

PSYCHOLOGY—STATISTICS

Telepathy and Clairvoyance Being Boomed as a "Science"

Experiments in Universities, Popular Book, Radio
Salesmanship Designed to Convince Skeptical Public

TELEPATHY is now the subject of a popular boom, just as certain psychologists in several leading universities have been toying with telepathy tests for the past several years.

"Keep an open mind! Beware of intolerance! It is what women call 'intuition', what men call 'hunch', what science calls 'telepathy!'"

So entices the suave, semi-religious voice over the radio.

A popular book is being distributed by one of the large book clubs, with a misty blue cover, "New Frontiers of the Mind" with "mind" in smoky green lettering, written by Dr. J. B. Rhine and telling the story of experiments at Duke University, the focus of infection of the present telepathy epidemic. Packs of cards with an assortment of crosses, haloes, waves, stars and squares upon them are being distributed in order that believing or skeptical readers may play the telepathy game.

No crude table tipping, ectoplasm, and Ouija boards, as in former years. No mediums or spirits. No seances with lights extinguished.

Telepathy is playing a new role.

"Extra-Sensory"

"Extra-sensory perception." That which cannot be told by the five senses: Sight, touch, hearing, taste, smell. The sixth sense? Even beyond that, no sense at all?

Now, is it?

Admittedly it is an interesting game. A game that scientists have played among themselves, seriously but dispassionately—most of them.

Some enthusiasts have become believers and propagandists—involuntarily discarding the critical scientific attitude. Not all of them.

What is this "telepathy," if it is?

First, telepathy is merely a name for an assumed phenomenon, not an explanation. No one has demonstrated how the supposed communication between minds takes place. Sometimes it is suggested that telepathy is like radio. But radio

or Hertzian waves were known physically long before they were used to transmit signals that allow the sending and receiving of messages by radio.

Telepathy is not "waves" of any physically demonstrable sort. The claim is that telepathy takes place, but no mechanism explaining how the communication takes place is suggested or claimed.

If the reality of telepathy is not demonstrated—and emphatically it is not to the satisfaction of scientists in general—what is the explanation of the experiments that have been made?

Because of the long history of so-called psychic phenomena, it is necessary to suggest fraud as an explanation. But in the case of current ESP card experiments, such as those conducted by Dr. Rhine, intentional fraud seems ruled out both on the part of the experimenters and the subjects.

Minute Clues

In such famous cases as the talking horse, minute sensory cues are the explanation. Almost undetectable and sometimes unconscious mannerisms or actions are the explanation in many cases of human and animal "mind reading." The horse got a signal from his master that told him to stop pawing just at the time when his master wanted him to stop. These cues are so slight in many cases that both subjects and the experimenter are totally unconscious of them, so much so that they are highly indignant at such an explanation. They may be expression in the eyes, muscle tension or some other sign that ordinarily would go unnoticed.

Another possible explanation is that "you can prove anything by statistics." The phenomenon may be due to mathematical error. Pure guessing would lead to the high score once in a while. It would lead to consistent high scores once in a while. It is like a run of good cards in bridge. And once in a great while a person is dealt a perfect bridge hand of all spades. Everyone is amazed, but actually such a hand is dealt just as often as any particular combination of less desirable cards.

Perhaps the high scores reported by Dr. Rhine in his telepathy card tests are due solely to chance. Some of those studying the research are not completely satisfied with the mathematical handling of the results. This is a case in which mathematicians and psychologists must work closely together.

The greatest danger in any such investigation is the understandable desire of both subject and investigator to get the result that is being tested. This applies to those who do not believe in telepathy as well as those who do.

Recognizing that danger, it must be said that another possible but not probable explanation of the results is that telepathy does exist!

In the full light of public attention, focused by newspapers and radio cooperation, telepathy has been tried with "negative" results in Seattle, Wash.

Radio Test

Prof. Ralph H. Gundlach, University of Washington psychologist, conducted the tests, using techniques similar to those with which Dr. J. B. Rhine of Duke University reports successful tests of "extra-sensory perception." Dr. Rhine used a pack of 25 cards with 5 each of stars, crosses, circles, squares and wavy lines upon them. After shuffling, the experimenter draws a card and the subject tries to name it.

A series of six group experiments in telepathy were made over a Seattle radio station. Prof. Gundlach explained in advance in the press the purpose of the tests and ten items to be used were publicized.

At the time of the broadcast 10 to 20 individuals, to act as "senders," gathered in the radio station studio. One of the test items was drawn from the pack of cards, it was made known to the "senders" who kept that item in mind for a short period of time. No announcement of what item was drawn was made over the radio, of course. Then the item was returned to the pack and a shuffle and another draw was made. This was repeated ten times.

About 500 listeners called or mailed in the order of the draw. No one got more than four items in ten right and only one per cent. got four right results. This demonstrated no general capacity for telepathic powers. Prof. Gundlach points out that these tests show no individual capacity for "telepathy" since only one person got three or more items correct in more than one broadcast.

A check experiment was performed in which the correct order of items was broadcast after the completion of the ex-

periment. One person reported eight correct and 10 per cent. claimed five or better right.

