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BOOK REVIEW

Evidence for Psi: Thirteen Empirical Research Reports edited by Damien Broderick and Ben Goertzel. McFarland, 2014. 332 pp. $49.95. ISBN 978-0786478286.

One reason I love parapsychology is the colorful collection of scientists it brings together. I think few fields can boast the shared research efforts of engineers, physicists, anthropologists, psychologists, sociologists, biologists, neuroscientists, philosophers, statisticians, and many other professionals. New, exciting ideas are often born at the crossroads of different fields.

The downside of so many different backgrounds is that each has its own culture and scientific jargon. This is obvious from the various chapters that are brought together in *Evidence for Psi: Thirteen Empirical Research Reports* introduced and edited by Damien Broderick and Ben Goertzel. Many contributors introduce their own words to describe very similar if not the same concepts. The unsuspecting reader is at risk of getting lost in a jungle of concepts and acronyms. In addition, using different words for the same thing, or the same words for different things, stands in the way of fruitful discussions among psi researchers, even more so between psi researchers and scientists in other fields, let alone discussions with skeptics. Although discussions with skeptics may be another story.

Researchers in parapsychology are sadly familiar with the following scenario: When you ask an outspoken skeptic what exactly in the scientific literature on psi causes such displeasure, it becomes clear that their knowledge is rudimentary at best. They justify their lack of investigative effort with the opinion that 'the laws of physics are not compatible with psychic phenomena.'

An example of this type of exchange is included in the book. Wishing to give a balanced view of the state of research on psi, Broderick and Goertzel invited skeptic physicist Sean Carroll to study the evidence and contribute his take on the evidence. He refused on the grounds that "our knowledge of the laws of physics rules [the abilities of purported psychics] out," and he was "not going to waste his time looking into claims to the contrary" (p. 26).

Some skeptics will never be convinced. But the more books become available that lay out the experimental evidence for psi, the harder it will

be to justify ignorance. Solely from this point of view, *Evidence for Psi* is already a welcome addition to what is out there. The book aims to seduce *rational and open-minded readers* with no more than a basic knowledge of statistics to learn more of some of the more important scientific endeavors in parapsychological research. The body of this book is taken up by the Thirteen Empirical Research Reports, of which quite a few are slightly adapted versions of previously published papers, although these were often not readily accessible to the general public. The Editors put these reports in context by means of an introductory chapter and a concluding chapter that look to the future of psi research.

I consider myself to be part of the intended audience. After all, who wouldn't want to be rational and open-minded? On the other hand, I'm also *not* part of the intended audience because I am no blank slate regarding psi. I do research in psi myself, and am familiar with many of the contributors, their research, and their points of view. My coming of age, parapsychologically speaking, was by means of the book *Psychic Discoveries Behind the Iron Curtain* by Sheila Ostrander and Lynn Schroeder, when I was in my late teens. I forgot most of the contents, but I do remember my awe of all these strange and wonderful things, apparently subjected to more or less thorough investigations. It would be great if *Evidence for Psi* would instill this same awe in contemporary young and curious people.

The Introduction to *Evidence for Psi* gives a well-structured overview of types of phenomena, the general experimental approaches to study those phenomena, and how the evidence might be evaluated and interpreted. This Introduction should give any reader at least a reasonably accurate impression of the present state of psi research in the U.S. and Europe. Below I will discuss a few of the contributions that I found especially remarkable for one reason or another.

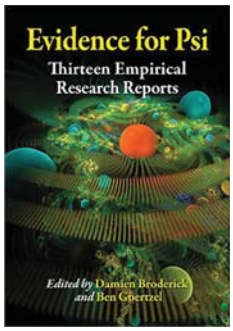
Jessica Utts contributes a slightly updated reprint of her now classic paper on The Significance of Statistics in Mind–Matter Research. It is clearly written and essential reading for anyone who wishes to understand the essence of widely used statistical techniques, and the basics of how to perform a meta-analysis, a technique used to combine the results of similar studies. Meta-analyses allow a more informed evaluation of whatever phenomenon is being studied. All techniques discussed by Utts are standard practice in many scientific fields. To some this subject matter might seem dull, but it is amply illustrated with real-life examples of psi research, contrasting the results to those of a conventional, medical study. After this, the reader should be suitably prepared to learn more about meta-analyses in later chapters.

I enjoyed Julia Mossbridge's chapter, written together with Jessica Utts

and Patrizio Tressoldi, on what she calls Anomalous Anticipatory Activity, AAA for short. AAA is about physiological processes that are associated with future events. These processes could be, for instance, changes in heart rate and skin conductance in anticipation of positive or negative feedback. These physiological processes are being measured while the participant carries out a computer task. In one such an experiment, participants were instructed to choose which of two neutral pictures is the 'correct' one. The participants had no ordinary way of establishing the correct choice; only after they entered their guess would the computer determine randomly which of the two pictures is the target. The results of a meta-analysis of 26 of this and similar studies showed that the anticipatory physiological processes differed significantly for the two different types of feedback (positive vs. negative). This means that, prior to feedback, the participant's physiology already reflected whether or not the choice was correct. What makes Mossbridge's contribution even more engaging, however, is that she lets you witness her scientific work as it progresses. You get to feel her ideas and dilemmas, almost inviting you to join her on her quest. Because she is primarily a neuroscientist, she has easy access to the work and data of her mainstream colleagues in neuroscience. It turned out that her colleagues' data showed possible AAA in mice. This is an exciting finding for two reasons. First, it shows that AAA can happen even if the experimenter is not looking for it; this practically rules out that the experimenter, consciously or subconsciously, somehow "produced" these results. Second, it is one of the relatively rare instances where psi is demonstrated with animals in a controlled laboratory setting. If psi is demonstrably not limited to humans, this has consequences for the theories that fit the existing data, e.g., it means that language processing or a high level of consciousness is not required.

