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DIRECT PERCEPTION OF REMOTE GEOGRAPHICAL LOCATIONS

by

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ABSTRACT

For the past five years we have been investigating aspects of human perception that appear to fall outside the range of well-understood perceptual/processing capabilities. Of particular interest is a human information-accessing capability that we call "remote sensing." This phenomenon pertains to the ability of certain individuals to access and describe, by means of mental processes, information sources blocked from ordinary perception (for example by distance or shielding) and believed to be secure against such access. In particular, the phenomenon we have investigated most extensively is the ability of a subject to view remote geographical locations up to several thousand km distant from his physical location given only a known person on whom to target.[1-3] We have recently carried out coast-to-coast experiments using a computer network to interface with individuals whose remote perceptual abilities have been developed sufficiently to allow them to describe--often in great detail--geographical or technical material such as buildings, roads, and natural formations.

Our accumulated data indicate that both specially selected and unselected persons can be assisted in developing remote perceptual abilities up to a level of useful information transfer. Further, the extent of physical distance separating the subject from the target site up to transcontinental distances does not appear to significantly affect the accuracy of the perception.

INTRODUCTION

In over 70 laboratory experiments that now include work with more than a dozen subjects, we have investigated an often-reported human perceptual ability that has heretofore not been widely investigated in the laboratory. This ability, brought to our attention by a subject, Mr. Ingo Swann, we term "remote sensing." It is an ability by which human subjects perceive, and describe by word and drawing, distant scenes and activities blocked from ordinary perception. In these experiments, subjects have been able to describe with equal accuracy scenes at both local sites (that is, within a few miles) and those at transcontinental distances.

As observed in the laboratory, the basic phenomenon appears to cover a range of subjective experiences variously referred to in the literature as autoscopy (in the medical literature); exteriorization or disassociation (psychological literature); simple clairvoyance, traveling clairvoyance, or out-of-body experience (parapsychological literature); or astral projection (occult literature). We choose the term "remote sensing" as a neutral descriptive term free from prior associations and bias as to mechanisms.

The need for a supportive setting to overcome prevailing societal prejudices against such remote sensing has been provided within the confines of the Electronics and Bioengineering Laboratory and the Radio Physics Laboratory at Stanford Research Institute (SRI). Here, throughout our research spanning a five-year period, we have worked with new and untrained subjects so as to avoid reliance on the availability of a very limited number of special subjects. Remote perceptual abilities in several individuals have now been developed sufficiently to allow them to describe--often in considerable detail--geographical or technical material such as buildings, roads, and real-time activities.

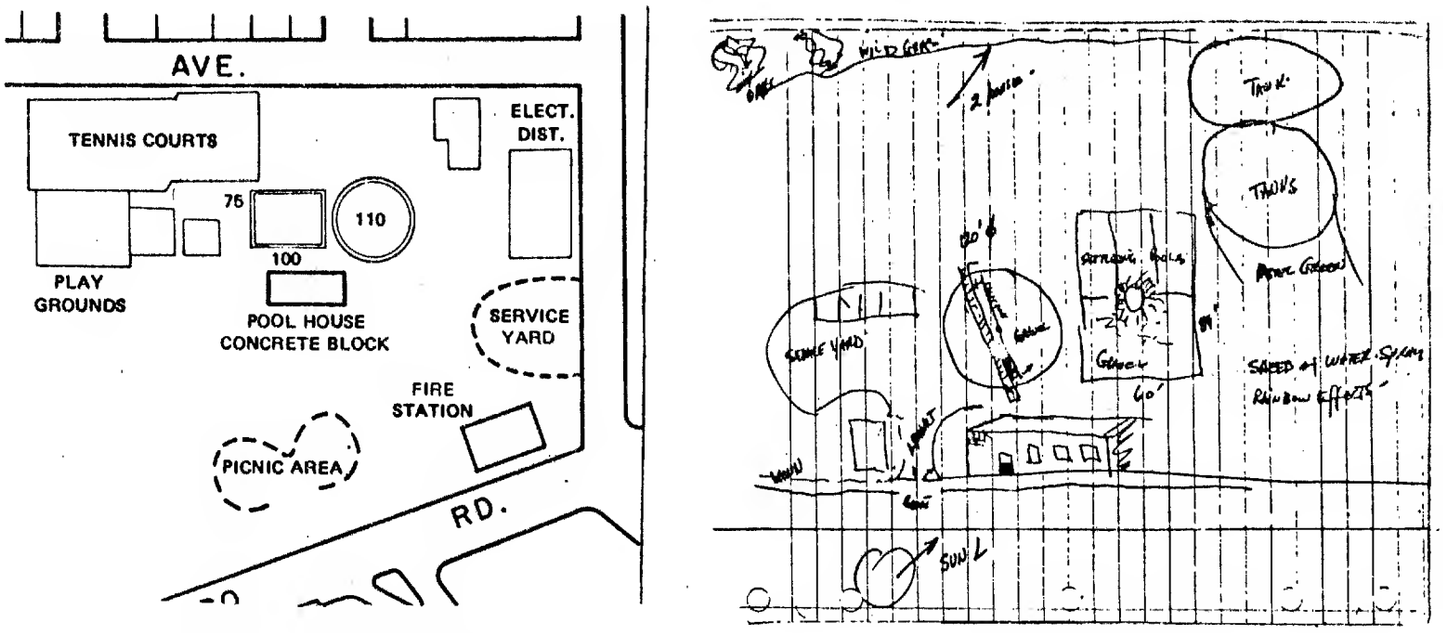
Since the initial publication of our investigations of this remarkable phenomenon,[1,2] four successful replication experiments have been performed in other laboratories across the country.[4-7] In addition, we have learned through private communications of several unpublished studies of other successful experiments in paranormal functioning of this type.

In this paper we describe the experimental protocol used to carry out the research and the formal judging procedure used to quantify the results. In addition, we detail recent experiments in coast-to-coast remote viewing that have yielded results similar to those obtained in the initial experiments using relatively local target sites. Finally, as a step toward achieving our research aim of using the experimental data base to deduce relevant physical principles and laws governing paranormal or psi functioning, we examine some physical models potentially applicable to remote perception.

EXPERIMENTAL APPROACH

Description of the Protocol (Local Targets)

The general protocol is to closet a subject with an experimenter at SRI and at a prearranged time to obtain from the subject a description of an undisclosed, remote site being visited by a target team. In each of the experiments, there is an SRI experimenter on the target demarcation team at the remote location



(a) City map of target location

(b) Drawing by Price

FIGURE 1 SWIMMING POOL COMPLEX AS REMOTE VIEWING TARGET

that is chosen in a double-blind fashion outlined below.

An outbound experimenter is assigned a target location by an independent experimenter who has generated a list of targets located within a 30-minute driving time from SRI, and who accesses this list by a randomization procedure. The target pool consists of more than 100 target locations chosen from a target-rich environment. The target location selected is kept blind to both the subject and experimenter closeted at SRI.

In detail: To begin the experiment, a subject is closeted with an experimenter at SRI to wait 30 minutes before beginning a narrative description of an undisclosed remote location that will be the target for the experiment. A second experimenter, accompanied by other members of a target demarcation team, then obtains sealed traveling orders from a monitor who has previously prepared and randomized a set of such orders. After leaving SRI by automobile, the target demarcation team opens the traveling orders and proceeds directly to the target without any communication with the subject or experimenter remaining at SRI. The experimenter remaining with the subject in the SRI laboratory is kept ignorant of both the particular target and the target pool so as to eliminate the possibility of cueing (overt or subliminal) and to allow him freedom in questioning the subject for clarification of his descriptions. The target demarcation team remains at the target site for a prearranged 15-minute period following the 30 minutes alloted for travel. During the observation period, the experimenter in the lab tape-records the subject's remote viewing impressions of the target site and collects ar drawings made by the subject. After the targe demarcation team returns to SRI, the impressic obtained from the subject are compared with th actual observations of the team. Finally, following the experiment, the subject is taker to the site so that he may obtain direct feedback.

