REMOTE VIEWING OF NATURAL TARGETS

RUSSELL TARG AND HAROLD PUTHOFF

This paper presents a series of experiments in which a subject is asked to describe a remote site chosen by experimenters and unknown to the subject. This work was undertaken to test the idea that natural geographic 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 in part on the suggestions of two of our subjects (Pat Price and Ingo Swann) who consider the use of artificial targets to be a "trivialization of the ability," as compared with natural preexisting targets.

In order to build a physical theory for the explanation of psychical phenomena, it is necessary to have a clear understanding of what constitutes the phenomena which are to be explained. In this paper we endeavor to present a series of coherent and repeatable experiments which represent a sufficiently stable data base against which to test various theories for psychical functioning.

In these experiments we have three principal findings. First, we have definitely established that it is possible to obtain significant amounts of descriptive information about remote locations. Second, the physical distance separating the subject from the scene to be perceived does not greatly affect the accuracy of perception. In our experiments the distance has been varied from 2 to 2000 miles. Finally, the use of electromagnetic shielding does not in any apparent way degrade the quality or accuracy of the descriptions obtained. These facts taken together cast great doubt on theories for psychic perception based on a conventional use of electromagnetic radiation. Although it is possible for extremely low frequencies to penetrate our shielded room, we question whether signals of such low frequency have the necessary information carrying capacity to account for the experiments described in this paper.

In our experience, a subject is more likely to describe accurately a remote site chosen at random from hundreds of nearby locations

than he is to select correctly an integer from zero to nine chosen by a similar random process. In a later section we describe the protocol used to quantify the correspondence between the subject's description and the observables present at the target location. We consider that this difference in task difficulty lies in the fact that a subject can make a perfect mental picture of each numeral from one to ten from his own imagination, whereas he is more likely to try to make his mind a blank when attempting to perceive pictorial information from remote locations about which he has no mentally stored data.

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

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

In each of nine experiments in which Mr. Price served 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.

In the nine double-blind remote-viewing experiments, the following procedures were used. A set of twelve target locations clearly differentiated from each other and within thirty minutes driving

[a]K. Osis, *ASPR Newsletter*, No. 14, Summer 1972.

time from SRI, had been chosen from a target-rich environment (more than 100 targets of the type used in the experimental series) prior to the experimental series by an individual in SRI management, the director of the Information Science and Engineering Division, not otherwise associated with the experiment. Both the experimenters and the subject were kept blind as to the contents of the target pool, which were used without replacement.

To begin the experiment, an experimenter was closeted with Mr. Price at SRI to wait thirty 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), a double-walled copper-screen Faraday cage[b] (Experiments 3, 4, 6–9), and an office (Experiment 5). A second experimenter would then obtain a target location from the Division Director from a set of traveling orders previously prepared and randomized by the Director and kept under his control. The target demarcation team, consisting of two to four SRI experimenters then proceeded directly to the target by automobile without communicating with the subject or experimenter 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 reproduced in an Appendix the entire unedited text of one of the better narratives (Experiment 7) which contains very few incorrect statements.

In general, Mr. Price's ability to describe correctly buildings, docks, roads, gardens, etc., including structural materials, color, ambience, and activity, sometimes in great detail, indicated the functioning of a remote perceptual ability. However, the descriptions contained inaccuracies as well as correct statements. 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 five SRI scientists who were not otherwise

[b]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.

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. A correct match requires that the transcript of a given date be associated with the target of that date. Table I shows the distribution of the 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.[c]

Table I. Distribution of correct selections by judges A, B, C, D, and E in remote-viewing experiments. Of the 45 selections (five judges, nine choices), 24 were correct. Boxes heavily outlined indicate the description chosen most often for each place visited. Correct choices lie on the main diagonal.

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

[c]The *a priori* probability of such an occurrence by chance, conservatively assuming assignment without replacement on the part of the judges, is $p = 8 \times 10^{-10}$.

Among all possible analyses, none is more conservative than a permutation analysis of the plurality vote of the judges' selections assuming assignment without replacement, an approach independent of the number of judges. By plurality 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.

REMOTE VIEWING WITH "ORDINARY" SUBJECTS

Based on the results of the Price experiments we decided to extend our investigations to include the two outstanding (ordinary) subjects who had been uncovered in a broad-based screening experiment including 147 volunteer subjects. The subjects for this experiment were an SRI scientist, Mr. D. E., and a professional photographer, Ms. H. H.

TARGET SELECTION

The protocol for the experiments was as follows: One experimenter would remain at SRI with the subject while the other experimenter went to the remote target location. The target was selected by the traveling experimenter after he left SRI and while the subject was monitored by the other experimenter. The traveling experimenter, who had a list of six San Francisco Bay Area locations that could be reached in no more than thirty minutes driving, then cast a die to determine which place would actually be visited.

After a half hour's wait, the subject remaining at SRI began to relate his impressions about the place where the other experimenter was located; these narrations were recorded on magnetic tape. The experimenter remaining behind with the subject had no information about the target location.

Four such experiments were performed with these two subjects, two with each. Locations were generated from a list that included such possible targets as a drive-in theatre, Hoover Tower on the Stanford University campus, a toll plaza on the east side of the Dumbarton bridge across the San Francisco Bay, Palo Alto

Methodist Church, Artificial Intelligence building in foothills west of SRI, Baylands nature preserve, Allied Arts crafts plaza, the Alpine Inn beer garden in the foothills, Rinconada Park swimming pools, and Redwood City Marina, among others.

