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TRANSMITTAL SLIP

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K A Kress

ROOM NO.

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REMARKS:

*Very interesting - it
would be easy to get
totally immersed in
this stuff.*

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FROM:



ROOM NO.

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FORM NO. 211

REPLACES FORM 36-8

(47)

INFORMATION TRANSMISSION UNDER CONDITIONS OF SENSORY SHIELDING

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FIGURE CAPTIONS

1. Target pictures and responses drawn by Uri Geller under shielded conditions.

2. Computer drawings and responses drawn by Uri Geller.
 - a. Computer drawing stored on video display
 - b. Computer drawing stored in computer memory only
 - c. Computer drawing stored on video display with zero intensity

3. Occipital EEG spectra, 0 to 20 Hz, for one subject (H.H.) acting as receiver, showing amplitude changes in the 9 - 11 Hz band as a function of strobe frequency. Three cases: 0, 6, and 16 flashes per second (12 trial averages).

INTRODUCTION

In this paper we present results of experiments suggesting the existence of one or more perceptual modalities through which individuals obtain information about their environment, wherein this information is not presented to any known sense. Such perceptual abilities are often considered to be paranormal. The literature in the field¹⁻³ coupled with our own observations have led us to conclude that such abilities can be studied under laboratory conditions.

The phenomena we have investigated most extensively pertain to the ability of certain individuals to describe graphical material or remote scenes shielded against ordinary perception. In addition, we also performed pilot studies to determine if electroencephalographic (EEG) recordings might indicate perception of remote happenings even in the absence of correct overt responses.

In these experiments we concentrated on what we considered to be our primary responsibility--namely, to resolve under conditions as unambiguous as possible the basic issue of whether a certain class of paranormal perception phenomena exists. Therefore, we conducted our experiments with sufficient control, utilizing visual, acoustic, and electrical shielding, to ensure that all conventional paths of sensory input were blocked. At all times we were vigilant in the design of our experiments to take measures to prevent sensory leakage and to prevent deception, whether intentional or unintentional, on the part of our subjects.

The overall goal of our research program is the determination of the laws underlying these phenomena. That is, our goal is not just to catalog interesting events, but rather to uncover patterns of cause-effect relationships that lend themselves to analysis and hypothesis in the forms with which we are familiar in scientific study. The results presented here constitute a first step toward that goal, in that we have established under known conditions a data base from which departures as a function of physical and psychological variables can be studied in future work.

In this paper we describe three related experiments which we consider to represent a single ability exhibiting different rates of information transmission. First, we conducted experiments with Mr. Uri Geller in which we examined his ability, while located in an electrically shielded room, to reproduce target pictures drawn by experimenters located at remote locations. Second, we conducted double-blind experiments with two individuals, Mr. Ingo Swann and Mr. Pat Price, in which we measured their ability to describe remote outdoor scenes many miles from their physical location. Finally, we conducted preliminary tests using electroencephalograms (EEG), in which subjects were asked to perceive whether a remote light was flashing, and to determine whether a subject could perceive the presence of the light, even if only at a noncognitive level of awareness.

REMOTE PERCEPTION OF GRAPHIC MATERIAL

We describe here a series of experiments in paranormal perception with a 27 year old Israeli subject, Uri Geller. In preliminary testing Mr. Geller apparently demonstrated an ability to reproduce simple pictures

(line drawings) which had been drawn and placed in opaque sealed envelopes which Mr. Geller was not permitted to handle. However, since each of the targets was known to at least one experimenter in the room with Mr. Geller, it was not possible on the basis of the preliminary testing to discriminate between Mr. Geller's direct perception of envelope contents and perception via some mechanism involving the experimenters, whether paranormal or subliminal.

Therefore, an experimental study was undertaken to examine the phenomenon under conditions specifically designed to eliminate all conventional information channels, overt or subliminal. This was accomplished by separating Mr. Geller from both the target material and anyone knowledgeable of the target material, as in the recent experiments by Musso and Granero.⁴

The first part of the study consisted of a series of thirteen separate drawing experiments carried out over a seven day period. The thirteen-experiment data set constitutes the entire set of consecutive experiments carried out in the time available for the study, with no experiments deleted.

The protocol for the experiments was as follows: At the beginning of the experiment either Mr. Geller or the experimenters entered a shielded room so that from that time forward Mr. Geller was at all times visually, acoustically, and electrically shielded from personnel and material at the target location. Only following Mr. Geller's isolation from the experimenters was a target chosen and drawn, a procedure designed to eliminate pre-experiment cueing. The method of target selection involved random procedures, such as randomly opening a dictionary and selecting the first word describing an object that could reasonably be drawn. Furthermore,

in order to eliminate the possibility of pre-experiment target forcing, Mr. Geller was kept ignorant as to the identity of the person selecting the target and as to the method of target selection. Mr. Geller's task was then to reproduce with pen on paper the line drawing being generated by the experimenters at the target location. Following a period of effort ranging from a few minutes to half an hour, Mr. Geller either passed (when he did not feel confident) or indicated he was ready to submit a drawing to the experimenters, in which case the drawing was collected before Mr. Geller was permitted to see the target.

In order to prevent sensory cueing of the target information, Experiments 1 through 10 were carried out using a shielded room in SRI's facility for EEG research. The degree of acoustic and visual isolation provided for this experiment is that afforded by a double-walled steel room, locked by means of an inner and outer door, each of which is secured with a refrigerator-type locking mechanism. The person inside the room is continuously monitored by means of a one-way audio monitor. The target picture was never discussed by the experimenters after the picture was drawn or brought near the shielded room. In our detailed examination of the shielded room and the protocol used in these experiments, no sensory leakage has been found.

The conditions and results for the ten experiments carried out in the shielded room are displayed in Table 1. As indicated in the Table, all experiments, except Experiments 4 and 5, were conducted with Mr. Geller closeted inside the shielded room. In Experiments 4 and 5, the procedure was reversed--i.e., the target was located inside the shielded room, with

TABLE 1. SUMMARY: REMOTE PERCEPTION OF GRAPHIC MATERIAL

<u>Experiment</u>	<u>Date</u>	<u>Geller Location</u>	<u>Target Location</u>	<u>Target</u>	<u>Figure</u>
1	8/4/73	Shielded room #1 ^a	Adjacent room (4.1 m) ^b	Firecracker	1a
2	8/4/73	Shielded room #1	Adjacent room (4.1 m)	Grapes	1b
3	8/5/73	Shielded room #1	Office (475 m)	Devil	1c
4	8/5/73	Room adjacent to shielded room #1	Shielded room #1 (3.2 m)	Solar system	1d
5	8/6/73	Room adjacent to shielded room #1	Shielded room #1 (3.2 m)	Rabbit	No drawing
6	8/7/73	Shielded room #1	Adjacent room (4.1 m)	Tree	No drawing
7	8/7/73	Shielded room #1	Adjacent room (4.1 m)	Envelope	No drawing
8	8/8/73	Shielded room #1	Remote room (6.75 m)	Camel	1e
9	8/8/73	Shielded room #1	Adjacent room (4.1 m)	Bridge	1f
10	8/8/73	Shielded room #1	Adjacent room (4.1 m)	Seagull	1g
11	8/9/73	Shielded room #2 ^c	Computer (54 m)	Kite (computer CRT)	2a
12	8/10/73	Shielded room #2	Computer (54 m)	Church (computer memory)	2b
13	8/10/73	Shielded room #2	Computer (54 m)	Arrow through heart (computer CRT, zero intensity)	2c

^aEEG Facility shielded room (see text).

