

and at several universities in the United States. But what parapsychologist John Beloff has called the Heroic Age of psychical research had passed, and the young science had to await the emergence of a new figure to rejuvenate it.¹⁹

J. B. and L. E. Rhine

Undoubtedly the best-known name in parapsychology is that of Joseph Banks Rhine, but in fact his career is not easily separated from that of his wife, Louisa E. Rhine. While J. B. (as he was always known to his colleagues) became the charismatic leader of a revolutionary new science, this probably would not have happened were it not for the intellectual and emotional support of "Louie," a very capable and innovative researcher in her own right.

J. B. Rhine and Louisa Weckesser were friends from their teenage years, when they found they shared a common interest in deep religious questions and a dissatisfaction with the traditional answers of organized religions. Following undergraduate work at different colleges (and a World War I stint in the Marines by J. B.), they were married in 1920. Both then went on to complete Ph.D. degrees in botany at the University of Chicago.

J. B. obtained a good position at the University of West Virginia, and both he and Louisa were at the start of promising careers in botany, but it was a lecture they had heard in 1922 while still in Chicago that made them start wondering if their careers should take a different direction. Sir Arthur Conan Doyle, creator of Sherlock Holmes, had been on a speaking tour promoting psychical research and Spiritualism. Doyle's sincerity and the list of distinguished scientists about whom he spoke deeply impressed the Rhines. After much thought, in 1926 J. B. gave up his West Virginia post and a career in botany to begin training in philosophy and psychology for a career in psychical research.

In the summer of 1926 the Rhines arrived in Boston, a city that had two attractions for them. One was the medium Margery Crandon, who had been the subject of controversial investigations for some years. The other was the presence of William McDougall at Harvard University. McDougall was a distinguished British psychologist who strongly supported psychical research. As luck would

have it, the Rhines caught up with McDougall just as he was leaving on a year-long trip. While the taxi waited, McDougall hurriedly gave Rhine advice about who to see and how he might get some money to support a year of research.

On July 1, the Rhines had a sitting with Margery Crandon that proved to be a bitter disappointment. To J. B. and Louisa, complete newcomers to psychical research, it seemed that this famous medium's physical phenomena were phony, and they were quick to say so. Writing to the American SPR (who had championed Margery), Rhine said he was disgusted with the case and with the ASPR's attitude and declared, "The whole case is sure to crash some of these days and where will our reputation be then? We will be the laughing stock of the world for years to come!"²⁰ The Rhines eventually published an exposé, which brought them to the attention of the more conservative wings of both the American and the British SPRs, though it did little to dampen the loyalty of Margery's supporters. Ironically one of those most put out by the Rhines' "colossal impertinence" was Sir Arthur Conan Doyle himself.

Perhaps the most important effect of this experience with Margery was to crystallize for J. B. Rhine the belief that progress could be made in psychical research only if it became primarily an *experimental* science. For J. B. and Louisa Rhine there was no future in the séance room and the old-style psychical research.

In spring of 1927 the Rhines learned that McDougall would not be returning to Harvard. He had accepted an offer from the newly endowed Duke University in Durham, North Carolina, to become head of the psychology department there. Initially this seemed another setback for the Rhines, but eventually McDougall secured funding for Rhine to do a semester of research at Duke University.

While scholars regard the founding of the SPR in 1882 as the start of psychical research as a *science*, they consider the arrival of the Rhines at Duke University in September 1927 as the start of its *professionalization*. Although Rhine began working without any long-term expectation of employment at Duke, McDougall offered J. B. a position in the psychology department for the 1928-29 academic year. Part of the time he assisted McDougall with some controversial experiments dealing with Lamarckian inheritance (the notion that acquired abilities or traits can be passed on to succeeding generations). This particular research experience impressed upon

Rhine the need for statistical reasoning in controversial areas of science. The next year Rhine was given a joint appointment in the departments of philosophy and psychology.

In the summer of 1930 Rhine finally had an opportunity to start his own research. He started with *card guessing using local children* and cards stamped with numerals. In the fall a colleague, Karl Zener, suggested that they try guessing tests with their classes using numerals or letters sealed in envelopes. Because this work was not particularly successful, Rhine asked Zener, a specialist in perception, to design a new set of cards that could be easily distinguished and easily remembered. The result is the well-known ESP cards discussed in the previous chapter.

One of the many students tested with the new cards, a sophomore by the name of A. J. Linzmayer, displayed a consistent ability to guess the cards better than chance—404 correct out of 1,500, where 300 would be expected by chance. The following year Linzmayer provided another 2,000 trials and continued to guess above chance, although Rhine noticed a decline in his ability. In the fall of 1931 Rhine was joined by two graduate students, Charles E. Stuart and J. Gaither Pratt. Through *careful self-testing*, Stuart found that he himself had a modest clairvoyant ability, and Rhine and Pratt uncovered another high scorer in divinity student Hubert Pearce. After adjusting to the testing procedures, Pearce quickly reached scoring levels higher than Linzmayer, with no sign of a decline. Within six months the program of experimentation with these subjects had become the main focus of Rhine and his colleagues.