Initial Experimental Series with a Subject Experienced in Remote Viewing

Our first subject in a formal series of experiments to investigate the remote viewing function was Mr. Pat Price, a former Californ police commissioner and city councilman, who participated in nine experiments. Mr. Price came to our experiments with a reported histo of spontaneous remote viewing experiences. I general, Price's ability in our experiments t describe correctly buildings, docks, roads, gardens, and the like, including structural materials, color, ambience, and activity--som times in great detail--indicated the function of a remote perceptual ability. A Hoover Tow target, for example, was recognized and correctly named. Nonetheless, Price's descripti generally contained inaccuracies as well as c rect statements. A typical example is indica by his drawing shown in Figure 1 in which he correctly described a park-like area containi two pools of water: one rectangular, 60 X 89 ft (actual dimensions 75 X 100 ft); the other circular, diameter 120 ft (actual diameter 11 ft). As can be seen from his drawing, he als included some elements, such as the tanks sho in the upper right, that are not present at t

target site. We also note an apparent left-right reversal, often observed in paranormal perception experiments.

Further, he incorrectly indicated the function of the site as water purification rather than recreational swimming. We often observe essentially correct descriptions of basic elements and patterns coupled with incomplete or erroneous analysis of function. This theme emerged as a thread which continued throughout our work and eventually led to a breakthrough with regard to an understanding of the interrelationship between paranormal perception and cerebral functioning, namely: that paranormal functioning may involve specialization characteristic of the brain's right hemisphere, which predominates in spatial and other holistic processing, in contrast to the left hemisphere which predominates in verbal and other analytical functioning.[8-10]

Judging of Results

To obtain a numerical evaluation of the accuracy of the remote viewing experiment, the experimental results were subjected to independent judging on a blind basis by an SRI research analyst not otherwise associated with the research. Price's response packets, which contained the nine typed, unedited transcripts of the tape-recorded narratives and associated drawings, were unlabeled and presented in random order. Working alone, the analyst visited each target location in turn and in a blind fashion rated Price's descriptions on a scale 1 to 9 (best to worst match). The statistic of interest is the sum of ranks assigned to the target-associated transcripts, lower values indicating better matches. For nine targets, the sum of ranks could range from nine (for perfect matching) to eighty-one. The technique for calculating the probability that a given sum of ranks s or less will occur by chance is given in Reference 2. The results of the judging, shown in Table 1, included seven direct hits out of the nine. The overall result was statistically significant at $p = 2.9 \times 10^{-5}$. Table 1 also indicates the various types of targets used in this series. Further, in experiments 3, 4, and 6-9, the subject was secured in a double-walled copper screen Faraday cage, which provides 120-dB attenuation for plane-wave radio-frequency radiation over the range of 15 kHz to 1 GHz. The results of rank-order judging indicate that the use of such shielding does not prevent high-quality descriptions from being obtained.

Replication Series with a Subject Inexperienced in Remote Viewing

Having completed this initial series of experiments with Price, we concluded that

Table 1

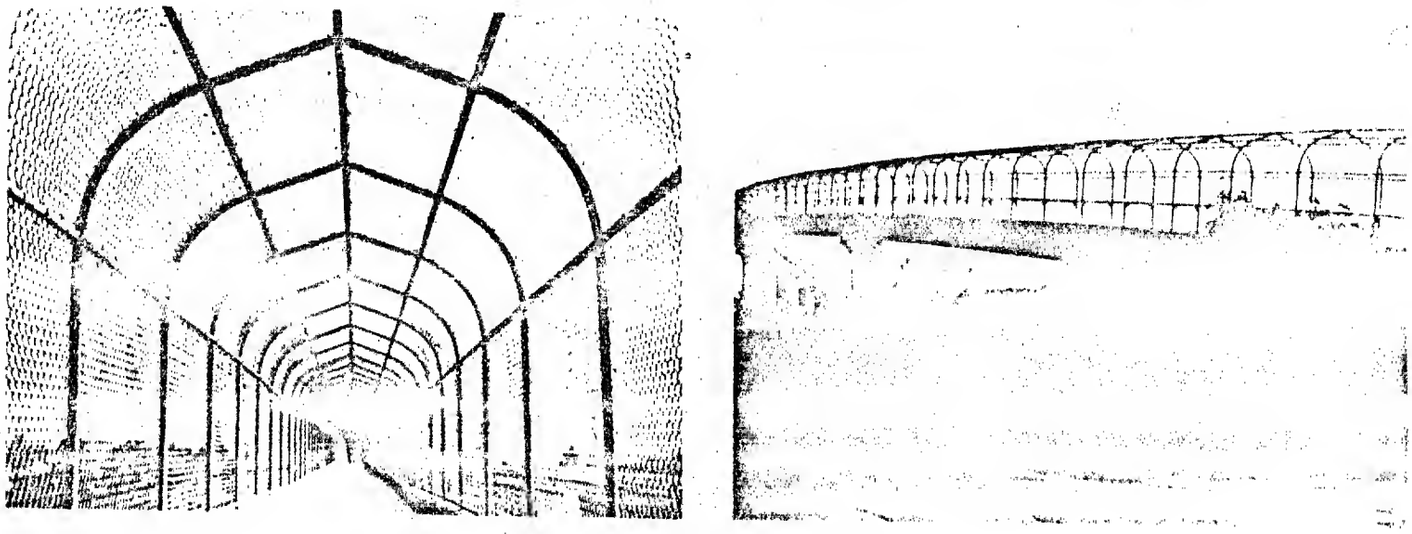
DISTRIBUTION OF RANKINGS ASSIGNED TO TRANSCRIPTS ASSOCIATED WITH EACH TARGET LOCATION FOR EXPERIENCED SUBJECT PRICE

Target Location	Distance (km)	Rank o Associat Transcri
Hoover Tower, Stanford	3.4	1
Baylands Nature Preserve, Palo Alto	6.4	1
Radio telescope, Portola Valley	6.4	1
Marina, Redwood City	6.8	1
Bridge toll plaza, Fremont	14.5	6
Drive-in theatre, Palo Alto	5.1	1
Arts and Crafts Plaza, Menlo Park	1.9	1
Catholic Church, Portola Valley	8.5	3
Swimming pool complex, Palo Alto	3.4	1
Total sum of ranks		16
		(p=2.9X10

remote viewing was both a real and a robust phenomenon. Our next task was to try to find out how widely distributed the ability was in the general population. We began with the following replication experiment.

The subject for this experiment was Mrs. Hella Hammid, a gifted professional photographer. She was selected for this series on th basis of her good performance as a percipient in an earlier EEG experiment designed to meas physiological response to remote strobelight stimuli, a hypothesized screening procedure f remote viewing. Outside of that interaction, she had had no previous experience with appar paranormal functioning.

At the time we began working with Mrs. Hammid, she had no strong feelings about the likelihood of her ability to succeed in t task. This was in contrast to both Ingo Swan who suggested these experiments and who had come to our laboratory fresh from an apparent successful series of similar experiments with Dr. Karlis Osis at the American Society for Psychical Research (ASPR) in New York[11] and



Pedestrian Overpass Target

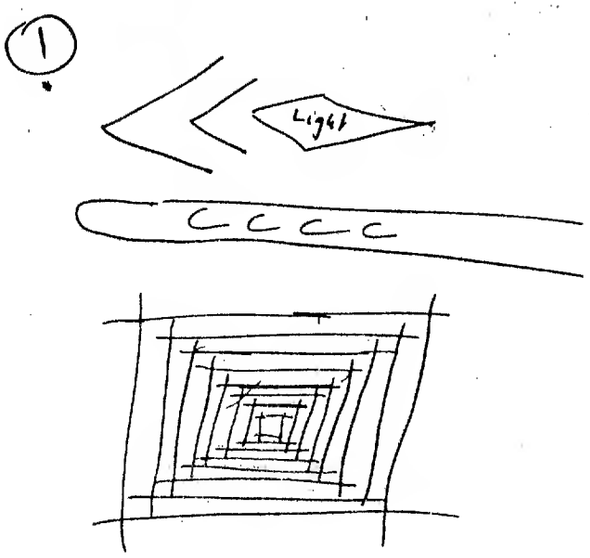


FIGURE 2 SUBJECT HAMMID DRAWING, DESCRIBED AS "SOME KIND OF DIAGONAL TROUGH UP IN THE AIR"

Pat Price, the first subject in our formal series of experiments, who felt that he used his remote viewing ability in his everyday life.

In working with an inexperienced subject, we must take into account the fact that many people are influenced to a large degree by their environment and by public scrutiny when it comes to activities generally considered to be impossible. A reluctance to cope with negative feedback from society often inhibits individuals from exploring a potential for paranormal perception. Therefore, in addition to maintaining scientific rigor, one of our primary tasks as researchers is to provide an environment that lends protective support for a subject to pursue such exploration. With a new subject, we also stress the nonuniqueness of the ability because our experience indicates that paranormal functioning is a latent ability that all subjects can demonstrate to some degree.

