

An ESP Test with Aluminum Targets

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ABSTRACT: According to theories of W. P. Bentley and others, ESP is more likely to be successful with targets made from organic materials such as cardboard than from inorganic materials such as aluminum. In tests with Pavel Stepanek at the University of Virginia, pieces of aluminum foil, silver colored on one side (called "white") and gold on the other (called "green") and four of the regular white/green cards were used as targets. W.G.R. randomized a set of two of each of the two types of targets, each in a double thickness manila folder, behind a screen, while the subject guessed the other set, with J.G.P. recording his responses. The trials with the cardboard cards gave a highly significant result, while the scoring on the aluminum cards was insignificant. The difference in scoring on the two kinds of targets was of borderline interest. Though the results are consistent with the guiding hypothesis, another explanation of the difference is possible and further research is needed for a sound interpretation.

INTRODUCTION

In a paper dealing with the phenomenon of object association or "psychometry," a form of ESP where the subject obtains information about events by means of a physical object which has been associated with them, W. P. Bentley (1) suggests that objects which are composed of elements common to the human organism may work better than objects which consist of inorganic elements. Pagenstecher (4) also was of the opinion that metal objects are unsuitable for psychometry, not because the metals are absent from or rare in organisms but because they are less "porous" than many other substances and thereby less capable of storing the "vibrations" to which the ESP subject ostensibly responds. Bentley's proposal is consistent with some speculations by one of the present authors. According to W.G.R.'s psi field theory (6), the physical state of an ESP target is copied in its psi field and this, in turn, affects the psi fields of objects in its environment, including living ones, the process terminating in the physical change in these objects which results in an ESP response. According to one of the psi field hypotheses, the probability of ESP interaction increases with the similarity ("isomorphism") between the two psi fields. Since an object's physical state is (according to this theory) reflected in its

¹ We wish to thank the Parapsychology Foundation (Mrs. Eileen J. Garrett, President), the Psychical Research Foundation, and an anonymous friend who paid the expenses of the subject's visit to the United States for their support of this research. As always, we are especially indebted to Mr. Pavel Stepanek for his continued interest and patience in cooperating in the ongoing investigations of his ESP abilities.

psi field, objects that are physically alike should work better as source and transmitter than those that are unlike.

A. A. Cochran, in two interesting papers (2, 3), presents a discussion of the wave characteristics of different chemical elements which also appears to be relevant to questions concerning ESP targets. He suggests that particles of matter "have a rudimentary degree of life as one of their fundamental properties" (3, p. 80). Using the analogy of Niels Bohr between the dual aspect of man as mind and matter on the one hand and the dual aspect of the fundamental particles of matter as being both particles and waves on the other, Cochran goes on to write, "If one suspected that a rudimentary degree of life were possessed by all matter, he would naturally suspect that the dual aspects of man are a direct result of the dual aspects of the matter from which he is made, and that the mind of man and the wave properties of an electron are two extremes of the same thing: the mind properties of matter" (3, p. 81). This leads Cochran to predict that elements with the greatest wave predominance should be abundant in living matter. Carbon and hydrogen, which together constitute about eighty per cent of protein, have the greatest wave predominance of all the elements at room temperatures and nitrogen and oxygen, which constitute about nineteen per cent of the proteins, are in the fourth and seventh position respectively.

If the wave or "mind" properties of substances are related to or identical with their psychical properties, several interesting consequences follow, one of which would be that cardboard cards, which in large part are made of carbon, ought to possess a greater wave and "mind" predominance than, say, aluminum cards and consequently should work better as a source of ESP signals.

The present experiments are a preliminary attempt to compare aluminum with cardboard targets. The tests were conducted with Mr. Pavel Stepanek (P.S.) at the University of Virginia, Charlottesville, during two days in the beginning of June, 1967.

METHOD

Test Materials

The targets were four cardboard cards and four aluminum "cards." The former were the type commonly used in tests with P.S., namely, simple pieces of cardboard four by six inches, white on one side and green on the other. The aluminum cards, which were roughly of the same size, consisted of pieces of commercial aluminum foil, silver colored on one side, designated their "white"

side, and gold colored on the other, their "green" side.² The cardboard cards were those on which P.S. had achieved the highest positive deviations in the immediately preceding series (Series 14, see 5) conducted by the present experimenters. These targets were numbered distinctively since they had been identified and recorded individually in the preceding tests in which they were used, but the numbers were ignored in this experiment. The presence of the numbers was considered to be irrelevant to the purpose of our research.

The aluminum cards had not been used before. They were not marked in any way since identifying marks might provide a basis of distinction that could vitiate the inorganic quality of the aluminum cards. For the same reason W.G.R. used rubber coverings on his fingers when he handled the cards.

Each of the eight cards was placed in a double-thickness manila folder (one folder inside the other) whose two sides were stapled shut, leaving the front open for randomization of the cards. The covers were also not marked in any way in order to direct the subject's attention exclusively to the cards and away from any concern with the folders as possible ESP targets.

Testing Procedure

The eight cards were divided into two runs with four cards in each, two cardboard and two aluminum. Two hundred runs were planned with each of the two packs of four cards for a total of 1,600 trials, 800 with cardboard and 800 with aluminum targets.

During the test the experimenters were seated opposite P.S. as in the previous series, J.G.P. sitting directly opposite P.S. and W.G.R. next to J.G.P. and behind a screen which prevented both P.S. and J.G.P. from observing the randomization. The four cards for each run were randomized by W.G.R. by shuffling the folders with the enclosed cards, then removing two cards from their folders and turning them over, and then shuffling the cards again.