In 1932 Rhine justifiably felt that he was on the verge of a breakthrough. Not only had he and his associates *demonstrated* the existence of psychic phenomena, which Rhine named “extrasensory perception,” with solid experimental evidence, but, more importantly, they were able to show that ESP seemed to *reveal natural relationships* in the same manner as ordinary psychological phenomena. For instance both Linzmayer and Pearce lost their ability under the influence of the drug sodium amytal. Their performance seemed to follow predictable patterns such as *fatigue curves—the falling off of scores during intensive testing*. Showing that psychic ability obeyed certain natural laws, Rhine felt, would do more to make its study acceptable to other scientists than any number of “miracle” demonstrations.²¹

Rhine's team discovered five more students with abilities similar to those of Pearce and Linzmayer. New experiments examined the differences between telepathy and clairvoyance—if any could be found—as well as the effects of distance between agent and subject. Most importantly, testing conditions became increasingly stringent as the researchers sought to exclude every possible opportunity for sensory leakage.

The classic example of these later experiments is the Pearce-Pratt series, which took place between different buildings on Duke's West Campus. Pratt, the agent, was located in what was then the Physics Building. Once a minute he picked up a card from a pre-cut and reshuffled pack. *Without turning it up or looking at it*, Pratt moved the card facedown onto a book. (Since this experiment was meant to test clairvoyance, it was not necessary for Pratt to see the card.) At that very minute Pearce, located with a synchronized watch in the library one hundred yards away, tried to perceive the card on the book. Without meeting, both men deposited sealed records with Rhine—Pratt of the targets (which he recorded after the run) and Pearce of his calls—and then met to check results. Although Pearce started off with only chance scores, as was typical for him when confronted with a new situation, he quickly resumed his high scoring level and averaged 9.9 hits per run of 25 (where chance predicts 5 hits) over the 300 trials. Pearce was then moved to the medical school, over 250 yards away, and, after the customary adjustment period, continued his high scoring. Ultimately four separate experiments were done with a total of 558 hits out of 1,850 trials (where 370 would be expected by chance). The odds against chance for the series were literally astronomical, 22 billion-to-one.²²

While this was going on, Rhine was preparing a report of the research to date. Its publication as the monograph *Extra-Sensory Perception* in April 1934 was a landmark in the history of psychical research. The initial response from fellow psychical researchers was generally extremely favorable, though Rhine's professional colleagues, particularly the British, were quick to voice criticisms, primarily of the book rather than of the research itself. They complained that Rhine's description of the experimental conditions was inadequate; they could not determine whether or not sensory leakage had been adequately excluded, and it was not clear whether or not some methods of testing might have permitted a certain

amount of logical inference. Although some of Rhine's more skeptical colleagues had reservations about certain experiments, they found more than enough in the other experiments to convince them that this was important work. Perhaps the most difficult pill for these researchers to swallow, though, was the ease with which Rhine seemed to find exceptional subjects. For many psychical researchers who had labored long with little or nothing to show for it, this was the most incredible aspect of Rhine's research. To be sure, no one before had approached ESP testing with the drive and vigor that Rhine had, and however incredible Rhine's results may have seemed, other researchers in America and abroad began duplicating his methods almost immediately.

While work continued at Duke—the team began precognition experiments in 1934 as well as psychokinesis studies, the latter being kept very quiet—other researchers began to report some success using Rhine's methods. Word came of successful replications at Tarkio (Missouri) College, Bard College in New York State, and from England. Word also arrived that a young German researcher, Hans Bender, had conducted a successful series of clairvoyance experiments, which Rhine regarded as an independent corroboration of his own work. As momentum built, Rhine was able to secure additional funding, and more researchers joined the team.

News of Rhine's research was picked up by the popular press. Articles on parapsychology (as it was now being called by the Duke researchers) appeared in *Time*, *Reader's Digest*, *Scientific American*, and *Harper's*, among other publications. As more scientists learned of the research and got hold of copies of Rhine's monograph, the criticism began to mount. A psychologist at Clark University, R. R. Willoughby, launched a series of articles essentially declaring Rhine's statistical procedures to be faulty. After extended correspondence with Rhine and Charles Stuart he conceded, in September 1936, that his statistical objections did not hold up. Almost immediately another attack on Rhine's statistics came from the McGill University psychologist C. E. Kellogg, who questioned the fundamental underpinnings of Rhine's statistical approach. Rhine and other researchers responded to these criticisms and eventually the Institute for Mathematical Statistics gave its blessing to the statistical methods used by the Duke researchers.

