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Contents

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ESP TESTS WITH AMERICAN INDIAN CHILDREN

A COMPARISON OF METHODS

By A. A. FOSTER

ABSTRACT: Fifty children attending a government school for Plains Indians in Canada were given tests for ESP capacity by a white teacher. The primary aim was to compare the effectiveness of a new type of test as against a standard technique, Screened Touch Matching, which has long been used in the ESP research. As it turned out, the older technique, which utilized the ESP cards concealed from the subject's view by an opaque screen, gave significant results while the new technique gave only chance scores. The significant results consisted of 250 runs through the ESP deck, five runs for each of the fifty subjects. The children averaged 5.39 hits per deck, whereas expectation is 5.00. This average is sufficient to give a critical ratio of 3.07; the odds are more than 700 to 1 that such a result would not occur by chance.

The new type of test, while it was a failure as far as producing evidence for ESP is concerned, may be regarded as an experimental control since the conditions were essentially the same so far as precautions are concerned. The principal significance of the experiment lies in its constituting the only published report to date of ESP experiments conducted with Indians as subjects.

Mr. Foster is the author of two earlier articles dealing with ESP and was at one time on the staff of the Parapsychology Laboratory at Duke, which he left to engage in industrial war work in Toronto, Canada.—Ed.

Introduction

While the primary interest of the writer in the work presented in this paper lay in the comparison of scoring success obtained with a new technique for testing ESP ability and that resulting from an older standard method, doubtless for many readers its principal feature will be the utilization of American Indian children as subjects in the tests. This is, so far as is known, the first report of ESP tests with Indians.

The actual experiment described herein was conducted by Miss D. Doyle, matron of a residential school for Plains Indian children. The following is a brief description by Miss Doyle of the subjects: "The tests were carried out on Plains Indians at the Indian Residential School at Brandon, Manitoba, in an environment very different

from their natural one. The western Canadian Plains Indian leads a much more primitive life than the Indians of the United States. The primary occupations on the reserves are fishing, hunting, and trapping, although a few in the southern sections farm in a modern manner. Many of the children had never known any other than the most primitive life, had never seen trains or motorcars. The original environment is not, however, similar in all cases. Of fifty children tested, thirteen came from what might be classified as primitive, fourteen from semi-primitive, and twenty-three from relatively advanced homes.

"Moreover, the age at which the children leave this background varies considerably. In the test group, one came to the school at three years of age, two at four, nine at five, nine at six, eight at seven, seven at eight, five at nine, five at twelve, two at fourteen, and two at fifteen. Many of the children remain at the Government School from the time of their arrival until discharged, which is normally at sixteen, not even returning home during the annual two months' vacation. Ages at the time of testing ranged from six to twenty. The subjects were of both sexes, although difficulties in securing the time of the boys affected the selection of the limited test group."

The children were selected on a basis of willingness to cooperate. All younger children received candy at the end of each sitting irrespective of their scores. With a few of the older ones, their sittings were either matters of interest and curiosity or personal favor to Miss Doyle. The final group of ten was selected on a basis of scores and willingness to continue. The actual experimentation extended throughout the winter of 1940-41. The great delay in the writing up of this experiment has been due to the pressure of war work.

As many of the subjects were untrustworthy either by reason of youth or disposition, a screen was employed and a procedure as close as possible to the STM procedure of the Duke Parapsychology Laboratory was used.

Since it was impossible for the writer to be present at more than a few sittings, it was decided that he be present at none in order to avoid a differentiation. This was the more desirable in that a stranger would have been a very perturbing factor to many of the subjects. Miss Doyle was carefully coached in the mechanics of the procedures, using a white child, whose record does not appear, as a "trial horse."

Techniques

For the purpose of evaluating the new method mentioned, it was decided to give each subject, at the beginning of each session, a test very similar to it, the Screened Touch Matching or STM (see glossary), using all five suits of the regular ESP cards. This was a well-tried technique and lent itself to easy comparison with the new technique. The ESP cards and the STM technique have been too often described in these pages to need further detail. I shall, however, have to go into greater length to describe the new procedure, even though, I may say in advance, it turned out in this instance to give only chance results. I do so because failures, too, contribute something to our knowledge if we study the conditions producing them and because, as I shall suggest, I persist in thinking that the technique in question may be worth another trial. (Readers who are not interested in the methodological problems of ESP may wish to pass over the next section and turn at once to the section on Results.)

The RC Technique

This technique is styled the "repeated choice" method and will be denoted hereafter by "RC" with certain subscripts to denote subtypes which are to be evolved. The essence of the method is to propound a question whose answer is *yes* or *no* and to have the subject deal from a deck containing an equal number of cards denoting *yes* and *no* on to two areas, one area designated *true* and the other *false*.

