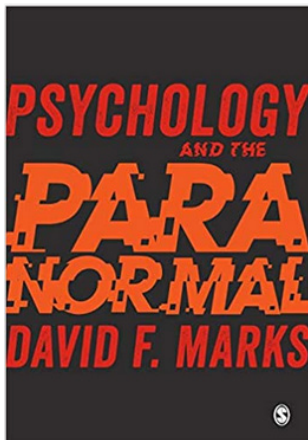


BOOK REVIEW

Psychology and the Paranormal: Exploring Anomalous Experience by David F. Marks

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David Marks's previous book about the paranormal (Marks, 2000) and other earlier writings established his reputation as a firm skeptic. He wrote the current book in order to learn about new developments in paranormal research during the past 20 years.

As described in this book, Marks's attitude toward the paranormal has changed significantly in recent years. These changes are apparently due largely to his personal anomalous experiences. This book is not a simple rehash and extension of his previous writings.

Chapter one introduces the types of paranormal phenomena and presents survey data about beliefs in paranormal phenomena. Chapter two discusses childhood abuse and dissociation as having a role in some, but probably not all, subjective paranormal experiences. Chapter three describes psychological factors that may be involved in paranormal experiences, including worldview, cognitive factors, confirmation bias, subjective validation, and the Barnum Effect (statements that most people consider true about themselves).

In chapter four, Marks describes and evaluates a personal experience of synchronicity that had layers of meaning for him. He rates the probability as 75% that the experience had a paranormal component. Marks now believes that spontaneous paranormal phenomena may occur.

Marks reviews several lines of laboratory experiments in chapters five through eight and concludes that the probability that psi manifests reliably in these experiments is extremely small, but not zero or disproven. Most of the discussion focuses on methodological problems and failures to replicate. He invited certain proponents of psi to respond to his writing and included their comments. These are the usual debates between proponents and skeptics, with little new information or insight. Those commenting were Harold Puthoff, Rupert Sheldrake, Daryl Bem, Adrian Parker, Stanley Krippner, and Dean Radin. The book also has comments by Susan Blackmore about the possible fraud of Carl Sargent.

Remote viewing and psychic staring are discussed in chapter five. For both lines of research, Marks concludes that studies with poor methodology have produced significant results and studies with good methodology have nonsignificant outcomes. He also notes that highly profitable applications of remote viewing would be well-established and convincing if the claims for remote viewing were true.

In chapter six, Marks discusses ganzfeld research and the methodological debates about the associated retrospective meta-analyses. He points out that with retrospective meta-analyses methodological decisions are made after knowing the outcome of the studies, which is the opposite of good research methodology. He notes that the methodological debates about the retrospective meta-analyses in parapsychology remain unresolved and discusses the value of study preregistration (or registration) and prospective meta-analysis. He ends the section by describing Caroline Watt's ongoing prospective meta-analysis of preregistered ganzfeld studies as a watershed moment and asks "Will it or won't it find support for ESP?" (p. 137).



In chapter seven, Marks discusses Daryl Bem's 2011 paper that forced psychologists to recognize the pervasive unacceptable practices in psychological research. The paper described nine precognition studies that used standard methods for psychological research. Skeptical psychologists were faced with the choice between recognizing evidence for psi versus recognizing that their usual research methods were deficient. Dream ESP is also discussed in chapter seven. Marks notes that the effects in these studies have been steadily declining. He also discusses the methodological debates about the retrospective meta-analyses for dream ESP.

Chapter eight on psychokinesis focuses on the 2006 retrospective meta-analysis by Bösch, Steinkamp, and Boller of experiments using electronic random number generators. Marks describes the methodological debate about the retrospective meta-analysis and accepts the conclusion of Bösch et al. that the results are consistent with publication bias.

Chapter nine covers hypnosis. Chapter ten covers out-of-body and near-death experiences, including a noetic experience that Marks had when he once thought he was about to drown. Chapter eleven presents Marks's theory that the underlying motivation for humans is homeostasis—striving to achieve safety, security, equilibrium, and control. He believes that paranormal experiences are part of the "spectrum of consciousness" associated with homeostasis.

The final chapter is twelve and has the title "Take-Home Message: Psi is a Spontaneous Process that Cannot be Summoned at Will in a Laboratory Experiment." This chapter has a message for skeptics that the lack of evidence for psi in laboratory experiments does not mean that psi does not occur in spontaneous reports. It also has a message for proponents of psi that they should accept that "*psi is not a process that is available at will*" (p. 309, emphasis in the original).

