Pure Clairvoyance and the Necessity of Feedback

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ABSTRACT: An alternative explanation of ostensible clairvoyance has been that percipients precognize the future state of their brain when they receive feedback about the target order. Older studies of pure clairvoyance, where this possibility is eliminated, suggest that clairvoyance exists, but these studies have some methodological problems. In this investigation, a computer tested clairvoyance (guessing numbers 1–10) with and without feedback. Totals were recorded in the pure clairvoyance condition only, so there could be no future inspection of target orders by anyone. Percipients with no previous history of success in laboratory psi tasks showed no results, but three talented percipients showed success in the pure clairvoyance task in accordance with their known beliefs, viz., significant psi-hitting by the percipient who accepted pure clairvoyance and significant psi-missing by the two who did not accept it.

A substantial number of psi experiments in the last decade have been based on various "observational theories" of psi functioning, theories derived from considerations of quantum physics. We will not attempt to review these theories here except to note that they share a common premise that there will be eventual feedback of the target data of a psi test, either to the percipient or to some other human. The possibility of "pure clairvoyance" is ruled out insofar as these theories claim to offer total explanations of psi effects.

By clairvoyance we use the generally accepted definition that it is the direct psychic perception of information about the physical state of a sensorily shielded object, place, or event by a percipient, when no living individual knows that information at the time of the clairvoyant perception. Apparent clairvoyance can be theoretically explained away, however, by alternatively postulating that the information is obtained by precognitive perception of the later feedback about the nature of the target. This later event can be direct feedback to the percipient and/or telepathically mediated feedback wherein the percipient "reads the mind" of an experimenter or observer who later observes the target set.

[1] We wish to thank our colleagues, Hal Puthoff and Ed May, for helpful suggestions in designing this study.

The target, for example, might be a shuffled deck of ESP cards. In a clairvoyance model, successful scoring occurs because the mind of the percipient somehow "reaches out" and inspects the physical characteristics of enough of the cards to allow significant scoring. In the alternative precognitive feedback model, no clairvoyance occurs, no information passes "across space" at the time the percipient makes his or her responses. Instead, the percipient precognizes his or her own future state of mind when he or she is later shown the order of the target cards and uses this information to correctly guess now. A variant of this theory, which assumes the existence of telepathy, proposes that the percipient precognitively reads the mind of an experimenter who observes the order of the target deck at some future time as part of scoring the experiment.

These alternative explanations can be ruled out by automation of an experiment such that the apparently clairvoyant perceptions of the percipient can be machine scored for correctness and the target material then destroyed, so that there is no possibility of future human observation of it by anyone. This is a pure clairvoyance experiment. Significant psi results under pure clairvoyance conditions would falsify those aspects of observational theories which assert that feedback to someone is absolutely necessary. It does not rule out the possibility that precognition of future feedback may be the mechanism for psi under some experimental conditions, or that it may be a useful auxiliary information channel in addition to present-time clairvoyance.

Establishment of the reality of pure clairvoyance is, then, of theoretical interest in and of itself, as well as pertinent to the observational theories of psi. It is also of practical significance. Suppose, for example, that you wished to use clairvoyance to determine whether or not to drill an oil well. In the observational theory framework, it would make sense to drill if the clairvoyant answer were "Yes," as feedback would later occur that would provide a basis for making the decision. If the answer were "No, do not drill," and the well was not drilled on that basis, a potentially productive oil well might be skipped, for there would be no future feedback information for a valid psychic prediction to be based upon. If pure clairvoyance exists, however, "no" predictions would be of as much practical value as "yes" predictions.

Previous Studies

The existence of pure clairvoyance as a distinct form of psi not explainable by telepathy or precognition was an issue for J. B. Rhine and others in the late 1930s and the 1940s. Initial support for pure clairvoyance was provided by Tyrrell's (1938) study which

used an automatic testing apparatus. The exploratory nature of Tyrrell's studies, coupled with the destruction of the apparatus and detailed records in World War II, makes us reluctant to put much weight on these results, however.

Humphrey and Pratt (1941) carried out a "chute" series of ESP card tests that provided evidence for clairvoyance in a way they believed excluded precognitive telepathy as an alternative explanation. The percipient would drop his call cards through five different openings, each marked with a different ESP card symbol. The cards fell through chutes into disarranged piles so that the order they were called in by the percipient was largely obliterated. The experimenters were to pay no particular attention to the organization of the disarranged piles as they picked them up for scoring. Although it is pushing ideas about unconscious observation to considerable limits, one could conceive, however, that the unconscious minds of the experimenters could contain partial information about call order that could be compared with target order, and this information might have been accessible to precognitive telepathy. Exact details of the experimental procedure, which might help resolve this issue, are no longer available.