^bPerceiver-target distances measured in meters.

^cSRI Radio Systems Laboratory shielded room (see text).

Mr. Geller on the outside in an adjacent room. For those experiments in which Mr. Geller was inside the shielded room, the target location was in an adjacent room at a distance of about 4 meters, except for Experiments 3 and 8, in which the target locations were, respectively, an office at a distance of 475 meters and a room down the hall at a distance of about 7 meters.

In Experiment 1, the object drawn on the basis of random dictionary selection was a firecracker, shown in Fig. 1(a). Mr. Geller's immediate verbal response via the audio monitor was that he saw "a cylinder with noise coming out of it." He made two responses to the target, also shown in Fig. 1(a).

In Experiment 2, the target--also chosen by random dictionary selection--was a cluster of grapes. Mr. Geller said that he was quite certain that he had the picture. Both the target picture and Mr. Geller's response have 24 grapes in the cluster (Fig. 1(b)).

In Experiment 3, Mr. Geller was locked in the shielded room with one experimenter outside as a monitor while the target was drawn in another building 475 meters away. The target, again randomly selected from the dictionary, was a devil (Fig. 1(c)). Mr. Geller spent 30 minutes on his drawing and expressed considerable difficulty in getting the target. The results are interesting from the standpoint of possible insight into the process that they provide. His drawings consisted of representations of Biblical symbology, including the "Moses tablets," an apple with a worm, a snake, and a concluding composite picture with the tablets on top of the world and the trident outside. Of these only the trident corresponds

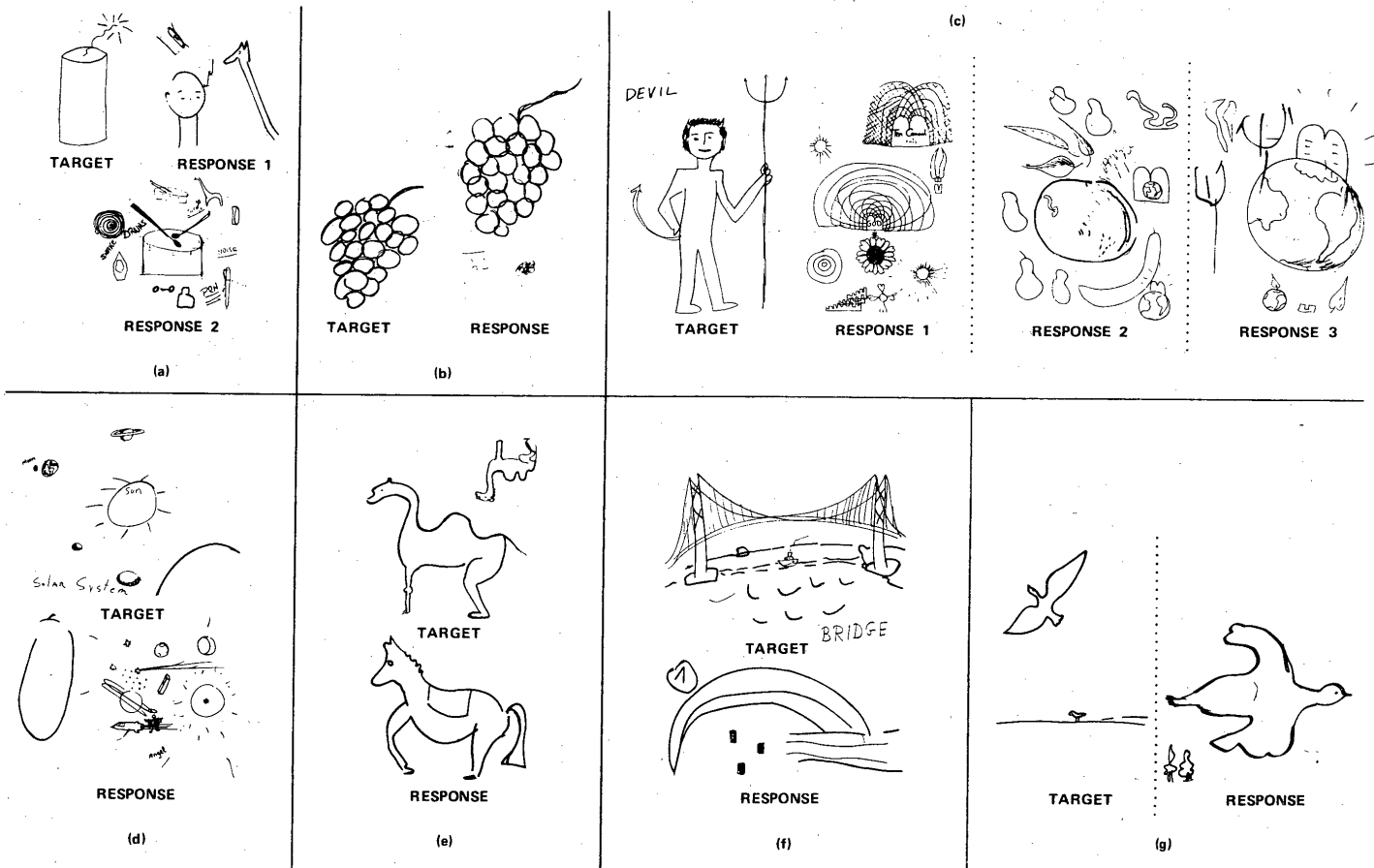


FIGURE 1 GRAPHICAL MATERIAL CONSISTING OF TARGET PICTURES AND RESPONSES DRAWN BY URI GELLER UNDER SHIELDED CONDITIONS

directly to an element in the target drawing. One is led to speculate that the Biblical elements in these three drawings are perhaps associational material triggered by the target.

