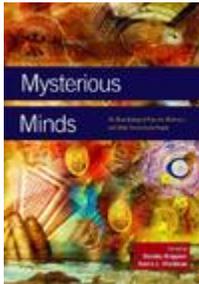


Extraordinary People, Ordinary Evidence: New Paradigms for Parapsychology, Same Old Problem

A review of



Mysterious Minds: The Neurobiology of Psychics, Mediums, and Other Extraordinary People

by Stanley Krippner and Harris L. Friedman (Eds.)

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Reviewed by

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The fundamental, and quite bizarre, problem with *Mysterious Minds: The Neurobiology of Psychics, Mediums, and Other Extraordinary People* is that, before they even begin, the contributors have effectively given up on demonstrating the very existence of their own subject matter. Instead they wish to somehow explore its more subtle characteristics. In the foreword, consciousness researcher Allan Combs presents the point in a surprisingly blasé tone: “Perhaps it makes more sense to push ahead and seek an understanding of the psychological and neurobiological processes that accompany putative psi phenomena *rather than endlessly trying to demonstrate their existence* [emphasis added]” (p. x).

This view comprises the central ethos of this volume. Relieved of the troublesome chore of having to show the reader that extrasensory perception (ESP), psychokinesis (PK), and other parapsychological phenomena actually exist, the contributors can instead devote their attentions to describing the brain architecture of (purportedly) telepathic individuals, alpha wave activity in (alleged) clairvoyants, neurochemical function in (persons who claim to be) mediums, and so on.

Unfortunately, this feels a lot like reading a tourist guide recommending interesting things to do in Atlantis or a biography exposing the dark side of the tooth fairy's personality. There is something fundamentally problematic when scientists seek to describe the finer points of something that they openly admit cannot be proven to exist.

This problem emerges right from the beginning and affects the entire volume. The aim of *Mysterious Minds* is to describe the research evidence on neurobiological substrates of psi phenomena. But as the contributors are forced to admit, science has failed to establish any replicable means to demonstrate them. In other words, while they are widely referred to both anecdotally and culturally, they do not exist in a way that can be seen, heard, felt, witnessed, or recorded by a disinterested observer.

In ordinary circumstances this type of problem would substantially delimit exposition. However, in psi literature, such reluctance is rare, and, accordingly, the contributors press on regardless. In all, the editors have gathered nine separate contributions regarding the output of neurobiological psi research, with only one of the chapters written from a skeptical perspective.

Given the context, it is interesting to note the various ways in which authors manage to put a positive, or at least less negative, spin on their evidence-base problem. In their chapter on ESP, Watt and Irwin note that while “positive results are sometimes reported” across the literature, the studies “appear to lack consistency or replicability” (p. 56). Given the findings of independent literature reviews (e.g., Milton & Wiseman, 1999), this is something of an understatement.

The chapter by Don describes a series of experiments on individuals with reputed psychic abilities (Warren, McDonough, & Don, 1990, 1992). While the researchers reported observing irregularities in participants' patterns of event-related potentials, in neither study did participants succeed in demonstrating actual clairvoyance. Rather than dismissing the findings as irrelevant to parapsychology, the author instead speculates that the data showed how participants' psychic abilities were “retreating to an unconscious level” (p. 115), thereby evading detection. In the chapter on mediumship, Hageman and colleagues effectively sidestep the question of whether their participants are exhibiting psi abilities at all (in this case, communicating with the afterlife) and focus instead on describing neurobiological correlates of hallucinogenic experiences and trances.

In a slightly more upbeat chapter on PK, Freedman describes two particular pieces of research—the extensive statistical review published in *Psychological Bulletin* by Bösch, Steinkamp, and Boller (2006) and the accumulated findings from the Princeton Engineering

Anomalies Research (PEAR) laboratory between 1979 and 2007—with what can only be described as a generous degree of optimism. First, Freedman implies that Bösch et al. provided evidence of “biologically important phenomena” relating to “mind–matter interactions” (p. 152).

Actually, Bösch et al. (2006) reported the opposite: According to their meta-analysis of 380 studies, no such evidence could be established. They stated that their data provided “no directive as to whether the phenomenon [of PK] is genuine” (p. 516), that “publication bias appears to be the easiest and most encompassing explanation for the primary findings of the meta-analysis” (p. 517), and that the best that could be said in describing the statistical results was to return “a verdict of ‘not proven’” (p. 517).

