

Book Review

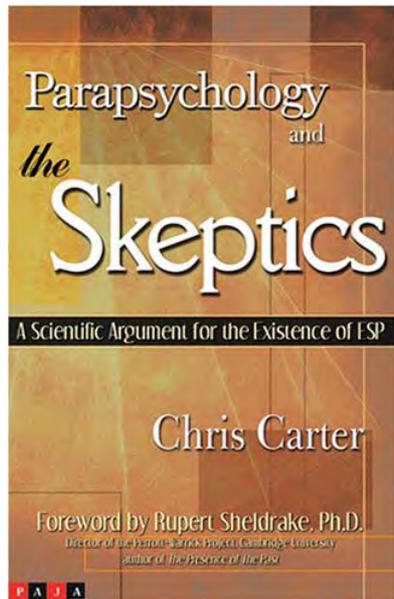
Chris Carter

*Parapsychology and the
Skeptics: A Scientific
Argument for the
Existence of ESP*



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Reviewed by U. Mohrhoff

The story of parapsychology's struggle for legitimacy is an epic tale spanning centuries and continents, containing victories, sudden reversals, intrigue, scandals, heated arguments, wild accusations, ruined reputations and some of the most bizarre characters that have ever walked the earth. But why, asks the author of this important investigation, is parapsychology so controversial? Why has the controversy lasted centuries? And are we capable, at long last, of rationally resolving the issue? While Carter appears to be hopeful, I doubt it. I'm not even sure that reason — presently our most reliable if not our most effective cognitive tool — will allow us to do so.

But let's get on with the book. In September 2001 Britain's Royal Mail decided to honor the 100th anniversary of the Nobel Prize by asking a British winner of each of the six different Nobel Prize categories to write a small article about the implications of research in their field. Brian Josephson, winner of the Nobel prize for physics in 1973, wrote in his contribution that quantum theory

is now being fruitfully combined with theories of information and computation. These developments may lead to an explanation of processes still not understood within conventional science such as telepathy, an area where Britain is at the forefront of research. (xviii)

This ignited a firestorm of controversy. The first to denounce Josephson in print was Oxford physicist David Deutsch. "It is utter rubbish," Deutsch spluttered to the London newspaper *The Observer*:

Telepathy simply does not exist. The Royal Mail has let itself be hoodwinked into supporting ideas that are complete nonsense. The evidence for the existence of telepathy is appalling. (*Ibid.*)

Deutsch is the author of *The Fabric of Reality: The Science of Parallel Universes* and, as the title of his book indicates, a proponent of a theory according to which

there are billions of parallel universes to our own. This theory is based on a silly category mistake. Essentially, quantum physics is a probability calculus: it allows us to calculate the probabilities of the possible outcomes of future measurements on the basis of actual outcomes of past or present measurements. Deutsch subscribes to the so-called “many-worlds interpretation” of quantum physics, which fails to distinguish between the categories of actuality and possibility. For Deutsch, every possible outcome is an actual outcome — hence his many parallel universes. He is not in the least embarrassed by the fact that the evidence for the existence of parallel universes is not merely “appalling” but *nonexistent*. Worse, his theory is *not even wrong* in Wolfgang Pauli’s memorable phrase, which is to say that there is no way to prove it wrong.

Whence this double standard? As far as I am concerned, the answer is rather obvious. The “many-worlds interpretation” is an attempt to transmogrify quantum theory’s mathematical formalism into a description of “the fabric of reality” — that is, a description of what exists and how this behaves. This sleight of hand — which appears to have worked for classical physics but in the context of quantum physics only produces absurdities — allows us to believe that we are omniscient, at least in principle. Such a belief would be seriously undermined by the admission that we know nothing whatever about *how* — by what mechanism or process — measurement outcomes contribute to determine the probabilities of measurement outcomes. Thus Deutsch’s dismissal of telepathy and his embrace of the “many-worlds interpretation” both originate in the fear of having to admit that there are things we don’t understand. Both are indicative of a pathological hubris.