The target picture for Experiment 4 was drawn by an experimenter while he was inside the shielded room, with Mr. Geller outside the room with another experimenter. In this case the target (Fig. 1(d)) was a representation of the solar system. Mr. Geller's response to the target while outside the room coincides quite well with the target drawing.

In Experiment 5, the person-to-person link was eliminated by arranging for a scientist outside the usual experimental group to draw a picture, lock it in the shielded room before Mr. Geller's arrival at SRI, and leave the area. Mr. Geller was then led by the experimenters to the shielded room and asked to draw the picture inside the room. He said that he got no clear impression and therefore did not submit a drawing. The elimination of the person-to-person link was examined further in the second series of experiments with this subject, which is described later.

Experiments 6 and 7 were carried out while we recorded Mr. Geller's EEG during his efforts to perceive the target pictures. The target pictures were, respectively, a tree and an envelope. He found it difficult to hold adequately still for good EEG records, said that he experienced difficulty in getting impressions of the targets, and again submitted no drawings.

For Experiment 8, the target picture was a camel and Mr. Geller's response was a horse (Fig. 1(e)). In Experiment 9, the target was a bridge. Mr. Geller's drawing bears some resemblance to the target (Fig. 1(f)), but before seeing the target picture he stated that he did not know what the picture was.

At the beginning of Experiment 10, Mr. Geller expressed extreme confidence and entered the shielded room. The target then chosen for Experiment 10 was a bird in flight. Mr. Geller said almost immediately, via the audio monitor in the shielded room, that he saw a swan flying over a hill and that he was sure that his drawing was correct (Fig. 1(g)).

Experiments 11 through 13 were carried out in SRI's Engineering Building, to make use of the computer facilities available there. For these experiments, Mr. Geller was secured in a double-walled, copper-screen Faraday cage 54 meters down the hall and around the corner from the computer room.[†]

For Experiment 11, a picture of a kite was drawn by one of the experimenters on the face of a cathode ray tube display screen, driven by the computer's graphics program. Mr. Geller's response, shown in Fig. 2(a), was a square with diagonals.

For Experiment 12, a picture of a church was drawn and stored in the memory of the computer. Mr. Geller's responses are shown in the drawings of Fig. 2(b). Although his responses have some elements in common with the target drawing, he did not recognize the target as a church.

In Experiment 13, the target drawing, an arrow through a heart (Fig. 2(c)), was drawn on the face of the cathode ray tube and then the display intensity was turned off so that no picture was visible. Mr. Geller immediately

[†]The Faraday cage provides 120 dB attenuation for plane wave radio frequency radiation over a range of 15 KHz to 1 GHz. For magnetic fields the attenuation is 68 dB at 15 KHz and decreases to 3 dB at 60 Hz.

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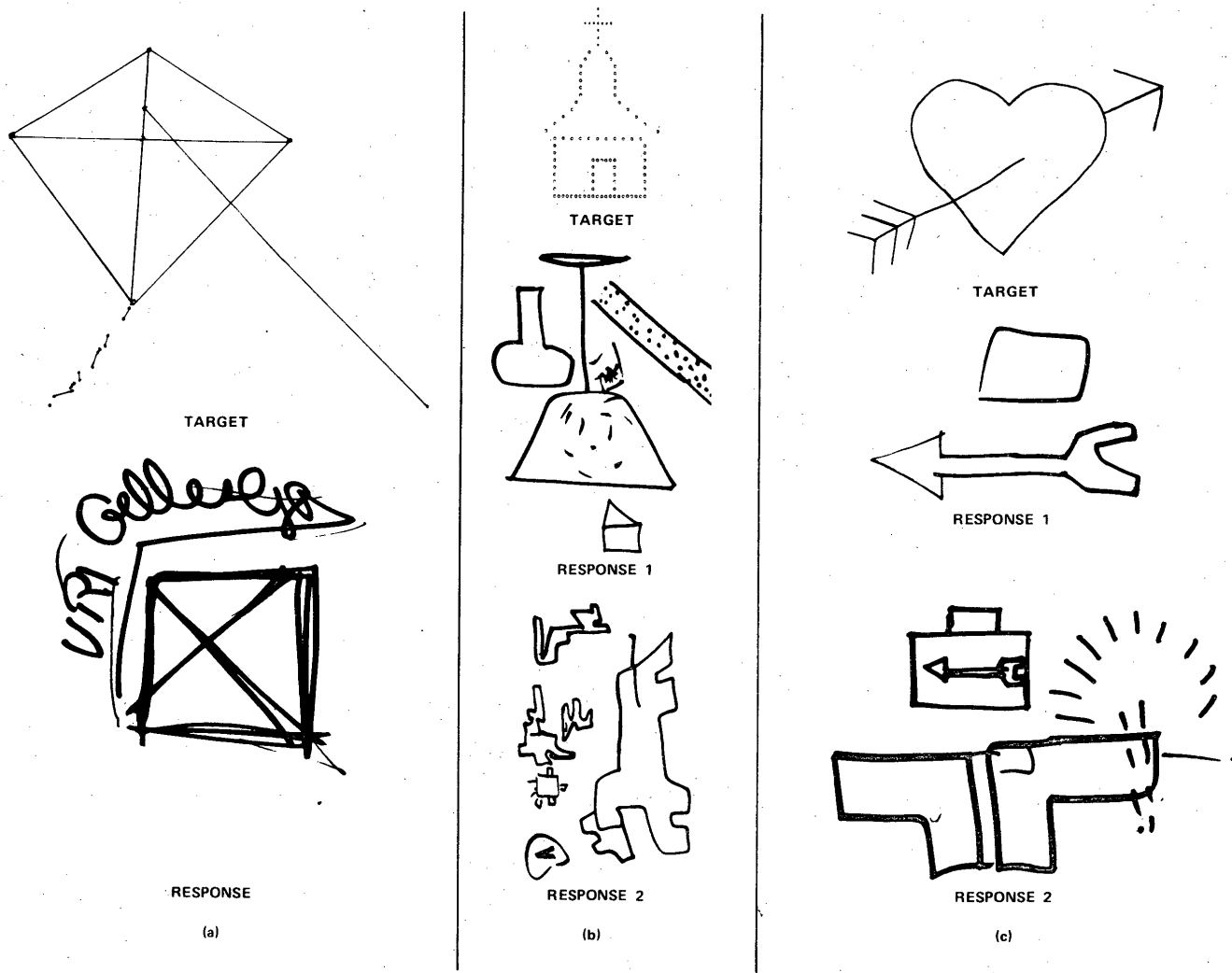


FIGURE 2 GRAPHICAL MATERIAL FROM COMPUTER DRAWING EXPERIMENTS WITH URI GELLER. (a) PICTURE STORED ON VIDEO DISPLAY. (b) PICTURE STORED IN COMPUTER MEMORY ONLY. (c) PICTURE STORED ON VIDEO DISPLAY WITH ZERO INTENSITY.

drew an arrow under a rectangle and then drew another arrow inside a suitcase, which he considered a better representation of the target.