Marks believes that paranormal research should focus on anomalistic psychology that investigates "the human mind, the conscious brain and the world of anomalous experience" (p. 313). He argues that ceasing research on laboratory psi will clear the way for scientific progress in understanding anomalous experiences. He offers various suggestions for expanded and innovative non-laboratory research.

STRENGTHS AND WEAKNESSES

One purpose of this book was to provide a summary and stimulus for students—in effect, "passing the baton to a new generation of explorers" (p. 313). The book summarizes past controversies about experimental research rea-

sonably well and offers ideas for future research.

Precedents

Marks mentions only one reference about the elusive, unsustainable nature of psi, and does not discuss the development and extent of those ideas, or investigators who have preceded him with similar conclusions. Notably, the book does not mention Rhea White, who was a pioneer in abandoning experimental research as making inadequate progress, after nearly 40 years of personal involvement. She started a line of scientific investigation of what she called *exceptional human experiences* (White, 1997a, 1997b; Brown, 2000). She focused on understanding how the experiences actually affected a person. Understanding the effects or apparent purposes of psi is a prerequisite for understanding how psi works and the sources of psi. Rhea White appears to have already gone down the path that Marks has just discovered.

The field of parapsychology has to a great extent become divided into two camps, with one believing that progress is being made with experimental research (represented by most writers in Cardeña et al. [2015]), and the other believing that some property of psi prevents reliable control of the phenomena. The latter includes ideas such as that psi is intrinsically unrepeatable (Eisenbud, 1992/1963), is actively evasive (Beloff, 1994), is radically elusive (Batchelder, 1994), manifests as a trickster (Hansen, 2001), is constrained to be unrepeatable and useless (Lucadou, 2001; Millar, 2015; Walach et al. 2021; Walach et al., 2014), and is unsustainable (Kennedy, 2003, 2016a). These are not naïve newcomers to parapsychology or outsiders. Like Rhea White, most actively pursued experimental control of psi, often for more than a decade, before adopting these ideas.

Both camps have the same data. Proponents of experimental parapsychology conclude that the existing studies provide convincing evidence for reliable psi effects. Those who believe that reliable psi effects are not possible conclude that these same studies support their position due to the inconsistent, weak effects, and lack of progress in obtaining more reliable, stronger effects after 90 years of experimental work.

Past Methodology

Marks notes certain key methodological practices that have been recognized in recent years as needed for good research, but those practices were not fully implemented in writing this book. Rather, most sections in the book appear to have been written with the methodological standards that were widely used 40 years in the past. At that

time it was mistakenly thought that studies with exploratory methodology could provide convincing evidence for a controversial phenomenon like psi.

The studies typically were unregistered, severely underpowered, and had methodological flexibility or researcher degrees of freedom to adapt the analyses and hypotheses to fit the data. Also, results that were not significant were sometimes not reported. These practices are appropriate for initial exploratory research, but not for confirmatory research. Virtually no formal confirmatory research was done in psychology or parapsychology. Additional studies using similar exploratory methodology were considered adequate confirmation.

A series of articles that spearheaded the need for formal, preregistered, well-powered confirmatory research was published in November, 2012, in *Perspectives on Psychological Science* (see in particular Bakker et al., 2012; Pashler & Wagenmakers, 2012; Wagenmakers et al., 2012).

Subsequent preregistered, high-powered confirmatory studies of many published findings in psychology verified that inflated effects were common for unregistered initial studies (Klein et al., 2018; Open Science Collaboration, 2015) and for retrospective meta-analyses (Kvarven et al., 2019). The need for formal confirmatory research with preregistration of studies and adequate sample sizes has become widely recognized and implemented. Exploratory research is the creative step in scientific research and is essential, but also intrinsically has questionable validity. Confirmatory research makes scientific research valid and self-correcting. For comparison, in medical research, in 2005 many journals made public preregistration a requirement for publishing confirmatory (phase 3) studies (International Committee of Medical Journal Editors, 2005).

Ferguson and Heene (2012) pointed out that retrospective meta-analyses have not been effective at resolving scientific debates in psychology and “may be used in such debates to essentially confound the process of replication and falsification” (p. 558). These points are consistent with the experience in parapsychology. As noted above, retrospective meta-analysis is a type of post hoc analysis that offers additional opportunities to introduce bias. A meta-analysis involves many methodological decisions. Critics of a retrospective meta-analysis usually can find plausible alternative decisions that significantly change the results. Ultimately, relying on post hoc analyses is not an effective strategy for resolving controversial scientific questions.