The mathematical expectation would be that, under the operation of pure chance alone, the number of *yes* and *no* cards in either pile would approximate a one-to-one proportion after a sufficient number of trials. If, however, the dealing be guided by extra-sensory perception, it would be possible to bias the distribution so as to indicate either a *yes* or a *no* response. The extent and consistency of the bias should be a measure of the frequence and clearness of the extra-sensory perception.

For example, if out of 100 cards, 36 *yeses* and 12 *noes* lay on the *true* and 14 *yeses* and 38 *noes* lay on the *false*, the indicated answer[1] would be *true* by a majority or deviation of (36—12)—(14—38)=48. The expectation in this case is zero. Now, the expectation in *n* cases where the probability of success is 1/2 is, of course n/2 and the standard deviation[2] is $\sqrt{1/2 \times 1/2 \times n}$. Since the score in any run is determined by a process of cancellation, obviously any deviation is counted twice and no odd score can occur. Therefore, the scores will be given as arrived at by cancellation, but the half-score or true deviation will be employed in all calculations of deviation and variance. Careful consideration will show that the expectancy on a chance basis cannot be altered by any deliberate manipulating of the quantities in the two piles. The limiting case of putting all the cards in one pile would result in a perfect chance or zero score every time.

[1] Since cancellation of one against the other of dissimilar cards in any one pile offers a very facile means of counting, the score is reckoned in terms of majority rather than excess over expectancy. This method, while appearing a bit clumsy, mathematically enjoys the further practical advantage that a majority of *noes* is symmetrical psychologically to a majority of *yeses* whereas high and low aim are decidedly asymmetrical.

In actual practice, ordinary playing cards were used, a black and a red suit, with the court cards omitted. The *yes* function was ascribed to the black suit and the *no* function to the red. The *true* and *false* disposition areas were designated by black and red, respectively, so that an affirmative response would entail placing like colors together while a negative response would be indicated by association of unlikes. Obviously, for any question to which the answer is *no* an affirmative response would be *incorrect;* i.e., in such case, association of unlikes would be the *correct* response. Since a black and a red suit of ordinary playing cards, less court cards, total twenty, it is evident that one run at RC consists of twenty trials. To minimize the effects of habit formation, four disposition areas were actually employed and these were alternated thus: T F T F and F T F T. Since habit patterns of response can work only to the disadvantage of ESP and could have no effect on chance scores other than to scatter them if the shuffling were poor,[3] no study has been made of this matter.

It has been considered advisable to classify certain essential question-response situations under the RC technique as follows:

A. Type of question:
   1. Truism
   2. Objective fact
   3. Emotionally charged statement

[3] This is recognizedly an approximation and with extensive use of this method, empirical tests of it will be applied. For the present paper, this issue does not arise.

[2] W. Feller, "Statistical Aspects of ESP," *J. Parapsychol.*, II (1940), 271-298.

B. To whom question is known (sensorially):
   1. Experimenter and subject
   2. Experimenter and not subject
   3. Neither experimenter nor subject
   4. No one

C. To whom answer is known (sensorially) if question is known:
   1. Experimenter and subject
   2. Experimenter and not subject
   3. Neither experimenter nor subject
   4. No one, although it is determined at the instant of trial
   5. No one, and not as yet determined

Types will be denoted by subscripts drawn from the above table. For example, $RC_{A_1B_1C_1}$ is a truism known to both experimenter and subject and its answer is also known to both parties. For purposes of discussing a group of types, notations such as RC_{A_3} will be used to denote restriction to type 3 as regards dimension A but leaving open all possible cases in dimensions B and C.

The simplest exercise in the RC technique is to endeavor to deal black on black and red on red or the reverse thereof. This exercise differs from common ESP card procedure only in the value of p which is 1/2 for RC instead of 1/5 as in common ESP.

Type $RC_{A_1B_1C_1}$ is equivalent to mere dealing, since once its question is propounded the procedure resolves itself into simple dealing with conscious direction of aim. Extension to type A2 is likewise of little import so long as type C1 is also adhered to.

It is considered that type A3 is important for two reasons: A cutting personal question should tend to command the total attention of the subject. Further, there is a lively possibility that the sign of the response may reflect not verity but the inmost desire of the subject. It is this possibility that may lead to procedures facilitating psychological analysis of the subject.

Type B2 should shed interesting light on the ESP process and its possible diametric nature.[4] Further, types B2, B3, and B4 avoid conscious direction of aim and so should escape conscious prejudice.

