	lst	2nd	Total		
ANGEL	1	3	4		
BÁNJO	1	4	5		
BEAN POLE	3	2	5		
BIKES	3	3	6		
BIKE TUNNEL*	5	6	11		
DIRT MOUNDS	3	2	5		
LOGS	4	0	4		
ORGAN	3	2	5		
PALM TREE	1	3	4		
TRACTOR	3	1	4		
Number of Drawi *ACTUAL TARGET	ngs - 27 SITE	1 2nd choice no	t given		

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TABLE II

	lst	2nd	Total
ANGEL	0	0	0
BANJO	3	3	6
BEAN POLE	1	2	3
BIKES*	3	1	4
BIKE TUNNEL	1	0.	I
DIRT MOUNDS	0	2	2
LOGS	2	1	3
ORGAN	4	4	8
PALM TREE	0	0	0
TRACTOR	0	1	1

from the randomized target pool, without telling E1 what it was, and traveled to the chosen site. E1 returned to the art class to be present while the percipients attempted to visualize the remote location that E2 was viewing. The experimenters had synchronized the fifteen minute interval so that E2 and the percipients were "viewing" at the same time. After the percipients had attempted "remote viewing," they were asked by E1 to produce a drawing of the images that corresponded to the remote site. E1 then collected the drawings and told the percipients the results would be discussed at a later class meeting.

E2 returned to a designated room, removed the slides from the envelopes, and randomized them a second time with target slide included. E1 was not present at the time the target site envelope was selected or rerandomized. E1 then proceeded with the method of evaluation, but being ignorant of the target identity he could not bias the results.

The judge for the first experiment was an employee of the U.C. Davis art department. He was asked to match a first and second choice of the ten possible target slides to each drawing. At the time of the judging, he was not aware that it was an ESP experiment. Using an overhead projector, the ten slides were projected on a screen simultaneously. The judge could then readily distinguish the differences in each location and make the decision for each drawing. After the judging E2 revealed the target site to everyone concerned.

The results of the judging were as follows (Table I), with first and second choices counted as hits, a procedure decided upon before the analysis.

Although we were not able to apply a formal statistical test to this single session, we nevertheless were impressed that the correct target received almost twice as many matches as the next most frequently chosen slide (11 versus 6). On the other hand, we were aware that if, by chance alone, the selected remote location happened to meet a predominant drawing bias in the percipients, the results would be artifactually inflated. Therefore we conducted a second remote viewing experiment, with mixed motivation. Partly we wanted to see if we could again obtain positive results, partly we wanted to see if images of tunnels (the target in Experiment One) occurred frequently when it was not the target.

Preliminary Experiments in Group "Remote Viewing"

THOMAS W. WHITSON, DAVID N. BOGART, JOHN PALMER, AND CHARLES T. TART

Abstract-In preliminary research designed to test the "remote viewing" paradigm of Puthoff and Targ, two university art classes drew their impressions of an unknown, randomly determined location. Based on the drawings, independent judges attempted to select the correct locations from among ten slides. The results (P = 0.03), although not conclusive, were encouraging.

The experimental findings of Harold Puthoff and Russell Targ at Stanford Research Institute (SRI) suggest that it is possible to obtain descriptive information about remote locations through an unidentified perceptual channel. Here we report two preliminary experiments performed at the University of California, Davis, to check on the validity of "remote viewing."

We wanted to test the hypothesis that "remote viewing" of natural objects may be a latent and widely distributed ability. We used students in a university art course as percipients. None of them were known to possess extraordinary psychic abilities and none reported having prior experience in describing unknown remote locations. The percipients were practiced art students quite willing to draw and describe their visual images.

Unlike the experiments at SRI, this study was a group experiment, i.e., all percipients present simultaneously. The percipients produced their drawings individually, with no discussion between one another.

For the first experiment, thirty target locations were selected by the experimenters, all within ten minutes driving time from the Davis campus. Of these thirty, ten locations clearly differentiated from each other by visual criteria were chosen as the target pool. A few examples of the target pool are: a palm tree, a Hammond organ, a bike underpass tunnel, and a gravestone statue of an angel. A color slide of each site was sealed in an envelope together with traveling instructions from the university to the location pictured. Before meeting with the class, E1 (Whitson) randomized the envelopes while E2 (Bogart) was not present.

