

TOWARD A GENERAL THEORY OF SURVIVAL

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The quest for evidence of postmortem human survival is one of the longest standing preoccupations of psychical research. From time to time this exercise has produced what many parapsychologists consider persuasive evidence of psychic phenomena, namely, extrasensory perception (ESP) or psychokinesis (PK). The question has then become what is the source of these ostensible paranormal effects. Survivalists argue that the source must be some kind of discarnate entity, while the opposing camp maintains that all the evidence can be accounted for by strong psi among the living, so-called "super-ESP" or "super-psi".

Not much progress has been made in resolving this controversy. It is a premise of the present paper that this state of affairs is attributable in part to a lack of sufficient theoretical development on both sides. This is especially true of the super-psi hypothesis, whose advocates often use our alleged failure to determine the limits of psi in the living as a basis for claiming that such psi can handle whatever evidence the survivalists put forth. This "anything goes" approach is unfalsifiable (Palmer, 1975; Roll, 1982) and of little scientific value.

Except for Stephen Braude (e.g., Braude, 1993), theory development has been the province of the survivalists. However, most of this theorizing has been directed toward explaining particular pockets of evidence such as mediumship (Sidgwick, 1915) and reincarnation cases (Stevenson, 1987). Valuable as such contributions are, we ultimately need a more powerful theory that not only integrates the disparate survival databases but also integrates these with the much larger body of evidence for psi in non-survival contexts. In other words, we need a general theory of psi that explicitly provides for a discarnate origin of some psi effects. Such a theory must be internally coherent, falsifiable, and provide a framework for testable predictions. Super-psi advocates notwithstanding, psi clearly does have limits, even though we cannot yet adequately state what they are. We know, for example, that psi is much less common than "ordinary" means of communicating with our environment. We also know that some species of psi (e.g., telepathy) are more common than others (e.g., poltergeists) (Palmer, 1979). A good theory of psi must account for such limitations. Finally,

it would be ideal, although not absolutely necessary, for the theory to integrate psi with mainstream science, particularly those branches concerned with the mind and brain.

The parapsychologist whose papers on survival best exemplify such global theorizing is William Roll, particularly his "psi-structures" theory (Roll, 1982).¹ Drawing on the writings of William James (1909), Gustav Pagenstecher (1922), Whately Carington (1944), and Gardner Murphy (1945), Roll proposes that each individual personality forms part of a psi structure that includes remnants of his previous social interactions and contacts with physical objects.

Psi structures, however, encompass not only an individual and his or her immediate or remembered environment, but also distant events... When a person moves, in the ordinary sense, from one location to another, the person at the same time remains, in a parapsychological sense, "in" the old environment...people remain "psi-contiguous" with places and people they have encountered in the past, or...they are part of the psi structure that includes these places and people...[thus] an individual can become aware of events that involve objects or people that are spatially remote from his or her body, but that are psi-contiguous to it. (Roll, 1982, pp. 206-207)

In other words, if I move into a room which you previously occupied, I come into contact with your psi-structure, from which I psychically obtain information about your past physical and social contacts. The theory is relevant to survival in that "the dispositions and other aspects of human personality remain in 'implicate form' [cf., Pribram, 1978] in the environment of the organism after it has died" (Roll, 1982, p. 209).

The purpose of this paper is to provide an alternative theory to Roll's. I am proposing it not because I think Roll's theory is necessarily wrong or that mine is necessarily right. I do not even claim to be an advocate of my own theory, because I am not yet prepared personally to accept that we survive death in any form whatsoever. I

¹ More recently, Roll (1989) has introduced the concept of the "long body", which seems to have the same implications for survival as do psi structures.

am engaging in this exercise because, as I have stated elsewhere (Palmer, 1987), I believe that to verify psi as a paranormal process we must confirm a particular, testable theory of psi, and I think that it is not only appropriate, but important, that some of the candidates postulate postmortem survival. Indeed, it is only through confirmation of a psi theory of the latter type that the survival controversy will be resolved in favor of the survivalist position. We have not yet reached the level of theoretical maturity in parapsychology where we can settle on one "paradigm" (cf., Kuhn, 1970); what we need instead is a (hopefully friendly) competition among a variety of theories, each of which has its own testable implications.

My original intent was to propose a theory that would be more similar than Roll's to traditional conceptions of survival, in that it would postulate a more active, dynamic, and cohesive existence to the surviving entity, more of a genuine "personality". I ended up with something midway between Roll's theory and the conventional conception. It bears some important similarities to Roll's theory, but there are also marked differences.

Many scientific theories, especially in psychology, evolve inductively from a consideration of the pertinent data. Other theorists arrive at their initial assumptions more independently and then tailor them to fit the existing data. This latter "top down" approach is represented in parapsychology by the observational theories (Millar, 1978), in contrast to Stanford's (1977) PMIR theory, which illustrates a more inductive approach. I have chosen the top down approach in this case, and to make this clear I will unveil the theory in a manner that stresses its stages of evolution in my own mind.

Metaphysical Considerations

I began by asking myself what metaphysical system is most compatible with survival. The candidates are physical monism (materialism), mental monism (idealism), and dualism. Materialism is clearly the least attractive candidate. Most materialists maintain that survival is impossible because all mental activities are dependent upon the physical brain, which disintegrates at death. It is conceivable,

however, that mental activities could be carried out by some sort of material entity that is not subject to biological decay, as is proposed in some Eastern metaphysics. It would need to be either some permanent substance with extension and mass or some sort of physical energy. The latter seems particularly incompatible with the notion that what survives is some sort of stable entity. In either case, verification would require detection by some kind of physical measurement, a burden I would not wish to assume simply for the benefits of embracing the scientifically fashionable ontology.

Some sort of idealism is a more realistic possibility. If we take the prototypically idealistic ontology of Bishop Berkeley, in which reality consists of ideas in the mind of God, I suppose the survival issue boils down to whether God wants to keep thinking about us after we die. I really don't know what to do with this viewpoint for the purpose of building a theory, and Berkeley's idealism seems to have very few adherents in modern philosophy, despite the apparent difficulty in refuting it.

