

EXPERIMENTAL PARAPSYCHOLOGY AS A  
REJECTED SCIENCE

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*Reprinted from*

THE SOCIOLOGICAL REVIEW MONOGRAPH No. 27:

On the Margins of Science: The Social Construction of Rejected Knowledge

University of Keele

March, 1979

Monograph Editor: Roy Wallis

## EXPERIMENTAL PARAPSYCHOLOGY AS A REJECTED SCIENCE

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A FUNDAMENTAL tenet of Popperian philosophy of science is that ideas should not be judged scientific or unscientific, true or false, on the basis of their origins.<sup>1</sup> Truths may come from sources that are quite unreliable, and false theories may come from the most trustworthy persons applying the most rigorous methods. Rather, 'scientific' ideas are those susceptible to empirical tests. Ideas should be accepted or rejected on the basis of their ability to withstand rigorous tests better or worse than their competitors.

This point of view surely has some value as a canon of scientific practice, and it may even describe how ideas get accepted or rejected as scientific knowledge in the long run. But in the short run, the sources of ideas surely do have effects on their reception by scientific and other communities. Previous studies of the reception of innovations in science have tended to obscure this fact by focusing on innovations proposed within the scientific community. Stephen Cole,<sup>2</sup> for example, found little relationship between physicists' rank in the stratification system and the speed with which their work was recognised. But innovative ideas about the empirical world that are proposed, elaborated and promoted by non-scientists may meet a quite different fate.

One such idea is that organisms can acquire information and affect their environments directly, without the usual intervention of the senses or the muscles. The experimental study of these extrasensory-motor interactions, known as parapsychology, has lately achieved a status approaching that of a legitimate scientific specialism. At the least, it has become a highly professionalised activity performed by men and women with scientific educations, most of whom occupy positions in academic science departments.

In this chapter, I shall examine how this professionalisation came about, paying particular attention to the social conflicts that accompanied it. My sources include both primary and secondary literature from the history of parapsychology, and results from a mail survey of U.S. members of the Parapsychological Association—the only pro-

fessional organisation for experimental parapsychologists. Conducted in the spring of 1972, the survey produced 120 usable returns for a response rate of 90 percent.

*The beginning of academic interest*

Although experiences and events interpreted as paranormal or psychic have been reported with great frequency throughout recorded history, the immediate progenitor of parapsychology was the movement known as Spiritualism—the belief that the dead communicate with the living, usually through the intervention of mediums. Sweeping through the U.S. and Great Britain in the second half of the 19th century, interest in Spiritualism was largely concentrated among the lower-middle and working classes. But there was also considerable interest among social elites, for whom it became an exciting leisure activity.<sup>3</sup>

Eventually the movement began to attract serious attention in academia. In 1882 scholars from a variety of fields met at Cambridge to found the Society for Psychical Research (SPR) with the expressed purpose of 'making an organized and systematic attempt to investigate the large group of phenomena designated by such terms as mesmeric, psychical and Spiritualistic'.<sup>4</sup> By 1900 the SPR had nearly 1000 members including many persons of substantial wealth and prestige: former prime ministers, nobility, fellows of the Royal Society, bishops, etc. A similar organisation, the American Society for Psychical Research (ASPR), was founded in 1884 but never quite achieved the reputation of its British counterpart.

The SPR sponsored most of the empirical research into psychic phenomena prior to 1920. Although the vast majority of SPR members were only dabblers and dilettantes, an enormous quantity of sustained, serious investigation was carried out by a handful of men led by Henry Sidgwick and including F. W. H. Myers, Edmund Gurney and Frank Podmore. These men dedicated their lives to psychical research, and reinforced that dedication through close companionship and collaborative investigations.<sup>5</sup> None of them had much training in the natural sciences. Some held academic positions in the humanities, and most had sufficient independent wealth to provide a comfortable living.

Their research generally consisted of careful field investigations of reported phenomena, usually the performances of mediums. Since

### *Experimental Parapsychology as a Rejected Science*

they often accepted conditions laid down by the mediums themselves, the scientific value of their work was somewhat limited. Nevertheless, the fraudulent tactics of scores of mediums were exposed by this group. Gradually a consensus emerged that some mediumistic feats were legitimate, but that they were accomplished not through the intervention of spirits but by telepathic and psychokinetic powers of the mediums.

There was also some scattered experimental investigation during this period including work done by such notables as Oliver Lodge and William Crookes, two outstanding physicists of the era, and Claude Richet, a Nobelist in physiology. In contrast to the Sidgwick group, however, the experimentalists did not really constitute a social network. For the most part, they failed to build upon the work done by others, and they rarely pursued their investigations beyond a few experiments.