We observed in working with Price that i remote viewing structure and form tended to b correct even when interpretation was incorrec We therefore found it an advantage that Mrs. Hammid's artistic background enabled her to draw and describe visual images that she could not identify in any cognitive or analyt sense. When the target demarcation team went to a pedestrian overpass target location, for example, the subject said that she saw "a kin of diagonal trough up in the air," which she indicated in the upper part of her drawing in Figure 2. She further explained that "If you stand where they are standing you will see something like this," indicating the nested squares at the bottom of Figure 2. As can be seen from the photograph of the target locati as shown in Figure 2, a judge standing where indicated would have a view closely resemblin what she had drawn. We emphasize, however, t judges did not have access to our photographs

the site, used here for illustrative purposes only; rather, they proceeded to each of the target locations according to a list.

As in the original series with Price, the results of this nine-experiment series were submitted for independent judging on a blind basis by an SRI research analyst not otherwise associated with the research. According to the judging procedure previously outlined in the section, "Judging of Results," the judge ranked each target location on a scale of 1 to 9 (best to worst match) on the basis of the narratives and drawings submitted by the subject. The sum of ranks assigned to the target-associated transcripts was statistically significant at $p = 1.8 \times 10^{-6}$. This included five direct hits and four second ranks as shown in Table 2 along with the locations of the nine experiments in this set.

Table 2

DISTRIBUTION OF RANKINGS ASSIGNED TO TRANSCRIPTS ASSOCIATED WITH EACH TARGET LOCATION FOR LEARNER SUBJECT HAMMID

Target Location	Distance (km)	Rank of Associated Transcript
Methodist Church, Palo Alto	1.9	1
Ness Auditorium, Menlo Park	0.2	1
Merry-go-round, Palo Alto	3.4	1
Parking garage, Mountain View	8.1	2
SRI International Courtyard, Menlo Park	0.2	1
Bicycle shed, Menlo Park	0.1	2
Railroad trestle bridge, Palo Alto	1.3	2
Pumpkin patch, Menlo Park	1.3	1
Pedestrian overpass, Palo Alto	5.0	2
Total sum of ranks		13 ($p=1.8\times10^{-6}$)

In comparing the results of the Hammid and Price experiments, we observe a difference in the subjects' styles that evidently affected the pattern of results. The descriptions from Price were usually more detailed than those of Hammid and thus led to more first-place matches--that is, direct hits in the rank order judging. At the same time, his striving for detail produced erroneous analytical interpretations that resulted in two distinct mismatches. On the other hand, the more restrained narratives of Mrs. Hammid resulted in fewer first-place matches, but none fell below second place. Such a comparison of results does not indicate that one subject necessarily has more paranormal perception than the other, but rather shows the effects in this type of judging procedure due a difference in tyle.

Experiments with Unselected Subjects

After more than a year of following the experimental protocol described above and observing that even inexperienced subjects obtained results better than expected, we began series of experiments to explore further whether individuals other than so-called "psychics" could demonstrate the remote viewing ability. To test this idea, we initiated an extensive series of experiments using unselected subjects and local targets in the Bay Area. We had no particular reason to believe that these additional subjects possessed paranormal perceptual ability.

These experiments served a twofold purpose. First they provided an opportunity to obtain data that indicate the level of proficiency that can be expected from unselected volunteers. Second, they served to dispel concerns about the possibility of deception. For example, many scientists from the government and elsewhere have visited our laboratory to decide whether their particular departments should be concerned with paranormal research. Their requests generally focus on a desire to "see something psychic," and we had been willing to demonstrate the remote viewing protocol with one of our subjects. However, when an individual observes a successful experiment demonstrated with another person as subject, inevitably occurs to him that perhaps chicane is somehow involved. We have found that the most effective way to settle this issue is to have the doubter become the subject, thereby providing him with personal experience as a basis for evaluating our experimental protocol and reported results. Consequently, we have discontinued demonstration experiments. Instead, we ask the visitor to become a subject so that he can personally evaluate what he experiences and sees. After the experiment, he is then taken to the target site where he can determine firsthand if it corresponds to what he has visualized during the experiment. We have found that the actual experience as a subject of successful remote viewing is by far more instructive than observation of what someone else has done. The following results

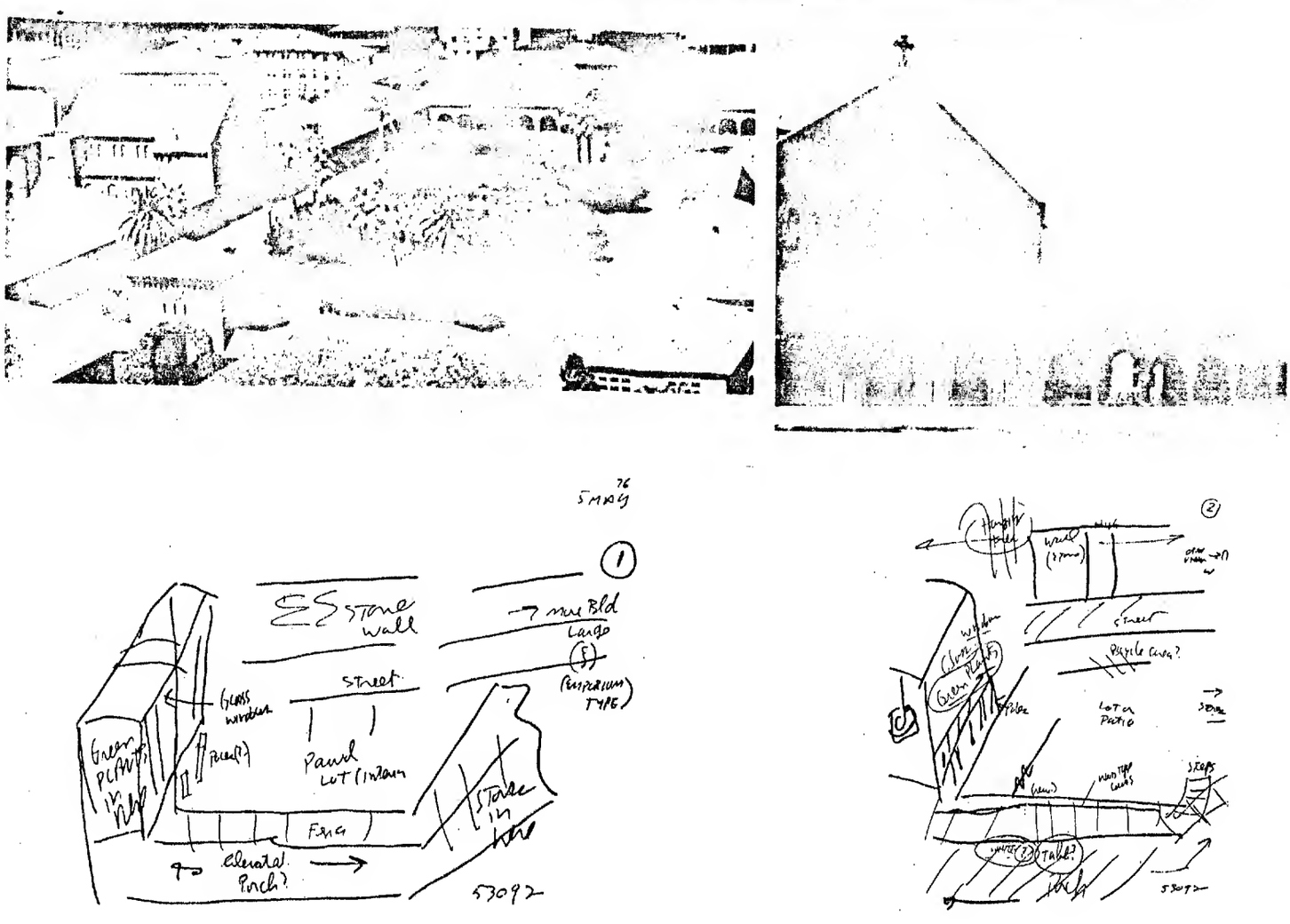


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FIGURE 3 STANFORD UNIVERSITY, INNER QUADRANGLE — TARGET; SKETCHES PRODUCED BY SUBJECT INEXPERIENCED AT REMOTE VIEWING

obtained with the last two visitors who agreed to act as subjects provide specific examples.

The first was an electrical engineer who was interested in evaluating our work. We explained to him that the only demonstration we were prepared to offer was the experience that he himself might have in being a remote viewing subject.