To obtain an independent evaluation of the correlation between target and response data, the experimenters submitted the data for judging on a "blind" basis by two SRI scientists who were not otherwise associated with the research. For the ten cases in which Mr. Geller provided a response, the judges were asked to match the response data with the corresponding target data (without replacement). In those cases in which Mr. Geller made more than one drawing as his response to the target, all the drawings were combined as a set for judging. The two judges each matched the target data to the response data with no error. For either judge such a correspondence has an a priori probability, under the null hypothesis of no information channel, of $p = (10!)^{-1} \cong 3 \times 10^{-7}$.

The quality of match between target and response in certain cases, together with the overall probability of matching obtained by the judges, constitute strong evidence for the existence of a potentially useful information channel.

A second series of experiments was carried out to determine whether direct perception of envelope contents was possible without some person knowing of the target picture.

One hundred target pictures of everyday objects were drawn by an SRI artist and sealed by other SRI personnel in double envelopes containing black cardboard. The hundred targets were divided randomly into groups of 20 for use in each of the three days' experiments.

On each of the three days of these experiments, Mr. Geller passed. That is, he declined to associate any envelope with a drawing that he made. On each day he made approximately 12 recognizable drawings, which he felt were associated with the entire target pool of 100. He seemed to be disturbed by the existence of such a large target pool. On each of the three days, two of his drawings could reasonably be associated with two of the 20 daily targets. On the third day, two of his drawings were very close replications of two of that day's target pictures. We consider that the drawings resulting from this experiment do not depart significantly from what would be expected by chance, which appeared to be Mr. Geller's conclusion also, leading to passes on his part.

Thus, it would appear that eliminating a person knowledgeable of the target degrades the quality of the information channel. However, based on Mr. Geller's subjective impression, there is also the possibility that advance preparation of a large target pool, in comparison with single target preparation, results in cross talk--i.e., diffuses the identity of the target.

In a simpler experiment Mr. Geller was successful in obtaining information in which no persons were knowledgeable of the target. A double blind experiment was performed in which a single die was placed in a small steel box. The box was then vigorously shaken by one of the experimenters and placed on the table. The orientation of the die within the box was unknown to the experimenters at that time. Mr. Geller would then write down his perception as to which die face was uppermost. Thus, in this

case the target pool was known, but the targets were individually prepared in a manner blind to all persons involved in the experiment. This experiment was performed ten times, with Mr. Geller passing twice and giving a response eight times. In the eight times in which he gave a response, he was correct each time.[†] The probability of this occurring by chance is approximately one in a million, $(1/6)^8$.

To summarize the work with Mr. Geller,⁵ we observe that in certain situations significant information transmission can take place under shielded conditions. Factors which appear to be important and therefore candidates for future investigation include whether the subject knows the set of targets in the target pool, the actual number of targets in the target pool at any given time, and whether the target is known by any of the experimenters.

REMOTE VIEWING OF NATURAL TARGETS

In experiments carried out in our program to investigate the abilities of a New York artist, Mr. Ingo Swann, he expressed the opinion that the insights gained during experiments at SRI had strengthened his ability to view remote locations that had been researched before he joined the SRI program.⁶

To test Mr. Swann's assertion, a pilot study was set up in which a

[†]The distribution of responses consisted of three 2s, one 4, two 5s, and two 6s.

series of targets from around the globe were supplied to the experimenters by SRI personnel on a double-blind basis. In our estimation, Mr. Swann's ability to describe correctly details of buildings, roads, bridges, and the like indicated that he could perceive remote locations, sometimes in great detail, given only their geographic latitude and longitude. Thus, we considered the descriptions were sufficiently accurate to warrant our setting up a research program in remote viewing.

We present here the results of a remote viewing experiment, carried out with a second subject in the remote viewing program, Mr. Pat Price, a former California police commissioner and city councilman. This experiment consisted of a series of double-blind, demonstration-of-ability tests involving local targets in the San Francisco Bay area which could be documented by several independent judges. We planned the experiment considering that natural geographical places or man-made sites that have existed for a long time are more potent targets for paranormal perception experiments than are artificial targets prepared in the laboratory. This is based on the opinions of Mr. Swann and Mr. Price that the use of artificial targets involves a "trivialization of the ability" as compared with natural pre-existing targets.

In each of nine experiments involving Mr. Price as remote-viewing subject and SRI experimenters as a target demarcation team, a remote location was chosen in a double-blind protocol. Mr. Price, who remained at SRI, was asked to describe this remote location, as well as whatever activities might be going on there.

Data from the nine experiments are presented in the following paragraphs. Final judging indicated that several descriptions yielded significantly correct data pertaining to and descriptive of the target location.

REMOTE VIEWING PROTOCOL

In the nine double-blind remote-viewing experiments, the following procedures were used. An experimenter was closeted with Mr. Price at SRI to wait 30 minutes to begin the narrative description of the remote location. The SRI locations from which the subject viewed the remote locations consisted of an outdoor park (Experiments 1,2), the double-walled copper-screen Faraday cage discussed earlier (Experiments 3, 4, 6-9), and an office (Experiment 5).

A second experimenter would then obtain a target location from an individual in SRI management, the director of the Information Science and Engineering Division, not otherwise associated with the experiment. This location was either in the form of traveling orders previously prepared, sealed, and randomized by the target selector (Experiments 1, 2, 5, 6), or by his driving the target demarcation team to the target himself without any written indication (Experiments 3, 4, 7-9). The set of targets was chosen from a target-rich environment by asking the selector to use his judgment in providing a set of nine target locations which were clearly differentiated from each other and within thirty minutes driving time from SRI. In all cases, the target demarcation team proceeded directly to the target by automobile without communicating with the subject

or experimenters remaining behind. Since the experimenter remaining with the subject at SRI was in ignorance both as to the particular target and also as to the target pool, he was free to question Price to clarify his descriptions. The demarcation team then remained at the target site for an agreed-upon thirty minute period following the thirty minutes allotted for travel. During the observation period, the remote-viewing subject would describe his impressions of the target site into a tape recorder. A comparison was then made when the demarcation team returned. To represent best the detail and style of these narratives, we have included the entire unedited text of one of the better narratives containing very few incorrect statements, Experiment 7, in an appendix.