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A saner attitude was advocated by the philosopher Curt Ducasse:

Although the evidence offered by addicts of the marvelous for the reality of the phenomena they accept must be critically examined, it is equally necessary on the other side to scrutinize just as closely and critically the skeptic’s allegations of fraud, or of malobservation, or of misinterpretation of what was observed, or of hypnotically induced hallucinations. For there is likely to be just as much wishful thinking, prejudice, emotion, snap judgment, naïveté, and intellectual dishonesty on the side of orthodoxy, of skepticism, and of conservatism, as on the side of hunger for and belief in the marvelous. (2)

Chris Carter is a graduate of Oxford University with degrees in economics and philosophy. His book *Parapsychology and the Skeptics* is not so much “a scientific argument for the existence of ESP,” as the subtitle proclaims, as a critical examination of skeptical claims regarding paranormal phenomena. That a mass of favorable evidence exists can hardly be disputed by anyone who has taken the trouble to look at it. What the book provides is a critical examination of the different metaphysical assumptions underlying acceptance and rejection of the evidence.

An examination of the evidence the parapsychologists present brings us face to face with our most profound beliefs concerning the nature of human beings and our relationship with the world. The opinions we form on the subject of parapsychology have implications for our opinions concerning the relationship of mind with matter, and even the nature of reality itself. No small wonder then that the debate over parapsychology has been fought with the passion of a holy war. (4)

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Case in point: In 1975, Paul Kurtz, then a philosopher at the State University of New York at Buffalo, collected 186 scientist's signatures for a five-paragraph article titled "Objections to Astrology," which was published in the September-October 1975 issue of *The Humanist*. The article was favorably reported in newspapers across the U.S. Less noted was the objection of one famous non-signer, celebrity-astronomer Carl Sagan, who wrote in a letter to *The Humanist*:

I find myself unable to endorse the "Objections to Astrology" statement ... not because I feel that astrology has any validity whatever, but because I felt and still feel that the tone of the statement is authoritarian. The fundamental point is not that the origins of astrology are shrouded in superstition. This is true as well for chemistry, medicine, and astronomy, to mention only three. To discuss the psychological motivations of those who believe in astrology seems to be quite peripheral to the issue of its validity. That we can think of no mechanism for astrology is relevant but unconvincing. No mechanism was known, for example, for continental drift when it was proposed by Wegener. Nevertheless, we see that Wegener was right, and those who objected on the grounds of unavailable mechanism were wrong. Statements contradicting borderline, folk, or pseudoscience that appear to have an authoritarian tone can do more damage than good. They never convince those who are flirting with pseudoscience but merely seem to confirm their impression that scientists are rigid and closed-minded. (8)

Is it merely an impression? Shortly after the publication of the statement, Kurtz lobbied for the founding of an organization to challenge what he saw as the uncritical coverage of paranormal and occult ideas in television and print. This led to the formation of a "Committee for the Scientific Investigation of Claims of the Paranormal" (CSICOP) at a 1976 meeting of the American Humanist Association. In spite of its name, CSICOP has engaged in only one case of scientific investigation. It concerned a claim of French psychologists Michel and Francoise Gauquelin.

Much of the Gauquelins' work has been aimed at debunking traditional astrology, but they have also gathered some of the most compelling scientific evidence in support of certain quasi-astrological ideas, namely, that the position of the planets at time of birth correlates with certain human characteristics. One of the Gauquelins' strongest claims has been for the so-called "Mars Effect": Although critical of traditional astrology, the Gauquelins had published statistical studies that seemed to show that significantly more world-class athletes were born when Mars was rising or transiting.