Type B3 would serve to eliminate telepathy between subject and experimenter, although telepathy with a third party is not so ruled out.

[4] A. A. Foster, "Is ESP Diametric?" *J. Parapsychol.*, IV (1940), 325-328.

Type B4 might at first glance appear at bit ponderous, but it is not really so. All that is necessary is to propound a question and its opposite and have the choice of which of the pair is to be presented on any one trial determined by the toss of a coin *in camera;* i.e., the coin is tossed but not viewed until after a run has been made. After the run has been made, the coin is viewed to determine in which sense the question was asked. This procedure assures complete freedom from other than retrocognitive telepathy. Incidentally, this procedure provides a means for playing "solitaire" at ESP without reducing the act to mere consciously aimed dealing. The introspective possibilities are interesting.

Type C2 should elicit interesting relations between conscious and super-sensory knowledge. Type C3 only adds to type C2 in that it eliminates telepathy between experimenter and subject. Type C4 eliminates all but retrocognitive telepathy.

Type C5 is precognition. Obviously, no verification of success or failure in class C5 is to be had until in process of time the event inquired into occurs. However, it is hoped that a usable indicator of reliability may be found in the numerical value of the score. Just what relation, if any, will be found between high scores and certainty of prediction remains to be discovered, but *a priori* it would appear likely that high and consistent scoring would indicate at least a consistency of orientation. Whether this orientation be one of extra-sensory knowledge or one of subconscious desire will require careful investigation in conjunction with the psychological studies related to type A3.

Sequence of the Tests

The following is the sequence of the procedure laid down for Miss Doyle and rigidly adhered to by her:

	Trials	*Expect.*
First sitting		
Five runs, 25 trials each, ESP cards, STM	125	25
Five runs, 20 trials each, RC deal, *Yes* aim (likes)	100	50
Five runs, 20 trials each, RC deal, *No* aim (unlikes)	100	50
Second sitting (only a selected group to continue)		
Five runs $RC_{A_1B_1C_1}$—Number 1	100	50
Five runs $RC_{A_1B_1C_1}$—Number 2	100	50
Five runs $RC_{A_2B_3C_1}$—Number 1	100	50

Third sitting

Five runs $RC_{A_1B_1C_1}$ —Number 3 . . . . . 100 50
Five runs $RC_{A_2B_3C_1}$ —Number 2 . . . . . 100 50
Five runs $RC_{A_2B_3C_1}$ —Number 3 . . . . . 100 50

Fourth sitting

Three sequences of five runs each of $RC_{A_2B_1C_4}$ 300 150

Fifth sitting

Three sequences of five runs each of $RC_{A_2B_1C_5}$ 300 150

Question for $RC_{A_1B_1C_1}$ Number 1 is: "Are there seven days in the week?"
Question for $RC_{A_1B_1C_1}$ Number 2 is: "Are there eight days in the week?"
Question for $RC_{A_1B_1C_1}$ Number 3 is: "Do two and two make five?"

For each sequence of five runs of $RC_{A_2B_1C_4}$, a coin is to be tossed in an opaque container and the question is to be put: "Is it heads?" After the sequence of five, the container is to be opened and the setting of the coin observed and recorded. This is to be done three times.

For $RC_{A_2B_1C_5}$, the procedure is to be the same as for the preceding except that the coin is to be tossed *after* the sequence of five runs and the form of question is to be: "Will the coin be heads?"

Care must be taken to give the question in the exact sense prescribed, but it is permissible to amplify or even to give directions of the following form: "If you think the answer is *Yes*, try to get the cards the same, or if you think the answer is *No*, try to get the cards opposite."

Necessarily, no mention was made in the above of the questions for type $A_2B_3C_1$. These questions were carefully sealed into opaque envelopes and marked on the outside with the appropriate sitting numbers. They were presented for the subjects' consideration with whatever preliminary explanations seemed advisable to Miss Doyle.

Results

The results were quite contrary to my anticipation; the only significant scoring appeared in the ESP card tests, and the RC test scores gave averages approximating mean chance expectation.

There were fifty subjects, each of whom made 125 trials on ESP cards (probability of success on each, 1/5) with an expected average score of 25. This is 6,250 trials, 1,250 hits expected. As Section A of Table 1 shows, there were 1,347 hits actually obtained, which gives a

significant CR of 3.07. This is sufficient to warrant the rejection of chance as an explanation of the ESP card test results.

