CHAPTER 4

Why Does the Controversy Continue?

> For the last ten years, we have been arguing about what constitutes science and scientific method and what societies use it. We even changed the By-Laws about it. The PA uses statistics and blinds, placebos, double blinds and other standard devices. The whole history of scientific advance is full of scientists investigating phenomena that the establishment did not believe were there. I submit we vote in favor of this Association's work.[1]

> There is nothing that one can't research the hell out of. Research guided by bad judgment is a black hole for good money . . . Now is the time for everyone who believes in the Rule of Reason to speak up against pathological science and its purveyors.[2]

Both of those quotations refer to the same organization—the Parapsychological Association. Both of them were delivered to our nation's premier scientific organization, the American Association for the Advancement of Science (AAAS). The first statement was made in December 1969 by the renowned anthropologist Margaret Mead, who spoke from the floor in support of the PA's application for affiliation with the AAAS. Following her statement, the membership voted five-to-one in favor of granting that affiliation.

The second statement was made by the noted physicist John A. Wheeler in an address to the AAAS in January 1979. It was the opening salvo in a campaign to "drive the pseudos out of the workshop of science" that he launched in the hope of getting the PA disaffiliated from the AAAS. The campaign failed.*

In or out of the halls of the scientific establishment, parapsychology has a way of stirring passions and provoking amazing reactions. Robert Jahn was dean of the School of Engineering and Applied Science at Princeton University and a noted authority on aerospace engineering with a long record of work for NASA and the Department of Defense when he decided that certain parapsychological problems were worth investigating. Did his colleagues applaud his pioneering spirit? Not exactly. They as much as said he was crazy and a disgrace to science and the university. The university even convened an ad hoc committee to oversee his research—something unheard of for a scientist of his stature. Yet not all established scientists reacted that way, as Jahn noted in a 1983 address to the PA. Speaking about the Princeton Engineering Anomalies Research program, he said, "We have had commentary on our program from no less than six Nobel laureates, two of whom categorically rejected the topic, two of whom encouraged us to push on, and two of whom were evasively equivocal. So much for unanimity of high scientific opinion."

Roots of the Controversy

Robert Jahn's experience is not an isolated one. In fact it is fairly typical of what distinguished scientists who dare to stray from orthodoxy have had to endure ever since the noted physicist William Crookes began examining the phenomena of Spiritualism more than

*Wheeler's address, "Drive the Pseudos Out of the Workshop of Science," can be found in the *New York Review of Books*, April 13, 1979. When he originally delivered the address to the AAAS, Wheeler injudiciously replied to a question with statements accusing Rhine of fraud in his pre-parapsychological research. The accusation was groundless, and Wheeler subsequently retracted it in a "correction" published in the AAAS magazine *Science* (13 July 1979, p. 144). Nonetheless AAAS legal counsel disallowed distribution of the cassette tapes of that part of the conference.

one hundred years ago. There is a long history of scientific journals discriminating against parapsychological reports, and an almost equally long history of principal government funding agencies that deny funding for parapsychological research. Although there is great public interest in the topic, the popular scientific press often prints vehement attacks on parapsychological research (and on the researchers themselves). Parapsychology is controversial, no doubt about it, but *why* this is so turns out to be a fairly complicated issue.

Fundamental to the controversy are the *claims* of parapsychology. Parapsychological hypotheses at the very least claim that humans can acquire information or affect external physical systems in ways that science, in its present state, cannot explain. If these claims are correct, then the existing worldview that science gives us will have to be modified—the so-called laws of physics will have to be rewritten. Of itself this should not be controversial, since the scientific worldview is always undergoing modification and the laws of physics have been rewritten several times in just the last century. This is called scientific progress. Yet some scientists are profoundly uncomfortable with this possibility and feel that the domain of human communication and action is already completely understood, so any apparent need for modification is spurious.