In short, psychical research during the late 19th and early 20th centuries was basically an amateur activity. Even those who spent most of their time investigating mediums pursued this work not as a professional career, but as a personal mission. Moreover, in neither the Sidgwick group nor among the experimentalists do we find 'studentship' or apprenticeship in any meaningful sense of the words. Psychic investigators developed their knowledge, skill and lore independently or in collaboration with peers. Although many investigators had university affiliations, psychic phenomena were not yet regarded by university authorities as an appropriate subject to be taught or studied.

#### *The professionalisation of psychical research*

A revolution in psychical research began in 1934 with the publication of *Extra-Sensory Perception* by J. B. Rhine, a professor of psychology at Duke University. Thoroughly familiar with previous research on the paranormal, Rhine came to the field with a degree in biology and an intense commitment to the experimental method. He began his work in 1930 by conducting card guessing trials with several Duke students who seemed to possess substantial clairvoyant ability. Over the next four years, Rhine and his collaborators performed tens of thousands of guessing trials under widely varying conditions, with remarkable results.

These results were first made public in the 167-page monograph

whose title (coined by Rhine) has since become a part of everyday language. Although primarily addressed to a scientific audience (it contains 45 tables, 5 graphs, and extensive documentation) *ESP* soon created a popular sensation. Within a year, it began to get favourable reviews in national magazines and newspapers. In 1937 Rhine published the more popularly oriented *New Frontiers of the Mind* which became a Book-of-the-Month Club selection. Media interest reached a peak in late 1937 and 1938 when most magazines and newspapers ran articles on ESP.<sup>6</sup>

Not surprisingly, there was also a highly critical response from the academic community, especially from psychologists. The dimensions of that rather vehement reaction are well documented in this volume by Collins and Pinch. Later I shall consider some of the causes and effects of the orthodox resistance, but first let us continue with Rhine's work and the changes he wrought on parapsychology (Rhine's new term for psychical research, borrowed from the German).

There is a growing consensus that *Extra-Sensory Perception* constituted a paradigm for parapsychological research in the Kuhnian sense (senses?) of the term. Although Rhine's work contained many innovative elements, McVaugh and Mauskopf<sup>7</sup> argue that most of these innovations had precedents in earlier experimental psychical research. In their view, Rhine's contribution was the synthesis of these innovations in a highly successful research project. Some of the more important elements of *ESP* were

- (1) the experimental distinction between clairvoyance<sup>8</sup> and telepathy and an emphasis on the percipient as the active agent;
- (2) the use of statistical methods to evaluate the probability that results could or could not be accounted for by chance;
- (3) the introduction of standard procedures for such operations as the presentation of cards, the elimination of sensory cues, the recording of results, etc., as well as a standard terminology for both procedures and the phenomena under study.

Beyond these innovations, two aspects of Rhine's work were especially influential in establishing parapsychology as a professional activity. First, there was his unprecedented success in finding strong evidence for ESP ability among large numbers of ordinary college students. No previous experimental work had even approached this level of above-chance scoring,<sup>8a</sup> and most researchers believed that

### *Experimental Parapsychology as a Rejected Science*

psychic ability was an extremely rare occurrence. This enormous success gave later researchers both a model to emulate and the confidence that good results could be obtained. Second, Rhine did not stop with experiments designed merely to demonstrate the existence of psi,<sup>9</sup> but began to study physical, physiological, and psychological conditions which either facilitated or hindered paranormal performance. Although his initial findings on correlates of ESP were based on very limited evidence, they suggested a multitude of further experiments. And that is where their true significance lay. What Rhine had presented, in essence, was a blueprint for a long-term and highly diversified programme of investigation, the sort of programme that could occupy an entire career, or indeed many careers. He had thus laid the groundwork for a community of researchers dedicated solely to sustained, cumulative investigation of paranormal phenomena.

Rhine's contributions to the professionalisation of parapsychology were not merely intellectual. His position at Duke where parapsychological research had the encouragement of the psychology department chairman, William McDougall, provided him with a unique opportunity to continue his investigations with assistance from doctoral students in psychology. Between 1935 and 1947, a total of 21 students worked in his semi-autonomous Duke Parapsychology Laboratory<sup>10</sup> and seven of these co-authored papers with him. A few students wrote dissertations on parapsychological topics and later continued their work as full-time research associates in his laboratory.

Meanwhile, a number of academics throughout the U.S. were sufficiently impressed with Rhine's work to try their hand at it. To report this growing body of research, Rhine founded the *Journal of Parapsychology* in 1938. Most of the major developments continued to come out of Rhine's laboratory. During the '30s and '40s, he and his co-workers claimed to have demonstrated the existence of several new psychic abilities including psychokinesis, the direct influence of the mind on material objects, and precognition, the ability to predict randomly generated events in the future.

