

EXTRASENSORY PERCEPTION - FACT OR FICTION?

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WHEN I TOOK MY FIRST COURSE in experimental psychology in 1953, I recall that as I thumbed through the syllabus of what was considered to be a very difficult course -- one that dealt with such topics as differential statistics, experimental design, and psychophysics -- my thought was that perhaps the most intriguing part of the course would be the section on extrasensory perception.

YOU CAN IMAGINE MY DISAPPOINTMENT when all of our laboratory work on that topic consisted of going through decks of ESP cards, painstakingly keeping scores, then doing statistical tests to determine whether the number of hits (or correct guesses) in a 25-card series occurred more frequently than they would have been expected to occur by chance. They never did in any of our many trials, though we spent many hours over probability tables and calculators computing variances, standard deviations, and the ever popular t-test for significance of differences.

THERE WAS NO CONSIDERATION GIVEN to the kind of sensational events of which I had heard -- people who could predict the future, poltergeists who haunted houses, or mind readers who could perform remarkable feats. Indeed, the stuff of which ESP research is made (and as carried out in the traditional psychological laboratory) is of far less exciting character.

BEING A SKEPTIC ANYWAY, I was fairly well convinced, by the end of that section, that there was no such thing as perception that was not dependent on any of the known sensory channels -- vision, audition, kinesthesia, touch, taste, or smell.

THERE REMAIN, HOWEVER, even in the late Twentieth Century, many people who seem easily convinced that extrasensory perception does occur, at least with certain gifted people, and often find to be credible certain stories of people who claim to predict disasters, political assassinations, and other great events. Otherwise sophisticated police departments often seek the assistance of seers to solve difficult crimes and to find missing persons. And water witching, or the use of dowsing rods, remains a respectable pursuit in many rural areas.

AMERICAN HEALTH magazine reported in its January/February issue that a recent survey showed that more than half the persons polled believed that they had, at some time in their lives, an extrasensory experience. The editors quote George Gallup, Jr., as saying that twenty-three percent of all American adults believe in reincarnation, and ^{the editors} state that one critic in THE NEW YORK TIMES calls ^{this} the "new age^{of} spiritualism . . . the most powerful social force in the world today." They see the popularity of actress Shirley MacLaine's recent best seller, Out On A Limb, which describes her own many paranormal experiences, as reflecting the American's public's growing rapport with modern spiritualists and psychics.

PERCEPTION IS DEFINED in standard psychology textbooks as "the process of becoming aware of objects, qualities, or relations by way of the sense organs." The special case of extrasensory perception, usually given little space in psychology texts, is said to occur when one is able to sense information about objects or events in the environment without that information coming through any of the known sensory modalities. The field of study is often called parapsychology and the paranormal events studied referred to collectively as psi phenomena. These events may be classified as falling into one of four different areas: telepathy, clairvoyance, pre-

cognition, or psychokinesis. I have distributed handouts with definitions of these four areas, because their precise meanings must be kept in mind in order for this paper to make any sense.

1. Telepathy - Refers to thought transference, or one person becoming aware of another person's thoughts in the absence of any communication through sensory channels. In popular terminology, that is mind reading.

2. Clairvoyance is perception of objects or events not influencing the senses. For example, one who knows that a certain event is taking place at this moment some place far from here, could be said to be a clairvoyant.

3. Precognition refers to perception of future events. Fortelling events, prophecy, and having presentiments of things to come fall in this category. If the event involves mind reading, then it can be called precognitive telepathy; if it involves events, then it is precognitive clairvoyance.

4. Psychokinesis is the ability to influence a physical object or event, such as the fall of a die, by thinking about it. Most crap shooters seem to believe that they can, by thinking in certain ways or doing or saying certain things, cause certain numbers to appear on a pair of dice - a psychokinetic feat if such takes place. The Ouiji board would be an example of psychokinesis, sometimes in combination with clairvoyance.