Freedman employs similarly misplaced ebullience when describing the PEAR studies, stating that they produced “a wealth of data in support of mind–matter interactions as genuine phenomena” (p. 152). This is not the usual way in which the controversial PEAR data are summarized. Rather, the studies tended to report effect sizes so small (equivalent to 2 incidents of successful PK out of every 10,000 attempts) that it is entirely plausible that they resulted from imperfections in the experimental apparatus (Park, 2008). Moreover, far from being able to provide a wealth of evidence, the fact that the PEAR studies were not double-blinded means that they lacked basic levels of internal validity (Park, 2008).

Troublesome Science

Like many commentators in this situation, the contributors regularly seek to minimize their evidence-base problem by questioning the value—and validity—of science itself. As early as in the introduction, the editors present the following view:

Science utilizes so-called “objective” methods, which may not be able to ever directly grasp subjectivity. Mainstream science requires consensual approaches, as in the need for replication of findings, so that more than an isolated individual’s belief is needed to be credible. (p. xv)

Here the editors are preparing ground: They wish to cast aspersions on (“so-called”) objectivity as a requirement for useful science in order to help explain away the fact that decades of scientific research have debunked their claims regarding psi.

While these editors are not alone in questioning the nature of objectivity in science, it is not without irony in the present context. The problem it creates is twofold. First, the generic snag with championing subjectivity over objectivity is that it deprives communication itself of any coherence in that it ultimately reduces to solipsism: How can an

observer attach verity to a statement if there is no requirement for statements to be verifiable by anyone but the speaker?

Second, the specific difficulty is that in the present context the editors are presenting to us a volume that purports to describe empirical research. According to the editors, this body of research, which features studies involving “quantitative electroencephalography (qEEG), functional magnetic resonance imaging (fMRI), and many other . . . sophisticated types of brain mapping,” possesses the capacity to provide us with “remarkable noninvasive glimpses into the heretofore unknown working of the brain” (p. xvii).

It is a shame, therefore, that even before readers have the chance to read about the studies that have been recommended, the editors have sought to debunk the scientific method that underpins the procedures used. Or maybe the editors are just trying to have it both ways.

Another traditional, core epistemological principle that these contributors are willing to dispense with is determinism. Again in the introduction, the editors argue that mainstream science is “based on a limited worldview, one misunderstood as a simple linear system of cause–effect . . . within a synchronized forward-moving time” (p. xvi). As such, suggestions that events in the universe stem from causes (as opposed to just occurring spontaneously, in the absence of causes) or that causes must temporally precede the events that they precipitate, are dismissed as reductionist affectations.

As with the dismissal of objectivity, such rejection of determinism renders the editors’ position contradictory. Skepticism toward standard empirical models of causality completely undermines the paradigms of controlled experimentation employed by contributors throughout the rest of the volume. Why bother with a control group if effects can precede causes?

The chapter by Roll and Williams seeks to reject traditional ideas of causality by asserting that mainstream science “is no longer based on classical physics” (p. 16) but has instead given way to quantum theory. This is used to argue that, because quantum physics posits the notion of action at a distance (where the measurement of the position of an electron is believed to cause the instantaneous collapse of its wave function), it supports the possibility of psi phenomena: “In this way, two individuals, who are distant from each other, may be connected, as in telepathy; and a person may be connected with a physical object as in PK” (p. 18).

Concepts relating to quantum theory are invoked again in the chapter by Parker and by the editors in both their introduction and postscript. There are at least three problems with using quantum theory in this way. First, the concept of action at a distance long predates quantum physics. Gravitation is an everyday example. There is nothing specific to quantum physics that makes it any more relevant to psi phenomena than gravity is, except perhaps that it conveys a more attractive jargon for rhetorical purposes.

Second, the jury remains out on whether the subatomic events seen at the quantum level constitute true action at a distance at all or whether they can be accounted for by

hidden variables. And third, quantum physics pertains to subatomic particles rather than to human minds (likewise, gravity relates to physical objects rather than to thoughts). The extrapolation of quantum phenomena to the human mind can (at best) be only metaphorical (just as the extrapolation of gravitation to cognition would be) and, as such, quantum physics has nothing to say about parapsychology (Stenger, 1992).

Overall, the present volume represents an interesting case study in scientific enthusiasm, if not exactly leading-edge scientific rigor. While the use of neurobiological research methods to study extraordinary claims about cognition can hardly be faulted on empirical grounds, it is difficult to avoid the impression that at least some parapsychologists will welcome such developments because of the public esteem associated with methods laden with both jargon and technology.

Unfortunately, an appetite for scientific technology does not appear to guarantee that the challenges of scientific reasoning will be taken up with equal vigor. For parapsychology to progress as a science, its proponents will need to acquire higher standards of epistemology, not equipment.

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