#### *Experimental parapsychology today*

Rhine and his co-workers dominated the emerging field until the late 1940s. Around that time, however, there emerged several professional parapsychological researchers who worked in the Rhine paradigm but who were completely independent of the Duke Para-

psychology Laboratory. Among them were R.A. McConnell at the University of Pittsburgh, Gertrude Schmeidler at City University of New York, and Ian Stevenson at the University of Virginia. This trend continued so that by 1975 'reputable' parapsychological research was being conducted at many locations across the U.S.

In spite of growing geographical and institutional dispersion, the field retains a high degree of intellectual and social cohesion. Many parapsychological researchers work in formally organised research institutes such as the Psychical Research Institute (Durham, N.C.), the Institute for Parapsychology (Durham, N.C.), the American Society for Psychical Research (New York), the Maimonides Dream Laboratory (New York), and the Division of Parapsychology (University of Virginia). The research centers have a pattern of 'interlocking directorates' whereby members of one center sit on the steering committees or boards of directors of other centers.<sup>11</sup> Most of the major research centers also have at least one staff member who received training at Rhine's laboratory.

The key integrating institution is the Parapsychological Association, founded at Durham, N.C., in 1957 to 'advance parapsychology as a science, to disseminate knowledge of the field, and to integrate the findings with those of other branches of science'.<sup>11a</sup> Although membership in the PA is somewhat restricted (a fact to be discussed later), a survey of the literature indicates that the organisation includes almost all the publishing researchers in the field. Only two journals in the U.S. regularly report experimental parapsychological research, the *Journal of Parapsychology* (JP) and the *Journal of the American Society for Psychical Research* (JASPR). Of 205 articles published in a recent ten year period in these two journals, well over 90 percent had at least one PA member as an author. Of 84 American authors listed in JP articles, 60 were PA members (most of the remaining 24 appeared to be students). The survey results I shall report apply only to U.S. and Canadian members of the PA.

PA members have fairly high rates of participation in the organisation, with 53 per cent saying they attended at least two of the five previous annual conventions. Respondents were also asked how often they had 'face to face or telephone contact with other parapsychologists in a typical month.' Forty-eight per cent said they were in contact with other parapsychologists at least once a week, and 17 per cent reported daily contact.

### *Experimental Parapsychology as a Rejected Science*

PA members are not just dabblers in the field but generally have a high degree of professional commitment. Fifty-one per cent say that parapsychology is their major area of interest, and 78 per cent have done parapsychological research in the previous ten years. They also published an average of 2.9 journal articles reporting original parapsychological research in the preceding five years. Educational standards among parapsychologists are fairly high. Almost 60 per cent of PA members hold a doctorate, while another 27 per cent have a master's degree. Seventy per cent of the respondents thought that one ought to have at least a master's degree before undertaking 'serious parapsychological research on a continuing basis.' However, 70 per cent also agreed that special training beyond that found in regular academic programmes is 'essential for successful, high quality research in parapsychology.'

Although PA members are employed in a wide variety of settings, 49 per cent work in colleges or universities. Another 17 per cent work in private research institutes. Those in academia are distributed among departments as follows: 30 per cent psychology, 19 per cent psychiatry, 18 per cent physical sciences, 12 per cent biological sciences, 21 per cent other.

In short, professional parapsychologists have many characteristics in common with research workers in most scientific specialisms. A careful reading of the two experimental journals will indicate that parapsychologists also practice a highly technical, rigorous, and quantitative methodology. In fact, if one knew nothing of parapsychological terminology, it would be difficult to distinguish the *Journal of Parapsychology* from, say, the *Journal of Experimental Psychology*.

#### *The quest for legitimacy*

It would appear that Rhine and his followers have been remarkably successful in their aim of building a professional scientific specialism devoted to the study of paranormal phenomena. They have recruited a moderately large number of people with doctorates who are devoting their careers to experimental parapsychology. Many hold academic positions. They have formed themselves into a professional association and seem to be able to maintain rigorous standards for published research. They publish two journals in the U.S. Moreover they have been able to maintain this pattern for several decades, and have been successful in transmitting their accumulated knowledge and skill from



one intellectual generation to the next. By no means dependent on a single organisation, they now have institutional bases in a variety of locations and settings.

I would be remiss if I failed to note that there is also a much larger number of persons who call themselves parapsychologists but who do not participate in this group to any significant extent. These include individuals who claim psychic abilities and perform paranormal feats; those who claim to be able to train others in extrasensory performance for a fee; those who have formed quasi-religious groups based around psychic phenomena; those who write exclusively for popularly oriented parapsychological books and periodicals; and others without advanced degrees who carry on parapsychological investigations of one sort or another but who do not publish their results in the experimental journals. As I will argue shortly, the existence of this 'lay parapsychology' has an enormous impact on the academic, experimental side of the field. But this hardly negates the existence of a truly professional, scientific parapsychology which has somehow managed to distinguish itself from more popular manifestations of belief in psychic phenomena.