If researchers have a useful understanding of a real effect, 90% or more of properly designed confirmatory studies should produce significant results. That is basically replication on demand and should efficiently end a scientific debate without the need for a retrospective meta-analysis to establish that the effect exists. If properly designed con-

firmatory research has not yet been conducted or does not have a high degree of success, the research can be considered to remain at the exploratory or unconfirmed stage, with questionable validity.

Essentially all of the findings currently considered as established in experimental parapsychology (reviewed in Cardeña et al., 2015) are based on retrospective meta-analyses of unregistered, usually underpowered studies. Preregistered, well-powered, formal confirmatory research has not yet been conducted for most lines of research in parapsychology. The arguments that reliable psi effects have or have not been found in experiments are based on speculations about research with questionable validity.

Marks appears to believe that conclusions can and should be drawn from studies that were unregistered and conducted with methodology that was more exploratory than confirmatory. Virtually all of the studies discussed in his book were in that category. He has a “belief barometer” at the end of most sections, where he registers his personal belief and asks readers to register their belief. Also, the comments by proponents of psi and Marks’s responses appear to be based on the outdated assumption that such debates about methodology can make unregistered, small studies provide convincing evidence. As was common 40 years ago, Marks gives little attention to the distinction between exploratory and confirmatory research.

An alternative approach more in line with the new era of methodological standards would be to end each section by noting that the existing studies cannot provide reasonable conclusions. Preregistered, well-powered, formal confirmatory research is needed before reasonable conclusions can be made.

With this new era of methodology, the first question when reviewing a line of research is: Have any preregistered, well-powered, confirmatory studies been conducted? Searching study registries is a fundamental, initial step for a review. In the previous methodological era the first question was: Have any meta-analyses been conducted (with the meta-analyses being retrospective and typically based on small studies)? Study registries did not exist in psychology and were not considered. Marks appears to have focused on the question from the previous era when writing most sections of this book.

Three Confirmatory Studies

The book does not discuss the three large preregistered confirmatory studies conducted by Schlitz, Delorme, and Bem for Bem’s 2011 retroactive (precognitive) priming studies (Schlitz et al., 2021; Schlitz & Delorme, 2021). Marks may have left these out because the studies were published in a peer-reviewed journal after his book was

published. However, the results had been presented at conventions of the Parapsychological Association, and the preregistrations (2013, 2015, and 2019) were publicly available on a study registry, similar to the ganzfeld prospective meta-analysis that was discussed in the book.

These three studies were the type of confirmatory research that is needed. They were multi-center and had planned sample sizes of 512, 640, and 384 (compared to 100 in the two initial studies by Bem). The detailed preregistrations ensured that the confirmatory analyses evaluated whether the data fit the hypothesis, rather than the exploratory practice of adapting the analyses and/or hypotheses to fit the data. These studies should provide significant results if the findings of Bem's initial studies and the subsequent retrospective meta-analysis are valid.

All three studies obtained nonsignificant results for the preregistered confirmatory analyses. This disparity between unregistered initial research and preregistered confirmatory research is not surprising to those who have experience with formal confirmatory research (medical research in my case, also see Kvarven et al., 2019; Open Science Collaboration, 2015). These findings demonstrate the need for caution and humility when drawing conclusions from exploratory research, or any research without proper preregistration.

The dramatic methodological changes in the past 10 years indicate that psychological researchers have historically not had the methodological skills needed to resolve a scientific controversy. Even with the recent methodological advances, psychological researchers still generally do not have the needed methodological skills. Experimenter fraud is a conspicuous example.

Experimenter Fraud

Marks has much discussion of Susan Blackmore's observations about possible fraud by Carl Sargent. I found both Blackmore's claims and Sargent's responses to be unconvincing. Sargent's subsequent refusal to cooperate with investigators and quitting parapsychological research are of more concern. Whether the errors in managing the targets were intentional as suspected by Blackmore or unintentional as claimed by Sargent, this unfortunate case demonstrates the need for routine quality control measures to prevent both fraud and unintentional errors in confirmatory research.

Marks, like most other psychological researchers, offers no guidelines or suggestions for preventing experimenter fraud. This leaves fraud as an endlessly unresolved confounding factor that is not addressed with preregistration or prospective meta-analysis.