Schmeidler (1964) carried out a thoughtful series of experiments that involved a pure precognitive clairvoyance condition. In her first study, percipients tried to identify colors and ESP card symbols to match targets that would later be generated by a random process[2] in a computer. In one condition, the targets and responses were printed out by the computer and inspected by the experimenter. In a second condition, they were inspected by both the experimenter and the percipient. In the pure precognitive clairvoyance condition, only the responses and the total score of each run were printed out, and the target data were destroyed. Schmeidler, as experimenter, knew which conditions were which in her first study, and reports that she was most interested in results in the pure clairvoyance condition.

Due to a computer malfunction, data from 34 of the 50 percipients had to be rerun in ways that make interpretation of their results very ambiguous, so we deal only with the data of the 16 percipients who were properly run. In the pure precognitive clairvoyance condition, 199 hits were obtained when 160 would be expected by chance in 800 trials. This is significantly above chance ($p = .0006$, two-tailed) and shows a psi quotient of +.06 (Timm,

[2] Schmeidler does not provide any details on how the computer she used generated random sequences, but we have now learned (Schmeidler, personal communication, 1984) that it was a pseudorandom algorithm. She did test it for equal frequency of all target possibilities, with satisfactory results.

1973) and an average information-rate of 0.14 bits per trial (Tart, 1983).

In a second study, Schmeidler kept herself blind as to in which experimental condition she was running a percipient. She noted that "her ignorance of which condition the subject was calling seemed to take some of the sparkle out of the research; that it made the whole procedure more uniform, flat, and stale" (Schmeidler, 1964, p. 6). Results for the pure precognitive clairvoyance condition in this second study were positive but did not reach statistical significance.

These are the only published studies of pure clairvoyance of which we know. Considering the theoretical and practical importance of the question of whether pure clairvoyance exists, we conducted a brief study that overcame the methodological flaws of the past ones. This work was carried out at SRI International in the summer of 1978. We describe its results here.

Note that we are not considering the role of feedback in *learning* to use psychic abilities in this article. We consider feedback essential for improving psi performance but not essential for manifesting psi abilities. We needed visual feedback about where our hand was in reaching for something to initially learn eye-hand coordination, for example, but once we have learned that skill we can easily close our eyes and still reach out with great precision.

METHOD

The ESPER Program

In this experiment, a Polymorphic Systems model 8813 8-bit computer with floppy disk memory storage was programmed[3] to carry out 20-trial runs of a 10-choice number guessing test. A percipient turned on the machine and started the "ESPER" program. For each trial, 10 boxes were presented on the screen, and percipients pressed a number key corresponding to their call as to the identity of the stored target.

The target for each trial was selected by a pseudorandom generator subroutine. For greater randomness, the seed number for the routine was selected on a random basis, namely by the computer reading an internal clock sampled by a key stroke initializing the program, but before the first trial. Because the computer clock ran much faster than human response times, the exact moment of sampling the clock in its precision digits was random.

This pseudorandom sequence also decided which of the 20 trials

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[3] We want to thank Tom Crispin for programming ESPER.

in a run were to be feedback or nonfeedback trials, with these random decisions subjected to the restriction that 10 trials were to be feedback and 10 nonfeedback in each run. On feedback trials, within a few tenths of a second after the percipient entered his or her response, a message, "The target was a 7," for example, was displayed. A tone also sounded if the response was a hit. On nonfeedback trials, the message "No Feedback" was displayed.

After 20 trials, the ESPER program then recorded the *total hits* in both feedback and nonfeedback conditions for each run on a protected file on the floppy disk under the percipient's name, but the trial-by-trial data were permanently erased to preclude any possibility of future observation of target identity information.

Percipients

Percipients were of two groups. Eight were SRI International personnel who showed enough interest in our experiment to put some time in on it but were otherwise naive to psi experimentation and had not been tested before. These percipients were run out of general curiosity as to how people would do on this new test program. The three percipients in the second group were selected because of extensive experience with psi testing, previous personal psi experience, and, for two of them, well-established track records of producing psi under laboratory conditions. We intended to examine the scores of the three talented percipients separately because of the very different attitudes they brought to the experimental task.

Ideally, the number of runs in an experiment such as this should be fixed ahead of time to avoid the possibility of arbitrarily stopping the experiment when the results met our expectations. Practical considerations precluded this. The number of runs done by each percipient was determined by the time he or she was able to volunteer from his or her other duties during the experiment. The length of the experiment was determined by the recall of the computer by the manufacturer. Thus, we had little control over when to stop data collection. The number of runs for each percipient ranged from a low of 2 to a high of 50.

Results

Table 1 presents the results, grouped by feedback and nonfeedback conditions for the unselected percipients.