A more promising form of idealism is the panexperientialism of Alfred North Whitehead. David Griffin (1993), who has presented a very readable interpretation of Whitehead's cosmology, does not consider it to be a form of idealism, but rather an ontology distinct from the standard three. I disagree (Palmer, 1993), on the grounds that the world Whitehead describes is fundamentally mental. Specifically, and expressed very crudely, it consists of a kind of substratum of consciousness plus a temporal sequence of "occasions of experience" that communicate information to one another through a process called "prehension" that includes what we call psi.

Following Whitehead, Griffin (1993) maintains that while panexperientialism allows for survival it does not require survival; the question is left for empirical resolution. He nonetheless puts forth a kind of Whiteheadian survival theory that might be placed alongside the efforts of Roll and myself as a separate alternative. He cites a speculation by John Cobb (1967) that "psyches", which are the most advanced or "dominant" of the occasions of experience, have evolved in humans to the point that they no longer need the body as a source of prehensions, because their premortem concerns do not primarily involve the welfare of the body as is the case with lower animals.

As I am attracted to Whitehead's cosmology, it would be tempting to build my theory on it. However, panexperientialism does not make as sharp a distinction between mind and brain as I consider optimal for this purpose. It is too much like Sperry's (1970) emergent materialism in this regard. I have chosen instead to opt for dualism, in which the distinction is more clear-cut. Whereas panexperientialism allows survival, dualism virtually *requires* it. The idea that matter and mind are fundamentally different substances seems to me to be the clearest basis for maintaining that mind is not subject to the laws of biological decay. Dualism also more readily allows us to deny to mind qualities such as (physical) extension, which at the very least are a nuisance for a theory of psi, which is generally considered to be space/time independent.

However, my strategic embrace of dualism does not require that I accept everything René Descartes had to say on the subject. For example, despite the recent emergence of the pineal gland in parapsychological theorizing (Roney-Dougal & Vogl, 1993), I reject the notion that the mind is located in (or is it at?) this particular piece of anatomy. My rejection has less to do with the pineal gland per se than with the fact that I find it nonsensical that an entity lacking physical extension can be "located" anywhere in physical space. For some reason, this locating of the Cartesian mind in physical space seems to bother philosophers less than the notion that mind and matter can somehow interact. The latter, which my dualistic theory admittedly requires, is at least conceivable to me, even though I cannot explain the nature of the interaction in mechanistic terms. (In fact, I believe it is inexplicable in such terms.)

Just as dualism has implications for survival theory, survival evidence has implications for dualism. Survival evidence could not prove dualism because, as noted above, it would also be consistent with some idealistic ontologies. However, for all practical purposes it would refute materialism, because it would imply, at a minimum, that personal memories continue to exist after the death of the brain.

Incidentally, I do not agree with John Beloff (1989) that psi evidence other than survival evidence would refute materialism. The reason is quantum mechanics. Even if we grant that quantum theory does not at present explain psi, at least not in the sense of direct transmission of

information from a source to a receiver, the fact that matter has been shown to have non-local properties opens the door for a future quantum theory of psi based on brain processes.

Origins of the Theory

The stimulus for my dualistic theory of survival was an insight that originated with Frederic Myers (1886-1887), who speculated that "perhaps when I *attend* to a thing, or *will* a thing, I am directing upon my own nervous system actually that same force which, when I direct it on another man's nervous system, is the 'vital influence' of mesmerists, or the 'telepathic impact' of which Mr. Gurney and I have said so much" (pp. 172-173). In other words, telepathy is the externalization of the same process that we use all the time internally to initiate willed behavior. This insight was developed further in the "Shin" theory of Thouless and Wiesner (1947).

The internal "psi" process to which Myers referred was described hypothetically in more detail by the distinguished philosopher Karl Popper and the equally distinguished neurophysiologist John Eccles as part of their dualistic theory of mind (Popper & Eccles, 1977). Popper began by dividing reality into three "worlds". World 1 is the world of the materialist, the world of physical objects. World 2 is the world of the idealist, the world of subjective experience. Popper then added World 3, which consists of the products of the human mind, such as myths, art, and scientific theories. This somewhat Platonic notion does not make much sense to me, and I will not discuss it further. Worlds 1 and 2 are sufficient to create the dualistic context for the neurophysiological aspects of the theory, which Eccles summarizes as follows:

The self-conscious mind is an independent entity ... that is actively engaged in reading out from the multitude of active centres in the modules of the liaison areas of the dominant cerebral hemisphere. The self-conscious mind selects from these centres in accord with its attention and its interests and integrates its selection to give the unity of conscious experience from moment to moment. It also acts back on the neural centres ... Thus it is

proposed that the self-conscious mind exercises a superior interpretive and controlling role upon the neural events by virtue of a two-way interaction across the interface between World 1 and World 2 ... It is proposed that the unity of conscious experience comes not from an ultimate synthesis in the neural machinery but in the integrating action of the self-conscious mind on what it reads out from the immense diversity of neural activities in the liaison brain. (Popper & Eccles, 1977, pp. 355-356)

The modules Eccles refers to are ensembles of up to 10,000 neurons "with a functional arrangement of feed-forward and feedback excitation and inhibition" (p. 366). The liaison areas are those locations in the dominant hemisphere "which have linguistic and ideational performance or which have polymodal inputs" (p. 363), especially Brodmann areas 39 and 40 and the prefrontal lobes. At any given time, some of the modules are open to interaction with the mind and others are closed. When all are closed, the result is unconsciousness. The modules are considered to be very labile (to borrow a popular parapsychological term), and only a weak input from the mind is necessary to alter their functioning, which alterations then radiate out to other brain modules by normal physiological mechanisms.

My strategy was to take Eccles' theory, with some modifications described below, and expand it to explain psi and survival evidence. In so doing, I deliberately attempted, for the sake of parsimony, to minimize the number of new assumptions that must be added to the materialistic account of mind.