WHILE DRAMATIC ANECDOTES about how one predicted an earthquake or an assassination or found water underground by carrying a stick over it, may be more fun to read about, such experiences cannot really be studied with any degree of scientific control. One can, however, with an ordinary deck of ESP cards - five each of the symbols on the handouts that I have distributed - study each of the ESP phenomena under controlled conditions.

PRECOGNITION MAY BE DEMONSTRATED by guessing which symbol will come up next when the deck has been shuffled and the symbols randomly distributed. Clairvoyance would involve guessing which card has been placed in a sealed envelope (without the subject being able to see it). Telepathy can be investigated by having one subject guess which card another person is looking at, and psychokinesis can be tested by having a subject think about a certain symbol in order to influence its selection. Hypotheses that various ESP phenomena occur can be tested by elaborately controlled studies, though such work is tedious, painstaking, and far less exciting than predicting whether certain stock prices will go up or down or whether it is going to snow next January 3.

IN THE LATTER PART of the 19th Century, the British Society for Psychical Research was founded, and a few years later an American society was established. Many of their members have been well-established scientists, but not a few charlatans have been discovered by those reported to possess special powers. In the early years much of the Society's

studies were of seances and mediums who claimed to communicate with the dead and to receive special messages from the world beyond. It was largely a history of fraud.

TYPICAL OF THE STORIES is that of Eusapia Palladino, an uneducated, illiterate woman who was said to have "discovered" her special powers as a medium at age 13. For many years she held sittings (and survived numerous investigating committees) in which objects moved around the darkened room, and sounds came from musical instruments and other objects. But eventually various tricks were discovered, and she was classified as a fraud by the Society of Psychical Research. An American medium named Marjorie Crandon gained much notoriety in the first part of this century in this country, but in 1924 she was exposed by the famous magician, Harry Houdini. It is notable that several such hoaxes have been exposed by professional magicians who knew the tricks of the trade and resented the claims made by mediums. The difference in a magician and a medium is that the magician admits that what he is doing is a trick (but he won't tell you how he does it) while the medium claims special powers.

PSYCHICAL RESEARCH FLOURISHED at Harvard University in the 1920's where the psychologist Hugo Munsterberg, was at one time Chairman of the Department of Psychology. Munsterberg had been instrumental in the exposure of Eusapia Palladino, and the book *There Is A River* tells of his coming to Hopkinsville, Kentucky, in 1912 to study Edgar Cayce, though his study was

not conclusive. A botanist named J.B. Rhine joined the Harvard psychology faculty as a research assistant, and in 1927 moved to Duke University where he later became America's foremost researcher and publisher on ESP and the founder of that university's Department of Parapsychology. Rhine also met Edgar Cayce in 1935 when the latter visited Duke University where his son was a student. At the professor's request, Cayce did a reading on Rhine's daughter who was ill at the time, but Rhine dismissed it, because it did not seem to be accurate with regard to her illness.

AS A PSYCHOLOGY STUDENT, I had the pleasure of meeting Dr. Rhine in 1954 at a Vanderbilt University colloquium in Nashville. He impressed all of us as a highly ethical and responsible scientist, as well as a magnetic personality.

A COLLEAGUE OF RHINE'S named Zener developed the ESP cards, and ESP research at Duke gravitated toward the card guessing procedure to demonstrate the various ESP phenomena. Using 25 cards that consist of five sets of five different symbols, subjects would be expected to obtain five hits on one trial run, and the probability of getting one hit on any single guess would be .20. In 100 runs, however, one is likely to get exactly five of 25 only about 40 times, with the other 60 consisting of runs of a few hits above or below five. The highest scoring subjects, i.e. subjects thought to possess some ESP or psi abilities average only about eight or nine hits over a large number of runs. This hardly seems remarkable, since

such results are not indicative of great mind reading or prophetic powers. But the odds of getting such results by chance are in the millions to one.