Just how controversial parapsychology is depends on whom you ask. The public does not think of parapsychology as a particularly controversial science, since surveys frequently show that most people either accept the reality of ESP or have had psychic experiences themselves. Oddly enough, even a very large percentage of scientists and academics see nothing wrong with parapsychology, or at least parapsychology's main topic of study. Over the decades several surveys have been made of scientists' opinions on ESP. The percentage of scientists who think that ESP is "an established fact" or that ESP is a "likely possibility" has climbed from a low of 8 percent (in a survey of 352 members of the American Psychological Association in 1938, just as the Duke University work was becoming known) to highs of 67 percent and 75 percent in two large (well over 1,000 respondents each) surveys conducted in the early seventies.[4]

With such evidence indicating that so many scientists are willing to consider ESP a likely possibility, you may wonder why parapsychology courses are not routinely found in colleges and universities

and why there are so few labs doing research in this area. A more recent survey conducted by University of Maryland sociologist Dr. James McClenon in 1981 may suggest some reasons.[5] McClenon surveyed the "administrative elite"—the council and selected section committees of the AAAS. These scientists were more skeptical of ESP, with just under 30 percent believing that ESP was an "established fact" or a "likely possibility." Those in the social sciences (where parapsychology courses would normally be categorized) were even more skeptical (20 percent were believers) than those in the natural sciences (30 percent believers). Clearly the percentage of scientists willing to entertain the possibility of ESP (and presumably the study of it) is much lower among those who run the scientific establishment than among average working scientists.

Science is not just the steady accumulation of little facts, one building upon the other. It is a steady accumulation of little facts punctuated periodically by major upheavals in the whole scientific view. Minor revolutions in science, such as the acceptance of continental drift, happen all the time. Major revolutions, such as Einstein's theory of relativity, happen less frequently. Change, from minor revisions to major revolution, is the very essence of scientific progress, and change never comes easily. From the discovery of anomalies—pieces that do not fit into the prevailing scientific picture—to the general acceptance of a revised picture that makes sense of the anomalies, is often a long and difficult road. The prevailing scientific view will not give in easily to a challenger, and the battle is waged not only with data and reasoned debate but also with ridicule and scorn, censorship and denial, and just about every other rhetorical and political tactic.

Parapsychology may or may not contain the seeds for a major upheaval in science. Only time will tell. Many a scientific anomaly has come and gone without provoking a scientific revolution. What is clear is that the controversy surrounding parapsychology bears the hallmarks of at least a potential revolution. Sociologists of science see this both in the activities and strategies of those who believe the claims of parapsychology should be rejected and in parapsychologists' efforts to win the approval of orthodox science. Frustrating as this struggle may be to those who champion the unpopular cause, we must accept that this is part of the give-and-take of normal science, the winnowing of the wheat from the chaff of human knowledge.

The pivotal point about which the entire parapsychological controversy turns is whether or not "normal explanations," which are compatible with the existing worldview, have really been excluded for any given parapsychological claim or experimental result. Could the subjects in researcher X's experiment in fact have obtained the information through some normal means? Did subject Y have an opportunity to cheat in such-and-such an experiment? This is where scientific control becomes so important. But there is another, equally important but often unacknowledged, factor: a person's *a priori* concept of just how *improbable* the phenomena are. If a person's *a priori* conviction is that psi phenomena cannot possibly exist, then any "normal" explanation, no matter how bizarre and convoluted it might have to be, will be preferable to an explanation that invokes psi phenomena.

Are psi phenomena really "impossible" according to contemporary science? As Robert Jahn's experience with the Nobel laureates revealed, the answer will depend upon whom you ask. Certainly there has been a tradition both in philosophy and in science that would make psi phenomena "impossible." This is the tradition (or philosophy) of *materialism*, which holds that *all* phenomena, whether they are chemical reactions or mental events such as memories, can ultimately be reduced to discrete, analyzable bits of matter and observable interactions between such particles. From this perspective the idea that information can be transferred from one person to another, or from some object to a person without a material transmission medium, or that action can take place at a distance without material connecting the cause and the effect, is purely and simply *impossible*.