His first target location (determined by the standard random protocol) turned out to be a locale known as the Baylands Nature Preserve. Our visitor described and drew a long wooden walkway and indicated the presence of extensive gardens, an accurate depiction of the target site. However, he also described seeing a building, that is not at the target site. This sort of superposition of erroneous imagery on otherwise accurate descriptions is a common occurrence and is the principal source of noise to be overcome if remote viewing is to become a useful tool.

The next day we carried out a second experiment with this visitor. This time the randomly-determined target was the inner quadrangl at Stanford University. Our subject described courtyard and made the two drawings shown in Figure 3. Almost every element of his drawing corresponds to the actual arrangement at the location of the remote experimenters. These r sponses are among the most accurate and detail that we have ever seen. This target had never been used before, and the visitor indicated th he had never been to the Stanford Campus befor nor had he ever seen a photograph of this location.

A second result, typical of what we have come to expect from the remote viewing protoco was obtained with our most recent visitor/volu teer, a physics professor who was skeptical of our reported results. This man had been lectu ing on the West Coast and came to SRI to learn firsthand of our research. In addition to hea ing our description of the protocol, he was al invited to participate as the subject in an ex periment so that he could personally evaluate

the experimental aspects of the remote viewing channel.

The target chosen by random protocol was White Plaza at Stanford University, the second time in four years that this particular site came up for experimental use. The subject gave an excellent description of the plaza and the surrounding buildings and produced the drawing shown in Figure 4. In addition, he also correctly described the motion of the outbound experimenter who circled the fountain in a clockwise direction as shown in the subject's drawing.

The results obtained with these two men are not isolated examples selected from many unsuccessful trials. Rather, they are simply the most recent examples of visitor first-time cases, and are typical of what we have come to expect from any serious attempt at remote viewing.

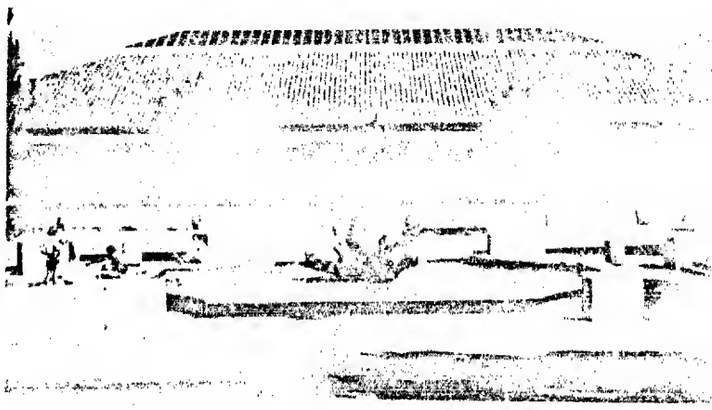
LONG-DISTANCE EXPERIMENTS WITH TELECONFERENCING

After establishing a data base of over 50 experiments with local targets (sites within a few miles), we undertook an experimental series designed to determine whether an increase in subject-target separation to transcontinental distances would degrade the quality or accuracy of perception. As a secondary goal, we were interested in the real-time data rate; e.g., determining the extent to which a remote viewing subject can track the real-time activities and movements of a known individual in a distant city. The only communication between the outbound experimenter (e.g., in New York City) and a subject in the SRI Laboratory (Menlo Park, California) was by means of the ARPA computer net. Access to the computer by the traveling experimenter was by means of a portable terminal carried from point to point.

Following are the results obtained in this series, which consists of five experiments to date.

New York-California Experiments

The protocol for this experiment allowed the subject at SRI in California and the experimenter in New York City to communicate via the conversational TALK mode available on the ARPA computer net. The subject and the experimenter at SRI agreed (via computer telcconferencing) to begin an experiment one-half hour later. The purpose of the computer in this experiment was to provide time- and date-stamped permanent records of all communications between the various parties involved in the experiment. These data can be read in real time by any authorized person entering the SRI-AI Tenex (MSG) system.



Remove Viewing at White Plaza Stanford University

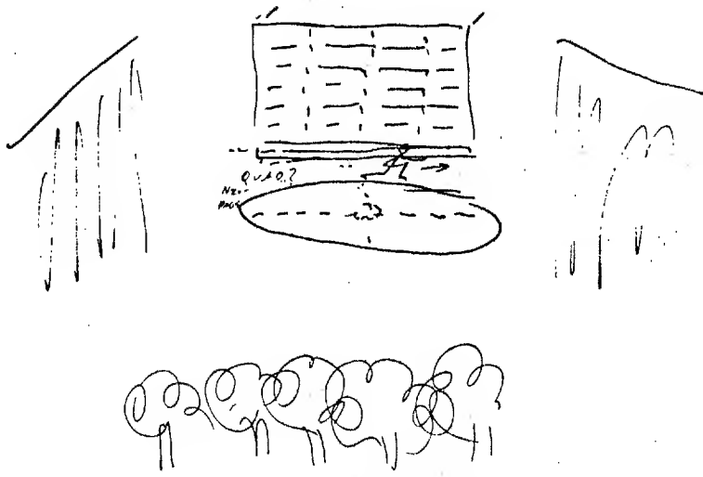


FIGURE 4 FIRST EXPERIMENT WITH VISITING PHYSICS PROFESSOR: "THERE ARE WIDE STEPS RUNNING THE ENTIRE WIDTH OF THE STRUCTURE.... I SEE AN OVAL POOL IN FRONT OF THE STEPS AS I MOVE BACK.... AND THERE COULD BE A SMALL STRUCTURE IN THE MIDDLE OF IT LIKE A CROSS-SHAPED OBJECT.... ON THE GROUND I STILL SEE SOME KIND OF QUADRILATERAL."

After logging off the computer, the outbound experimenter would use a random number generator to determine which of six locations in New York City would constitute the target to be visited in this experiment. Neither the subject nor the experimenter at SRI knew the contents of the target list that was compiled just before the experiment. Having selected a target location by the random protocol, the experimenter would proceed directly to the site and remain there for fifteen minutes.

One-half hour after breaking computer links, the subject would begin to type impres-

sions into a special computer file established for this purpose.

When the New York City experimenter returned to his hotel from his target site, he would make use of a limited-access file to enter his description of the place he actually visited. He would then return to the executive level of the computer, and await the appearance of the SRI experimenters who could then (and only then) link terminals. At that time both files would be printed out on both terminals and the subject and the experimenter would each learn what the other had written.

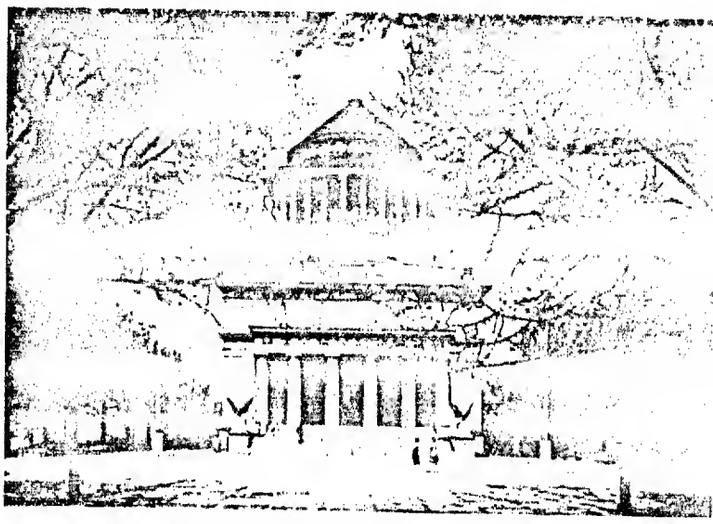
Two subjects, both in California, participated simultaneously in this experiment with the first of two New York City targets. The first of the two New York City targets was Grant's Tomb. Both subjects independently provided computer-stored records of their impressions, and one made the sketch shown in Figure 5. (The five possible targets in addition to Grant's Tomb were a railroad bridge, the 20-story New York University law library, the fountain in Washington Square Park, the Columbia University subway station, and the 72nd Street boat basin. The targets were chosen to be dissimilar, and thus differentiable, by potential judges.)

The first subject, an SRI systems analyst, said in his opening paragraph: "Outdoors, large open area, standing on and then off asphalt (rough material), dark for a path. A white building, like a ticket booth. Wooden structure, is white in color, and has an arched look about it. There is a large shade tree close to kuss (outbound experimenter)."

The second subject, a medical student closeted in a separate SRI location, began with: "I thought of a high place with a view. I saw a tree on your left. A brick plaza seemed to be in front of a building you were entering. I could not clearly identify the activity. A restaurant? A museum? A bookstore? You had coins in the palm of your hand, maybe giving some to Nicky (son of outbound experimenter)."