THE EASY ACCEPTANCE of paranormal phenomena among the general public is itself of interest. There is hardly any person who cannot, once the subject is brought up, recall some event that seems to require a paranormal explanation. I will never forget an incident in my own life, at about age seven, when I wakened inexplicably for three or four consecutive nights in what seemed to be the wee hours of the morning. On the third or fourth awakening I saw a strange light in the house and woke my father who discovered that the house was on fire. It is easy to believe that some kind of precognitive influence caused me to wake up, especially since my father believed that had I not awakened at that time that the fire could soon have been out of control.

MOVIES AND NOVELS about poltergeists are popular, and many people seem to place credence in their possibility. Most daily newspapers run astrology columns, and popular journals are replete every December with predictions of things to happen in the coming year. Few will admit that they believe such things, but they remain popular. It is typical, of course, to make such predictions with a certain elasticity. For example, one predicts that "a disaster that will result in the loss of many lives will occur somewhere in South America during 1987;" the probability of some event taking place that can give

credence to that prediction is high.

ONE MAY ALSO PREDICT that "Elizabeth Taylor will become romantically involved with a prominent man" during that year with a fair degree of confidence. Such predictions yield no evidence of special powers, but they do add to the prophet's success rate to offset the more specific predictions that do not come true and which are promptly forgotten. Of course, even a certain number of highly specific and improbable events will come true also, and if enough predictions are made, the seer will have some success. When these hits are given publicity to the neglect of the many misses that occur every year, the public may get the impression that certain people have special precognition powers.

EVERYONE IS FAMILIAR with the predictions of Nostradamus, a 16th Century poet who is credited with many amazing prophecies. His writings, like those of Isiah and Jeremiah, are subject to varying interpretations, however, and the application of the prophecy to the event would seem to require as much imagination as the original prophecy itself.

VARIOUS SHARED, HUMAN EXPERIENCES may feed our tendency to accept as believable certain paranormal occurrences. One is the common experience known as deja vu, which is the feeling that one is reliving a previous experience. Another is the occurrence of dreams that seem to predict future events. For example, a man dreams he will lose his job, and then he actually loses it. The most conservative explanation for such

an occurrence is that something was going wrong which made the person fear, perhaps unconsciously, that he was going to lose his job. In the relatively unbridled flow of dream thoughts this fear is made manifest, before the actual event takes place. The deja vu experience occurs, probably, because we experience events that are very similar to ones we have been through before. Perhaps certain emotions, even visual images and smells that have been experienced under similar circumstances give us the feeling of having done this before. (I get the feeling sometimes during Athenaeum Society meetings.)

THE ESP RESEARCH of parapsychologists - however dull and tedious it may appear - does afford a way to study paranormal phenomena without the many uncontrollable factors that make interpretation of anecdotal events so difficult. If any credible substantiation of an ESP or psi ability - whether shared by all members of the human species or owned by only a few gifted individuals - is ever to be found, it will have to be done under such controlled, laboratory conditions.

THE INTERPRETATION OF SUCH PHENOMENA presents a difficult scientific problem. If ESP is a fact, how do we work it into our total system of knowledge and theory? Of course, when Gallileo asserted that the earth revolved around the sun, it presented such a problem to those who saw the universe in geocentric terms that his heliocentric theory was rejected out of hand. After all, any fool can see that the earth is flat and we can watch the sun revolve around it every day. If it

were round, we would all fall off into space! By the time Einstein proposed his theory of relativity, with its apparent contradiction of Newtonian physics, the world was too sophisticated to make him recant his heresy or be executed, but it presented difficulty to scientists who had to revise many theories previously held.

THE SCIENTIFIC METHOD works in just that way. A new theory gives rise to hypotheses that must be tested under controlled conditions, and the theory gains credence when it continues to generate hypotheses that can be substantiated by further research, by independent investigators, or under different conditions.

THE ESP THEORISTS are asking us to accept something which would change drastically everything we know - or think we know - about sensation and perception, as well as physics. As one physicist put it, "If ESP is a fact, then this is the most important fact in modern physics, for to explain it requires the assumption of a new kind of force - a force presently unknown to physicists. The only alternative is to abandon causality altogether, which would entail an even greater revolution of science." (Rothman, 1970, p. 280.)