Fortunately the march of scientific progress is usually only temporarily slowed down by people saying "impossible." For a long time meteorites were declared "impossible." The idea that continents could drift around on the surface of the earth was ridiculed for decades. The history of science is full of other "impossibilities" that have become ordinary parts of everyday life. A number of leading physicists, acknowledged giants of the field, such as Henry Margenau, David Bohm, and O. Costa de Beauregard, have repeatedly claimed that there is nothing in quantum physics that forbids psi phenomena. De Beauregard maintains that certain axioms of quantum physics virtually *demand* that psi phenomena exist.[6]

Nobel laureate Brian Josephson, a strong supporter of parapsychology, has stated that some of the most convincing evidence he has seen for the existence of psi phenomena comes not from the diligent work of the parapsychologists but from experiments in quantum physics.[7]

So, science does not speak with one voice on the matter of parapsychology. Such is life on the frontiers of knowledge. All we can say now is that the jury is still out.

From a scientific point of view, what we are calling psi phenomena can be explained in one of two ways. Either they can be attributed to such constructs as ESP, PK, and so forth, explanations that are paranormal *for the present* but will become normal if they are brought within the general scientific worldview, or they can be attributed to ordinary, normal factors, unrecognized by the investigators but perfectly explicable by today's science.

Parapsychologists, obviously, are betting on the first explanation, skeptics on the second. Actually *skeptic* is not the best word to describe those who reject the possibility of psi phenomena. A true skeptic is inclined to question easy answers from whatever point of view. I prefer to use an expression advocated by my colleague John Palmer, who recommends that people preferring the second type of explanation be called *conventional theorists*, that is, those who try to explain apparent psi phenomena in terms of conventional scientific knowledge.[8]

Conventional explanations of psi phenomena are as varied as the imagination can devise, but they basically fall into two classes: incompetence and fraud. The conventional theorist will maintain that if one carefully examines any given parapsychological experiment, one will find methodological flaws and lapses in controls that could permit the subject or subjects to accomplish the task through perfectly normal means. The subject may be as unaware as the experimenter that he is using ordinary sensory information. Furthermore this claim can apply as easily to spontaneous-case investigations as it does to laboratory experimentation, and even if there is no obvious evidence of incompetence in the investigation, there is always the possibility of fraud.

The objections of conventional theorists are not without merit. Certainly there have been parapsychological experiments that, after being reported and generally accepted, are later found to have weaknesses. For example, in one type of experiment subjects were asked

to judge which art print out of a set of five was being viewed by an agent elsewhere. The agent would have spent some time trying to communicate one of those pictures, usually by holding it and looking at it. In a few early experiments the experimenters had only one set of pictures, so the same set that the agent used was later used by the subject. Might not the subject have noticed that one picture had been handled recently? Whether or not the subjects actually did make use of "handling cues" is not known, but the fact that they *could* have undermines our confidence that all sensory information had been excluded.

Errors in statistical analyses of experimental results may lead an experimenter to conclude that chance had been eliminated as an explanation when in fact it had not. Not surprisingly most slipups in experimental methodology or statistics are caught by fellow parapsychologists. They, more than anyone else, feel the obligation to keep their experiments as near to perfect as possible.

Fraud, too, is a problem from time to time. In the days of psychical research quite a few mediums were found to be faking psychic effects, and even in the laboratory a few subjects have been caught cheating. Even worse, on one occasion a parapsychologist was caught cheating by his colleagues, and in at least two other cases there is strong circumstantial evidence that the experimenter faked parapsychological data. Worth noting is that in all of these cases it was other parapsychologists who brought the evidence forward. While fraud by experimenters is utterly reprehensible, it is reassuring to me that parapsychologists are doing a pretty good job at least of policing themselves. Recent media coverage of fraud in science suggests that parapsychologists are well ahead of their colleagues in other branches of science in rooting out fraud.