The experimenters decided to introduce the nature of the experiment at the beginning of the class and then carry out the procedures after the percipients had been drawing for two hours. We felt that the percipients' visual imagery would be more activated at this time than at the beginning of class.

On arriving, the experimenters introduced themselves and the experiment to the percipients. They described the studies performed at SRI and emphasized that the earlier experiments suggested "remote viewing" might be a widely distributed perceptual ability. They then informed the percipients of the procedures that were to be followed two hours later, i.e., that E2 would travel to a remote location and view the site for fifteen minutes. Upon leaving, E2 selected one of the envelopes

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Experiment Two used essentially the same procedure as Experiment. One except that a new art class and a new judge, a graduate student in the art department, were used. The bike tunnel was precluded as a possible target, although it was included in the judging pool. Finally, E1noted before the data were analyzed that this class seemed less interested and involved in the experiment than did the first class. Table II gives the results.

Tunnel-like images that would be matched with the slide of the bike tunnel were quite rare, so we consider the possibility of artifactual inflation of the results of Experiment One to be unlikely. The results of the second experiment were not as impressive as those of the first although the target slide did receive the third highest number of matches out of ten. Of all possible target pairs in both sessions combined, the total number of matches assigned to the actual target pair was the third highest of the 90 possible pairs. This is associated with a one-tailed probability of 0.033.

These initial experimental excursions into the investigation of "remote viewing" offer modest support to Puthoff and Targ's results. Given the theoretical significance of the phenomenon, we intend to do further studies.

Remote Viewing Experiments Through Computer Conferencing

JACQUES VALLEE, ARTHUR C. HASTINGS, AND GERALD ASKEVOLD

Abstract-A series of remote viewing experiments were run with 12 participants who communicated through a computer conferencing network. These participants, who were located in various regions of the United States and Canada, used portable terminals in their homes and offices to provide typed descriptions of 10 mineral samples. These samples were divided into an open series and a double-blind series. A panel of five judges was asked to match the remote viewing descriptions against the mineral samples by a percentage scoring system. The correct target sample was correctly identified in 8 out of 33 cases; this represents more than double the pure chance expectation. Two experienced users provided 20 transcripts for which the probability of achieving the observed distribution of the percentage score by chance was 0.04.

These results confirm earlier reports of successful remote viewing experiments while extending them to cases in which participants were thousands of miles away from each other and in which the targets were mineral samples of potential economic significance, with control of communications provided by a computer network.

In a recent article,¹ Puthoff and Targ have stated the case for the existence in humans of the ability to perceive objects and scenes at a distance through an apparently unknown information channel. In this note, we report a series of experiments that appear to confirm their work while extending it to cases in which the participants were several thousand miles away from each other, with control of sensory conditions automatically and unobtrusively provided by the medium of communication, and in which the targets were mineral samples of potential economic significance.

The experiments were conducted via a computer teleconferencing system, which has been described elsewhere.² This system is implemented on a computer network and allows each participant to type comments at any time. All comments are immediately printed by the computer on the terminals of any participants who are currently logged in (or are stored for later retrieval). Twelve persons, in New York, Florida, Quebec, and California, were supplied with computer terminals in their homes or offices. The conference was sponsored by a communications company, and participants made their personal time available for the project on a voluntary basis.

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The authors are with the Institute for the Future, Menlo Park, CA 94025. ¹H. E. Puthoff and R. Targ, "A Perceptual channel for information

transfer over kilometer distances: Historical perspectives and recent re-search," *Proc. IEEE*, vol. 64, no. 3, Mar. 1976. ³See, in particular, the articles "Network conferencing," *Datamation*, May 1974, and "The Computer conference, An altered state of com-munication?," *The Futurist*, June 1975.