PARAPSYCHOLOGISTS HAVE BEEN KNOWN to complain that more is asked of them than of other investigators, in view of the very small statistical probability for chance occurrences found in many of their studies. In fact, more is asked, since

the phenomenon they seek to demonstrate is highly implausible, and thus far no systematic relationships have been found to integrate the results of what is known. Precognition, for example, would seem to violate the accepted scientific and logical principle of cause and effect. If something can be known before it occurs, then the effect (i.e. the knowing) would seem to preceed the cause (i.e. the event).

OBJECTIONS TO ACCEPTANCE of psi phenomena, both by psychologists and other scientists, fall into several categories.

FIRST, THERE IS A GENERAL skepticism about extraordinary phenomena, and I believe that our total experience tends to reinforce that skepticism. The reports of ghosts, poltergeists, and dreams that foretell the future always seem to prove invalid when they can be studied by objective observers. Painstaking investigation by the United States Air Force has yielded no "flying saucers," and no one has ever captured the Loch Ness monster.

SECOND, THE STUDIES WITH ESP CARDS do depend on obtaining statistically significant results, but large amounts of data can be analyzed in many ways to find configurations that appear to be non-chance results. The significance of statistically substantiated ESP loses something when one considers that an average of eight correct hits out of 25 in five or six hundred trials reaches a very stringent level of significance. Such results may be statistically significant, but do they have any other meaning?

THIRD, IMPROVED RESEARCH METHODS routinely seem to yield poorer results in the field of ESP - almost always a sign of poor experimental control in any field of investigation. Perhaps the sensationalism of psi phenomena tends to influence the objectivity of researchers and sometimes the integrity of clever subjects. The literature is replete with "gifted" subjects who were found to have used various tricks to improve their results.

FOURTH, THERE IS A NOTABLE LACK of systematic consistency in the phenomena. For example, in Dr. Rhine's laboratory gifted subjects appear to be equally successful in clairvoyance and telepathy, but subjects in England appear to be good at telepathy but not at clairvoyance. One subject was found to possess neither clairvoyance nor telepathy, but a further analysis of the data showed him to be successful in precognition telepathy, i.e., guessing what was going to be on the experimenter's mind on the next trial. Such manipulation of data is not commonly accepted in other areas of behavioral research. In conclusion, the literature is replete with records of strange, unexplained phenomena that seem to lend themselves to paranormal explanations. In addition, we can accept as fact that many non-chance results have been obtained in legitimate experiments, but non-chance results do not, by themselves, prove that any paranormal or extrasensory event has occurred. In my opinion, the assertion that any perceptual events occur without the use of known sense modalities is yet to be proved.

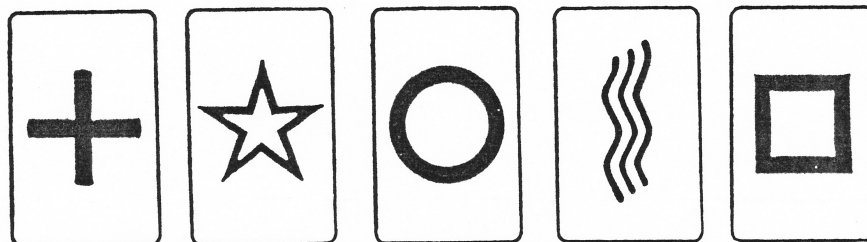


Figure 8-1
ESP Cards (formerly called Zener Cards)

DEFINITIONS

- Telepathy. Thought transference; one person becoming aware of another person's thoughts other than through known sensory channels. In popular terminology: mind reading.
- Clairvoyance. Perception of objects or events not influencing the known senses. E.g., being able to tell what is in your pockets at the present time would be clairvoyance.
- Precognition. Foretelling a future event. Predicting the winner of a horse race or tomorrow's Dow-Jones averages would be examples.
- Psychokinesis. Mental influence of physical events. E.g., making a picture fall or a pair of dice come up seven would be examples.