In general, the descriptions contained inaccuracies as well as correct statements. To obtain a numerical evaluation of the accuracy of the remote viewing experiment, the nine original target locations were subjected to independent judging on a blind basis by five SRI scientists who were not otherwise associated with the research. The judges were asked to match the nine locations, which they independently visited, against the typed manuscripts of the tape-recorded narratives of the remote viewer. The transcripts were unlabeled and presented in random order. The judges were asked to find a narrative which they would consider the best match for each of the places they visited. A given narrative could be assigned to more than one target location. The hypothesis is that the judges, when asked to match the actual targets with the transcripts, would place the actual target in the most favored category more often than they would be expected to by chance. Table 2 shows the distribution of the

DESCRIPTIONS CHOSEN BY JUDGES	PLACES VISITED BY JUDGES									
	1	2	3	4	5	6	7	8	9	
Hoover Tower	1	ABC DE			D					
Baylands Nature Preserve	2		ABC	E			D		D	
Radio Telescope	3			ACD		BE				
Redwood City Marina	4		CD		ABD E		E			
Bridge Toll Plaza	5					ABD		DCE		
Drive-In Theatre	6			B		A	C		E	
Arts and Crafts Garden Plaza	7							ABC E		
Church	8				C				AB	
Rinconada Park	9		CE							AB

TABLE 2. Distribution of correct selections by Judges A, B, C, D, and E in remote viewing experiments. Of the 45 selections (5 judges, 9 choices), 24 were correct. Boxes heavily outlined indicate correct choice.

judges' choices. For purposes of display we present the table such that the main diagonal corresponds to the correct choices. The number of correct matches by judges A through E is 7, 6, 5, 3, and 3, respectively. The expected number of correct matches from the five judges was five; in the experiment twenty-four such matches were obtained.

Among all possible analyses, none is more conservative than a permutation analysis of the majority vote of the judges' selections assuming assignment without replacement. By majority vote, six of the nine descriptions and locations were correctly matched. Under the null hypothesis (no remote viewing and a random selection of descriptions without replacement), this outcome has an a priori probability of $p = 5.6 \times 10^{-4}$, since, among all possible permutations of the integers one through nine, the probability of six or more being in their natural position in the list has that value. Therefore, although Price's descriptions contain inaccuracies, the descriptions are sufficiently accurate to permit the judges to differentiate among the various targets to the degree indicated.

EEG EXPERIMENTS

An experiment was undertaken to determine whether a physiological measure such as EEG activity could be used as an indicator of information transmission between an isolated subject and a remote stimulus. We hypothesized that perception could be indicated by such a measure even in the absence of verbal or other overt indicators.^{7,8} In other words, this experiment examines the hypothesis that perception may take place

at noncognitive levels of awareness and be measurable, even though not expressed verbally.

It was assumed that the application of remote stimuli would result in responses similar to those obtained under conditions of direct stimulation. For example, when normal subjects are stimulated with a flashing light, their EEG typically shows a decrease in the amplitude of the resting rhythm and a driving of the brain waves at the frequency of the flashes.⁹ We hypothesized that if we stimulated one subject in this manner (a sender), the EEG of another subject in a remote room with no flash present, (a receiver), might show changes in alpha (9-11 Hz) activity, or possibly EEG driving similar to that of the sender.

Applying this concept, we informed our subject that at certain times a light was to be flashed in a sender's eyes in a distant room, and if the subject perceived that event, consciously or unconsciously, it might be evident from changes in his EEG output. The receiver was seated in the visually opaque, acoustically and electrically shielded double-walled steel room previously described. The sender was seated in a room across the hall from the EEG chamber at a distance of about 7 meters from the receiver.

In order to find subjects who were responsive to such a remote stimulus, we initially worked with four female and two male volunteer subjects, all of whom believed that success in the experimental situation might be possible. These were designated "receivers." The senders were either other subjects or the experimenters. We decided beforehand to run one or two sessions of 36 trials each with each subject in this selection procedure, and to do a more extensive study with any subject

whose results were positive.

A Grass PS-2 photostimulator placed about 1 meter in front of the sender was used to present flash trains of 10 sec duration. The receiver's EEG activity from the occipital region (O_2), referenced to linked mastoids, was amplified with a Grass 5P-1 preamplifier and associated driver amplifier with a bandpass of 1 to 120 Hz. The EEG data were recorded on magnetic tape with an Ampex SP 300 recorder.

On each trial, a tone burst of fixed frequency was presented to both sender and receiver, and was followed in one second by either a ten-second train of flashes or a null flash interval presented to the sender. Thirty-six such trials were given in an experimental session, consisting of 12 null trials--i.e., no flashes following the tone--12 trials of flashes at 6 fps, and 12 trials of flashes at 16 fps, all randomly intermixed. Each of the trials generated an 11-second EEG epoch. The last 4 seconds of the epoch was selected for analysis to minimize the desynchronizing action of the warning cue. This 4-second segment was subjected to Fourier analysis on a LINC 8 computer.

Spectrum analyses gave no evidence of EEG driving in any receiver, although in control runs the receivers did exhibit driving when physically stimulated with the flashes. However, of the six subjects studied initially, one subject (H.H.) showed a consistent alpha blocking effect. We therefore undertook further study with this subject.

Data from 7 sets of 36 trials each were collected from this subject on three separate days. This comprises all the data collected to date with this subject under the test conditions described above. The alpha

band was identified from average spectra, then scores of average power and peak power were obtained from individual trials and subjected to statistical analysis.

Of our six subjects, H.H. had by far the most monochromatic EEG spectrum. Figure 3 shows an overlay of the three averaged spectra from one of this subject's 36-trial runs, displaying changes in her alpha activity for the three stimulus conditions.

Mean values for the average power and peak power for each of the seven experimental sets were given in Table 3. The power measures were less in the 16 fps case than in the 0 fps in all seven peak power measures and in six out of seven average power measures.

Siegel's two-tailed t approximation to the nonparametric randomization test¹⁰ was applied to the data from all sets, which included two sessions in which the sender was removed. Average power on trials associated with the occurrence of 16 fps was significantly less than when there were no flashes ($t = 2.09$, $df = 118$, $p < .04$). The second measure, peak power, was also significantly less in the 16 fps conditions than in the null condition ($t = 2.16$, $df = 118$, $p < .03$). The average response in the 6 fps condition was in the same direction as that associated with 16 fps, but the effect was not statistically significant.

Spectrum analyses of control recordings made from saline with 12K ohms resistance in place of the subject with and without the addition of a 10 Hz, 50 μ V test signal applied to the saline solution, revealed no indications of flash frequencies, nor perturbations of the 10 Hz signal. These controls suggest that the results were not due to system artifacts.