Hundreds and hundreds of experiments in parapsychology have provided good evidence of psi phenomena. Are they all fatally flawed or the result of fraud? That is quite a sweeping indictment, but some critics would answer, "Probably so." Their reasoning is that even in experiments where they cannot point to specific flaws, they are quite sure they are there—it just might take a sharper eye to find them.

Accusations of fraud are even more sinister than accusations of flawed methodology. Critics frequently see no problem in alleging fraud without even a shred of evidence. One famous example of this took place in 1955, when Dr. G. R. Price, then a research associate

in the Department of Medicine at the University of Minnesota, published an article in the prestigious journal *Science*. Price argued that ESP was scientifically impossible and that therefore J. B. Rhine and British investigator S. G. Soal must be fraudulent experimenters. Appearing as it did in such an authoritative journal, this article was taken by many otherwise uncommitted scientists as the final dismissal of ESP research. It was not until 1972 that Price admitted he was mistaken and withdrew some of his accusations. Later, he further admitted that he had written the original article in *Science* without even a slight attempt to find evidence of fraud and in fact had been under the mistaken assumption that Rhine was trying to promote some sort of religious belief.[9]

The Rise of Fundamentalism

Parapsychologists have nothing to fear from responsible criticism. Unfortunately the past decade has seen the growth of a form of scientific fundamentalism that threatens to undermine the productive, if not always amicable, relationship parapsychology has had with its critics. This movement, characterized by its unquestioning acceptance of the authority of the existing scientific worldview and its vehement condemnation of any deviations from orthodoxy, can trace its origins back to a magazine called *The Humanist*, a philosophical journal known primarily for its attacks on religion. The editor, Dr. Paul Kurtz, a philosopher at the State University of New York at Buffalo, had mounted several editorial campaigns against "pseudo-sciences," most notably astrology. In 1976 Kurtz, along with Dr. Marcello Truzzi, a sociologist with a long-standing academic research interest in occult beliefs and practices, and several other scientists and academics formed the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP). The goals for CSICOP were indeed laudable, "the critical investigation of paranormal and fringe-science claims from a responsible, scientific point of view and [the dissemination of] factual information about the results of such inquiries to the scientific community and the public."[10] No reasonable scientist could possibly take issue with goals such as these, and CSICOP was quickly able to attract distinguished members from a broad spectrum of scientific and academic disciplines.

It quickly became clear that the plans Kurtz had for CSICOP were rather different from the professed goals of the organization. After only one year Truzzi, who was serving as cochairman with Kurtz, resigned. Truzzi felt uncomfortable with CSICOP's excessive negative zeal and its crusading, inquisitional approach to anomalies, which was rapidly replacing the scholarly, scientific approach that Truzzi had envisioned. Several other noted academics also resigned for similar reasons. Truzzi had been editor of *The Zetetic*, a journal that was to be CSICOP's organ for scholarly debate, but on his resignation Kurtz replaced him with Kendrick Frazier, who headed CSICOP's new journal, *Skeptical Inquirer*. Under Frazier's editorship the *SI* abandoned all pretensions to scholarship and has become a propagandistic organ that trades chiefly on ridicule, titillating innuendo, and a "fellow traveler" camaraderie among like-minded individuals who are already convinced that the study of a wide range of anomalies has nothing to offer science.* Backed by an aggressive marketing campaign, *SI* has achieved wide circulation in recent years.

Two examples will illustrate how CSICOP members "investigate" parapsychological claims. One of parapsychology's better-known academic critics is the British psychologist Prof. C.E.M. Hansel. Although his critical attacks on parapsychology predate the formation of CSICOP, he has been one of CSICOP's fellows from the beginning, and CSICOP's publishing house, Prometheus Press, issued an update of Hansel's 1966 examination of parapsychology under the title *ESP and Parapsychology: A Critical Reevaluation*. Hansel makes no bones about his basic assumptions: ESP is impossible; therefore investigating an experiment simply means finding out how the trick was done or where the loophole occurred. His strategy is to devise "rational reconstructions" of how a given experiment took place and then suggest how the fraud was perpetrated.