The coins were in fact used to purchase the postcard from which Figure 5 was made, and they were given to the experimenter's son who made the purchase. Both subjects then went on for an additional paragraph to describe details of the activities they imagined to be going on inside the building they saw, details that were partly correct, partly incorrect.

In the second experiment, the target, again chosen by random protocol, was the fountain in Washington Square Park. One subject participated. She produced an exceptionally accurate transcript. The photos and the subject's drawing of the fountain are shown in Figure 6. The



Grant's Tomb Target in New York City

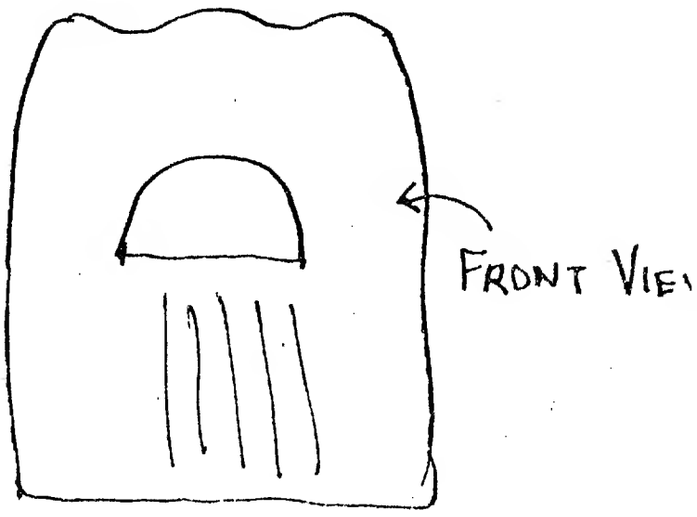
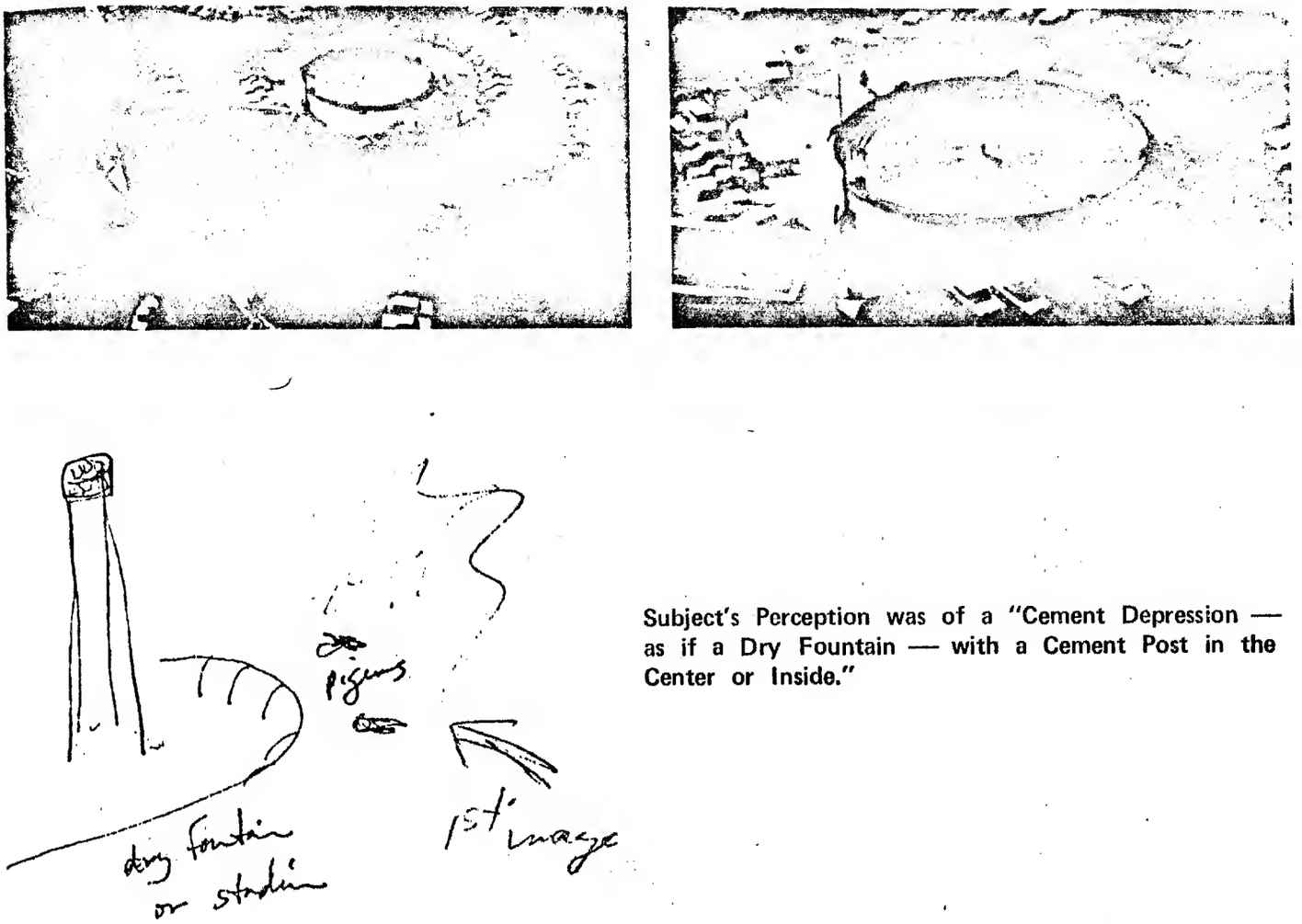


FIGURE 5 COAST-TO-COAST REMOTE VIEWING EXPERIMENT. SUBJECT DESCRIBED "OUTDOORS, LARGE OPEN AREA.... SHADE TREES.... WHITE BUILDING WITH ARCHES."

subject began her printout with the following: "The first image I got at about the first minut was of a cement depression--as if a dry fountai with a cement post in the center or inside. There seemed to be pigeons off to the right, flying around the surface out of the depression . . . At one point I thought you were open ing a cellophane bag . . ." (The experimenter had in fact bought ice cream during the experimental period.) "There was also a rectangular wooden frame, a window frame, but I wasn't sure if it was on a building, or a similar structure with a different purpose." (A possible correlation from a functional viewpoint to the Washington Square Arch through which the outbound experimenters viewed the fountain toward the en of the experimental period.) "All in all I thought you were at Riverside Park . . ." (Incorrect analysis.) An SRI scientist, familiar



Subject's Perception was of a "Cement Depression — as if a Dry Fountain — with a Cement Post in the Center or Inside."

FIGURE 6 COAST-TO-COAST REMOTE VIEWING EXPERIMENT WITH TARGET AT WASHINGTON SQUARE IN NEW YORK CITY

with the New York City area but blind to the target, did, however, identify the target correctly on reading the twenty lines of printout as it emerged from the computer terminal.

As an example of the style of narrative generated by a subject during a computer teleconferencing experiment, we include the entire unedited computer-logged text of the Washington Square experiment below (Figure 7).

These teleconferencing experiments provide an elegant demonstration of the utility of the teleconferencing process as a secure data recording system useful in real-time monitoring of long-distance remote viewing experiments.

In a more detailed tape recording she made after the experiment, but before any feedback, she described "cement steps going into the depression, like a stadium, and the rounded edge of the top of the depression as you go up to ground level." These descriptions not only are correct but also show remarkable detail.

New York-Ohio

A third long-distance remote viewing expe ment was carried out under the control of an independent, skeptical scientist. In this cas both SRI experimenters visiting in Ohio agreed to take part in a remote viewing experiment in which our host would select the target.

Under the observation of our challenger, telephoned one of our subjects, Hella Hammid, New York City and obtained her agreement to participate in a long-distance remote viewing experiment. She was told only that we were located somewhere between New York City and ou California laboratory and that shortly we woul be taken to a target that we would like her to describe. The time for the experiment was set for 2:00 PM EDT. We also agreed to call her again at 3:00 PM EDT to obtain her impressions and to give her our feedback as to the actual target.

The scientist took us directly to Springfield, Ohio, to the Ohio Caverns that he had chosen as the target location (see Figure 8).

