to imply that a causal relationship must also involve a causal mechanism of the kind that traditional classical mechanics have made us familiar with. Now this, I quite agree, is absolutely absent in all parapsychological evidence, but this is why, for example, Rex Stanford and myself and many others, while not abandoning a causal theory, believe that the kind of causation that operates in psi transactions is of a very different nature. It's much more teleological and it doesn't operate by the sort of pushes and pulls that we so ordinarily, in common sense, associate with causing something to fall over or something of that kind.

DOMMEYER: Well, I would grant that I do introduce an open skepticism here, because I am holding that parapsychologists have not established any causal relation between what I call the psychical entity and the verifying referent. But I would not want to put it on just a chance basis. That, I think, would misconstrue my theory, because I am quite willing to say that nature can operate in this way to produce statistical significance and the fact that it does this is evidence that I'm not postulating very much. Nature does operate in that way. We see it happening, so I'm not really going beyond anything that we can't ascertain empirically.

PENELHUM: I came away about ten days ago from a conference commemorating the bicentennial of the death of Hume, and this may color some of these comments. It does seem to me, however, in view of this morning's discussion, that he might very well never have existed. I was struck by the fact that everyone from Professor Dommeyer onwards seemed entirely clear about what the difference was between causal uniformity and acausal uniformity, and were merely disagreeing about whether the kinds of uniformities involved in psi transactions were of one kind or the other. But, I'm not sure I do understand what the difference is, and I think that when Professor Dommeyer recommends us to think of psi phenomena as involving acausal uni-

formities, he really ought to say what *he* thinks this difference is. I'm reminded of the classical debates about the difference between interactionism and parallelism, the nasty criticism of parallelism, which tells us these things always go together but don't just happen to be causally related, is that it's not discernably different from interactionism. What else does the interactionist tell us, but that when one occurs, you can be sure the other has and if that also goes for parallelism, are these theories really different? If the sorts of acausal uniformities that Professor Dommeyer thinks may be operative in the case of psi phenomena, are the kind that might enable one to know that one phenomenon has occurred when the other does, then how is this not a causal uniformity? If they don't enable us to know that one occurs when the other has, then in what sense is it an explanation he is offering?

DOMMEYER: I certainly would agree with you that, if I were to write a book on the topic, I would certainly try to distinguish more adequately what I mean by a causal uniformity as distinguished from, say, an acausal uniformity. I would still maintain that I think I can state that distinction and I think there is a difference. For one thing, I believe that a causal condition is an event that has to be present, let us say, in producing a given effect, and one clock doesn't have to be present to produce 12 o'clock on the other clock. I'm thinking here of laboratory control and strict repeatability. And I do think there's a lot of difference between my taking a pill for high blood pressure and having my high blood pressure go down, and one clock, say, being at 12 o'clock and the other clock being at 12 o'clock—there's a big difference there, and that's the difference I'm trying to get at.

STANFORD: I felt a good bit of sympathy with Dr. Beloff's remarks and I think there are a couple of points in which I feel there were factual errors in Dr. Dommeyer's presentation. I see no basis except the most trivial one, for instance, in saying clairvoyance most closely resembles ordinary perception, unless he wants to fall back, despite his own ideas, on some kind of causal notion. But most particularly with regard to PK, to suggest that we haven't found any kind of indications of causation, I think ignores a large mass of PK literature. There have been dozens of instances in which persons have run random number or event generators of one type or another, with no kind of contingent linkage to the subject's dispositions where they have got chance results. And then when they're linked with those dispositions they have found a biasing of the generators. It's been repeated again and again. Furthermore, if we talk about machines in general, we find a boundary

condition on this relationship because we don't typically find computers being biased in this way. It looks as though you have to have some special characteristic for the machine to function as a PK-influenced random event generator. We don't yet understand what this characteristic is. These findings certainly seem to me a basis for strongly suspecting a kind of lawfulness. Now, you may not accept the evidence in this case as strong enough to establish that kind of a point—that's your right. But now what kind of boundary conditions, if any, does your so-called explanation propose? Does it propose any, even, in principle? And if it doesn't, how is it conceivable that we can differentiate these kinds of acausal connections from accidents? You said a few minutes ago that you're not willing to put this on a chance basis.