What is particularly surprising about the achievement of parapsychologists is that they have been able to construct and maintain these professional institutions in the face of intense resistance from mainstream scientists. Although some would argue that resistance has been declining in recent years, there can be little doubt that parapsychology had few friends in the scientific community from the time Rhine's work was first published until at least the 1960s. While the published criticism of parapsychological research is well known,<sup>12</sup> the more insidious forms of resistance are less-easily documented, and to an unfortunate degree, we must rely on the claims of parapsychologists that they have often been the victims of unfair practices. Virtually no parapsychological research appeared in orthodox journals in the 1930s and 1940s, and Rhine<sup>13</sup> reports that this was not due to a lack of submissions. A few such publications have appeared in the last 10 years, but most either reported negative results or came out under highly unusual or questionable circumstances (see the chapter by Collins and Pinch). In terms of hiring and promotions, the record is even less clear. One of Rhine's students, J. G. Pratt, claims that he was repeatedly offered a regular academic position at Duke if only he would give up his work in parapsychology. He

### *Experimental Parapsychology as a Rejected Science*

chose instead to stay on as a research associate in Rhine's laboratory.<sup>14</sup> Surely, other such cases have occurred, but one would hardly expect to find public records of their occurrence. I asked members of the PA if they had experienced discrimination because of their interest in parapsychology and 53 said they had. Of 183 instances of discrimination claimed, 25 per cent had to do with publications, 26 per cent occurred in the area of hiring and promotions, and 29 per cent centred on funding or facilities. Respondents were more likely to have experienced discrimination if they were heavily involved in the field and had an academic affiliation.<sup>15</sup>

The belief that resistance to parapsychology has declined in recent years is based largely on the admission of the PA as a member organisation of AAAS, the awarding of a few federal grants for parapsychological research,<sup>16</sup> and a survey in the *New Scientist* (25 January 1973) which showed somewhat greater belief in the existence of psychic phenomena and greater acceptance of the legitimacy of parapsychological research. While it is probably the case that acceptance of psi has increased somewhat in recent years, this can easily be overstated. The federal grants only supported a tiny fraction of parapsychological research, and there is no evidence that they have increased in number or amount in the last five years. It is still unheard of for a parapsychologist to publish positive results in a major journal. The results in the *New Scientist*, it should be noted, were not based on a representative sample. Consider, moreover, the following statement which appeared in the same year the PA was admitted to the AAAS:

'There used to be spiritualism, there continues to be extrasensory perception, psychokinesis and a host of others . . . Where corruption of children's minds is at stake, I do not believe in freedom of the press or freedom of speech. In my view, publishers who publish or teachers who teach any of the pseudo-sciences as established truth should, on being found guilty, be publicly horsewhipped, and forever banned from further activity in these usually honorable professions.'

This was from E. U. Condon<sup>17</sup> past president of the AAAS and the American Physical Society, and former director of the U.S. Bureau of Standards.

In spite of continuing hostility on the part of many orthodox scientists, parapsychologists have been equally unrelenting in their efforts to break down resistance and persuade scientists that their work is legitimate. Rhine's first publication, *ESP*, set the pattern for this effort by being primarily oriented towards a scientific audience

rather than to laymen. The research that followed in the 1930s and 1940s was almost a dialogue with their critics. Every time a possible inadequacy in the experimental design was pointed out, new experiments would be conducted 'to pile safeguard upon safeguard in the effort to stifle all remaining doubt as to the adequacy of the conditions of the ESP experiments'.<sup>18</sup> Such safeguards included duplicate record sheets to avoid recording errors, locked boxes for depositing record sheets, and photographic evidence of the results. Parapsychologists even seemed to go out of their way to solicit criticism from responsible scientists. In 1938, for example, several critical psychologists were invited to serve on a board of review for the *Journal of Parapsychology*, and for two and one-half years their comments were published alongside the experimental reports.

These efforts have often been frustrating to parapsychologists because of the apparent lack of progress in gaining legitimacy, and because the extreme controls required to eliminate all possible sensory cues (even those available through deceit) have made parapsychological research more expensive, more time consuming, and to some degree, less successful. Many parapsychologists argue, in fact, that the high degree of control demanded by critics make the experiments so dull for both researcher and subject that it adversely effects paranormal performance. Psychic ability, they claim, is much more likely to be manifest under highly dramatic and emotional circumstances, which can hardly be produced in experimental situations.

Given these perceived limitations of the experimental method and the extremely slow progress in convincing orthodox scientists, one must ask why parapsychologists have continued to toe the scientific line for some forty years. Aside from ideological commitments to a scientific approach, one explanation is that the potential benefits to parapsychologists of *any* lessening of opposition are well worth the cost. The reason is simply that orthodox scientists control most of the things that are good for the specialism as a whole and for individuals in pursuit of a career. In order for a specialist group to survive and grow, at least three things seem necessary: (1) *Resources*. Specialism members must have regular sources of income that allow them sufficient time for independent research. Furthermore, in empirical disciplines they must have 'irregular' funds to cover the costs of research. (2) *Recruitment*. To keep the specialism from dying out, there must be access to advanced students with high interest and

### *Experimental Parapsychology as a Rejected Science*

intellectual promise.<sup>19</sup> (3) *Communication*. There must be channels for regular and relatively unrestricted communication among specialism members.