"They probably did not recognize that they had cheated," Prof. Gundlach commented.

Prof. Gundlach explained that he thought that the group method of testing over the radio would comb out of the city "any lurking group or individual with telepathic powers."

It failed to do so.

At Reed College, in Portland, Oregon, Prof. William Griffith attempted extensive duplication of Dr. Rhine's experiments with negative results.

Statistics

It is not telepathy, but statistical trouble. That is the verdict from McGill University psychology experiments designed to test the Duke University claims for telepathic demonstrations through use of card tests.

"The statistical techniques used by Dr. J. B. Rhine at Duke were so unrelated to the problem that no conclusions properly could be drawn from them," Dr. Chester E. Kellogg of McGill University's department of psychology concludes after an investigation begun in 1935 and conducted as part of graduate seminars.

Valid statistical methods, now developed, can not be used to evaluate the Duke experiments, Dr. Kellogg holds, since the complete results from the tests conducted by Dr. Rhine have never been published.

Dr. Rhine's experiments were given technical publication in 1934 and have now been popularized in a book "New Frontiers of the Mind" (Farrar and Rinehart). He uses a pack of 25 special cards, in 5 suits of circles, squares, wavy lines, plus signs and stars. The tests are made in a variety of ways, usually the subjects attempting to name the cards as the experimenter or subject draws and holds them face down.

If the guessing is a matter of pure chance or luck and the individual has no help from marks on the back of the card, facial expression of the experimenter, or other sensory or extra-sensory cues, then he has on the first call a one-to-five chance of making a hit.

Dr. Rhine assumes that this same chance holds straight through the 25 guesses. It would if each card were returned to the deck after the call and the deck shuffled. Actually as a star is removed the chances on that suit are lessened slightly and the chances on other guesses increased.

The assumption has also been made that, in the long run, pure guessing would result in an average score of five guesses right out of twenty-five. But mathematicians point out that this assumption is not necessarily correct. Five may be the most likely score on any one run through the deck but it may not be the average over a large number of runs because possible scores may extend on one side down to zero but no lower—a variation of only five points. In the other direction, possible scores range all the way up to 25—20 points above the most likely score.

In other words, 20 of the possible scores that an individual might make lie above the most likely 5 while only five of them lie below it.

If a person guessed only one kind of card, naturally five of his guesses would be correct. So it is easy to make a score of 5.

But Dr. Kellogg holds that, in the cases of short series of runs, chance can produce these higher scores claimed. He emphasizes that the comparison of actual with chance results should be impartial. In such a study as Dr. Rhine made, just as in any game of chance, relatively high and low scores must be expected from time to time.

"A calculation may show that some special part of the results deviates from the average chance value so markedly that it would occur only rarely, by chance," Dr. Kellogg commented. "If the general trend of the results shows that such cases are actually rare, then the deviations mean nothing. A tyro at baseball, standing at the plate and swinging with might and main, might happen to connect with the ball and hit a home run. A player's rating, however, depends upon his batting average. Similarly, in the card tests, only long-run results can justify conclusions."

Demon?

One of the card tests of a Mrs. M. made by Dr. J. G. Pratt, assistant to Dr. Rhine, continued over six weeks and the general average is a little higher than the chance value of 5, a fact that is considered significant by the proponents of the telepathy theory.

But Prof. Vernon W. Lemmon of Washington University at St. Louis published the results of a practical test of the chances, made by matching one shuffled pack with another one, for 771 runs. This test gave results diverging more from the theoretical chance value than Mrs. M's.

"Unless one is to postulate some male-

volent demon interfering with the shuffling of the packs," Dr. Kellogg comments, "it will have to be granted that neither set of results indicates the influence of anything but chance."

Dr. Kellogg also observes that the ESP cards used in the Duke and other experiments are rather thin and translucent, with a light filagree diagram on the back. Even when the pack is lying on the table, Dr. Kellogg finds a shadowy impression of something dark shows through the cards, an impression which becomes much more definite as soon as the card is picked up. All the subjects are familiar with the designs and so know just what to look for. Is it any wonder, then, Dr. Kellogg asks, that some people, perhaps with exceptionally acute vision, are able to score on the average a few points above the figure representing plain luck?

Science News Letter, November 6, 1937

Fur coats are worn by African tribesmen, on the high and sometimes chilly veldt of South Africa.

A flying squirrel in the Sequoia National Park, Calif., is reported to be extremely fond of uncooked spaghetti.

The Susquehanna Expedition of 1916

In that year, a survey started at Cooperstown, New York, head of the River, and proceeded southward to Chesapeake Bay. This was in the interests of the Museum American Indian Heye Foundation. At last, the report is ready and will be released December 1st. Dr. Arthur Parker of the Rochester Museum has acted as Editor-in-Chief and there are various papers by Dr. Moorehead, Mr. R. B. Hill, Mr. W. B. Marye who describes shell heaps and petroglyphs of the Chesapeake Bay region. There are other contributors. Also a complete bibliography. The publication is sold at cost, \$2.45, and descriptive circular will be mailed to interested persons or institutions.

ANDOVER PRESS
Andover, Mass.