Ordinary Mental Processes

I began by defining a substratum for World 2. Because this substratum is analogous to physical space in World 1, I will provisionally call it mental space. (The reason for the "provisionally" is that this mental space lacks extension, i.e., spatial properties, as defined for World 1.) This move allows me to avoid the problem of where World 2 entities are "located" in physical space, and it also provides for the origination of psi processes in World 2.

Such a mental space is difficult to conceptualize, because we are programmed to think in terms of physical space. In this sense, the situation is comparable to what we find with advanced physical theories like quantum mechanics, which can only be properly understood mathematically. It might help a little to follow Smythies (1989) and think of this mental space as existing in higher spatial dimensions than the three we are used to. However, I prefer to simply avoid talking about dimensions at all in relation to World 2; I see no necessity for doing so.

The only quality I attribute to mental space is consciousness, which I define as the potential for subjective awareness. This allows me to drop the term mental space and replace it with consciousness.

Consciousness is "inhabited" by an almost infinite number of what I will call *psiads*. These psiads are representations of each integrated preconscious thought or image (i.e., meaning unit) generated by the open brain modules in Eccles' theory. In contrast to Eccles, I propose no scanning process by which consciousness seeks out particular thoughts or images of interest; they are imprinted upon consciousness automatically. Like consciousness itself, the psiads lack spatial dimensions (which is fortunate, because there are so many of them!)

Strictly speaking, what is recorded in the psiad is the physiological state of the entire brain (or one hemisphere, in the case of split-brain patients) at the time the preconscious thought or image is created by an open module, but only insofar as that state is relevant to the particular thought or image. From a psychological point of view, the most important background or contextual information recorded in the psiad is the person's body concept at the time. This body concept is necessary to provide the implicit awareness that the thought or image is one's own.²

Not all brain processes result in psiadic representation. The latter only occurs when (a) cortical arousal is sufficiently great and (b) the *intensity* of the thought or image is sufficiently great. This intensity level, which is coded in the psiad along with the representation of the

² The necessity for this assumption became clear to me after reading an incisive critique of survival theory by Alan Gauld (1982).

brain state, is correlated with, for example, the intensity of a stimulus that impinges on the organism's physical receptors or the degree of autonomic arousal occasioned by a particular recollection. In terms of Eccles' theory, intensity is governed by the factors that determine whether a module is open or closed.

At this point, I must introduce two other respects in which I have departed from Eccles' theory. Although he equivocates somewhat, Eccles generally limits the interaction of Worlds 1 and 2 to the dominant cerebral hemisphere. This is because he sees consciousness as closely associated with language, which is primarily a function of the dominant hemisphere. This argument makes no sense to me. For example, I can be aware of and appreciate a work of abstract art without having a verbal label for it or thinking about it in words. Thus in my theory, both hemispheres are open to World 2 directly.

Second, and more importantly, the theory attributes most sequential thought processes to the brain, whereas Eccles attributes them to the mind. Attribution of thought to the brain is also espoused by the conservative dualist philosopher Howard Robinson (1989), who argues that thought must be embodied because concepts require memories, which are stored in the brain. I have tried to be conservative myself and attribute to the brain as many mental functions as it seems within its nature to undertake, even if physiological research has yet to adequately explain how the brain performs these functions. In the course of arriving at these judgments, I asked myself what mental functions I could reasonably expect a computer to perform. This tactic implies no commitment to particular outcomes of computer simulation or artificial intelligence research; it is simply a way to try to understand what matter can do. This exercise led me to conclude that the brain should be granted the capacities to input data (sensation and perception), process data (sequential thought), store data (memory), and output data (initiation of behavior).

There remain two functions, however, that the theory allots exclusively to World 2. Foremost of these is *consciousness*, which I have already considered. It is simply inconceivable to me that any machine could have subjective awareness. The interaction of consciousness (as reflected in the psiads) with thoughts or images in the

brain is responsible for giving these thoughts and images their subjective qualities, such as meaningfulness, value, and hedonic tone.

Second is what I will call *spontaneous functional ideation*. Most of our thought processes are not spontaneous. They are triggered by immediately preceding thoughts or sensations in a kind of stimulus-response chain (that, of course, is modulated by a host of complicated contextual factors that cognitive and linguistic psychologists love to grapple with). Some of these thoughts can be characterized as intentions to do something or recall something. In addition, the theory provides for some indeterminacy in the system. For example, it might simply be a matter of chance which particular surface memory comes to mind as an expression of a certain propositional memory.

However, the theory also provides for thoughts or intentions that arise neither from previous mentation nor happenstance. Such an assumption seems necessary, for example, to account for creative insight which, although spontaneous, seems too functional to be mere happenstance. Secondly, many of our "willed" actions seem to be more than just the end of a stimulus-response chain. Much of the mainstream psychological research seen as having implications for the mind-body problem concerns presumably unconditioned but purposeful acts such as moving one's finger at an arbitrary time (see, e.g., Libet, 1985). The theory attributes such insights and intentions to psiads "choosing" to manifest through particular brain modules that result in the optimal expressions of the thoughts or images they represent.

By virtue of being embedded in consciousness, the psiads absorb the *potential* for awareness, and thus conscious experience, but they do not have conscious experiences themselves. Such experiences arise only from interaction between the psiads and the brain. Also, psiads cannot directly interact with each other. The teleological aspect of the theory is that the psiads by their nature seek to actualize their potential for conscious experience, and they are attracted to brains because brains are by far the best vehicle for doing this. From the standpoint of evolution, the theory postulates that brains evolved for the specific purpose of granting conscious experience to the psiads, and the purpose of the preceding stages of evolution was to lay the groundwork for the emergence of brains.

This theory of psiads bears some resemblance to the sophisticated "psychon" theory of Whately Carington (1946), although it was arrived at independently. The main differences between Carington's theory and mine are that his psychons are capable of independent experience and can interact with each other directly to form "systems". As we will see later, psiads also have some psychic functions in common with the "psitrons" hypothesized by Adrian Dobbs (1967), although the latter are more analogous to subatomic particles.

