

Techniques and Status of Modern Parapsychology

AAAS Symposium

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Chicago

It is about 100 years since the earliest university studies and first research developments occurred which led to the founding of the Society for Psychical Research in London in 1882. Thus, it seems appropriate to have a symposium on what is now called parapsychology at the AAAS Annual Meeting in Chicago. The founders of the society were exceptional persons. One, Sir Arthur Balfour, later became Prime Minister of Great Britain, and another, Frederick Myers, wrote the classic work in the field. In later years, three Nobel prize winners became presidents of the society. The American Society for Psychical Research started in 1885 as a result of a visit of Sir William Barrett to the United States.

The change in name to "parapsychology" was associated with a change in emphasis, around 1930, from investigation of spontaneous cases to the experimental, quantitatively evaluated study of psychic phenomena. Parapsychology can be considered as the study of interactions between behaving organisms and their external environment, which occur under conditions precluding participation of the sensorimotor system. For convenience, such interactions are called psi processes. Psi processes, in which the organism's behavior gives evidence that information was received from the environment without the use of the recognized senses, are designated as ESP. Psi processes, by which the environment is altered without the use of the organism's motor system, are called psychokinesis (PK).

At the symposium, the first two

speakers will discuss the status of parapsychology in general and the place of the field in the framework of present-day science. Then a panel composed of representatives from seven centers of parapsychological research in the United States will discuss recent experimental programs.

One of the best known topics of ESP research is the "sheep-goat" effect, or the relationship between attitudes and ESP performance. Briefly, "sheep," or believers in ESP, guess at target cards and usually obtain a score higher than mean chance expectation, while "goats," or skeptics, tend to produce a score lower than mean chance expectation. Thus skeptics also seem to make use of ESP, but in a negative direction ("psi-missing"). Statistically significant results on this general pattern have been obtained by about a half dozen experimenters in the United States, Europe, South America, and India. In another series of studies of the psychology of ESP, six experimenters out of nine found that the magnitude of the ESP effect increased significantly with the use of hypnosis. Most good subjects do not like long-continued runs of restricted card-guessing. Some ESP experiments have therefore been designed to make it possible to measure ESP effects in free verbal responses while basing the chance probability on the data themselves and in other ways still maintaining strict laboratory standards.

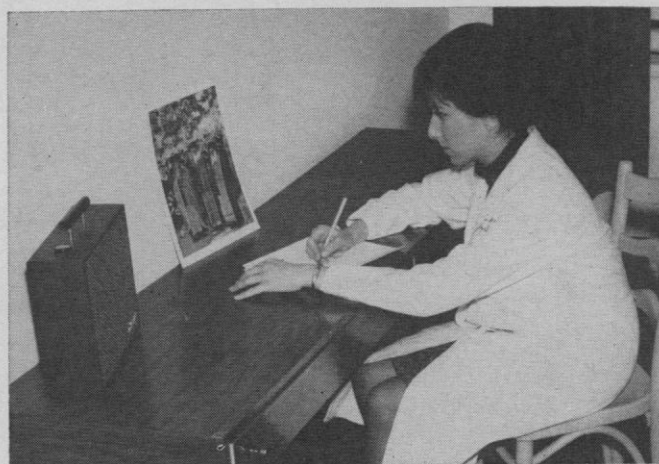
About the time of the founding of the Parapsychological Association in the United States in 1957 (affiliated with the AAAS in December 1969),

the emphasis in research shifted toward the use of electronic equipment for making ESP and PK measurements. Simple equipment is now available for counting hits in predicting which of four lights will be lit at random (averaging 1/10 of a second later), when the randomness is based on the radioactivity of strontium-90. In one recent study with such equipment 3 subjects out of 100 showed very outstanding results which, taken together, were very improbable ($P < 10^{-9}$). Special precautions were taken to prevent recording errors, to check the randomness of the generated numbers, and to eliminate the possibility of fraud by the test subjects. No known basis could be found to account for the anomalous results. In other automated testing, Skinner boxlike equipment, operating automatically all night in a locked room in France, has measured anticipation of shock in mice which were forced to jump an electrified barrier to escape a random electric shock. Confirmation of this result has now been obtained in the United States.

Use of rapid-eye-movement techniques and the electroencephalogram (EEG) allows recording of a subject's dreams that occur when an agent, 100 feet away, looks at a picture, chosen at random after the subject is asleep and effectively "tied down" in bed because of the EEG connections. Independent judges, acting blindly, have ranked the correspondences between the picture and the dream transcript significantly higher than control pictures. This has also been done with hypnotic dreams. Research is just starting with physiological feedback effects on ESP results. In another recent experiment, the subject "dialed" his guesses onto the EEG record sheet at the same time as his EEG waves were being registered. In one statistically very significant series, at least four scores higher than 15 occurred in calling on a standard 25-card ESP deck, for which a score of 5 is expected by chance. A number of experiments have shown significant correlations between parameters of occipital alpha activity and ESP performance.

Other physiological recordings, such as plethysmograph vasoconstrictions produced by a "receiver," were larger when an "agent-sender" was stimulated than when he was not, even though thousands of miles separated the two people. This difference, if further developed, might be applied in dot-dash





(Left) A subject being prepared for all-night sleep monitoring at the William C. Menninger Dream Laboratory, Maimonides Medical Center, Brooklyn. (Above) A staff member in another building concentrates on a randomly selected target picture in attempts to influence the subject's dream content through ESP.

Morse code to make possible transmission of messages by ESP. Other experimental results suggest that extrasensory prediction may receive practical application in business decisions by top executives. In computer-scored ESP tests of 100 company presidents, extrasensory prediction on the ESP test and corporate profits were related.

The effect of distance on ESP guessing the location of 100 postcards has been measured after elimination of the effects of 25 mood and attitude vari-

ables. At first, different persons laid the cards face down at four locations around the world. Later one man traveled to New York, Paris, New Delhi, and Sydney to lay out the cards in such a manner that none of the 57 subjects knew where he was. Both experiments showed a significant decline of ESP scores with distance.

The foregoing summarizes some of the work being done at the centers which will be discussed by the panel. Regarding the theoretical side, previous-

ly there have been too many theories "trading one mystery for another." Now, however, hypotheses which can be tested are appearing. After 100 years, it is about time, because the above-mentioned results, if they are real, need to be integrated into present-day science.

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Speakers and Topics

Chairman: Gardner Murphy (George Washington University, Washington, D.C.), *Parapsychology in the Framework of Modern Science*.

Robert van de Castle (University of Virginia School of Medicine, Charlottesville, Virginia), *Present Day Research in Parapsychology*.

Panel: Current Research at Seven Centers of Parapsychological Research in the United States.

Gaither Pratt (University of Virginia School of Medicine, Charlottesville, Virginia).

E. Douglas Dean (Newark College of Engineering, Newark, New Jersey).

Karlis Osis (American Society of Psychical Research, New York City).

Charles Honorton (Maimonides Medical Center, Brooklyn, New York).

Gertrude Schmeidler (City University of New York, New York).

Helmut Schmidt (Foundation for Research on the Nature of Man, Durham, North Carolina).

Robert Morris (Duke University, Durham, North Carolina).