It is well-established that peer review and replication

are not effective at detecting or deterring experimenter fraud (Broad & Wade, 1982; Strobe et al., 2012). Fraud would be easy and tempting in most psychological and parapsychological experiments, with very little chance of getting caught. When previously successful experimenters fail to obtain evidence for psi, as happened with Schlitz, Delorme, and Bem, experimenter fraud does not come up. However, if evidence for psi is found, then experimenter fraud will need to be addressed.

Effective quality control measures usually can be easily implemented that prevent undetected fraud by one person acting alone, as well as prevent unintentional errors. This would eliminate almost all cases of experimenter fraud and unintentional errors. For example, in a precognitive dreaming study by Watt (2013), an experimenter used an online random source to randomly select the target pool and the target. A second experimenter observed this process and the recording of the results to verify that no unintentional or intentional errors occurred. Given that humans are not perfect, such double-checking is a needed quality control for convincing confirmatory research.

Measures to prevent software programming fraud can be integrated with software validation, but most psychologists currently do not recognize formal software validation or programming fraud as significant methodological issues (Kennedy, 2016b). This is another example of the lack of needed methodological skills.

RECOMMENDATIONS

Marks's book will be useful to students and others seeking an introduction to parapsychological research that focuses on controversies in the past 20 years. For those who have a working knowledge of paranormal research, the book may be of most interest as a case study of one psychologist's changes in attitude about the paranormal. The book is also a case study of the continuing difficulty psychological researchers have in implementing the new era of methodology in their thinking and work.

DISCLOSURES

I have previously come to conclusions similar to Marks's beliefs that psi may occur spontaneously, but is not subject to reliable human control in laboratory experiments (Kennedy, 2013; 2016a). Therefore, I am sympathetic with the main conclusions in this book. One difference is that based on my personal experiences, I am 100% certain that paranormal phenomena beyond current scientific understanding sometimes occur. My skepticism about claims for reliable control of psi is based more on the inability to develop sustained practical applications of psi rather than

on methodological weaknesses. If psi had the properties that are assumed for experiments and for meta-analyses, reliable practical applications would have been developed long ago. The lack of sustainable practical applications indicates that some fundamental principles that make psi uncontrollable and unpredictable are not understood and can no longer be ignored.

My standards for research methodology are based on working in regulated medical research for about 15 years. These standards are very different than past and present psychological and parapsychological research (Kennedy, 2016b). To my knowledge, the Transparent Psi Project (2017) is the only study design in the history of parapsychology that applies methodological practices that are comparable to the routine practices in my experience in regulated medical research. These include measures to prevent experimenter fraud, formal software validation, and appropriate development of operating characteristics (power analysis) for confirmatory Bayesian hypothesis tests.