REP	OTE DESCR	IPT I ON	PANEL SELECTION AND SCORES AMONG THE IO POSSIBLE TARGETS					PANEL SELECTION AND SCORES ACTUAL AMONG THE 10 POSSIBLE TARGETS IARGET MAS:	
No.	Open/ Blind	Author	Best Match	2nd Hatch	3rd Match	4th Match	5th Match		
1 2 3 4 5 6 7 8 9 10	Open Open Blind Den Blind Blind Blind Blind Open	1.5. A.H. 1.S. 1.S. A.H. R.B. A.T. 1.S. A.H. 1.S.	J (134) A (100) F (212) J (100) K (70) (D (284) A (205) I (210) H (150) D (50)	F (60) I (60) G (50) E (76) H (62) J (10) I (90) J (40) F (70) J (50)	(C) (50) F (52) C (10) F (55) G (60) G (80) J (50) K (50)	G (44) H (50) D (10) K (30) C (20) E (40)	D (30) C (45) H (10) A (10) C (30)	C C F G D D D t 1	
11 12 13 14 15 16 17 18 19 20	Open Open Open 811nd 811nd 811nd 0pen Open Open	R.B. A.H. R.B. R.B. A.H. I.S. H.B. I.S. I.S. A.H.	$ \begin{array}{c} (1) (208) \\ 1 & (45) \\ 1 & (45) \\ 1 & (180) \\ 1 & (110) \\ $	0 (30) (E) (20) 0 (56) 0 (10) (i) (90) 0 (120) C (100) K (20)	C (20) D (17) J (30) F (10) L (20) (J)(84) D (6)	н (20)		I E F H H F J J	
21 22 23 24 25 26 27 28 29 30	Open Blind Blind Dpen Open Open Open Open	R.B. R.B. A.H. J.B. R.B. A.V. A.H. R.B. A.H. I.S.	() (56) H (62) D (52) C (40) (40) (55) D (126) D (222) J (58)	I (50) G (10) D (14) J (10) D (25) E (5) F (10) C (30)	D (30) J (10) F (5) (H)(22)	A (10) K (2) A (10)	C (10)	Ј К К К В В В В В В В Н Н Н	
31 32 33	Blind Blind Open	A.H. R.B. R.B.	H (32) C (130) I (60)	E (30) G (124) D (16)	G (10) J (15)	1 (6) K (6)		A A A	

Fig. 1. Total panel results for each remote description (correct matches are circled).

The primary purpose of the experiments was to test "remote viewing" under the altered state of communication enabled by computer teleconferencing-in which participants are individually isolated, communicating with each other only in the printed mode, but often in real time. We further wished to confirm that the use of the teleconferencing system would supply accurate and unobtrusive recording of the data and would prevent collusion or subliminal cuing to a degree not found in most parapsychological experiments.

Over the period of 14 June to 8 July 1975, the participants discussed current issues in psychic research. The formal experiments lasted five days, from 29 June to 3 July, and were conducted as follows: Ten mineral samples selected from geological collections were assigned a label and enclosed in sealed envelopes. The specimens were the rare mineral bastnosite, a vein filling of galena and quartz, opal, gold ore, halite, cinnabar, magnetite, realgar, barite, and cobaltite. The participants were told only that the targets were mineral samples from North America. Five of the samples were enclosed in larger envelopes and randomly labeled "Sunday" through "Thursday" to compose a "double-blind" pool. The other samples constituted an "open" pool.

Each day at 7:30 a.m. and 7:30 p.m. Pacific Daylight Time, a geologist sitting at his home terminal took one of the envelopes from the open pool, extracted the sample, and held it in his hand. Anyone logged into the conference at that time could volunteer a remote viewing description. Such descriptions were recorded and printed by the computer with a date and time stamp. After all descriptions were in, the geologist entered a brief description of the specimen to provide feedback for the participants. This sample was then removed from the open pool.

Similarly, each morning the envelope for the day was taken from the double blind pool and placed at a designated office location where it was a target for remote viewing for eight hours. Anyone logging into the conference during that time could type in a description of the sample contained in that envelope. At the end of the day, the envelope was taken to the geologist, who added the sample to the open pool. No feedback was given for the double blind targets.

Upon completion of the experiments, we had obtained 33 descriptions of the ten samples from six people. Thirteen of these descriptions were under double blind conditions and 20 under open conditions. Four specimens had been run under both conditions.

Inspection showed what appeared to be successful descriptions of several samples, but in order to objectively evaluate the accuracy of the remote viewing descriptions, we asked outside judges to match the 33 descriptions against the mineral samples. Five judges who had no prior knowledge of the correct pairings (a sociologist, an editor, a physicist, a secretary, and a librarian) were given transcripts of the descriptions