TYPE (MESSAGE SEQUENCE) 6
(MSG. # 6, 1730 CHARS)
DATE: 6 JUL 1976 1354-PDT
FROM: TARG
SUBJECT: SUSANS REPORT PART 2 NYC EXP

THE FIRST IMAGE I GOT AT ABOUT THE FIRST MINUTE WAS OF A CEMENT DEPRESSION - AS IF A DRY FOUNRTAIN - WITH A CEMENT POST IN THE CENTER OR INSIDE . THERE SEEMED TO BE PIGEONS OFF TO THE RIGHT, FLYING AROJNDTHE SURFACE OUT OF THE DEPRESSION. THEN I SAW AS IF IFIF IN THE DISTANCE A REAL" STADIUM WITH GRASS IN THE CENTER AND PERHAPS STADIUM LIGHTS. OTHER IMAGES WERE AROW OF HOUSES/APICKET FENCE - SOME VERTICAL UNITS WITH JAGGED TOPS. THEN A FLUTED/GROOVED VERTICAL COLUMN, BUT I COULDN'T SENSE WAHT IT WAS RELATED TO. AGAIN YOU WERE IN A DEPRESSED AREA WITH CEMENT SIDES, LOOKING OUT ONTO THE SURFACE OUTSIDE. THE CEMENT SIDES ARE NOT STRAIGHT, BUT SLOPING, ALMOST S-SHAPRD. ALSO A CLEAR FEELING OF THE HEAVY, WORN METAL BAR ON THE TOP OF TYPICAL NYC OR ANYCITY FENCES. THERE DIDN'T SEEM TO BE ANYTHING REALLY SPECIAL INSIDE, JUST A SEPARATION BETWEEN TEWO TWO SIMILAR AREAS. AT ONE POINT, I THOUGHT YOU WERE OPENING A CELLOPHANE BAG AND LATER I SENSED YOU FEEDING POPCORN - TO PIGEONS. THERE WAS ALSO A RECTANGULAR WOODEN FRAME, A WINDOW FRAME, BUT I WASN'T SURE IF IT WAS ON A BUILDING, OR A SIMILAR STRUCTURE WITH A DIFFERENT PURPOSE. ALL IN ALL, I THOUGHT YOU WERE IN RIVERSIDE PARK NEAR A TRACK AND PLAY AREA, OCCASIONALLY LOOKING UP AT THE "ROCK AND LEAF" CLIFFS LEADING UP TO THE DRIVE. AFTER I HAD THOUGHT THAT AND FIT IT IN T WITH THE IMAGES RECEIVED SO FAR, IT KIND OF STUCK, AND I POSSIBLY GENERATED MORE PARK SCENES. THE STADIUM /FOUN TAIN IMAGES WERE THE FIRST AND THUS THE LEAST BJIASED AS TO PARK MEMORIES. (I SURE DO LIKR THE TLELETYPE. IT CAN BECOME AN OBSESSIVE PASTIME, I SEE).

THAT WAS MESSAGE 6

FIGURE 7 COMPUTER FILE PRINTOUT. CALIFORNIA-NEW YORK LONG DISTANCE REMOTE VIEWING. TARGET: WASHINGTON SQUARE (NYC).

We entered the grounds through an entrance arch, that opens onto an enormous expanse of lawn, perhaps twenty acres. The caves are located at a depth of ≈ 150 ft and are entered through a small building having a long flight of steep stairs. Once underground, we walked through a maze of rock-lined tunnels that lead eventually into a series of rooms lined with calcite stalagtites and stalagmites, frosty white and beige crystals formed like icicles. The entire cavern is illuminated by small electric light bulbs attached to the walls. After a forty-five minute walk, we exited the caves through a large metal door giving access to a square cross-sectional shaft with stairs leading to the surface.

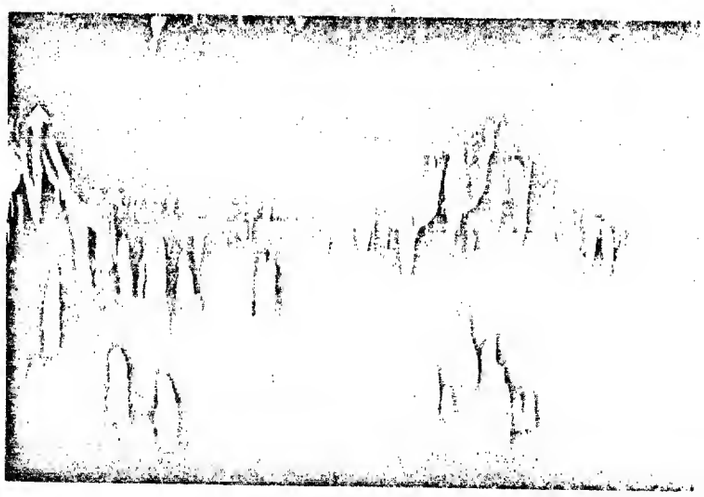


FIGURE 8 OHIO CAVES: DESCRIBED BY SUBJECT IN NEW YORK AS, "UNDERGROUND CAVES OR MINES. DEEP SHAFTS.... DARKER, COOL, MOIST EARTH-SMELLING PASSAGES.

Following the experimental period, the scientist observer called the subject in New York, forty-five minutes after we left the caves. The opening statements of the subject's transcript as dictated over the phone and posted to the SRI experimenters is as follows:

"1:50 PM before starting--
Flat semi-industrial countryside with mountain range in background and something to do with underground caves or mines or deep shafts--half man made, half natural--some electric humming going on--throbbing, inner throbbing. Nuclear or some very far out and possibly secret installation--corridor--mazes of them--whole underground city almost--Don't like it at all--long for outdoors and nature. 2:00 PM--(Experimenters) R and H walking along sunny road--entering into arbor-like shaft--again looks like man helped nature--vines (wisteria) growing in arch at entrance like to a wine cellar--leading into underground world. Darker earth-smelling cool moist passage with something grey and of interest on left of them--musty--sudden change to bank of elevators--a very man-made steel wall--and shaft-like inverted silo going deep below earth--brightly lit . . ."

She concludes with

"I see a lot of gold and metal and silver-gold glow all over--not much sound--very silent factory--scary--few people--very special."

As is often the case, one observes that the basic gestalt of the target site is cognized and even experienced, while specifics are misinterpreted.

New Orleans-California

Two experiments carried out between New Orleans and Menlo Park, CA, constitute the latest members of the long-distance series, five experiments of which have been completed to date (all reported here). These were carried out with the two subjects who had participated in the New York-California experiments.

During an extensive cross-country trip, we arranged to conduct two experiments between New Orleans and Menlo Park, CA, one each way. The Menlo Park subject was not told in what city the outbound experimenter was located. He knew only that the outbound experimenter was in the central time zone.

For the first experiment (subject in Menlo Park) it was agreed that at 12:00 noon CST on a particular day, the outbound experimenter would choose a target location in his city by random protocol and remain there for the required fifteen minutes. During this time, the subject in Menlo Park would tape-record his impressions and make any drawings that seemed appropriate. (The ARPA net was not available because of computer not malfunction.)

The target chosen by randomized entry into a New Orleans guide book list was the Louisiana Superdome. The outbound experimenter tape-recorded the following description as he looked at the building. "It is a bright sunshine day. In front of me is a huge silvery building with white dome gleaming in the sun. It is a circular building with metal sides. It looks like nothing so much as a flying saucer. The target is in fact the 80,000-seat Louisiana Superdome stadium."

The subject in Menlo Park described the target as "a large circular building with a white dome." He also expressed feelings of wanting to reject what he saw because the dome looked to him "like a flying saucer in the middle of a city." Some appreciation for this perception can be obtained from Figure 9 in which the target is shown, together with the sketches that the subject made.

The most recent experiment in this series involved a subject in New Orleans viewing activities of a group of three people known to her, at a location in the Palo Alto/Menlo Park area 2000 miles away. Her principal impression was of a "overhang of a building over their heads . . also a round gold rim around a sunken depression." The target, a bank building is shown in Figure 10. Principal features of the target include a dramatic building overhang, and a rectangular concrete depression with a fountain in which the water comes out of a circular gold rim. The subject also reported "some kind of fake china flowers mushrooming out of the depression." There were four orange lamps mounted on the gold rim. Finally, she reported "there was a projectile coming toward David (one of the outbound experimenters). Like a ball or frisbee, as if Elizabeth (another experimenter) has tossed him a ball." Actually the experimenters had found a paper airplane lying on the ground and had thrown it back and forth for some period of time. In fact, the photo of the site taken at the time of the experiment shows the airplane between them. This is one of the few times that a remote viewing subject has perceived rapid motion at the target site.