Criticism also focused on the question of whether all sensory cues

had really been excluded. Critics quickly noticed that the cards in some of the early commercially produced ESP decks could be read from the back because of the printing impression. But these were not the same cards that had been used in the early Duke testing, and of course the problem did not exist in the many experiments in which the subject was not permitted to see even the back of the cards. This did not stop some critics from trying to portray the entire body of results as worthless, however.

The year 1937 was something of a watershed. The *Journal of Parapsychology* was inaugurated, officially demarcating the area of psychical research that comprised parapsychology: Parapsychology was to be the strictly experimental approach to psychic phenomena. In September 1937 the Zenith Radio Corporation began a series of nationwide broadcasts about psychic phenomena and ESP in particular. Along with this went a special version of the ESP cards (with the Zenith logo on the back) that were sold in bookshops for people to test themselves in conjunction with the weekly radio program. The following month Rhine's popular account of the Duke research program, *New Frontiers of the Mind*, hit the bookshops and was selected by the Book-of-the-Month Club.²³ By the end of that year few people in the United States had not heard of ESP or the research at Duke University.

Of course the massive publicity brought renewed attacks on the research. Some of the reviews of *New Frontiers* rehashed old statistical and methodological criticisms, as did articles now appearing in the semipopular science press. Criticism became increasingly vicious. It began to appear that the objective of many leading psychologists of the day was not to criticize but to discredit the research entirely, lest the enterprise reflect badly on orthodox psychology.

The controversy came to a head in the professional community at the annual convention of the American Psychological Association in September 1938. The APA arranged for a session to debate "Experimental Methods of ESP Research." On the panel were three supporters of ESP research—J. B. Rhine; T.N.E. Greville, one of Rhine's statisticians; and Gardner Murphy, a well-respected psychologist who supported the Duke work—as well as three critics of the research, L. D. Goodfellow, H. O. Gulliksen, and J. L. Kennedy. Rhine had not been looking forward to this meeting—referring to it as his "heresy trial"—but in the end it went rather

well. Rhine and Murphy were able to rebut much of the criticism. Several well-known critics harshly denounced the work, but Rhine's patient and well-reasoned responses, as well as his ability to point to examples of his team's continued methodological improvements, were warmly applauded.

It would be wrong to leave the impression that organized psychology was ready to embrace parapsychology. Far from it. But the grudging tolerance from professional psychology that Rhine had earned was better than nothing. At least Rhine understood how he was going to have to present his findings to his professional colleagues in the future. Almost immediately his thoughts turned to a project that would present all the accumulated research on ESP to a professional audience.

What Rhine had in mind was another book, but this one would be a collaborative effort of nearly all the researchers in the laboratory. Throughout the spring and summer of 1939, the entire team worked on what would be the definitive report on ESP research. Not only were all of the experiments of the last decade reported thoroughly in this volume, but the mathematical and statistical treatments were explained in detail. Furthermore the book took on all of the principal criticisms that psychologists had leveled over the years—thirty-two, by Rhine's count—and then demonstrated how the six "best" parapsychological experiments could not be explained away by any combination of these criticisms. Before publication the authors showed these arguments to their principal critics and invited their replies, which were included in the volume. The resulting book, *Extra-Sensory Perception After Sixty Years* (the word *sixty* referring to the founding of the SPR in 1882), appeared in 1940.²⁴

The professional response to *ESP-60*, as it came to be called, was far more positive than it had been to Rhine's earlier monograph. Most of the principal professional psychological journals reviewed it. This time many of the reviewers, even if they were unwilling to accept the reality of ESP, at least gave a sober and careful hearing to the arguments. By now psychologists seemed willing to accept that parapsychology was a legitimate scientific activity, whether or not they were personally convinced by the evidence. No one was more surprised than Rhine when *ESP-60* became assigned reading for the introductory psychology classes at Harvard for the 1940–41 academic year.

Now that parapsychology had gained a measure of acceptance, researchers at other universities were able to take up ESP research without ridicule, and many did. Already a massive replication and extension of the Duke work had been completed at the University of Colorado. As World War II clouded the horizon, Rhine and his co-workers hoped that their academic battles were behind them.²⁵

When the war ended, a fresh influx of new students attached themselves to the Duke University Parapsychology Laboratory. These students later started research programs at other universities. The data base upon which parapsychology rested became increasingly broad. The network of researchers grew, too, and soon there were regular international meetings to discuss research. Parapsychology continued to grow and change over the decades, and J. B. Rhine's influence was powerfully felt right up until his death in 1980.

Still, the academic battles were not over in 1940 as Rhine had hoped. They are not over today. Rhine could give other researchers ESP cards and teach them the methods of the Duke lab, but he could not give them ESP. Many researchers were able to confirm Rhine's findings, but many others simply found no evidence of ESP, and they remained skeptical. The evidence for ESP and psychokinesis is incomparably stronger now than it was half a century ago when *ESP-60* was published, yet, as the next chapter reveals, parapsychology has yet to find universal acceptance within the scientific community.