Once a psiad is formed by input from the brain, it immediately and reflexively applies a psychokinetic input to the same or associated brain location. Provided that the intensity coding in the psiad and the cortical arousal in the brain are high enough, and the interaction is not aborted by competing psiads or obstructive cognitive brain processes (e.g., psychological defenses), a conscious experience results. This conscious experience causes a reduction in the psiad's intensity coding. If this value is sufficiently low, the psiad ceases to exist; it is "exhausted". If the psiad survives, it will continue to seek actualization as a conscious experience, but because of its reduced intensity coding it will be at a relative disadvantage in competing with fresh psiads. If it does manifest, it will most likely do so as a memory experience, or "recollection". As noted previously, most recollections are not spontaneous but result from the activation of memories stored in the brain by preceding brain processes in the modulated causal chain. This activation creates its own psiad that then reflexively becomes an experience.

The psiad's success in becoming an experience is also a function of the similarity of the brain state at the time of the psiad's potential manifestation to the brain state encoded in the psiad, which is the brain state at the time of origin. In most cases this is no problem, because the psiad manifests immediately after it is produced with the same brain that produced it. The brain state has no time to change. This does become a problem, however, when the psiad seeks to manifest at some later time, because the "real-time" brain state will by then be somewhat different. This matter of brain state similarity plays a crucial role in the theory's explanation of psi phenomena, to which we now turn.

Psi Processes in the Living

Telepathy. For the most part, psiads interact with their brain of origin, or "host" brain. However, the theory postulates that occasionally they can interact with other brains. The likelihood that this will occur is governed by the same factors that determine likelihood of manifestation in the host brain. This extension of the theory requires no new terms, concepts, or entities; it is simply a generalization of the principles previously discussed.

Of these various limiting factors, brain state similarity is perhaps the most noteworthy as far as telepathy is concerned. Precisely what a brain state is and what are the relevant aspects of brain state similarity have not yet been defined, and this is an area where the theory needs more work. However, the theory does propose that when two people think the same thing, their brain states are similar in some relevant respect. The brain states of people who are genetically related to each other should, all else being equal, be more similar than brain states of people not so related, because of the functional consequences of genetically based structural differences. This means that telepathy should be especially prevalent among pairs of such people.

The above process is equivalent to what has been called active-agent telepathy. However, I prefer Rex Stanford's (1974) acronym MOBIA (mental or behavioral influence of an agent), because the process is more accurately described as a PK influence on the brain than as mind-to-mind communication. MOBIA, according to the theory, is the primary and most common mode of psychic functioning. (Telepathic interactions will hereafter be referred to as mobic.)

In her critique of MOBIA, Louisa Rhine (1956) noted that agents frequently do not seem motivated to communicate to the percipient. This argument does not apply to the present theory, because the psiads are not motivated to transmit a message, just to attain experience through a receptive brain.

Brains differ structurally in the capacity of their states to align with the brain states of other persons. This assumption is needed to account for individual differences in the "telepathic" ability of percipients. It follows that such brains should also be very receptive to their own psiads. In psychological terms, this means that persons with strong

"telepathic" abilities as percipients should have very rich experiential lives generally. I have the impression that this is the case, but no hard data; thus, this can be treated as an empirical prediction of the theory.

Good mobic agents should be persons whose psiads tend to have high intensity codings that allow the psiads to survive after interacting with the host brain. Thus, from a psychological perspective, good mobic agents should be persons who experience things very intensely, another testable prediction. The theory also explains why MOBIA seems to work best when the agent "lets go" of the image to be transmitted; when the psiad is not manifesting through the host brain, it is freer to manifest elsewhere.

Clairvoyance. According to the theory, brains are especially qualified to be the source of psiads and indeed evolved for that purpose. To postulate that any object or event could serve that function, although logically permissible, would be very awkward for the theory. Thus, the theory makes the bold prediction that clairvoyance does not exist as a distinct form of psi.

The theory deals with ostensible clairvoyance as either MOBIA (usually precognitive) or PK. MOBIA is a possibility whenever the target information is subsequently perceived by someone, consciously or unconsciously. This seems to be invariably true in spontaneous cases. In card guessing experiments of the Rhinean type, the targets were always known at some point by the experimenter (who needed to tally the hits), and in most cases they were fed back to the subject as well. It is customary in random number generator (RNG) experiments to provide subjects with trial-by-trial feedback of targets. PK is another attractive option in RNG clairvoyance experiments, as RNGs are known to be susceptible to PK (Radin & Nelson, 1989).

There are three experiments I know of that claim to provide evidence for "pure clairvoyance". In two of these (Schmeidler, 1964; Targ & Tart, 1985), forced-choice targets were selected by computer and erased before anyone observed them. In Targ and Tart's experiment, the seeding of the pseudo-random target sequence seemed susceptible to PK. A similar possibility may apply to Schmeidler's experiment, but the method of obtaining the entry point to the computerized random number table is not known (Schmeidler, personal

communication). The third study was a remote viewing experiment (Targ, Targ, & Lichtarge, 1985) in which the marginally significant results could be explained by PK on the dice task used to select the target, supplemented by mobic knowledge of the subject's future mentation, of the judge's future awareness of the potential targets, and of the interviewees' awareness of the locations of these potential target slides in the carousel of the slide projector.

Additional research will be needed to resolve the status of pure clairvoyance. The theory predicts that the results of all the experiments, evaluated collectively, will fail to confirm it.

Precognition. Earlier in the paper, I noted that World 2 is independent, or devoid, of physical space. To postulate further that it is independent of time would allow for *true* precognition, by which I mean direct apprehension of future events. Such an extension would be natural because space and time are treated comparably as dimensions in modern physics.

The theory would allow true precognition to occur in either or both of two ways. First, a psiad could be formed at time t_1 by brain events occurring at some later time t_2 . Second, a psiad at time t_2 could cause a brain event at some earlier time t_1 .

True precognition has been criticized on conceptual grounds by Braude (1986), who treats it as a special case of retrocausality. In particular, he notes that it has difficulty in accounting for the surrounding network of retrocausal events leading to and away from the precognitive event. The theory, however, postulates that episodes of retrocausation are extremely rare as compared to ordinary forward causation; thus, the chains of retrocausal events of concern to Braude are very unlikely to occur. Braude acknowledges this option but maintains that retrocausality would still be unparsimonious in that it would entail new definitions of causality and related concepts. This is certainly true, but lack of parsimony is not a fatal argument against true precognition.