Parapsychologists have been able to manage their own research communication through the two journals, *JP* and *JASPR*. But in the U.S. today, professorships in graduate departments of universities are the usual source of regular income, time for research, and graduate students. Thus the availability of such positions, controlled by scientific elites, is critical for development of the specialism. Most grants for research come from public agencies which are also controlled by disciplinary elites. To those who merely want to study psychic phenomena as a hobby, these things are not terribly important. But to those who want a research career in parapsychology, there is clearly an enormous motivation to do what is necessary to attain these ends.

As we have noted repeatedly, however, the successes have been few and far between. Although half the PA members hold academic positions, only a handful of these are in major graduate departments. As might be expected, these parapsychologists do not supervise many graduate students studying parapsychology. Only 24 of the 120 respondents reported that they had any graduate students under their supervision as advisor or major professor. Furthermore out of 121 students reported, only 39 were thought to have a significant interest in parapsychology. Assuming the usual rates of graduate student attrition, this number seems woefully insufficient to insure any long-term growth for the field.

Given parapsychologists' concerted efforts to win over orthodox scientists, why have they not been more successful? One frequently advanced explanation is that the phenomena are not replicable—individual experiments may be highly persuasive, but they cannot be repeated at will. While the discovery of an easily repeatable experiment might ultimately save parapsychology, the lack thereof surely does little to explain the intensity of those who oppose the field. It certainly hasn't stopped other fields (e.g. psychology) from being accepted as scientifically legitimate. No, the opposition seems to stem most from two closely related features of parapsychology: its threat to basic scientific assumptions and its origins in and continued association with the occult.

Psychic phenomena are, first of all, unexplainable by any current

scientific theory. Both parapsychologists and legitimate scientists seem to agree on that point. Although parapsychologists have proposed numerous imaginative theories, none has achieved even a modicum of consensus. Gertrude Schmeidler a parapsychologist, has suggested<sup>19a</sup> that theories of psychic phenomena fall into two classes: the incomprehensible and the unbelievable. Beyond its inexplicability, psi directly contradicts several deeply held assumptions and firmly established laws of physics. Parapsychological research suggests that psi is completely unrestricted by distance or any kind of physical shielding; the size of the material target has no effect; in the form of precognition, psi implies an effect preceding its cause in time.

To make matters worse, many parapsychologists, especially Rhine, seem to exult in the anomalous character of psi. As late as 1972, Rhine was claiming that:

'Even now, however, physics cannot be regarded as the logically inclusive term it so long has been assumed to be. It is no longer the basis of *all* natural science and of the *entire* system of reality in the universe. In other words, we can now say the universe is more than physical—and that this is an experimental, not merely a speculative conclusion.'<sup>20</sup>

Gertrude Schmeidler and R. R. McConnell<sup>21</sup> two parapsychologists who have never worked with Rhine, have concluded on the basis of their research that:

'ESP phenomena, such as telepathy and clairvoyance, are a type that has no place in the physical universe . . . We are forced to conclude that the picture of the universe which present-day physicists have roughed out for us will have to be modified once again.'

McConnell, it should be noted, holds a doctorate in physics. Other parapsychologists seem to be in substantial agreement. To the statement 'A satisfactory explanation of psi will probably require revolutionary changes in a number of disciplines, including physics, biology and psychology', fully 57 per cent of the PA members agreed strongly and another 28 per cent agree 'somewhat'. PA members were also asked why, in their judgment, other scientists had resisted parapsychological work. Sixty-seven per cent rated as very or extremely important, the statement that 'Parapsychology threatens the established mechanistic world view of scientists.' Only 5 per cent saw this as unimportant. Similarly, 58 per cent rated as very or extremely important the explanation that 'Parapsychology conflicts with current physical or biological theories.' In short, parapsychologists view themselves as revolutionaries who are persecuted for daring to question

### *Experimental Parapsychology as a Rejected Science*

the orthodox creed.

Why should parapsychologists go out of their way to emphasise their differences with mainstream science when it only hurts their efforts to obtain legitimacy? One plausible explanation is that this revolutionary ideology helps maintain internal esprit de corps in the face of an opposition that would resist them in any case. Indeed, Hagstrom<sup>22</sup> argues that emerging disciplines often make utopian claims as to the importance of their field, a point also made by Griffith and Mullins.<sup>23</sup> This makes particular sense in the light of parapsychologists' strong belief in the strength of their experimental evidence of psychical phenomena. Of seven reasons presented to them as possible explanations for the resistance of scientists to parapsychology, the one rated most important was 'Scientists are simply unfamiliar with the present evidence for psi.' Seventy-three per cent saw this as very or extremely important, and another 20 per cent rated it as somewhat important. If, as they believe, the evidence is so strong, it makes good sense to attract as much attention to it as possible.