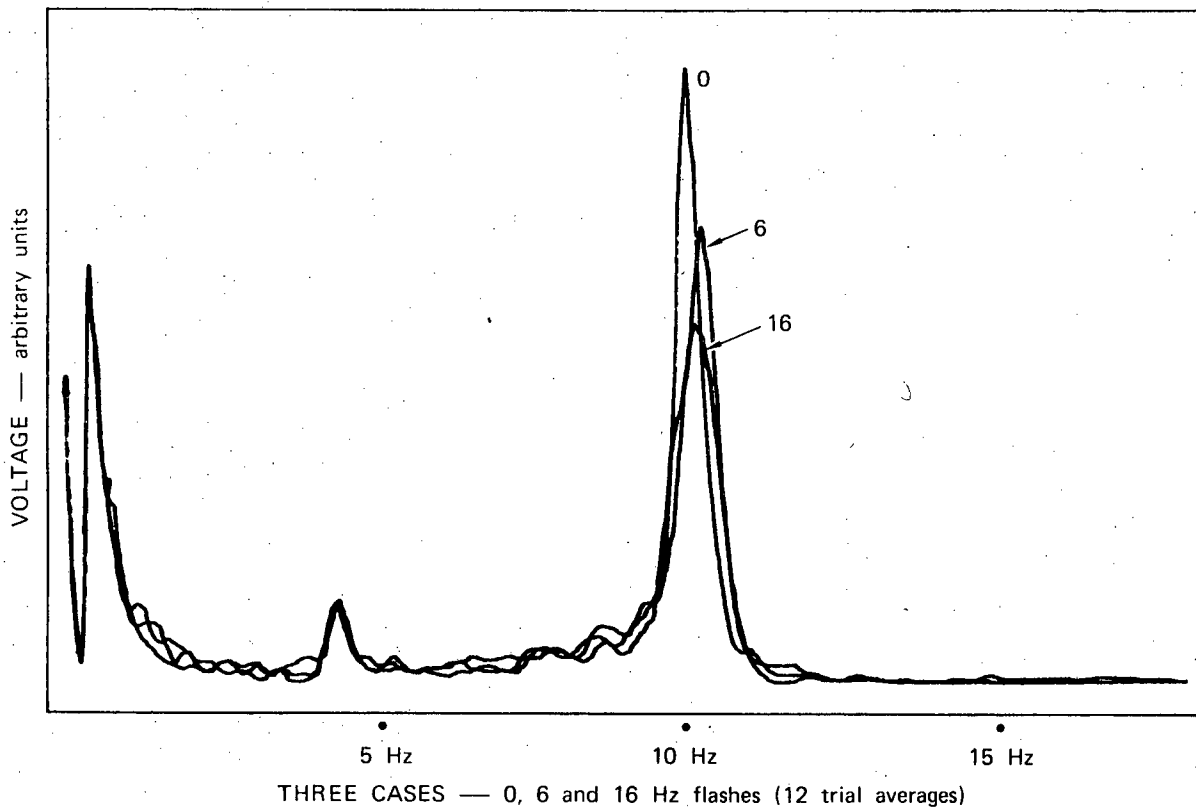


FIGURE 3 OCCIPITAL EEG FREQUENCY SPECTRA, 0 TO 20 Hz, OF ONE SUBJECT (H.H.) ACTING AS RECEIVER SHOWING AMPLITUDE CHANGES IN THE 9-11 Hz BAND AS A FUNCTION OF STROBE FREQUENCY

Flash Frequency Sender	Average Power			Peak Power		
	0	6	16	0	6	16
J.L.	94.8	84.1	76.8	357.7	329.2	289.6
R.T.	41.3	45.5	37.0	160.7	161.0	125.0
No Sender (Subject informed)	25.1	35.7	28.2	87.5	95.7	81.7
J.L.	54.2	55.3	44.8	191.4	170.5	149.3
J.L.	56.8	50.9	32.8	240.6	178.0	104.6
R.T.	39.8	24.9	30.3	145.2	74.2	122.1
No Sender (Subject not informed)	86.0	53.0	52.1	318.1	180.6	202.3
Averages	56.8	49.9	43.1	214.5	169.8	153.5
		-12%	-24% (P<.04)		-21%	-28% (P<.03)

TABLE 3. EEG data for H.H. showing average power and peak power in the 9 - 11 Hz band, as a function of flash frequency and sender. Each table entry is an average over 12 trials.

Further tests also gave no evidence of radio frequency energy associated with the stimulus.

Subjects were asked to indicate their conscious assessment for each trial as to which stimulus was generated. They made their guesses known to the experimenter via one-way telegraphic communication. An analysis of these guesses has shown them to be at chance, indicating the absence of any supraliminal cueing.

Thus, we note that in this pilot study, one of six subjects showed significant EEG changes associated with the presence of remote stimuli under conditions of sensory shielding. This form of noncognitive arousal evidenced by alpha blocking has also been observed by Tart (1963), using a small electric shock stimulus applied to himself as sender in a similar experiment.⁷ We hypothesize that the protocol described here may prove to be useful as a screening procedure for latent remote perceptual ability in the general population.

DISCUSSION

We have presented evidence for the existence of a biological information channel whose characteristics appear to fall outside the range of known perceptual modalities. The precise nature of the channel or channels is as yet undefined, but may involve either direct perception of hidden information content, perception of mental images of persons knowledgeable of target information, precognition, or some combination of these or other information channels.

We have worked with three individuals, two of whom are reported on in detail here, whose remote perceptual abilities were sufficiently developed that they were able to describe both pictorial and geographical material blocked from ordinary perception.

In addition to experiments which centered on subjects' conscious perceptions, we have also conducted EEG experiments in which we have found statistically significant evidence of direct physiological indications of nonconscious perception of remote stimuli. The observation that a nonconscious link with physiological correlates can exist between separated individuals is one that merits considerable study.

From these experiments we conclude that

- A channel exists whereby information about a remote location can be obtained by means of an as yet unidentified perceptual modality.
- As with all biological systems, the information channel appears to be imperfect, containing noise along with the signal.
- While a quantitative signal-to-noise ratio in the information-theoretical sense cannot as yet be determined, the results of our experiments indicate that the functioning is at the level of useful information transfer.

It may be that remote perceptual ability is widely distributed in the general population, but because the perception is generally below an individual's level of awareness, it is repressed or not noticed. For example, two of our subjects (H.H. and P.P.) had not considered themselves to have unusual perceptual ability before their participation in these

experiments. We conjecture that it is partially the prevailing philosophical attitudes of the times in which we live that prevent such ability as may exist from surfacing to a greater extent. Our shared cultural constraints deny permission for the demonstration of such abilities.