Gauquelin's results showed that 22 percent of European sports champions were born with Mars rising or transiting. Since Gauquelin divided the sky into 12 sectors, according to pure chance the probability of Mars being in any two sectors at time of birth is 2/12 or 17 percent, well below the 22 percent reported. With a sample size of 2088 sports champions, the odds are millions-to-one against these results occurring by chance. (10)

In 1979, in their new magazine *The Skeptical Inquirer*, CSICOP published the results of their own study on an American sample of athletes which seemed to disprove the Mars Effect.

Shortly after the *Skeptical Inquirer* article concerning the American athletes, there was a change in the membership of CSICOP's ruling Executive Council. On December 15, 1979, Dennis Rawlins, astronomer, founding member of CSICOP and debunking hard-liner, was ejected from the council and replaced by Abell. The vote for expulsion was unanimous. The following October Rawlins was also removed from

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the list of Fellows. The significance of these events would not become known until a year later, when an extraordinary article appeared in the October 1981 issue of *Fate* magazine.

The article, titled “Starbaby,” was Rawlins’ inside account of CSICOP’s investigation into the Mars Effect. Rawlins ... wrote that the CSICOP test on European athletes and non-champions had been botched from the beginning... [W]hen results came in supporting the existence of a Mars effect, the three CSICOP officials covered them up and so distorted them that it appeared that their results did not support the Mars Effect... When Rawlins alerted other CSICOP notables, including Gardner, Frazier, Randi, and Klass, he was shocked to learn that they were more interested in keeping him quiet than in facing up to the truth. When Rawlins refused to drop the issue, he was removed from the organization. (12)

One immediate consequence of this scandal was the announcement that CSICOP would no longer conduct any more “scientific investigation,” and this remains the official policy to this day. So today most of the opposition faced by parapsychologists and other proponents of unusual claims comes from an organization that refuses to conduct any scientific research itself, and merely criticizes the work of others from the sidelines.

Parapsychology is the only scientific discipline for which there is an organization of skeptics trying to discredit its work. As this organization does not perform any research of its own, the true nature of CSICOP is clearly that of a scientific vigilante organization defending a narrow brand of scientific fundamentalism, whose major goal has been to influence the media, and through it, public opinion. As Carter points out, true skepticism involves the practice of doubt, not of simple denial, and so, according to this criterion, CSICOP does not truly qualify as an organization of skeptics.

According to its editor Kendrick Frazier, *The Skeptical Inquirer* was founded by CSICOP “to disseminate accurate information about the results of ... inquiries to the scientific community and the public.” According to Henry Bauer, Professor Emeritus and Dean Emeritus, Virginia Polytechnic Institute & State University, *The Skeptical Inquirer* “serves only the purpose of speaking to the already converted: These writings are better understood as rituals of self-motivation and self-assurance than as attempts to make a case that might persuade opponents or the general public, let alone as attempts to clarify the substantive issue.”

In the third chapter, still forming part of the Introduction, Carter presents fascinating historical evidence. You might have heard that Australian aborigines communicate by smoke signals. In 1914, David Unaipon, a well-educated Australian native, delivered a lecture in which he told how the aborigines used smoke signals not as a kind of code, but to attract attention, so that communication could then be made by *telepathy*.

He might want to give his brother, who might be twenty miles away, a message; so he would set to and make a smoke signal, and then sit down and concentrate his mind on his brother. The column of smoke would be seen by all the blacks for miles around, and they would all concentrate their minds, and put their brains into a state of receptivity. Only his brother, however, would get into touch with him, and he could then suggest to his brother the message which he wished to convey. (25)

Chapter 4 explains statistical issues and presents the pioneering work of J. B. Rhine. Chapter 5 introduces psychokinesis (PK), from the legendary D. D. Home to the micro-PK research of Helmut Schmidt, Robert Jahn, Dean Radin, and Roger Nelson. Chapter 6 introduces telepathy and the ganzfeld, and Chapter 7 is devoted to the famous (or infamous) ganzfeld debate, in which for the first time a parapsychologist (Charles Honorton) and a critic (Ray Hyman) collaborated on a joint statement. The statement begins with these words:

We agree that there is an overall significant effect in this database that cannot reasonably be explained by selective reporting or multiple analysis. We continue to differ over the degree to which the effect constitutes evidence for psi, but we agree that the final verdict awaits the outcome of future experiments conducted by a broader range of investigators and according to more stringent standards. (56)

Psychologist Robert Rosenthal of Harvard University, world-renowned as an expert in evaluating controversial research claims in the social sciences, wrote:

Parapsychologists in particular and scientists in general owe a great debt of gratitude to Ray Hyman and Charles Honorton for their careful and extensive analytic and meta-analytic work on the ganzfeld problem. Their debate has yielded an especially high light/heat ratio, and many of the important issues have now been brought into bold relief. (57)

Enter the National Research Council (NRC). It created a committee to investigate various techniques of enhancing human performance in which the U.S. Army was interested. One of the reports requested by the NRC was prepared by Rosenthal along with Monica Harris. The report concluded:

The situation for the ganzfeld domain seems reasonably clear. We feel it would be implausible to entertain the null [that is, conclude the results are due to chance] given the combined p [probability] from these 28 studies. . . . When the accuracy rate expected under the null is $1/4$, we estimate the obtained accuracy rate to be about $1/3$. (58)

In other words, Harris and Rosenthal concluded that the Ganzfeld results were not simply due to chance, and that the accuracy rate was about 33 percent, when 25 percent would be expected if chance alone were responsible. You can sort of guess what happened next.

[C]ommittee chairman John Swets phoned Rosenthal and asked him to withdraw the section of his report that was favorable to parapsychology. Rosenthal refused. In the final NRC report, the Harris-Rosenthal paper is cited only in the several sections dealing with the non-parapsychology topics. There is no mention of it in the section dealing with parapsychology. (58–59)

At a 1987 press conference, called to announce the results of the NRC's two-year, nearly half-million dollar study, Swets announced:

Perhaps our strongest conclusions are in the area of parapsychology: [*pause for dramatic effect*] the committee finds no scientific justification from research conducted over a period of one hundred thirty years for the existence of parapsychological phenomena. (57)

This was far from being the end of that infamous episode. Suffice it to say that Hyman and the other skeptics lost the debate, as may be gleaned from a 1996 piece by Hyman, in which he wrote that “[t]he case for psychic functioning

By the end of the chapter the only question that remains open concerns the ultimate fall-back position of the skeptics: the claim that present-day science is incompatible with the parapsychological data.

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seems better than it has ever been... I also have to admit that I do not have a ready explanation for these observed effects."

Chapter 8 discusses the research done by skeptics, notably Susan Blackmore, Richard Wiseman, and James Randi. By the end of the chapter the only question that remains open concerns the ultimate fall-back position of the skeptics: the claim that present-day science is incompatible with the parapsychological data.

Chapter 9 addresses a preliminary question: what is the scientific opinion on anomalies research? Referring to his Princeton Engineering Anomalies Research program (PEAR), Jahn said,

We have had commentary on our program from no less than six Nobel laureates, two of whom categorically reject the topic, two of whom encouraged us to push on, and two of whom were categorically evasive. So much for unanimity of high scientific opinion. (90)

In 1946 parapsychologist Dr Jan Ehrenwald sent Albert Einstein a copy of a book he had recently written called *Telepathy and Medical Psychology*, asking Einstein if he would read it and perhaps write an introduction. Parts of Einstein's response follow:

I have read your book with great interest... we have no right, from a physical standpoint, to deny a priori the possibility of telepathy. For that sort of denial the foundations of our science are too unsure and too incomplete... your book has been very stimulating for me, and it has somewhat softened my originally quite negative attitude toward the whole of this complex of questions. One should not walk through the world wearing blinders.