#### *The appeal to laymen*

A second reason why parapsychologists should choose to put a radical interpretation on their work is the obvious appeal to a second audience: laymen. Of crucial importance to the development of parapsychology is the fact that, in the absence of support from the scientific community, there has been and continues to be a heavy reliance on monetary and other forms of support from interested laymen. Although Rhine received some initial support from the psychology department at Duke, from 1935 onward he had to raise his own funds.<sup>24</sup> And there was nowhere else to go but to wealthy laymen, most of whom were primarily interested in the prospect of a scientific demonstration of life after death.<sup>25</sup> Over the years, their contributions to parapsychology have been quite substantial. In 1968, Rhine's Foundation for Research on the Nature of Man controlled assets of about two million dollars.<sup>26</sup> In 1966, the American Society for Psychical Research reported stocks and bonds worth \$664,000 in addition to a five-story building in New York City.<sup>27</sup> The Parapsychology Foundation was reported to have disbursed more than a million dollars for research grants by 1968. Most of the contributors have preferred to remain anonymous, but a few are well known: Chester Carlson (deceased), inventor of xerography; Eileen Garrett (deceased), wife of a

New York publisher and founder of the Parapsychology Foundation; Frances Payne Bolton (deceased), former Republican representative from Ohio; W. Clement Stone, multimillionaire president of the Combined Insurance Company of America and a heavy contributor to Richard Nixon's presidential campaigns.

To the dismay of many parapsychologists, this money has often come with strings attached. For example, the endowed research professorship at the University of Virginia stipulates that 'the incumbent will devote at least fifty per cent of his time to research into the question of survival of the human personality after death'.<sup>28</sup> The Psychical Research Foundation, an offshoot of Rhine's laboratory, is by charter devoted exclusively to the question of post-mortem survival. Recently, a wealthy Arizona prospector left an estate of almost \$300,000 to an unspecified institution that would attempt to find scientific proof of the existence of the human soul. After a long court battle involving many claimants, the money was eventually awarded to the American Society for Psychical Research.<sup>29</sup>

Besides the money, parapsychologists have also relied on laymen as a base for recruitment. Cut off from the scientific journals and from significant numbers of graduate students, it has been difficult for parapsychologists to spread the word about their research to qualified students and researchers. For the most part, they have had to rely on the mass media as a means of attracting potential recruits. Rhine recognised<sup>30</sup> quite early the importance of the mass media in arousing interest among 'psychology students and instructors, men and women who would not have learned of the research through technical journals for many years, if at all.' He seems to have made good use of that fact. A typical pattern of recruitment, at least into the middle 1960s, was for students and researchers to contact Rhine's laboratory after reading popular accounts of his work. If they seemed to hold promise as parapsychological researchers, they were invited to the laboratory for training under a Visiting Research Fellowship programme for periods ranging from three to twelve months.<sup>31</sup> Many of these were mature researchers in other fields. Indeed, over 40 per cent of my respondents said they had decided to become involved in parapsychology after already completing their education and having entered another field.

Parapsychologists also talk frequently with laymen about their research. Seventy-four per cent of my sample report that they discuss

### *Experimental Parapsychology as a Rejected Science*

parapsychology with laymen other than their family at least once a week, compared with only 43 per cent who discuss parapsychology with other professionals (non-parapsychologists) once a week or oftener. Thirty-seven per cent say they 'frequently' address lay groups on the subject of parapsychology while another 37 per cent do so 'occasionally'. Those who express greater interest in parapsychology also interact more frequently with laymen.<sup>32</sup> A substantial part of this interaction is initiated by laymen. As early as 1937, Rhine complained of being deluged by letters, phone calls and visitors to Duke laboratory. As he put it, 'I had never dreamed there were so many brands and branches of the "occult sciences" as there are in practice in this country . . . Our laboratory must have come in contact with every one of them by this time.'