When W.G.R. had completed the randomization, he handed the folders to J.G.P. who cut the pack and then placed the stack of targets before P.S. with the openings of the folders away from the subject. P.S. in his usual way took up each folder in turn and made his guess of "white" or "green" according to his impression of

² The subject saw a sample of the aluminum before starting the experiment and was told how to call the two sides, but he did not see the aluminum targets actually used until the test was finished. The aluminum is a product of the Reynolds Metals Company, who kindly informed us that the aluminum has a purity of ninety-nine per cent and is coated with vinyl containing yellow pigment. Presumably the subject could have responded by ESP to this "organic" plastic coating, but failed to do so for psychological reasons.

which side of the enclosed card was face up. He had been informed that some of the targets consisted of aluminum sheets, but he was not told which of the folders contained these and which contained the cardboard cards.³ J.G.P. wrote down the guesses. While P.S. was making his calls on one of the packs of four cards, W.G.R. randomized the other set. At the completion of the four trials, J.G.P. took the stack of targets from the subject (now in reverse order from that in which they had been called), opened the flaps of the folders sufficiently for him and W.G.R. to see the cards, and recorded the actual order of the colors, W.G.R. checking on the correctness of this.

As in the other series, there usually was a coffee break in the morning and a pause for tea in the afternoon. The radio was on most of the time with P.S.'s favorite program of country music.

RESULTS

Since the aluminum cards had no distinguishing marks and the numbers on the cardboard cards were ignored, it was not planned or possible to study the scores on the individual cards.

As shown in Table 1, the total number of hits obtained in the 1600 trials was 875, a deviation of +75 above mean chance expectation. The SD works out at 20.00 and the CR at 3.75 which has a value of $P = .00018$, a highly significant result. The deviation on the cardboard cards was +56, which gives a CR of 3.96 and a P of .00008. On the aluminum cards the score was +19, the CR 1.34, and P an insignificant .18. A test of the difference between the results on the cardboard and the aluminum cards gives a chi square of 3.45 which, with one degree of freedom, gives $P = .06$.

³ There was almost certainly a difference in weight between the folders with cardboard targets and those with aluminum, and it is conceivable that this and other differences could be perceived through the folders by special methods of handling. But it seems highly unlikely that these were in fact detected by P.S. under the conditions of the experiment, in which he picked up each folder by the edges and laid it aside without delay before taking up the next one. We can therefore say with reasonable assurance that the subject was not consciously aware of the difference between the two kinds of targets, and of course sensory awareness at any level of the difference between them could not explain his success in naming the colors presented upward on the cardboard targets (a result depending upon a distinction between the two sides of the target, comparable to *side focusing*). Slight differences in weight, size, and shape are relevant for the interpretation of evidence for *object focusing*, and these factors have been explicitly taken into account in research to be reported in a later issue of the *Journal* (Keil and Pratt, in preparation).

Table 1

RESULTS OF TRIALS WITH CARDBOARD AND ALUMINUM CARDS

	No. Trials	No. Hits	Deviation	SD	CR	P
Cardboard	800	456	+56	14.14	3.96	.00008
Aluminum	800	419	+19	14.14	1.34	.18
Total	1600	875	+75	20.00	3.75	.00018

Difference

	Cardboard	Aluminum	Difference
Hits	456	419	875
Misses	344	381	725
	800	800	1600

$$\chi^2 = 3.45 (1 \text{ d.f.}); P = .06$$

DISCUSSION

The total results and the results on the cardboard cards are well beyond chance expectation. Since there appears to be no ordinary way in which P.S. could have perceived the color of the targets through two layers of manila cardboard, the most reasonable hypothesis is that he did so by ESP.

The failure of P.S. to score significantly on the aluminum cards is consistent with the theories of Bentley and others discussed above. However, it can be explained in another way as well. The selection of four cardboard cards on which P.S. had previously succeeded may have provided a favoring condition for the cardboard targets. For some reason, as yet unknown, with this subject certain cards become endowed with a special stimulating property which is absent from other cards, though these seem physically similar to the favored ones. We chose the favored cards to provide optimum conditions for the subject's ESP abilities. If we had not done so and if P.S. had failed to score on either cardboard or aluminum targets, this failure might have been due to an absence

of favored cards rather than to anything having to do with the ordinary physical properties of the targets.⁴

In experiments on this problem in the future, in addition to the preferred cards, a series of new cardboard cards could be used. If the subject also scores better with these than with the aluminum cards, this would give stronger confirmation of the hypothesis that the chemical composition of the targets affects their stimulating properties than has the present series. Or preliminary tests could be done with a larger number of aluminum cards in the hope of finding favored ones to compare with the favored cardboard cards.

In whatever way the problem is approached, the possibility that the stimulating properties of ESP targets is related to their chemical composition deserves to be fully explored.

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⁴ Solely as a matter of record and explicitly without any implication of drawing any conclusion from the statistical comparison, we note in passing that these four cards were used for 100 trials each in the preceding series and were selected for this experiment because they yielded deviations of +16, +14, +12, and +8. Thus these "selected best" targets were called correctly in that series at the 62.5% level, whereas in the present experiment the level of hitting on color for them was 57%. This suggests that we were successful in obtaining a high deviation on the cardboard targets in the present experiment by taking advantage of a focusing effect upon these selected cards, but the evidence is suggestive only.