With regard to the methodology itself, our observation of the phenomena leads us to conclude that experiments in the area of so-called paranormal phenomena can be scientifically conducted. The results presented here offer a basis from which departures as a function of other observables can be studied. Our goal for future experimentation is the investigation of the physical and psychological laws underlying these phenomena, rather than just the addition of further demonstrations of the statistical appearance of paranormal phenomena in the laboratory.

ACKNOWLEDGMENTS

This research was sponsored by The Foundation for Parasensory Investigation, New York City. We wish to thank its president, Mrs. Judith Skutch, and their representative, Dr. Edgar D. Mitchell of the Institute of Noetic Sciences--as well as our SRI associates, Mr. Bonnar Cox, Mr. Earle Jones, and Dr. Dean Brown--for their support and encouragement throughout this work. We also wish to acknowledge Dr. Wilbur Franklin of Kent State University for his contribution, especially in the early phases of this research. Finally, we acknowledge the many constructive suggestions provided us through conversations with Mrs. Jean Mayo, Dr. Charles Tart, University of California, and Dr. Robert Ornstein and Dr. David Galin of the Langley Porter Neuropsychiatric Institute.

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APPENDIX

Following is the unedited transcript of remote viewing Experiment 7, where the target was an Arts and Crafts Garden Plaza. This is a large plaza resembling a California mission. There are craft shops around the perimeter of the plaza. In the plaza area are many gardens, flowers, ceramic pots, fountains, and paths. Overhead are vines on arbors of redwood. Price's description is accurate in almost every detail and he omitted little of importance.

1:40 THIS IS A REMOTE VIEWING EXPERIMENT WITH PAT PRICE, DEAN BROWN, AND RUSSELL TARG IN THE SHIELDED ROOM IN BUILDING 30. THE TRAVELLERS TO REMOTE LOCATION ARE BART COX, HAL PUTHOFF, JUDY SCHMICKLEY AND PHYLLIS COLE. WE EXPECT THE TRAVELLERS TO BE AT THEIR PLACE IN ABOUT 10 MINUTES.

IT'S 1:58. OUR TRAVELLERS SHOULD BE NEAR TO ARRIVING AT THE PLACE.

OK. Why don't I start scanning by quadrant using this as a center point. 12-3, 6-9.....

I'll go from 12-3 first. Seems to me right now that I'm picking them up in the 12-3 quadrant, but I'll go on in the rest and look. I haven't actually identified them, I just feel that they're there.

Nope, I don't get them there.

Now I'll go from 6-9. While I was looking at 6-9, it looks to me like I'm looking at an iris, a flower of some kind. I'll come back and identify that later. Just wanted to get it down as having a flash of an iris flower-purplish. I'll continue to scan that quadrant. Nope, don't get them there.

I'll go from 9-12. Don't get them there.

I'll go back 12-3. Yeah, I get them in that quadrant.

Now I'll see if I can locate them physically and identify the area.

I'm looking at something that looks like an arbor, trellis-work arbor. Seems to be cool, shaded. Doesn't seem to me that they're out in the direct sunlight. Be more like there's lots of trees, in an arbor area.

The arbor appears to be made of wood, possibly redwood.

They're just...looks like it's a dirt path, quite wide, I'd say maybe 12 feet. I can see some grass. Looks like possibly a fountain of some kind.

Yeah, I can see Bart in his red shirt and what looks like kind of a gray paisley tie - I didn't really look at that when he was down there. The red shirt, I did. Looks like he has on a gray paisley tie.

It appears they're walking along quite leisurely.

Looks like there's some red brick laid into a walkway. They don't seem to be on it, they just seem to pass over that.

I get - it seems like a little ways away from them there are quite a few people but right where they're walking it doesn't appear to be many right in there.

This is an arbor area. Back of that arbor, back here I'd say 50 feet from that arbor to here, seems to be a lot of people in here. They were walking along here on what looks like about a 12 foot dirt path.

WHAT KIND OF PLACE IS THE ARBOR IN? IS IT A FIELD OUT IN THE OPEN?

No, I want to say park, but it doesn't exactly feel like a park. If you took a - the feeling I'm getting - it's not the specific place - but like the Town and Country Market. That type of an atmosphere, with quite a section of it into a little outdoor park, but basically I'm getting a very strong feeling of flowers.

Like the first one I saw was an iris.

TELL ME ABOUT THE TOWN AND COUNTRY ASPECT. IN WHAT WAY DOES IT REMIND YOU OF TOWN AND COUNTRY.

The buildings, not right where they're at, but very close to them have that same kind of architecture and look. The parking lot looks similar, grand, sweeping, not cluttered, it's more expansive area. You take a place like Sears Mall - it seems cluttered. This seems more leisurely paced.

People are moving about slower - there's not the hustle and bustle - more or less meandering.

TOWN AND COUNTRY MEANS TO ME A COVERED WALKWAY.

Yeah, the back of them it seems to be - where they are seems to be a very large arbor like vines growing over it and things, and there possibly - I haven't looked in there yet to see if there's any displays like pottery and things - I get the feeling that there is right close to it.

ALSO, OUTDOORS?

Yeah, it seems like fairly high shade trees - kinda bordering. The center part doesn't seem to have it - this part in here. The trees seem to be way up in here along like this over here. This seems to be shaded in here, but it's sunny out here.

I just saw something that looked like a windmill - not a farm type windmill - a Dutch-type windmill. It's smaller - it's not a huge thing, but I'm getting a definite feeling that it's like a windmill.

The area in there feels damp - not wet - they're not walking in water, but it's very moist.

The temperature in there...it's secluded. Feels very comfortable. A little on the shady side.

WHAT DO YOU FIND AS THE BOUNDARIES OF THE PLACE THEY'RE AT?

Outside of this little park-like affair that they seem to be in, there's a street. One side of it seems to be a kind of a residential...the other seems to be a little bit more heavily travelled.

Let me pick up a little bit more.

I can see one very large oak tree - exceptionally large.

Right now Bart is trying to point something out that is basically the significance of the whole place. It's like that key thing, well, if you'd have mentioned a salt pile I'd have blown my lid. Well, this has a significance that's just about comparable to that. I'm screening it out.

Thing that just flashed in was kind of like a stadium structure - like looking down into a stadium.

Just when I did that I - I'll have to reorient to make sure I'm looking in the same area now.

Seems like they're - I still get them in the same quadrant I had them in originally. Seems like some decorative brick walls.

THE QUADRANT YOU HAD THEM IN IS BASICALLY THE NORTHEAST QUADRANT?