I cannot write an introduction, as I am quite incompetent to do so. It should be provided by an experienced psychologist. You may show this letter privately to others. (92)

Chapter 10 contrasts modern science with its classical counterpart. As far as physics is concerned, this appears to be largely superfluous, not least because the so-called classical physics is by now *so yesterday*. Nor is classical physics presented correctly — but then, it hardly ever is. Writes Carter:

All interactions in classical physics are explicitly local. Interactions between a body at location A and another body at location B must be mediated by a force field that traverses the distance between A and B, at a speed not exceeding that of light. Body A causes a change in the force field, and this change in the field is propagated at or below light speed to Body B... Localism implies that any information exchange must be mediated by a signal, and relativity implies that no such signal can travel faster than the speed of light. (104)

This standard textbook story illustrates the sleight of hand I mentioned at the beginning. It involves the transmogrification of the mathematical tools that physicists use to calculate the effects that particles have on particles, into an explanation of how — by what mechanisms or processes — particles act on particles. As said, this sort of story worked well enough for classical physics, which is why you still find it in the textbooks. It is a very flattering story, for it allows us to believe that we are omniscient, at least in principle.

Carter's discussion of quantum mechanics also doesn't help. As far as physics is

concerned, the chapter should have ended with this paragraph:

At any rate, these ... interpretations ... are attempts to describe what reality is really like between observations, to account for the seemingly bizarre behavior of matter predicted so accurately by the theory of quantum physics. They are not actually scientific theories about the nature of reality, but metaphysical theories... (100)

Carter, however, goes on to apply Chalmers' "law of minimization of mystery," which says that consciousness is mysterious, and quantum physics is mysterious, so maybe the two mysteries have a common source. The author's attempt to connect the pioneering PK research of Schmidt with the so-called "collapse of the state vector" is misconceived, inasmuch as there is no such thing as a collapse of the state vector. This "collapse" is one of the specters raised by trying to transmogrify the mathematical tools of a probability calculus into descriptions of actual physical states, events, or processes. The following conclusion, however, is correct:

it would appear that the charge that the claims of parapsychology are incompatible with those of the more basic sciences is groundless, as they are not incompatible with quantum mechanics, at this time the most basic science of all. Given the existence of emergent properties, the operation of psi in our macroscopic world is consistent with but not necessarily explained by quantum mechanical principles. (108, original emphasis)

Considering that "the most basic science of all" is essentially a probability calculus correlating the outcomes of physical measurements, it is rather obvious that the operation of psi can be neither explained nor ruled out by quantum mechanical principles. (The invocation of "emergent properties" does not seem to contribute anything to this conclusion, though.)

A couple of brief chapters later, Carter writes that "physics does not deal directly with variables such as consciousness, intent, and values: They are outside of its scope." If this is correct, as it certainly is, why first make a song and dance about a possible connection between conscious observation and collapsing state vectors? (Be forewarned: there is more of this to come.)

Chapter 13 brings together the main reasons for the resistance of mainstream science to accepting the reality of psi: (i) lack of awareness of the experimental evidence, (ii) fear of ridicule, (iii) adherence to an outmoded metaphysics, and (iv) the inability to explain psi with the accepted theories of biology and psychology. Combined with the last three factors, the first often amounts to a refusal to even consider the evidence. Skeptics such as Susan Blackmore are fond of saying that the existence of psi is incompatible "with our scientific worldview." Carter pointedly asks:

with which scientific worldview? Psi is certainly incompatible with the old scientific worldview, based on Newtonian mechanics and behaviorist psychology. It is not incompatible with the emerging scientific worldview based upon quantum mechanics and cognitive psychology. (137)

Carter is fond of invoking "the new metaphysics of science," which according to him features non-locality, emergent properties, and the causal role of consciousness. What do these "new metaphysical implications of science" amount

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Emergence, too, fails to qualify as a positive feature of a new metaphysics. It just means that classical reductionism no longer works.