Typical of Hansel's approach was his examination of the famous Pearce-Pratt series of ESP experiments conducted at Duke Univer-

*In a 1989 issue of the *Journal of Scientific Exploration* (vol. 3, no. 1) Prof. Henry H. Bauer, of the Virginia Polytechnic Institute and State University, reported an exchange of letters with Frazier in which *SI*'s editor argued that "the magazine's purpose is not to consider what the best evidence for anomalous claims might be but to argue against them" (Bauer's words).

sity in the late thirties, discussed in the preceding chapter. Before Hansel's visit to Duke University some twenty years *after* the Pearce-Pratt experiments there had never been even the slightest suggestion of fraud in this classically designed card-guessing experiment. Hansel looked over the layout of the two locations that had been used and subsequently claimed that he had found the manner in which Pearce, the subject, had probably cheated. Pearce had obviously left his assigned post in another building, returned to the building where Pratt, the experimenter, was recording the ESP cards by a timed schedule at a desk, and either peeked over *two* transoms or gained access to the attic and peeked through a trapdoor in the ceiling. Near the end of the session Pearce would have hustled back to his assigned station and turned in his record sheets in the expected manner. (Of course Pearce would have had to repeat this performance over thirty times without having been detected, and done this even though Rhine himself was present for many sessions.) It did not concern Hansel that there was never a shred of evidence that any part of this activity ever took place, nor did it bother him that the layout of the rooms upon which he based his scenario had been substantially altered since the days of the experiment. Even the discovery of blueprints of the original layout that demonstrated that much of his scenario was simply impossible did not deter Hansel from standing by his accusations in the reissued version of his book.[11] From Hansel's point of view, evidence is not needed. It is sufficient to demonstrate the merest possibility of fraud to allow one to dismiss an experiment altogether. However, other staunch critics of parapsychology, such as University of Oregon psychologist Dr. Ray Hyman, have said that Hansel's hypothetical fraud approach is neither scientific nor helpful.[12]

Probably one of CSICOP's best-known advocates is the magician James Randi. Born in Canada as Randall James Zwinge, Randi achieved national exposure through his efforts to debunk the self-proclaimed Israeli psychic Uri Geller. Randi has always been harshly critical of parapsychologists who investigate alleged psychokinetic effects such as object movements or metal bending because he claims they consistently overlook the tricks of his trade—conjuring. Actually parapsychologists have a long history of collaborating with conjurors and mentalists, but Randi's criticisms did serve as a salutary reminder to the latest generation of researchers. In 1979 and 1980,

under the code name Project Alpha, Randi arranged for two young magicians to pose as psychics and hoax the researchers at the recently established McDonnell Laboratory for Psychical Research at Washington University in St. Louis, Missouri. Several times over the next eighteen months the two young men were flown in for research sessions at the laboratory. All of this work was classed as exploratory and done under relatively relaxed conditions. At the 1981 convention of the Parapsychological Association, the McDonnell Lab researchers presented a videotape of some of these exploratory sessions that they felt captured some possibly genuine phenomena. The researchers made it clear that they were making no claims and that they were really seeking the advice of colleagues on how to proceed. Nevertheless the videotape was practically hooted down by their parapsychological colleagues, who saw numerous weak spots in the setup. Chastened by that experience, the researchers returned to St. Louis and restructured their experiments according to advice from Randi (who had been offering it all along) and of other parapsychologists. Under the more rigorous conditions, the two young men were able to produce no seemingly psychic effects, and the researchers reported this lack of results at the following year's convention. Subsequently they discontinued work with the two men.