Yeah, I got them out about this far - it's not far away - I'd say in this direction over here about - feels like a mile to a mile and a half. They don't feel as far away, and I'm not looking at the time continuum. They actually don't feel as far away. I'd say that it is about - not half the distance they were to the marina, and it seems to be on a line just about in that direction but just a hair more - rather than a direct line from here to the marina - they seem to be just slightly more to the left of that line.

I was looking back to where he had the car parked and it seems like it's on asphalt then a curb in front, and then it's like a dirt walkway and then a sidewalk. But I can see eucalyptus buds on the ground and some branches of eucalyptus there.

One of the most dominant things to me in the way of unusualness is the size of the oak tree that I'm looking at. Looks like an arboretum, or I get the definite feeling of flowers.

Almost get the feeling like it's commercial flowers.

In fact, the most predominant feeling that I'm getting right now is flowers.

Don't know why iris particularly.

There's something about the windmill that I was going to look at. Wasn't that what you were....?

Be like one you'd almost see in a miniature golfcourse...the windmill.

Has all the construction and detail but not as large - it's fairly small. Seems to be made out of dark redwood and it's kind of aged.

I'm going to try to look more directly to them. Let's see, there's Bart and Hal, and behind Bart is Judy and behind Hal is Phyllis, kinda staggered there.

Looks like a possible small pool of water - like a garden pond.

Looks like a little bridge.

I was trying to get the feeling of what type of an area it was.

Let me elevate a bit. I'm looking at much too small an area. There's some greater significance there that I feel I'm definitely not looking at - let's jack up a bit...maybe 500 feet.

I see a lot of trees.

I see Judy's red hair and her brown eyes and her flashing teeth - she has beautiful teeth. Hadn't really looked at them before.

Phyllis and her are talking about something and Hal and Bart are talking about something and he's pointing at something and it seems to me that he's pointing over to what I'd call a windmill or something that looks like a windmill.

The water I see looks more like a pool or a pond than it does - you know, it's not big like a lake - not very large, but it looks like a definite pool.

Right where they're at I don't hear too much traffic noise - it seems to be fairly quiet.

Looks like a little wooden walkway.

Feels a little early, but it kinda seems like they're retracing their steps heading back toward the car, but they're still moving quite leisurely.

IF YOU LOOK DOWN ON THE PLACE FROM ABOVE, CAN YOU GET ANY FEELING FOR THE - IS THERE ANY OVERALL LAYOUT OR PLAN?

When I went up I could see trees and stuff, and I kind of got the feeling of like in a corner of a golf course, you know - where there would be a lot of trees overhanging the green and some things in there - that seemed to be out of context, but when I elevated, that's what I got. It kind of looked like an overlap to me, so I didn't talk about it, but I will.

When I elevated it kind of felt like it was right over the corner of a golf course of some kind, with a street running down one side, and they are fairly close to that.

In fact, the bricked area that I looked at or like a patio thing kinda looks like a walkway. Seems like there's small building - small meaning not tall - looks like a single story building. Looks like it has a flat roof - slightly pitched. Looks like 4 x 4 poles supporting it - has a

canopy out over it. They're painted white, place looks like very possible light yellow or cream color.

They're walking not too far from that. Still seems to me that they're on a dirt pathway.

In the area that they're in now I get flowers again - where before they kinda fell out of the flowers.

Looks like maybe 80-100 yards from where they are - looks like 2 guys on a motor scooter. They can see them.

WHAT WOULD YOU SAY IS THE INTEREST TO THIS PLACE? WHAT'S SPECIAL ABOUT THIS PLACE?

It seems to be a kind of a recreational, relaxed...not energetic - looks more relaxed. I'd say it's kind of combination recreational and relaxation area that I'm getting out of it.

That would be the general character of it.

Two aspects - one is aesthetics and the other is a kind of a mild recreational area.

There seem to be some unique features - I don't have it totally into context as yet. There's a number of things that I've rejected - looked at and rejected saying.

First, I got the impression that it was kind of like a miniature golf course - I rejected that. Merely from saying it - I didn't reject the principle - I just rejected saying it.

Then I kind of got the idea of a standard golf course - I also rejected that on the same principle, so I'm just trying to describe the terrain.

Seems expansive - doesn't seem cluttered.

Just got a flash of something that reminded me of the gyroscope - gimbals on the gyroscope.

Drinking fountain - looks like it's made out of kinda like field stone built up into a fountain...bowl.

I'm going to elevate again and go through a search quadrant again.

I still get them in that general location, so that seems to set all right.

Distance - maybe a mile, mile and a half. Doesn't seem much farther - seems fairly close.

The area has an awful lot of grass, lot of trees - looks like dirt walkways, well trimmed. I can see the arbor, and the arbor could be a place to sit and be out of the direct sun.

May be a few little tables and benches and chairs in there.

That outlooks over quite a grassy area - there are quite a few trees. I see basically an oak.

Right after they got out of the car I could see some eucalyptus buds and branches on the ground, and it seemed like the trees were there.

Looked like they got out of the car, stepped upon a curb, dirt parkway, a sidewalk, and then they went into this area.

I get the feeling this windmill type thing - that all seems fairly real.

The feeling is still that it's relaxing and has some recreational aspects - I just haven't put it totally together as to giving it a name.

Right now I get a very strong impression of flowers again.

It seems like right now they're back to right where I originally spotted them only they're going in the opposite direction - like they're moving toward the direction they originally went.

While they were there they walked on several pathways - walked out quite a ways, then swung over and come over and worked around and looked at...

One peculiar thing I might note - so far I haven't sensed, seen nor heard an airplane.

Cars seem quite distant - outside of that little motor scooter affair with the two guys on it. That's about the only vehicular traffic I've seen - except out in the parking lot.

It seems like to me that they've got most of their attention off what they were looking at and they've got their attention more on the car now.

I want to look and find out what the significant thing was that Bart was talking about.

There's something quite unusual there and I ... Damned if I can pick it up.

WAS HAL DOING ANYTHING BESIDES WALKING ALONG - WAS THERE ANY ACTIVITY FOR HAL TO DO?

Most of the time I was looking at Hal, he was kind of listening to Bart and Bart was pointing out a number of things.

Part of the time Bart was walking with Hal; part of the time he was back by Judy.

When I first saw them, it was Bart in the front on the left side, Hal was on his right, Judy was slightly behind - almost between Bart and Hal but behind, and Phyllis to her right.

They wandered around but the first time I picked up - they were that way.

When they were coming back, they just about reversed. Bart would be in front. When they were coming back, it looked like Bart was in front with Phyllis, and Judy was walking more behind Bart and Hal on her right when they were coming back out of there.

They're actually at the car.

2:30 SHALL WE GO DOWNSTAIRS AND SEE HOW THEY'RE DOING?