The alternative explanations of precognitive events are logical inferences from contemporaneous mobic input and creation of the events by PK. These options have the advantage of not introducing new concepts, but can they plausibly account for all the data? PK

interpretations are awkward for predictions of strong effects, such as the Aberfan landslide (Barker, 1967), because we do not find macro-PK effects of this magnitude in other contexts. The "ESP" option also is restricted somewhat in such cases because of the theory's denial of clairvoyance. MOBIA, however, is theoretically possible in all cases except those, like RNG experiments, in which the precognized events are randomly determined and thus not predictable from current information. These are just the kinds of labile situations for which a PK explanation is most plausible.³

I am not prepared at present to take a stand on this matter. Suffice it to say that should it prove necessary for the theory to embrace true precognition, it could easily accommodate it, as described at the beginning of this section.

Psychokinesis. Inasmuch as MOBIA is PK applied to a remote brain, the theory reduces all forms of psi to PK (unless the formation of psiads is treated as ESP). I noted earlier that MOBIA is an extension to other brains of the relationship psiads have with their host brain. PK on other physical systems, including nonbiological ones, is simply a furthering of this extension. The theory also postulates a gradient by which the ease or frequency of PK manifestation should decrease as the target system becomes less similar to the host brain. Of course, other brains are first in line on the similarity gradient. Among nonbiological systems, the theory predicts that more "brain-like" (or labile) systems, such as RNGs, should be more susceptible to PK than static objects like match sticks. That seems to be the case empirically.

According to the theory, psiads interact with matter for the purpose of creating a meaningful experience. This explains why poltergeist phenomena, for example, are not haphazard but express some meaningful psychological need of the agent. But static objects, in contrast to brains, are very inefficient vehicles for such expression. One

³ As I have noted previously (Palmer, in press), the PK interpretation of such events has been challenged by the intuitive data sorting model (May, Radin, Hubbard, Humphrey, & Utts, 1985). If this model is confirmed, true precognition may be required by data.

consequence of this hypothesis is that expression through static objects does not reduce greatly the intensity codings of the psiads. This might explain why poltergeist phenomena tend to be recurrent.

But why should psiads ever express themselves through static objects when brains would appear to be readily available? The theory postulates that such events represent a spillover from psiads with very high intensity codings. It follows from this hypothesis that macro-PK and poltergeist agents should be very intense, obsessive individuals, because what the macro-PK is a spillover from is intense interaction between the psiads and the host brain. This bombardment might be expected to occasionally result in epileptic or pre-epileptic brain states, which seem relatively prevalent in poltergeist cases (Roll, 1977). In some cases, added pressure for a spillover could be created by blocking of the psiads' expression through the host brain by means of suppressive or repressive defenses. Such defenses are often encountered in poltergeist cases (Roll, 1977).

Finally, the theory must accept the conclusion drawn by many parapsychologists that PK is "goal-oriented" (Stanford, 1978). This assumption arises from the fact that PK seems to be independent of task complexity, and that it is awkward to assume that in dice tests, for example, the location of the die at each stage of its fall must be monitored by ESP so that just the right "push" can be momentarily applied. The assumption of goal-orientedness is important for the theory in order to preclude the need for postulating true clairvoyance. For example, the PK interpretation of the Targ and Tart (1985) computer experiment (see above) requires that the subject be able to cause the right seed to be generated without knowing what that seed is. Had I wanted to, I also could have used goal-orientedness in the PK dice task as a substitute for the three MOBIA assumptions in my explanation of the remote viewing experiment of Targ et al. (1985).

Goal-orientedness implies that there is no mechanistic explanation of PK causality, at least not in the Newtonian sense. This is not a new assumption, because such a mechanism is already precluded by the theory's dualism. With regard to the psiads, causality is better conceptualized as teleological than efficient.

Postmortem Psi

The theory provides for postmortem survival because the psiads do not depend on the brain for their existence. When the brain dies, the psiads live on. In gradual deaths, the person lives in an increasingly stimulus-deprived environment, which inhibits the creation of a large number of new psiads and allows for the gradual exhaustion of old ones. That is not the case when death is sudden, including by accident or violence. This may explain why persons who died violently seem particularly prone to manifest in reincarnation cases (Stevenson, 1987). The panoramic memories that sometimes occur during near-death experiences (NDEs) can, in such cases, be interpreted as a frantic attempt by lingering psiads to exhaust themselves while the host brain is still alive.

In the following paragraphs, I will briefly outline how the theory accounts for four major types of purported survival evidence: mental mediumship, apparitions and hauntings, reincarnation cases, and NDEs.

Mental mediumship. The theory interprets the various communications allegedly from discarnate spirits as mobic impressions created by psiads. Although in most cases of mediumship it is reasonable to suppose that these psiads are from deceased persons, they can also be from living persons. As all psiads contain representations of the person's body concept, they can, by affecting the motor neurons of the medium's brain, mimic the vocalization or other behavioral characteristics of the communicator when living. The mobic impressions intermingle with mentation created by the medium's own brain and psiads, and to some degree influence the content of this mentation. Thus, communicators can appear to be a composite of characteristics of the real communicator plus bogus characteristics supplied by the medium to round out a full personality. Controls are no different than communicators, although the proportion of characteristics attributable to the medium tends to be larger in controls.

Mediums do two things to become receptive to the communicator's psiads. First, they process whatever information they can acquire sensorially about the communicator. These mentations function like Carington's (1946) "K-ideas" and increase the comparability of the

medium's brain states to those of the communicator as recorded in the psiads. Second, by entering a trance, mediums minimize the creation of their own psiads, leaving a clearer path for the external psiads to manifest. In the case of drop-in communicators, there is simply a chance correspondence between the brain states recorded in the communicator's psiads and the brain states of the medium during the session. Note here that similarity of brain states includes structural factors that are not necessarily reflected in common mentation or experiences.