REFERENCES

- Bakker, M., van Dijk, A., & Wicherts, J. M. (2012). The rules of the game called psychological science. *Perspectives on Psychological Science*, 7(6), 543–554. <https://doi.org/10.1177/1745691612459060>
- Batchelder, K. J. (1994). Notes on the elusiveness problem in relation to a radical view of paranormality. *Journal of the American Society for Psychical Research*, 88, 90–115.
- Beloff, J. (1994). Lessons of history. *Journal of the American Society for Psychical Research*, 88, 7–22.
- Broad, W., & Wade, N. (1982). *Betrayers of the Truth*. New York, NY: Simon and Schuster.
- Brown, S.V. (2000). *Exceptional human experiences: Rethinking anomalies and shifting paradigms*. EHE Network. <https://www.ehe.org/display/ehe-pagedfb4.html?ID=1>
- Cardeña, E., Palmer, J., & Marcusson-Clavertz, D. (Eds.) (2015). *Parapsychology: A handbook for the 21st century*. McFarland.
- Eisenbud, J. (1992). Psi and the nature of things. In *Parapsychology and the unconscious* (pp. 149–168). North Atlantic Books. [Original work published 1963]
- Ferguson, C. J., & Heene, M. (2012). A vast graveyard of undead theories: Publication bias and psychological science's aversion to the null. *Perspectives on Psychological Science*, 7(6), 555–561. <https://doi.org/10.1177/1745691612459059>
- Hansen, G. P. (2001). *The trickster and the paranormal*. Xlibris.
- International Committee of Medical Journal Editors (2005, May). Update on Trials Registration: Is This Clinical Trial Fully Registered?: A Statement from the International Committee of Medical Journal Editors. ICMJE News and Editorials. http://icmje.org/news-and-editorials/update_2005.html
- Kennedy, J. E. (2003). The capricious, actively evasive, unsustainable nature of psi: A summary and hypotheses. *Journal of Parapsychology*, 67, 53–74. <http://jeksite.org/psi/jp03.pdf>
- Kennedy, J. E. (2013). Conclusions about Paranormal Phenomena. <https://jeksite.org/psi/conclusions.pdf>
- Kennedy, J. E. (2016a). Coming to terms with the trickster. https://jeksite.org/psi/trickster_panel_paper.pdf
- Kennedy, J. E. (2016b). Is the methodological revolution in psychology over or just beginning? *Journal of Parapsychology*, 80, 56–68. <https://jeksite.org/psi/jp16.pdf>
- Klein, R. A., Vianello, M., Hasselman, F., et al. (2018). Many labs 2: Investigating variation in replicability across samples and settings. *Advances in Methods and Practices in Psychological Science*, 443–490. <https://doi.org/10.1177/2515245918810225>
- Kvarven, A., Strømland, E., & Johannesson, M. (2019). Comparing meta-analyses and preregistered multiple-laboratory replication projects. *Nature Human Behavior*, 4, 423–434. <https://doi.org/10.1038/s41562-019-0787-z>
- Lucadou, W. v. (2001). Hans in luck: The currency of evidence in parapsychology. *Journal of Parapsychology*, 65, 3–16.
- Marks, D. (2000). *The psychology of the psychic* (2nd ed.). Prometheus.
- Millar, B. (2015). Quantum theory and parapsychology. In E. Cardeña, J. Palmer, & D. Marcusson-Clavertz (Eds.), *Parapsychology: A handbook for the 21st century*. McFarland.
- Open Science Collaboration (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251). <https://www.science.org/doi/10.1126/science.aac4716>
- Pashler, H., & Wagenmakers, E. (2012). Editors' introduction to the special section on replicability in psychological science: A crisis of confidence? *Perspectives on Psychological Science*, 7(6), 528–530. <https://doi.org/10.1177/1745691612465253> Table of Contents: <https://journals.sagepub.com/toc/pssa/7/6>
- Schlitz, M., & Delorme, A. (2021). Examining implicit beliefs in a replication attempt of a time-reversed priming task [version 2; peer review: 2 approved]. *F1000Research*, 10(5). <https://doi.org/10.12688/f1000research.27169.2>
- Schlitz, M., Bem, D., Marcusson-Clavertz, D., Cardeña, E., et al. (2021). Two replication studies of a time-reversed (psi) priming task and the role of expectancy in reaction times. *Journal of Scientific Exploration*, 35(1), 65–90. https://www.scientificexploration.org/docs/35/jse_35_1_Schlitz.pdf

- Strobe, W., Postmes, T., & Spears, R. (2012). Scientific misconduct and the myth of self-correction in science. *Perspectives on Psychological Science*, 7, 670–688. <https://doi.org/10.1177/1745691612460687>
- Transparent Psi Project. (2017). Transparent Psi Project—Research Plan. <https://osf.io/d7sva/>
- Wagenmakers, E.-J., Wetzels, R., Borsboom, D., van der Maas, H. L. J., & Kievit, R. A. (2012). An agenda for purely confirmatory research. *Perspectives on Psychological Science*, 7(6), 632–638. <https://doi.org/10.1177/1745691612463078>
- Walach, H., Lucadou, W. v., & Römer, H. (2014). Parapsychological phenomena as examples of generalized nonlocal correlations—A theoretical framework. *Journal of Scientific Exploration*, 28(4), 605–631. <https://journalofscientificexploration.org/index.php/jse/article/view/844>
- Walach, H., Kirmse, K.A., Sedlmeier, P., Vogt, H., Hinterberger, T., & Lucadou, W. v. (2021). Nailing jelly: The replication problem seems to be unsurmountable. Two failed replications of the matrix experiment. *Journal of Scientific Exploration*, 35(4), 788–828. <https://doi.org/10.31275/20212031>
- Watt, C. (2013). Study registration for “Precognitive Dreaming: Sleep Lab Study.” KPU Registry ID Number: 1003. https://www.koestler-parapsychology.psy.ed.ac.uk/Documents/KPU_registry_1003.pdf
- White, R. A. (1997a). (Ed.). *Exceptional human experience: Special issue. Background papers II. The EHE Network, 1995–1998: Progress and possibilities*. Exceptional Human Experience Network.
- White, R. A. (1997b). Exceptional human experiences and the experiential paradigm. In C. T. Tart (Ed.), *Body, mind, spirit: Exploring the parapsychology of spirituality* (pp. 83–100). Hampton Roads.