Important as this lay interest and support has been to parapsychology, it also poses a number of dangers. Chief among these is the hostile reaction it generates among orthodox scientists, the very group that parapsychologists have been trying to win over. As Hagstrom<sup>33</sup> has noted, scientific disputes tend to become much more intense whenever laymen get involved in the debate. Scientists view appeals to unqualified audiences as threats to their own autonomy in deciding questions of experimental evidence often leading them to take 'retaliatory action'. (A good example is the case of Velikovsky<sup>34</sup>). Pope and Pratt's<sup>35</sup> survey of early scientific criticism of parapsychology strongly suggests that the intensity of the attack was determined in large part by the degree of attention parapsychology was receiving in the mass media, a fact noted by Rhine himself:

'The aggrandizing sensationalism which went on undaunted was a factor in generating the studied coolness to the work with psi. Many said as much. Parapsychology now belonged to the entertainer, the popular writer, the comic strip artists, and even to Broadway.'<sup>36</sup>

The attacks did not start until after *ESP* had begun to capture public attention in 1935; they rose to a peak in 1938, one year after the peak in popular attention, then declined sharply along with mass media notices. Although the initial criticism was 'moderately well tempered', as publicity rose 'there was an increasing irritation conveyed by explicit statements of condemnation'.<sup>37</sup>

The usual tendency of scientists to resist the interference of laymen has been exacerbated in the case of parapsychology because of the peculiar interests of those laymen who inhabit its fringe: magic,



witches, spirits, astrology, mysticism, divination—all the bugaboos of modern empirical science. Indeed, the massive upsurge of interest in the occult over the last decade has become a matter of great concern to parapsychologists for the potential harm it may cause. In an address at a recent convention of the Parapsychological Association, R.A. McConnell warned of the threat posed by the 'occult defilers of scientific parapsychology'. He has argued that 'much of the reluctance of orthodox scientists to endorse extended support for ESP research arises from their failure (and that of the lay press) to make a clear distinction between popular and scientific belief'.<sup>38</sup> Most parapsychologists share that concern. PA respondents were asked to evaluate the statement:

'The increasing interest among laymen in various occult practices will probably be harmful to parapsychology. There should be an effort to disassociate the field from such movements'

Seventy-three per cent agreed with this statement, about half of these expressing strong agreement. Only six per cent strongly disagreed.

The reaction of orthodox scientists is not the only basis for this concern. Parapsychologists have come to depend on the support of wealthy laymen, but these same donors are now the target of numerous organisations and enterprises which have sprung up to promote various occult and spiritualistic aims. The increased competition can only hurt.

Most threatening of all is the possibility that experimental parapsychology will itself be corrupted, that it will be infiltrated by persons with low scientific standards and bizarre interests. There is some precedent for that fear. As early as 1947, there was an attempt to found a professional society of parapsychologists—The Society for Parapsychology—but it was soon overrun by followers of L. Ron Hubbard's dianetics movement (now known as scientology). When they captured many of the leadership positions, the group quickly disintegrated.<sup>39</sup>

While this was an extreme case, the maintenance of scientific standards in the midst of an enormous 'pseudo-scientific' fringe has been a continual problem for parapsychologists, and has led to concerted efforts to erect barriers around the field. Consider the membership requirements for the Parapsychological Association. To be a full voting member one must:

### *Experimental Parapsychology as a Rejected Science*

- (a) hold a doctorate or have a 'professional affiliation with a recognized academic institution or research organization;'
- (b) have 'prepared a paper on some aspect of parapsychology which in the opinion of the Council is of high professional calibre, and which has been published in a scientific journal or which merits such publication;'
- (c) be nominated by two members of the association and elected by a majority vote of the governing Council (consisting of four officers and three councilmen).

To be an associate member, one need only have a bachelor's degree and need not have written a paper, but must still be nominated and elected in the same manner.<sup>40</sup> Even this is not enough for Rhine who argues that the PA should :

'... keep on raising standards as well-trained membership becomes available and to watch admission at the convention too. Rather than admit everyone, it is best to encourage the formation of other groups for those requiring more lenient qualifications. Over-permissiveness within a group endangers the whole value of the organization.'<sup>41</sup>

My survey results suggest that laymen do, in fact, have a 'corrupting' influence on the field. One of the main areas of disagreement in parapsychology today is over the study of spontaneous cases—naturally occurring, usually dramatic instances of psychic ability. Rhine and his supporters have argued repeatedly that while such fieldwork can be useful in generating hypotheses, it is only through experimentation that parapsychology can really advance. Others who have become frustrated by the lack of progress and the extreme technicality of the current literature call for a return to the earlier tradition of field studies. Results from the mail survey indicate that experimentalists predominate in the PA, but their majority is not a large one. Fifty-seven per cent disagreed with the statement 'More than laboratory work, what is most needed at present in parapsychology is a sustained and careful attention to spontaneous cases.' As shown in Table 1, the response varies substantially by the degree of involvement

TABLE 1

*Percentage of Parapsychological Association members who favour the study of spontaneous cases over experimentation, by interest in the field and frequency of contact with laymen.*

Contact with Laymen	Interest in Parapsychology	
	Major	Minor
Frequent	47% (30) <sup>a</sup>	60% (15)
Infrequent	23% (30)	44% (43)

<sup>a</sup> Base of percentage in parentheses.