The cross-correspondences (Piddington, 1908) provide a particular challenge to the theory, because they seem to involve creative planning by the deceased. According to the theory, psiads are incapable of such activity on their own. The theory proposes that different but closely related psiads from the deceased communicator manifested in the receiving mediums. Perhaps, for example, the psiads for the Hope, Star, Browning case were created when Myers was having some particularly charged musings on a piece of Browning poetry, and a few of them (which encoded very similar brain states) found similar opportunities for postmortem expression from several mediums who happened to be thinking of Myers. Integration statements, such as Mrs. Piper's reference to the words "hope," "star," and "Browning" having appeared in an earlier script of Mrs. Verrall, can be accounted for as MOBIA—in this example, from Verrall to Piper.

Apparitions and hauntings. The theory's explanation of these phenomena generally follows the telepathic theory of Gurney (Gurney, Myers, & Podmore, 1886/1970). Psiads from the deceased (or living) agent, which include that person's body concept, interact with the percipient's brain, especially the sensory cortex, in such a way as to produce a hallucinatory image of the agent. As the information in the psiad may not be sufficient for a full image, some content, such as what the apparition is wearing, might be supplied by the percipient's fantasy or expectation. The fact that the appearances so frequently involve a "crisis", such as death, follows from the fact that psiads associated with such crises have high intensity codings.

In haunting cases, the psiads represent experiences of the deceased that occurred at the same place that the apparition manifests. When

percipients come to these locations, their brain states become similar to those represented in the psiads, because they partake of similar sensory experiences. The theory predicts that hauntings are most likely to occur when the surroundings at the time of the percipience are similar to when the psiads were formed.

Collectively perceived apparitions are the result of psiads interacting simultaneously or in rapid succession with multiple percipients. This is no different in principle from a classroom card guessing experiment where a teacher attempts to send an image of a card to all the students in the class.

The fact that multiple percipients sometimes see the apparition at the same precise location in a room introduces a complication for the theory whenever the event represented by the psiads occurred at a general location other than where the apparition appears. One way the theory can handle such cases is to propose that the mobic input does not reach each percipient exactly simultaneously, and that the later percipients use possibly unconscious sensory cues from the attentional orientations of earlier percipients to judge the apparition's location. The brain then adjusts the hallucinated image accordingly. It is possible that some cases might require the assumption of mobic exchanges of such information among the percipients, as postulated by Gurney (Gurney et al., 1886/1970).

Reincarnation cases. Of the three paranormal interpretations of these cases discussed by Ian Stevenson (1987)—ESP (by the subject), possession, and reincarnation—possession is the interpretation most in line with the theory, although this term may not be the best label for what occurs. The theory proposes that psiads, usually from deceased persons, introduce past-life memories into the subject's brain by MOBIA. The interactions can occur as soon as the child's brain is mature enough to incorporate them. The input is experienced as memories because unlike, say, mediums guided by their Spiritualist beliefs, the child has no other context through which to interpret it. The psiads need not interact continually with the child's brain; once the memories come into being, they can carry on by themselves. At the same time, memories are continually being created from the child's own experiences, and these gradually form a personality of their own.

As this process matures, any past-life memories that are consistent with this native personality are integrated into it and the rest drop away. (Because the child is posited to have his or her own "soul" from birth, the theory can easily handle the few cases in which the child was born prior to the death of the previous personality—awkward data for the reincarnation interpretation.)

When the child visits the home and neighborhood of the previous personality, the perceptions of the new environment bring his or her brain states into conformance with the brain states recorded in the previous personality's psiads when the latter was at this location. As a result, new memories may be introduced into the child's brain. This is roughly analogous to what occurs in hauntings. Prior to the visit, the child would not likely have become paranormally aware of changes in buildings or people that had occurred at the location since the death of the previous personality, because the psiads record only information about events that occurred when the previous personality was alive.

The apparent transfer of skills to the child can be explained in part by proposing that the psiads seek out children who possess strong innate aptitudes for the skill in question, another basis for brain state similarity. Indeed, the theory requires some basis for why particular children are chosen for manifestation. The psiads then interact with the child's brain, perhaps making permanent changes in motor synapses, to create the actual skill. In the case of xenoglossy, whole language maps, encoded as contextual information in the psiads, might be transmitted.

As brains of males and females are known to differ somewhat in their structural organization, the finding that the great majority of the children are of the same sex as the previous personality is very compatible with the theory. The theory would also predict that in the few sex change cases, one of the individuals had characteristics of the opposite sex to begin with (e.g., a male person who was somewhat effeminate.)

A phenomenon in some reincarnation cases that poses a challenge for any theory is birthmarks. These birthmarks often reflect tragic events that befall the previous personality, such as a fatal wound, that would create psiads with high intensity codings and thus a relative likelihood of seeking postmortem manifestation. In such cases, the

birthmark on the child's body is at the same location as the wound and resembles it in appearance.

The most elegant way for the theory to proceed would be to propose that the psiads seek out children who will develop the birthmark anyway. Because the psiads incorporate the wound in their representations of the previous personality's body concept, and the birthmark has some representation in the child's brain, a basis exists for brain state similarity. However, the fact that the child and the previous personality often come from the same family or group of acquaintances creates a problem for this hypothesis, because the likelihood that the psiads could find an appropriate child with the unique birthmark among a small number of options is quite small. On the other hand, birthmark cases are extremely rare compared to the number of potential cases in the population as a whole. If this problem proves fatal, the theory would have to maintain that the psiads create the birthmark by PK on the developing fetus.

Near-death experiences. The world that psiads occasionally experience after death is the same world they experience before death, albeit through someone else's brain and perceptual apparatus. Thus, the theory does not accept the conclusion that NDEs represent some glimpse of the afterlife. On the contrary, the theory adopts the conservative view that NDEs are experiences of the dying host brain, an interpretation for which there is good rationale and much supporting evidence (Blackmore, 1993). Of course, the theory adds that NDEs also involve (nonphysical) psiads, which theorists such as Blackmore would surely reject.