The results obtained to date in the long-distance remote viewing series appear to be roughly of the same caliber as those obtained in local remote viewing experiments. The descriptions not only contain correct information beyond that expected by chance, but also show remarkable detail and resolution. Although extensive data must be taken before a final conclusion can be reached, we are led to conclude at this point that there is little, if any, degradation in quality of perception as the subject-target distance is increased from a few

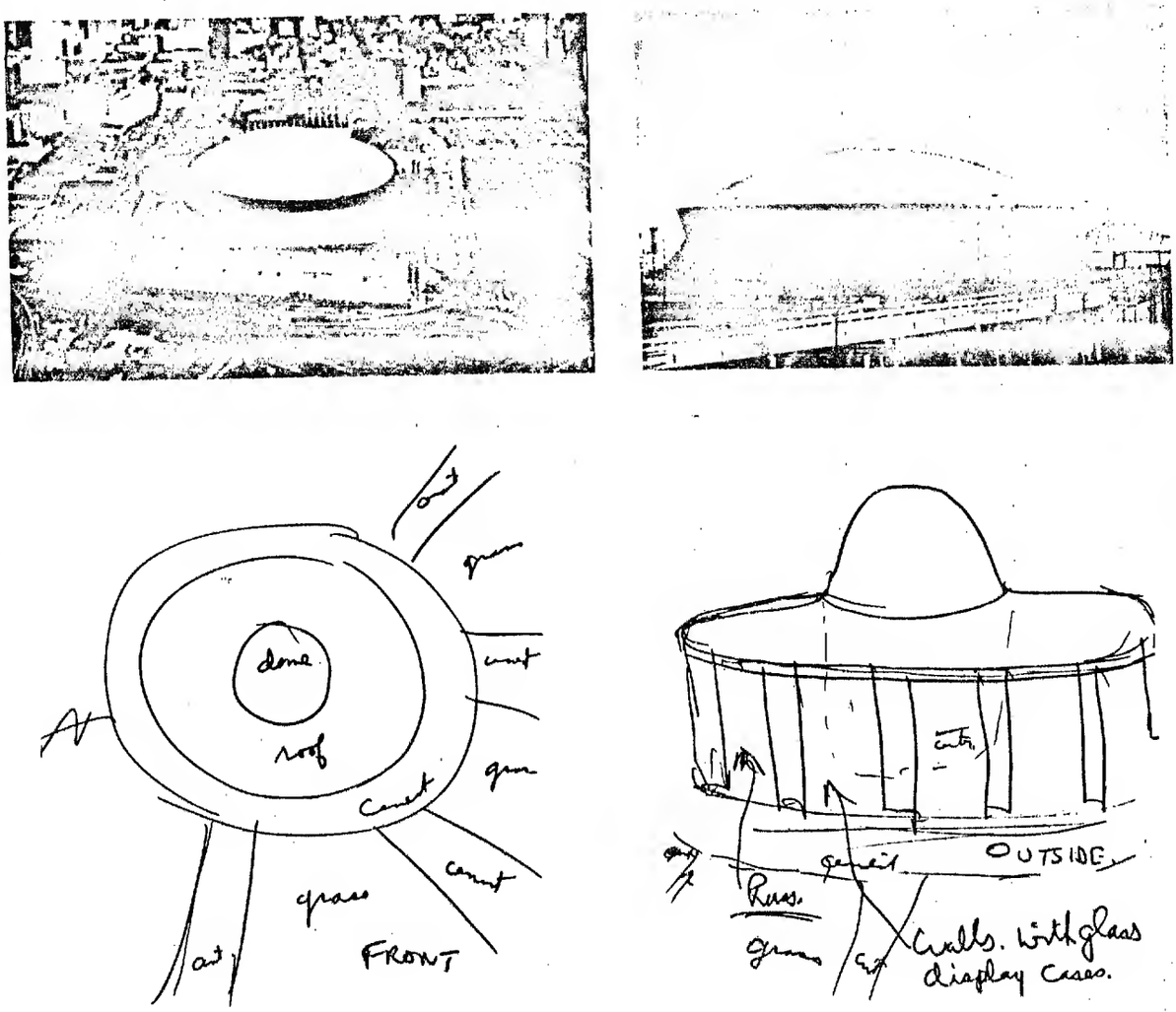


FIGURE 9 LONG DISTANCE REMOTE VIEWING EXPERIMENT — SRI, MENLO PARK, TO LOUISIANA SUPERDOME. SUBJECT DESCRIBED LARGE CIRCULAR BUILDING WITH A WHITE DOME. 31 OCTOBER 1976.

miles to transcontinental distances. The results obtained on the basis of viewing a New York site from SRI in Menlo Park, California, three thousand miles away, for example, are similar to those obtained in local remote viewing experiments. Any theory of paranormal functioning put forward at this time should take this insensitivity to distance into account.

PRINCIPLES OF PHYSICS POTENTIALLY APPLICABLE TO PSI PHENOMENA

One of the common objections to the existence of so-called paranormal functioning is that it would seem to be in conflict with the laws of physics. Our investigations, however, have led us to the contrary view that the data can in all probability be accounted for either within the framework of physics as presently understood, or within the framework of extrapolations that have been proposed to account for other (non-psychic) data. In fact, we anticipate that not only can we use physical principles to help us understand psi phenomena, but the psi data base will probably shed light on some of the current problems in physics, e.g. with regard to the foundations of quantum theory, and for geometrical models of space-time events such as exist in relativity theor In this section we outline how we are making of our experimental data base to deduce the relevant physical principles and laws that govern psi functioning.

In addition to attempting to determine whether psi phenomena are generally compatib with the laws and content of physics as pres ently codified, we are also examining the li of specific physical theories in modeling ps phenomena. The areas of physics we have und consideration as potentially relevant to mod ing psi phenomena include: the possibility remote viewing is mediated by extremely low-frequency (ELF) electromagnetic waves;[12-17] possible significance for remote viewing of Bell's theorem[18] and the Einstein-Podolsky-R