Through Time and Space, The Evidence for Remote Viewing, a contribution by Stephan Schwartz, contains insights on the history of a number of labs that studied remote viewing. Remote viewing entails that people describe what happens at some distant loosely specified location, when sometimes only coordinates of longitude and latitude are given. In Schwartz's terminology, remote viewing is a form of *nonlocal perception*. The results range from interesting to amazing. For me, the added value of this chapter was learning more about the origin and development of the different research labs, the varied academic backgrounds of the investigators, how these different labs inspired and encouraged each other, and how criticisms by skeptics were embraced and used to further improve experiments. Schwartz's fluent writing style made this piece of history read like a psychological thriller. I'm happy that this history has been documented.

Speaking of history, especially the chapter by Bryan Williams, Empirical



Examinations of the Reported Abilities of a Psychic Claimant, made me realize how cumbersome and time-consuming research used to be. Nowadays the computer automates the process of randomizing and presenting stimuli, and registering and compiling responses. The psychic claimant in the title of Williams' chapter is Sean Harribance, whose patience must have been truly mind-blowing. He participated in a seemingly endless stream of experiments, many of which were conducted by the late William Roll. In a so-called ESP(Extra-Sensory-Perception)-task, Harribance was shown 12 opaque envelopes, hiding portraits of six men and six women. Harribance's task was to guess the gender of each. This task was performed a total of 5,890 times! A PK(PsychoKinesis)-task required Harribance to mentally influence six dice to turn face-up with a predetermined target number. Harribance dutifully performed this task almost 2,500 times. Williams describes many details, such as the color and material of the cloth hiding the envelopes, in what way cards were shuffled and by whom, and in what particular way an experiment was adapted to avoid possible cheating through 'sensory leakage.' Any of these details may turn out to be relevant, as long as we don't have a satisfying explanation for psi. Even though this painstaking reporting demonstrates the dedication and honesty of all those involved, the reader would probably have been better served if this chapter had been condensed. For a book aimed at a general public, this amount of detail tends to drown out the interesting results.

A chapter that presents an even bigger challenge to the reader, although of a different kind, is Peter Bancel's, An Analysis of the Global Consciousness Project. The Global Consciousness Project (GCP), clearly described in the preceding chapter by Roger Nelson, starts from the idea that mental activity of humans is globally connected. The GCP shows that global, emotional events are associated with decreased randomness in random number generators (RNGs). In other words, RNGs' output becomes more structured, or coherent. Previous research, e.g., the studies performed by York Dobyns, also described in this book, showed that human conscious intentions are associated with changes in random material processes such as the output of RNGs. This correlation is seen as a type of PK, often called microPK. The GCP is a natural extension of this kind of result. It's microPK gone global.

Bancel analyzes the massive amount of data of the GCP and uses it to answer a number of theoretical questions about possible mechanisms explaining the surprising correlations between 'global mind' and matter. To

answer these questions, Peter Bancel first explains a number of theoretical models that should or shouldn't fit the GCP-data, and consequently looks at how well each model fits. This chapter is very technical. I found it hard to follow the details of the arguments, despite Bancel's very careful and precise style of writing. Luckily the conclusions resulting from this admirable amount of work are not too hard to follow. The most important are that 1) a field model is compatible with the data. In a field model, an effect decreases with distance, just like the intensity of sound waves. This gives an indication of the type of theories that might explain the global consciousness data; 2) an experimenter effect cannot be ruled out. In this case, the experimenter Roger Nelson may theoretically by means of his subjective choices of global events, somehow unconsciously produce the association between the events and RNG output. To safeguard against this subjective part of the process, Bancel recommends that an algorithm should be developed that selects the global events of interest without human input.

All this attention to technical detail may make us lose sight of the broader context: How to evaluate the endeavors and discoveries in psi as part of our general efforts to make sense of the world. We can therefore be grateful for the clearly written contribution of Ted Goertzel and Ben Goertzel, in Skeptical Responses to Psi Research. The authors explore the types of criticisms that have been leveled at parapsychology, and compare them to similar criticisms in other academic fields. This insightful chapter concludes that parapsychologists would best avoid fights with vocal but ill-informed skeptics, and instead keep calm and study psi.

While the contributing authors are a varied bunch, the book is limited to research in the U.S. and Europe. It would have been nice if the editors had at least recognized that a country such as Russia also has a long history of psi research.

The writing style of Broderick and Goertzel reflects an admirable effort to be nuanced and precise, sometimes married with slightly humorous pomp and bombast. This may result in long-winded sentences such as:

> We argue that the total corpus of evidence for psi, while complex and vexing in various regards, contains sufficiently compelling positive evidence to: (1) cause a rational, open-minded observer to conclude that it is reasonably likely that one or more real physical processes underlie observed psi phenomena; (2) merit focus of significant resources of further scientific research into psi.

This is hard to read. Why not something like: "The evidence lets us conclude that psi is real, and we need more money to find out how it works."

Preferences for writing styles differ, of course, but if you deliver a

controversial message, it seems best to leave out the baroque. Luckily, many of the contributors write clearly and concisely, without compromising precision. Even though content should trump presentation, an uncluttered writing style can only help to keep the readers' focus on the message. And it should be obvious that this message deserves to be heard loud and clear and distributed widely.

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