The unselected percipients showed no evidence of psi performance. In the feedback condition, they scored only 225 hits, when 216 would be expected by chance. In the nonfeedback condition,

Table 1

RESULTS OF UNSELECTED PERCIPIENTS

	Feedback Condition		Nonfeedback Condition	
Percipient	Hits/Trials	*Z*-Score	Hits/Trials	*Z*-Score
1	49/500	−.15	46/500	−.60
2	54/500	.60	57/500	1.04
3	23/200	.71	21/200	.24
4	24/210	.69	21/210	.00
5	22/230	−.22	19/230	−.88
6	28/250	.63	29/250	.84
7	23/250	−.42	25/250	.00
8	2/20	.00	2/20	.00

they scored only 220 hits, when 216 are expected by chance. They showed no individually significant scoring patterns.[4]

Table 2 shows the scoring patterns for the three talented percipients. The two-tailed p-value shown for each condition for each percipient is the exact binomial probability of making a score as or more extreme from mean chance expectation as the one obtained. We do not present a combined p-value for these three percipients, as their different attitudes toward the experiment made us consider them as three separate case studies.

Percipient A was an SRI policy analyst, Duane Elgin. In 1974, he participated in a NASA-sponsored study of feedback training on a four-choice electronic ESP tester and trainer, the Aquarius machine (Targ, Cole, & Puthoff, 1974). He was outstandingly successful, scoring at a significance level of $p < 10^{-6}$ over 2,800 trials.

That earlier experience had convinced him that immediate feedback on every trial was essential for ESP success, and he wrote an appendix to the NASA report on the earlier study based on that conviction. His results, in the present experiment, tend to confirm his convictions, as he scored significantly above chance in the feedback condition and poorly in the nonfeedback condition. Note that this is the case even though he did not know, at the beginning

[4] The Z-scores shown for individual percipients in Table 1 are based on the normal approximation to the binomial,

$$Z = \frac{H - NP}{\sqrt{NPQ}}$$

for computational ease. They are not completely accurate for some small Ns, but because the results in Table 1 are clearly insignificant, it was not worth the trouble to compute exact binomial probabilities.

Table 2

RESULTS OF TALENTED PERCIPIENTS

	Feedback Condition		Nonfeedback Condition	
Percipient	Hits/Trials	(two-tailed p)	Hits/Trials	(two-tailed p)
A	29/190	.02*	11/190	.05*
B	11/110	1.00	18/110	.03*
C	7/60	.67	1/60	.04*

* Indicates $p < .05$, two-tailed.

of most trials,[5] whether that particular trial would be a feedback or a nonfeedback trial. A closer look at his scores in the nonfeedback condition shows only 11 hits, when 19 were expected by chance. This indicates significant psi-missing, which could only have occurred through the operation of pure clairvoyance. Of his total of 40 hits, 73% were obtained in the preferred feedback condition.

Percipient B was one of the authors, C.T.T. He had not done any extensive laboratory series as a percipient to set up a track record but he had had numerous personal psi experiences and occassional, informal laboratory successes. He strongly believed that the observational theories were incorrect in holding that feedback was essential for psi to manifest. He undertook this experiment to prove that pure clairvoyance was possible. His scores were significantly above chance in the nonfeedback condition, in accordance with his expectations and interest.

Percipient C, Ingo Swann, had been extensively involved and exceptionally successful as a remote viewer for some years. Although he had done some successful work with multiple-choice type ESP tests, he regarded the present experiment as a trivialization of his talents and participated out of courtesy, rather than willingly. He showed a negligible rate of hitting in the feedback condition and significant psi-missing in the nonfeedback condition (only 1 hit in 60 trials, when 6 would be expected by chance). The significant psi-missing could, again, only come about through pure clairvoyance, and served to demonstrate his expressed feeling about the experiment.

DISCUSSION AND CONCLUSIONS

We have heard an argument that there is some feedback in this kind of experiment, namely the *global* feedback that there were X

[5] Note that this statement is generally, but not completely, true. If a percipient keeps track of how many feedback and nonfeedback trials have already occurred in a run, such that one type has had all 10 trials used, he or she would know which type the last few would be.

hits in Y trials. It is unclear to us, however, how this information, if precognitively perceived, could be useful. If a percipient could precognize that at some future date he was to be shown a target order for the run he is currently doing, and that order is, say, 2, 4, 6, unknown, 9, ...etc., then clearly he should respond with 2, 4, 6, any guess, 9, etc. On the other hand, it is not clear that the precognitive information that he would get, say, "3 hits in these 10 trials," would be at all useful in deciding what response to give on trial 1, trial 2, etc. Until someone can spell out specific strategies that would make use of such global feedback to increase scoring, we do not find the concept of global feedback meaningful in this context.

We would like to see more extensive studies on pure clairvoyance, but the present results, coupled with the earlier work cited and the recent work of Targ, Targ, and Lichtarge (1985), provide a strong case for the existence of pure clairvoyance. Psi, it appears, can manifest when there is no feedback of target information.

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