Conclusion

Why do psiads manifest sometimes as past-life memories in children and other times as hauntings or the communication experiences of mediums? I suspect that belief systems have something to do with this. Stevenson (1987) has noted that reincarnation cases are most common in cultures that accept the philosophy of reincarnation, and the prevalence of mediumship phenomena coincides with the rise and fall

of Spiritualism in Western cultures. It would seem that it is very difficult for psiads to manifest in persons whose beliefs are inconsistent with the beliefs these psiads represent, either because there is insufficient brain similarity or because brain censors in the target person prohibit the psiads from achieving consciousness.

I have not been able in this short paper to address all classes of survival evidence or all the issues that arise within the classes I did address. However, I am not aware of any evidence that would contradict the theory. I suspect others are likely to be more insightful in this regard than the theory's parent, and I fully expect that they will point out to me logical gaps in the theory or data that would be awkward for it to handle. It then becomes my job to defend the theory as best I can or introduce modifications. The theory's fate will rest on my success (or the success of allies I might acquire along the way) in doing so. This is how things are supposed to work. Whatever the outcome, the winner will be our quest for understanding human life (and death).

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DISCUSSION

BRAUDE: John, first of all, I think your paper is really interesting and very thoughtful. But as you could have predicted, I have a few questions. Let me just lay out a few things that bother me about this. I don't even expect you to respond to them all now. I just want to indicate what I would regard as some trouble spots in this kind of presentation. Basically what bothers me about it, quite apart from the specific criticisms that you've made about things that I've said elsewhere, has to do with what I would consider to be a kind of fatal mechanistic residue in the theory. It comes up in the concept of a psiad and more specifically in the notion of a representation, which I'd say is the weak spot in cognitive psychology generally. It's often used in a way that ultimately turns out to have no meaning whatsoever. Let me just indicate the kind of problem that I think you are going to have to address sooner or later. It cannot just be enough to make promissory notes of the sort, "Well, we'll figure out how to flesh this out some time in the future." First of all, you need to specify whether every thought has a psiad. For example, will there be separate psiads for the

thought "I admire Smith. I like Smith. I like Smith but not enough to risk my life for him"?

PALMER: The answer is yes.

BRAUDE: Each one has a specific psiad?

PALMER: Sure.

BRAUDE: Well, you see, that leads to another problem; can different psiads or different representations of two different thoughts be represented by the same psiad? So, for example, suppose I'm thinking about Baltimore. As I'm thinking about Baltimore, I do so by conjuring up an image of a particular politician. That particular mental image, though, the very same mental image, the very same psiad or same representation could on another occasion be used while I'm thinking about people who lack the subtlety to appreciate Strindberg or things that are softer than plywood but firmer than cotton or things that even a mother couldn't love.

PALMER: I want to say a psiad would be created in each of those circumstances.

BRAUDE: But the point is, the same psiad can be associated with different meanings.

PALMER: Whatever meaning is available at the particular time is represented in that psiad. You may have ten psiads representing different variations of the same basic idea.

BRAUDE: So, the same psiad can mean different things?

PALMER: Not in and of itself. However, when it interacts with what is going on in the host brain, its manifest meaning could be partly defined by that.

BRAUDE: Well then, I find it a little peculiar that you are going to attach the kind of importance you do to something like brain state similarity. First of all, as I understand the way you are using it, a psiad is supposed to help account for similarity of meaning where you are explaining similarity of meaning in terms of similarity of structure. Quite apart from specific reasons for thinking that structure does not determine function, or in this case meaning, I would say that even sophisticated mechanists like Jerry Fodor recognize that you cannot explain brain state similarity of the kind you need simply in hardware terms. That is to say semantic properties in general can be realized physically in different ways. So that, the very notion of brain state

similarity that I think you want to rely on is not the sort of concept that actually can explain similarity of meaning of the kind that I think you are trying to capture.

PALMER: How far does that Fodor point really go? If I was a dualist, I would love someone to say that there is no relation at all between our thoughts and brain hardware. But surely there is some relation and that is all I need to assume. I would not suppose that my concept of a house is the same as your concept of a house, although it is surely more similar to your concept of a house than it is to your concept of the Cincinnati Reds baseball team. If our concepts of a house are not identical, then neither would our brain states be identical, even though they would refer to the same abstract concept, a house. Likewise, a psiad is unlikely to cause exactly the same cognition in two people. If a psiad is formed from my perception of a house and this psiad stimulates your brain, it will interact with what is going on in your brain at that time. Your cognition will not come out exactly the same as mine, because our brain processes at the time will not be identical.

BRAUDE: I don't want to pursue this ad nauseam.

GROSSO: John, I was fascinated by your paper. But I am puzzled as to the outcome or the implications for survival. Are you saying that we survive through the brains of other living people? That is what I thought I heard you say toward the end of your paper. What real cash value do you attach to that notion of survival? My other question concerns the notion of the intensity of psiads. Does this imply that only some people under certain circumstances survive? In other words, what are the implications of your theory for people at large? Do only some people sometimes survive for certain periods of time? What is the general picture, for the common man out there? You have a message. What is the message for the average person who believes and who is interested in knowing what his or her fate is after death? That is not quite clear to me.

PALMER: Let me say first, as I said in the paper, this is not necessarily a theory that I believe myself. I think it's good for survival research to have more theories, but I am a little concerned about this one being too closely identified with what I believe deep down. It is

based on fairly minimalist conservative assumptions, which I think is what was bothering Steve.

When you look at the theory's implications for survival, the key point is that persons do not survive; psiads survive, although psiads obviously have their source in particular people. In a lot of dualistic theories, for example in Carington's theory, the psychons have experiences by themselves; in this theory they don't. They can only have experience when they interact with the brain.

It is not what we normally think of as a personality surviving. It's a much more atomistic kind of survival. It is not the kind of survival I think we would like, or something we would choose.

GROSSO: It is still not clear to me. You say that persons don't survive according to your theory, but psiads do—and psiads are related to the notion of consciousness. Psiads are conscious?

PALMER: They have a potential for being conscious.

GROSSO: They have the potential. So, what is the relevance of all this to human beings? My question is perhaps a bit blunt. But I don't see how some aspect of my personality independent of my conscious center of being, which is the only thing I really care about when I think about survival, will reproduce itself or will reactivate itself through other brains, or through other contexts. It strikes me that this has rather trivial implications for the question of survival, as I understand it to be important to most people.