That might have been the end of the affair, not unlike others that have wasted the time of parapsychologists. When it became obvious to Randi that no further work was going to be done with his "plants," he called a press conference (with the sponsorship of *Discover* magazine) where he announced to the world that he had conducted a "sociological experiment" to test whether parapsychologists were capable of detecting fraud. Although privately Randi had told the McDonnell researchers that they had "passed the test" and that his two magicians were unable to cheat after the more rigorous conditions were imposed, at the press conference and in all the following publicity Randi lambasted and ridiculed the earlier exploratory work. It went largely unnoticed that the McDonnell researchers had *never* made any formal claims that the two alleged psychics were producing psi phenomena.[13]

Afterward some science commentators, notably William Broad of *The New York Times*, observed that had Randi been a psychologist conducting that experiment, his hoax would probably have landed

him in trouble with the ethics committee of the American Psychological Association.[14] At the 1983 Parapsychological Association convention, Project Alpha was roundly condemned by some of Randi's own colleagues in the magic profession, who had gathered there to discuss how magicians can collaborate with parapsychologists. Despite the ethical backlash, Project Alpha has been warmly embraced by CSICOP members as one of their most audacious exposés.*

Of course the real function of CSICOP is as an advocacy group to lobby for a particular point of view. Certainly the organization is effective in this way, and few would deny that there is often a need to counter the public's credulity. But somewhere along the line CSICOP abandoned the *objectively* critical spirit of science and adopted a "stop at any cost" approach toward any topic that it deems off-limits to science. Fortunately the scientific controversy over parapsychology will not be resolved at press conferences and in the media. Only in the appropriate professional forums can the give-and-take of science go on. Science is a marvelously self-correcting system. If there are errors or bad science, this will be

*One might wonder if CSICOP is capable of conducting any "scientific investigations," as its name implies. The answer appears to be a resounding *no*. CSICOP has conducted only one organized investigation of what could be called a paranormal claim—observations by the French chronobiologists Michel and Françoise Gauquelin that the birth times of sports champions bear an unusual, but quite regular, relationship to the position of the planet Mars in the heavens. In 1977 CSICOP inherited a controversy about this quasi-astrological claim from Kurtz's *The Humanist*, and Kurtz organized a committee of himself and two other members with astronomical and statistical expertise to conduct certain control tests and a replication of the Gauquelins' work. This resulted in several articles in the *Skeptical Inquirer* claiming there was no such effect. Shortly afterward the project's statistician, Dennis Rawlins (who was a member of CSICOP's executive committee), published a scathing denunciation of CSICOP's handling of the investigation. Rawlins claimed that Kurtz and his associates had manipulated the data and had demonstrated gross incompetence. Then they engineered a massive cover-up of the whole thing when he had tried to bring this to the attention of other CSICOP fellows. The furor that ensued resulted in additional defections by other prominent members of CSICOP as well as several subsequent exposés of the investigation by additional former CSICOP fellows. Since that fiasco CSICOP has undertaken no further scientific investigations. (For a recent history of CSICOP, including the Gauquelin affair, see "Skeptics and the New Age" in J. Gordon Melton, Jerome Clark, and Aidan A. Kelly, *New Age Encyclopedia*. Detroit: Gail Reasearch, 1990, pp. 417–427.)

weeded out in due course. Science does not need vigilantes to guard the gates.

Parapsychologists ask for nothing more than to have their experiments, their methods, and their data examined without distortions or misrepresentations, without prejudice or predisposition. The work that we shall examine in part II represents the broadest representation of recent parapsychological research that space will permit. For each area we shall look at the evidence and examine whatever reasonable criticisms should be taken into account. In some of the areas we will find that the evidence is inconclusive, but that does not mean it should be altogether dismissed or rejected. In other areas the evidence for psi phenomena is very strong, and scientists are beginning to feel that some real progress is being made. As you make your own evaluations of the data, resist the temptation to decide whether something is "real" or "not real"; the real question is whether the scientific quest is worthwhile.