Future historians may look back on the 19th and 20th centuries and shake their heads at the arrogance with which many of our scientists and philosophers dogmatically dismissed experiences people in all cultures have reported for thousands of years.

to? Non-locality merely compels us to accept that the classical illusion of locality no longer works. It is *not* a positive feature of any new metaphysics.

What about the slippery concept of “emergent properties”? The author himself wonders: “When we say a rabbit emerges from a hole, are we implying that the rabbit depends on the hole for its existence?” In short, emergence, too, fails to qualify as a positive feature of a new metaphysics. It just means that classical reductionism no longer works.

And the “causal role of consciousness”? Discounting the red herring of consciousness-induced collapses of state vectors, I don’t think that there is a scientific theory of mental causation anymore than there is one of parapsychological phenomena. Like psi and PK, mental causation is perfectly consistent with what science can legitimately affirm. Like psi and PK, it isn’t ruled out by scientific data. But this is a far cry from having a scientific theory of the causal role of consciousness. Nevertheless (or else precisely for this reason) I wholeheartedly concur with the chapter’s conclusion:

Future historians may look back on the 19th and 20th centuries and shake their heads at the arrogance with which many of our scientists and philosophers dogmatically dismissed experiences people in all cultures have reported for thousands of years. (139)

Chapter 14 highlights the weaknesses of skeptical arguments. Hyman, for instance, writes that

Parapsychology is unique among the sciences in relying solely on significant departures from a chance baseline to establish the presence of its alleged phenomenon. In the other sciences the defining phenomena can be reliably observed and do not require indirect statistical measures to justify their existence. Indeed, each branch of science began with phenomena that could be observed directly. (144)

In actual fact, parapsychology, like all other branches of science, began with phenomena that could be observed directly, what with the many consistent reports found throughout recorded history. On the other hand, statistical analysis is routinely employed to establish empirical correlations (“causal connections”). A recent example is the potential link between exposure to strong electromagnetic fields and health. An article in *Science* reported that

After spending nearly a decade reviewing the literature on electromagnetic fields (EMFs), a panel of the National Council on Radiation Protection and Measurements (NCRP) has produced a draft report concluding that some health effects linked to EMFs such as cancer and immune deficiencies appear real and warrant steps to reduce EMF exposure. . . . Biologists have failed to pinpoint a convincing mechanism of action. (145)

So what’s the difference? Biologists are now seeking a mechanism, just as parapsychologists do. The difference is that the biologists stand a chance of finding a mechanism in the *classical* domain, whereas the parapsychologists’ only hope lies in the quantum domain. But this difference is spurious. Since the classical laws are degenerate versions of the quantum laws — obtained in the so-called “classical limit” — and thus derive their explanatory power from the quantum laws, the former have no more explanatory power than the latter.

The take-home message of Chapter 15 is that, while scientific beliefs are based

on induction, they are not therefore irrational, as Hume contended, but merely *conjectural*.

Chapter 16 inquires into the scientific status of parapsychology. According to Karl Popper, this would depend upon whether or not the field of parapsychology generates theories that are capable of being falsified in principle. Carter concludes that the field does, in fact, have theories that entail falsifiable predictions, subject to the proviso that these theories “are certainly incomplete and approximately true at best, in the way that Popper would describe *all* our scientific theories as incomplete and only approximately true.”

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I beg to differ. The quantum mumbo-jumbo offered in this chapter as a possible and in principle falsifiable parapsychological theory does nothing to advance the cause of knowledge. It simply extends common misinterpretations of the quantum-mechanical probability calculus in general, and of the meaning of “measurement” in particular, into new areas. In other words, I don’t agree with the author’s conclusion that parapsychology is in possession of anything like a scientific theory. It does employ scientific methods, but this is a different matter. I am nevertheless convinced that Carter would agree with my punch line, which is “so much the worse for science” rather than “so much the worse for parapsychology.”

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