DOMMEYER: I think you can't always distinguish between accidents. It's perfectly possible that I might wish to move that glass and then it goes up and it might be a complete accident. My general view of PK is certainly one that's not as comprehensive and detailed as yours. I'm no experimentalist and I would certainly respect anything that you would say there in regard to this, but it's my understanding that no one can indicate the causal conditions that are involved in PK, as my paper tended to suggest all too briefly. You get all kinds of wild differences. In the Chicago bar, these fellows were trying to will certain numbers to come up on the dice for years. And yet it came out in accordance with the laws of chance. One would suppose that if there were some causal explanation, that something other than that would have happened. In other words, I find the area of PK such a difficult area because of the diverse currents running through it, that I would personally, as a philosopher, hate to draw any solid kind of conclusion about it. But I would say, until you can come up with a causal explanation, that I'm going to stand by my acausal theory.

KORNWACHS: I think to speak about uniformity means to state that there is a possibility of correlations, and to make correlations means to bring order into the chance, avoiding the term necessity. The idea of conformity leads me to the idea of a conformal mapping, as it is known in functional analysis. By analogy I try to understand precognition. If one could understand it in the way that a hologram works, that means one could transform the spatial frequencies of a picture by a Fourier transformation in the temporal frequency of these pictures. So for a sensitive person, only a short reception of an interval of these temporal frequencies would be sufficient to re-transform the spatial frequencies of a picture, and so, to get all

information of this picture. And in this way I could imagine that I can prevent the difficulties with time, and my question is now: is that a specific sort of correlation which is an acausal one in the sense of your type Number Three you've mentioned?

DOMMEYER: Yes. It's the Number Three type of acausality that I would think would characterize ESP and PK occurrences because that is intermittent and as I see it, parapsychology, so far as its data go, is very intermittent.

MATTUCK: First, I think that the most striking indication of some sort of causal connection is found in the phenomenon of PK, which I think you dismissed much too lightly. There are now a large number of experiments which have been done under what I consider to be adequate control. I am thinking, for example, about psychic children who have been investigated by Hasted in England, and also about the French medium, John Pierre Girard, who has been investigated now by about three or four different scientists. Many examples are coming in every day, of psychokinesis performed under controlled conditions, where the medium for example, bends an object, but has absolutely no means of producing this bending by use of physical methods. That's number one. And number two, I disagree with your statement that there are no theories being proposed now which show a causal connection. I myself am working on such a theory . . .

DOMMEYER: No, I didn't say that.

MATTUCK: I don't see how it is possible for any scientist to work using an acausal model for PK because, as far as I can see, an acausal model is no model at all. The motivating force behind science is finding seemingly unrelated events and trying to find a causal connection between them. This is the life blood of science. We'd all have to stop doing our work in parapsysics and parapsychology if we subscribe to your model.

DOMMEYER: On the point of the bending of objects, I don't believe that a precise causation is known in those cases at all. For instance, when someone strokes a spoon and it bends, how do I know that that is a psychokinetical event. This may be because of the stroking. It may be a purely physical occurrence for all I know. It's completely gratuitous to say that the mind is doing it.

MATTUCK: But the bending occurs without contact with the metal object in some cases!

DOMMEYER: In any event, it's in physical space, and something may be happening to it physically. Why do you pick on the mind as the cause? It might be anything in the world that's doing it.

MATTUCK: But nobody has been able to find any physical cause for the bending.

MAUSKOPF: Briefly, I'll make a statement rather than ask any questions, a statement which now is serving as something of a summary. I got the distinct impression, Fred, that you were suggesting—especially at the beginning and end of your paper—that you would, by this theory, be able to reconcile parapsychology and parapsychological phenomena with more orthodox science and scientific beliefs. In the discussion that ensued since, the point I wanted to make has perhaps been borne out. I see no way whereby your particular proposal would get that reconciliation a bit farther than it presently is. The reaction, I think, seems to bear that out.

DOMMEYER: I have, on my view, simply eliminated all these reasons for the ordinary scientists to say this is nonsense, or for people to say that the sentences are semantically nonsensical. On this view, any scientist could say, "O.K., I agree with parapsychology and the results if that's the interpretation you're going to give to it." So in that sense I bring parapsychology back into orthodox science.

JANIN: Practically speaking, how does an acausal theory allow one to predict parapsychological events?

DOMMEYER: Well, you can't predict them on your view either, so maybe we have an equality there.

LESHAN: We've been offered a challenge to a tremendous tendency we have to always think in terms of actual causal connections, in billiard ball models, and that we've all shown how strongly we defend this instinctively without even thought. Finally, I would like to remind you of Law #3 of "Science as She is Done" by J. R. Vandercrank, in *The Journal of Spurious Diseases*, Vol. 27, 1933, page 144. Law #3 is that it's been scientifically proven by centuries of empirical research that the beating of tomtoms during an eclipse is always followed by the reappearance of the sun.