Table 1 also gives, in Sections A and B, the results of the RC tests, and these are all insignificant as will be seen from the CR's which range from 0.20 to 2.59. (The latter is not regarded as significant for an unanticipated negative deviation.) The 50 subjects in the first sessions made 5,000 trials in each of the two (a *Yes* aim and a *No* aim) subdivisions. The CR's were 1.07 and 0.20. In each of the other conditions of the later sessions, there were 3,000 trials with CR's respectively of 0.88, 2.59, 1.06, and 1.02.

Table 1

A. Main Experimental Session

Test	Subject	Runs	Trials	Hits	Average Score	Total Dev.	SD	CR	ESP Q
STM.....	50	250	6,250	1,347	5.39	+97	±31.62	3.07	1.94
RC—*Yes*.....	50	250	5,000	2,538	11.52	+38	±35.36	1.07	1.52
RC—*No*.....	50	250	5,000	2,507	10.28	+ 7	±35.36	0.20	0.28

B. Later Sessions (All RC Tests)

Condition	Subject	Runs	Trials	Hits	Average Score	Total Dev.	SD	CR	ESP Q
A1B1C1.....	10	150	3,000	1,524	10.16	+24	±27.39	0.88	1.6
A2B3C1.....	10	150	3,000	1,429	9.53	−71	±27.39	2.59	4.7
A2B1C4.....	10	150	3,000	1,529	10.19	+29	±27.39	1.06	1.9
A2B1C5.....	10	150	3,000	1,528	10.18	+28	±27.39	1.02	1.8

While none of the special conditions gave a significant score total, that of $A_2B_3C_1$ was nearly so, but with a negative deviation. Too little is known of the factors concerned, however, to offer any helpful comment, and the results are too slender to require an explanation.

The ESP Q's are given in the table, but they are not in themselves of evidential value on the issue of ESP; not at least without a standard deviation.[5] They are included here as items of possible interest

[5] It is possible in theory to attach standard deviations to the ESP Q's which have been computed from the actual deviations, but in view of the small sample it would only be misleading to give such deviations. This is the more especially true in this case, as it would have to be made very explicit just what variance a given root mean square error represented. There is a variance in the scores of any one subject (a) over all his procedures, (b) within one procedure. There is variance between subjects. Given sufficient data, any or all of these variances could be measured, but such detail is beyond the numerical scope of this experiment.

in future comparisons. It is of interest to observe that they are comparable in the RC tests to the STM, even higher in the case of the ESP Q of 4.7 in the A2B3C1 section. For lack of a reliability estimate, it would be risky to place much confidence in these quotients, especially based on research that has insignificant CR's.

Discussion

It will be better to conduct further tests than to elaborate greatly by way of discussion on the meager data for guiding our interpretation.

Of course certain points are too obvious to need even mention. The bare fact that American Indians have shown ESP ability is not surprising enough to deserve great emphasis. Since experimental verification has supported anthropological reports of the occurrence of extra-sensory perception, it is easier now to give tentative acceptance to the general impression that all races probably have the capacity. It may be of some interest to have found that a routine ESP card test devised for Caucasians is adaptable to the Indian. There is, of course, always some question of the suitability of methods for a different racial group.

As to why my own invention in the way of methods has proved incapable to showing ESP capacity when presumably it exists, is inexplicable to me. But, as I have said, it may be worth another try, perhaps with better prospects if applied to persons of more nearly my own cultural pattern. This is, however, to express a mere possibility.

More probably the use of the ESP card test at the start of each session in each case did something to interfere with the RC test's success. There have been cases reported before in which the subjects did their best at the beginning of each session and declined in scoring ability as the tests continued.[6] This, too, must be left as inconclusive for the present. At any rate, it is recognized now that it would have been better to have tried the RC technique without the ESP card test, or to have done half the tests with reversed order.

To some persons of critical bent it may be reassuring on the acceptability of the ESP card test results that the RC method gave only chance scoring. The precautions being similar, it has at least the humble merit of a control on the adequacy of the conditions.

[6] Charles Richet, *Thirty Years of Psychical Research* (New York: The Macmillan Co., 1923), p. 85.

Conclusion

Finally, it may be said that at least one group of American Indian children have given scores in ESP card tests that are ascribable only to the ability known as extra-sensory perception.

A new method, used in comparison with the successful test procedure, gave only data that are explainable by chance. The new test, however, has served incidentally as a control on test conditions. Further, this technique has been found in practice to be a very facile and flexible technique. If world conditions permit, the writer will conduct further research along the lines indicated herein, with special emphasis on type A3B2, and it is naturally hoped that others will find this technique or some adaptation of it an advantage in their work.

The STM procedure gave moderately significant results, which, under the conditions of control, appear to constitute evidence of extra-sensory perception. The fact that the subjects are of the American Indian race is of special interest, since this is the first report of ESP tests given to members of that racial group.