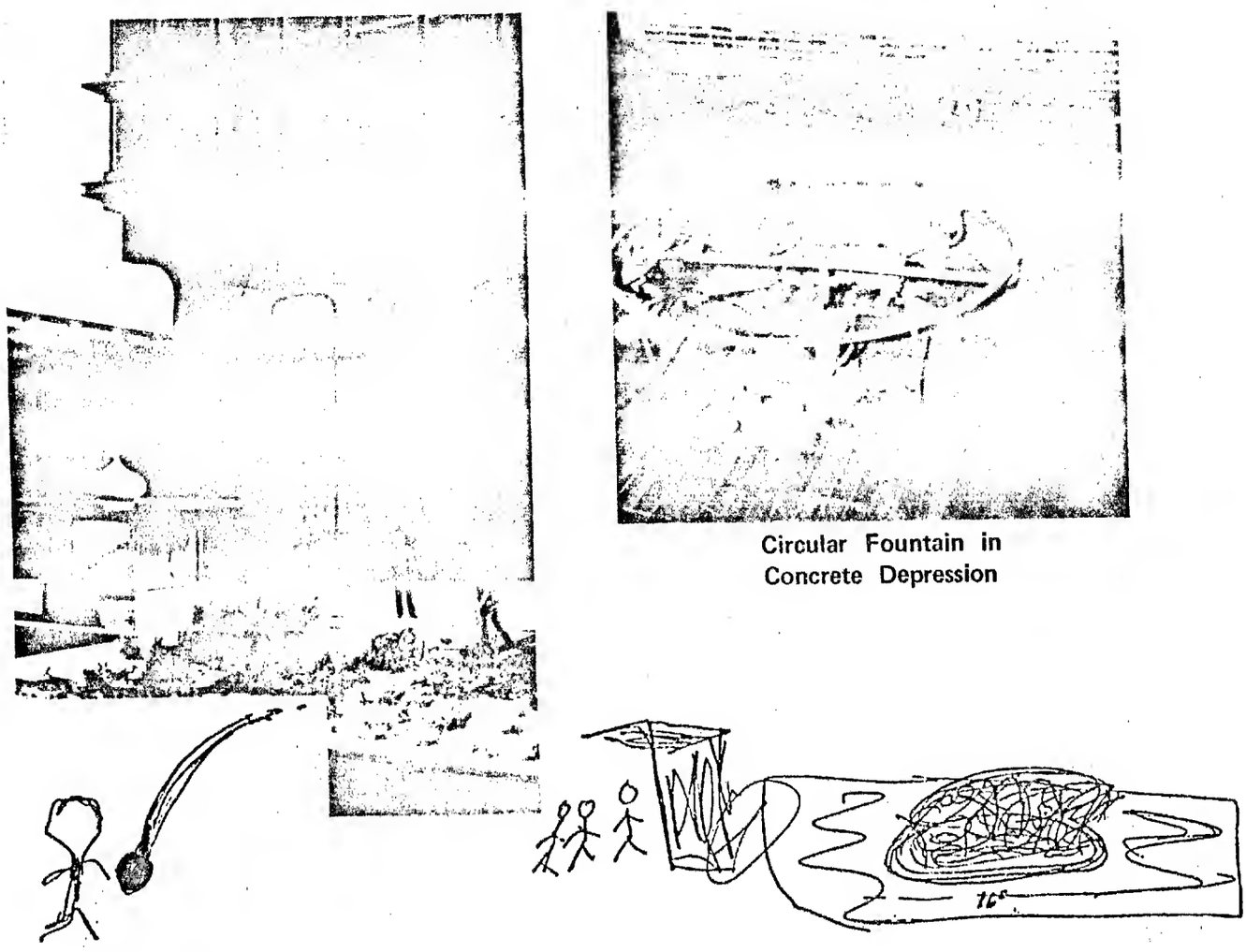


FIGURE 10 REMOTE VIEWING EXPERIMENT — NEW ORLEANS TO PALO ALTO, 30 OCTOBER 1976. SUBJECT DESCRIBED: "THE OVERHANG OF A BUILDING OVER THEIR HEADS," ALSO "A ROUND GOLD RIM AROUND A SUNKEN DEPRESSION" .... "IN THE SURFACE OF THE DEPRESSION THERE IS SOME KIND OF FAKE CHINA FLOWERS. IT'S LIKE A BONSAI TREE MUSHROOMING OUT OF THE SURFACE." LATER IN THE TRANSCRIPT SHE SAID "THERE WAS A PROJECTILE COMING TOWARD DAVE. SOME KIND OF A PROJECTILE, LIKE A BALL OR FRISBEE. AS IF ELIZABETH TOSSED HIM A BALL." (IT WAS A PAPER AIRPLANE.)

(EPR) paradox[19] of quantum theory which emphasize that "no theory of reality compatible with quantum theory can require spatially separated events to be independent,"[20] but must permit interconnectedness of distant events in a manner that is contrary to ordinary experience[21-22] (experimentally confirmed at the microscopic level);[23-24] the proper interpretation of the effect of an observer (consciousness) on experimental measurement,[25-26] of possible significance in psychokinesis; the possibility that the causality-reversing tachyon[27] or advanced-potential solutions of physics may play a role in precognition;[28-30] the potential relevance (for a general theory of psi phenomena) of theories based on geometries which provide for a more extended structure of the space-time metric.* To indicate the tenor of our approach, let us consider briefly two examples from this list.

A reasonable first hypothesis is that remote viewing is mediated by extremely low-frequency (ELF) electromagnetic waves, a hypothesis that does not seem to be ruled out by any obvious physical or biological facts.

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*We wish to acknowledge the technical contributions of Elizabeth A. Rauscher, a consultant to SRI on leave from Lawrence Berkeley Laboratory, who has done extensive research on physical theories relevant to psi functioning; in particular, work on multidimensional geometries.

This hypothesis, put forward by I. M. Kogan of the Soviet Union, suggests that information transfer under conditions of sensory shielding is mediated by ELF waves with wavelengths in the 300 to 1000-km region.[12-15] Experimental support for the hypothesis is claimed on the basis of: less than inverse square attenuation with distance, compatible both with earth-ionosphere waveguide mode trapping, with source-percipient distances lying in the induction field range as opposed to the radiation field range; observed low bit rates (0.005-0.1 bits/s) compatible with the information carrying capacity of ELF waves; apparent ineffectiveness of ordinary electromagnetic shielding as an attenuator; and standard antenna calculations entailing biologically generated currents yielding results compatible with observed signal-to-noise ratios.

On the negative side with regard to a straightforward ELF interpretation as a blanket hypothesis are: (a) apparent high-resolution, real-time descriptions of remote activities in sufficient detail to require a channel capacity in all probability greater than that allowed by a conventional modulation of an ELF signal; (b) lack of a proposed mechanism for coding (and decoding) the information onto the proposed ELF carrier; and (c) apparent precognition data. The hypothesis must nonetheless remain open at this stage of research, since it is conceivable that counterindication (a) may eventually be circumvented on the basis that the apparent high resolution and high bit rate results from a mixture of low bit rate input and high bit rate "filling in the blanks" from imagination; counterindication (b) is common to a number of normal perceptual tasks and may therefore simply reflect a lack of sophistication on our part with regard to perceptual functioning;[28] and counterindication (c) may be accommodated by an ELF hypothesis if advanced waves as well as retarded waves are admitted.[29,32]

Experimentation to determine whether the ELF hypothesis is viable can be carried out by the use of ELF sources as targets, by the study of parametric dependence on propagational directions and diurnal timing by experimentation under unusual conditions of shielding (e.g., in a submarine), and by the exploration of interference effects caused by creation of a high-intensity ELF environment during experimentation. All of these are under consideration in our laboratory and elsewhere.

Because of the apparent difficulties with the ELF hypothesis, especially in accounting for the relatively high resolution and data rate of paranormal perception, serious consideration is being given to alternative mechanisms. A more speculative, but promising, hypothesis, which could in principle account for both remote viewing and precognition, was developed in conjunction with Gerald Feinberg of Columbia University. It is proposed that the ordinary Minkowski 4-space (three spatial, one temporal coordinates) might simply be the real part of a eight-dimensional complex space-time. For this generalized coordinate model we let the spatial coordinates $x \rightarrow x + ix'$, and similarly for time $t \rightarrow t + it'$. Analogous to the expression for the square of the distance between two points in Minkowski 4-space,

$$\Delta s^2 = \Delta x^2 - c^2\Delta t^2 \quad ,$$

we take the corresponding expression in the complex 8-space to be

$$\Delta s^2 \equiv \Delta s \Delta s^* = \Delta x^2 + \Delta x'^2 - c^2\Delta t^2 - c^2\Delta t'^2 \quad .$$

With regard to modeling remote viewing in real time ($\Delta t = 0$), we can construct situations in which the remaining first, second, and fourth terms in the above equation add to zero ($\Delta s = 0$). Therefore, even though there is an ordinary (3-space) separation Δx between the two points, the distance in the complex 8-space is reduced to zero. Under the hypothesis that the imaginary (primed) coordinates are accessible to consciousness, reduction of the 8-space separation to zero could in principle provide for a coupling between remote viewer and target site. Given the additional geometrical channel provided by this model, a similar argument can be mounted to account for precognition ($\Delta s = 0$ for $\Delta t < 0$). We thus have the possibility of a geometrical interpretation of the "Quantum Interconnectedness" principle by which events remote in spacetime are nonetheless connected by non-local correlations,[22-24] or, in this interpretation, by the nature of the fabric of spacetime itself.

We are presently pursuing the implications of these and other models. Our goal in these investigations is to develop a theoretical structure to account for the data at hand, and to predict new, testable experimental outcomes.

CONCLUSIONS

In this paper we have described our investigation of particular aspects of paranormal functioning of human subjects. Specifically, we have examined the human capability to access and describe, by mental processes, information sources blocked from ordinary perception by reason of distance and shielding. We have found remote sensing to be a robust phenomenon in which experienced and inexperienced subjects are able to describe in words and drawings both the location and actions of experimenters placed at undisclosed sites at varying distances from the subjects.

From over seventy experiments with remote sensing, we have obtained three principal findings. First, we have established that it is possible to acquire significant amounts of information about remote locations. Second, the physical distance separating the subject from the scene--even distances ranging over thousands of kilometers in recent transcontinental experiments--does not appear to lessen the accuracy of the perception. Third, the use of Faraday cage electrical shielding does not in any apparent way degrade the quality of the description obtained.

One of the purposes of our research is to make use of the remote perception experimental data base to deduce the relevant physical principles and laws that govern paranormal functioning. In pursuit of this goal we are endeavoring to define the level of compatibility of paranormal phenomena with the laws of physics as presently understood and to examine the limits of specific physical theories in modeling these phenomena. To this end, we have considered some physical models potentially applicable to remote perception, but further investigation must be pursued. Therefore, we plan to continue our research efforts in the belief that not only can we use physical principles to help bring about an understanding of psi phenomena, but we anticipate that the psi data base may make a contribution toward the clarification of certain existing problems in physics.

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