PALMER: I think the kind of survival that I'm talking about is, as I said before, and I don't know how to say it any better, different than the standard dualistic notion that there is some integrated personality that can have experiences outside the body and may somehow interact with the body. It is definitely a minimalist view of survival. In that sense, it is probably somewhat closer to what the materialists are saying.

OWENS: My comments are similar to Steve Braude's. I think a lot of the mental operations that you assume will be handled by the brain are not very well understood. I think that they are the reason why the Eccles and Popper Theory postulates a World 3 which you dismissed as not being important. These operations that I'm talking about are selective attention, contextual processing, integration, relevancy and meaning, and goal direction. All of those higher order mental

operations are very mysterious at this point. I once heard a biochemist say that the idea that DNA can account for all of morphology is the largest promissory note in science. I think the idea that the brain can account for all of these higher order mental operations is an even larger promissory note. And, to just make that assumption is really a weak point. I think that mental representations such as myths, scientific theories, goals, and higher order event structures are not very well defined. These are things that are very mental and to assume that the brain can handle them is something that cannot be assumed at this point.

PALMER: Of course, we don't know. What I am saying is that what this theory does is make certain predictions that the matters you address are going to be resolved a certain way. They may come out that way or they may not. Also, remember that I did attribute a number of processes to the psiads, particularly things that are related to what I call "quality of consciousness". I think that these cover a lot of the things that give a materialistic theory trouble.

OWENS: But in order to accomplish those kinds of mental operations, I think you need abstract mental codes. This is directly counter to a notion of a psiad. A psiad is not abstract and that is the essential problem.

PALMER: You mean psiads within the theory?

OWENS: Right. You keep saying that psiads can accomplish this.

PALMER: I am giving them a reality status, in other words.

OWENS: How they get that reality status is the question. How do they get goals and the ability to selectively attend and accomplish these operations where you need an abstract mental representation? I would say World 3 is the best way to refer to the scientific theory. Cognitive psychologists have postulated scientific theories, myths, schemas. They are not very well worked out. They are just the kinds of things that reductionist models cannot handle very well; it is contextual information processing.

PALMER: Let me go back to my original goal in writing this paper. I wanted to come up with a theory that was going to compete with a lot of other theories, and that would give the materialist the benefit of the doubt on as many matters as possible consistent with survival. We don't know yet whether these cognitive processes are going to prove to

be handled by the brain. Maybe they will; maybe they won't. Let's assume they will. What kind of a theory do you get making that assumption? I don't think we know enough to say categorically that the brain is not going to be able to handle these contextual problems. As for psiads, I don't see how the functions I have assigned to them require this cognitive ability of abstraction you refer to. According to the theory, this is a brain function.

OWENS: The ability of the psiads to be functional and goal-directed is the kind of intelligence that I think requires dealing explicitly with this notion of abstract cognitive representation. I don't think you can just assume that they can do this.

TAYLOR: First of all, I found something that you said at the very beginning of your talk quite intriguing from the standpoint of the history of parapsychology; which is, you seem to make some reference to the relationship between the brain and experience as if experience somehow communicates with the brain or with bodily functions through PK. Did you say something like that?

PALMER: Roughly.

TAYLOR: Well, to me that poses a very interesting and imaginative starting point for trying to address the mind-body problem. How does consciousness interact with the physical world? It is a curious historical assumption to claim that this kind of interaction actually happens through psychic phenomena, or PK. You start with that as the normative way in which people really make things happen—the relation of the material world to their personal experience. I find that particularly interesting.

But the other problem that I see filtering out through some of the other discussions has to do with the problem of representation. We normally assume that there is an objective world out there independent of the mind and that stimuli come in. We then make a reaction to those stimuli and form an impression in our mind. Therefore, there is the whole psychology of how we perceive the world of material objects.

One of the great postulates in science and the thing that disturbs me tremendously is the notion that causal laws exist independently of the minds that created them. The fact is that you are trying to create a conceptual cognitive theory about something which essentially is beyond cognitive capacities and yet somehow includes them. I wonder

what you would say about that? The last question is, if it's not inappropriate to ask, I would like to know deep down inside what you really do believe?

PALMER: I'm not sure I know at this point. That is the problem.

TAYLOR: William James said, "There is no philosophy without autobiography." The thing is, then, what is this that you are presenting here if it is not somehow a product of your own personality? What is your position?

PALMER: The fact that I chose to make this a minimalistic theory, I suppose says something. As for survival, I used to believe very firmly in reincarnation. Now, I honestly don't know. The older I get, the more confused I get.

TAYLOR: This may be progress.

PALMER: It very well might be. I do know and I think this cuts across some of the distinctions that we've been making, that I do not believe in free will. I believe the world is basically deterministic. That is one area where my theory clearly says something that I don't personally accept. This was an exercise in which I simply wanted to see what kind of theory I could get by going on this particular path and comparing it with other theories to stimulate research, which is what I think needs to be done within parapsychology.

I think some of the problems you were referring to earlier and what Justine Owens was saying about abstract representation have to do with a general problem that has bedeviled dualism for some time; how exactly does the mind interact with the brain. Obviously, it is not going to be a billiard ball kind of interaction. It is not something that you can think of mechanistically, but rather as a kind of teleological causation that you cannot translate into mechanistic terms.

TAYLOR: I was more interested in your statement, "The purpose of this is to stimulate research." That makes more sense to me in terms of what this is about. I would then ask, with regard to our experience of psychic phenomena or near-death experiences, "To what end?" In other words, what does more research do with this problem that we are struggling with?

PALMER: This gets into what I am probably going to say about your paper.

EDGE: Let me say, I take the problem of representation to be not a problem of interaction but more of a problem of re-presentation; that is, you have a state of the brain and then you talk about psiads. In what way does a thought represent the brain state? The map is not the territory. There doesn't seem to be any structural similarity. To me, at least, this is the problem of representation.

PALMER: Again, you cannot think of this in mechanistic terms.