in the field and by the frequency with which they discuss parapsychology with laymen. Those most involved tend to support experimentation, while those who interact frequently with laymen are more likely to support spontaneous casework. (Both effects were statistically significant in a log-linear analysis). Additional analyses show that those who interact frequently with laymen are less likely to condemn 'fads and borderline areas', more likely to support research on post-mortem survival, and less likely to say that the occult movement will be harmful to parapsychology.<sup>42</sup>

*Summary and conclusion*

Experimental parapsychology poses a real dilemma for established science by presenting a picture of methodological innocence and theoretical guilt. On the one hand, parapsychologists have done their best to go about their work like hard nosed empiricists, designing and redesigning their experiments to eliminate every possible alternative explanation. On the other hand, they take every opportunity to emphasise the radical implications of their research and the bankruptcy of mainstream science. The response, after the initial burst of criticism in the 1930s, has been largely one of silent resistance, an attempt to ignore the offender wherever possible. Parapsychologists may get such token recognition as membership in the AAAS, but for the most part they cannot get federal grants, they cannot publish their research in prestigious journals, and they have only limited access to students.

Yet, the field has not only survived but prospered. It has done so by turning its most serious liability into an asset. The claims which have made parapsychology so unattractive to scientists have been extremely attractive to large numbers of laymen. They have provided the great bulk of the resources to keep the field going when it would otherwise have disintegrated. Their interest has made it possible to use the mass media as a base of recruitment. And they have undoubtedly reinforced the determination of parapsychologists through their moral support.

This support has hardly been an unmitigated blessing, however. It has increased the hostility and resistance of the scientific community and it has threatened the integrity of parapsychology as a community of professionals. Parapsychologists have been able to control the latter threat by strongly enforcing organisational boundaries and publication standards. This has been possible, in part, because of high geograph-

*Experimental Parapsychology as a Rejected Science*

ical concentration and strong leadership. Whether they can continue to do so in the face of increased dispersion and a large, anti-scientific occult movement remains to be seen.

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<sup>1</sup> Karl R. Popper: *Conjectures and Refutations*, Routledge & Kegan Paul, London, 1962.

<sup>2</sup> Stephen Cole: 'Professional Standing and the Reception of Scientific Discoveries', *American Journal of Sociology*, Vol. 76, 1970, pp. 286-307.

<sup>3</sup> Alan Gauld: *The Founders of Psychical Research*, Routledge & Kegan Paul, London, 1968.

<sup>4</sup> Society for Psychical Research: *Proceedings of the Society for Psychical Research*, Vol. 1, 1882, pp. 3-6.

<sup>5</sup> Gauld: op. cit.

<sup>6</sup> J. B. Rhine: *New Frontiers of the Mind*, Farrar and Rinehart, New York, 1937; Dorothy Pope and J. G. Pratt: 'The ESP Controversy', *Journal of Parapsychology*, Vol. 6, 1942, p. 175.

<sup>7</sup> Michael McVaugh and S. H. Mauskopf: 'J. B. Rhine's *Extra-Sensory Perception* and its Background in Psychical Research', *Isis*, Vol. 67, 1976, pp. 161-189.

<sup>8</sup> Clairvoyance is the extrasensory perception of objects or objective events. Telepathy is the extrasensory perception of the mental state or activity of another person.

<sup>8a</sup> McVaugh and Mauskopf: op. cit.

<sup>9</sup> Psi is a general term including both ESP (clairvoyance, telepathy, and precognition), and psychokinesis.

<sup>10</sup> J. B. Rhine: 'Some Guiding Concepts for Parapsychology', *Journal of Parapsychology*, Vol. 32, 1968a, p. 191.

<sup>11</sup> P. D. Allison: 'Social Aspects of Scientific Innovations: The Case of Parapsychology', unpublished master's thesis, University of Wisconsin, 1973.

<sup>11a</sup> Parapsychological Association: *Constitution and By-Laws of the Parapsychological Association*, (Third Edition), 1970.

<sup>12</sup> Pope and Pratt: op. cit.; C. E. M. Hansel: *ESP: A Scientific Evaluation*, Charles Scribner's Sons, New York, 1966.

<sup>13</sup> Personal communication to the author, 1974.

<sup>14</sup> J. G. Pratt: *Parapsychology: An Insider's View of ESP*, Doubleday, New York, 1964.

<sup>15</sup> Allison: op. cit.

<sup>16</sup> Nicholas Wade: 'Psychical Research: The Incredible in Search of Credibility', *Science*, Vol. 181, 1973, pp. 138-143.

<sup>17</sup> E. U. Condon: 'UFOs I have Loved and Lost', *Bulletin of the Atomic Scientists*, 25 December 1969, pp. 6-8.

Paul D. Allison

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- <sup>32</sup> Allison: op. cit.
- <sup>33</sup> Hagstrom: op. cit., pp. 271-272.
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*Experimental Parapsychology as a Rejected Science*

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<sup>42</sup> Allison: op. cit.