The four target locations used in this series of experiments were a miniature golf course in Redwood City, the Bay Area Rapid Transit station in Fremont (across the Bay), a shielded room at SRI, and (as a special long-distance task) a vacation resort in Costa Rica. For this last target, the subject was asked to supply a drawing and written description.

In the preexperiment orientation, the subjects were told that since they had demonstrated paranormal perceptual ability in previous tasks, we were confident that they could do this additional task since we had already observed two other subjects performing such tasks successfully.

SUMMARY OF EXPERIMENTS

The following gives a summary of the four experiments done with the two "ordinary" subjects from the screening study.

In the first experiment, H. H. described a ". . . red, wooden building with a pointed roof." The building was further described as being made with ". . . overlapping boards and has a white trim." Furthermore, she said, the ". . . building is empty, as though nothing is going on inside. And the whole place seems artificial like a movie set." The building where the experimenter, Dr. Puthoff, stood was a 4.5-meter-high caricature of a schoolhouse on a miniature golf course—botn empty and artificial (Fig. 1). The shape, color, and construction were all accurate.

In the second experiment, the experimenter (Phyllis Cole) was led by a throw of the die to a shielded room (Fig. 2) on the second floor of SRI's Engineering building. D. E.'s description had her ". . . sitting rather quietly alone on the corner of a rather large room. Not so much an office, but more like a classroom, a larger room. And as she was sitting there in the room she was writing, she was looking at perhaps something on the wall and writing something. . . ." (In fact, at about this time the experimenter was observing graffiti on the wall, and mentally composing her own for the collection.) A detailed description fits well with the row of a half-dozen large heavy black metal machines on a work bench to the right of the experimenter that she touched at approximately this time during the experiment: "I have some impressions that I can't understand—it's like some heavy black things that she could either

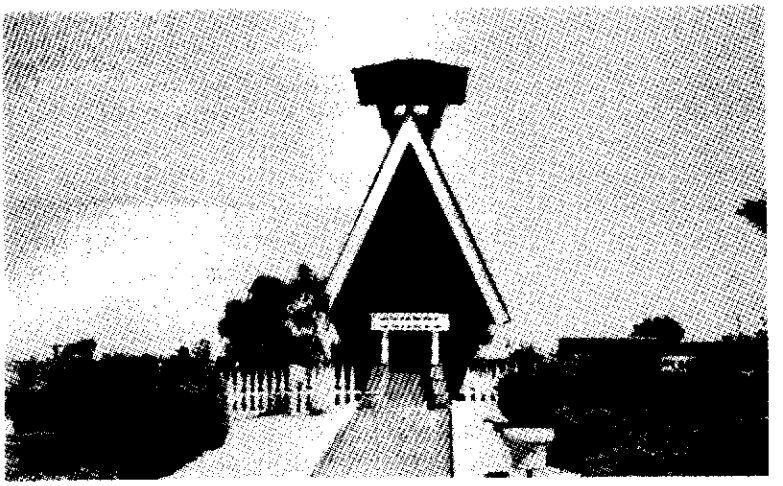


Figure 1. "Schoolhouse" on miniature golf course used as remote-viewing target.

be sitting on or that she's touching. Sort of an amorphous shape that I can't pick up, but it feels heavy and black and of a distinguishable shape, but its exact form is not angular—doesn't seem angular, and I can't interpret a shape from it." This description was substantially correct and would have fit no other target used in any experiments

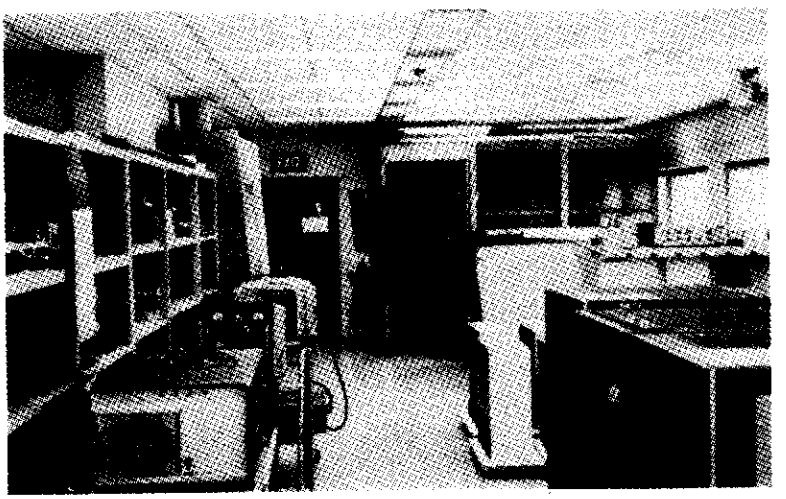


Figure 2. Shielded room in SRI's engineering building used as remote-viewing target.

up to that time. The description was unique in the set of descriptions with which it was compared.

In a third trial, the experimenters (Russell Targ and Phyllis Cole) went to the Bay Area Rapid Transit (BART) station across the bay from SRI, again chosen at random from a prepared list. D.E.'s description closely matched the target: ". . . a simple, heavy, solid building with a unique function" in ". . . relatively natural surroundings" [all correct—see Figs. 3(a) and 3(b)]. In his further description, D. E. said (correctly) "They are standing at a metal railing looking out over a scene. They are up high enough that they can see some buildings down below" [Fig. 3(c)]. He sensed some ambiguity of whether the experimenters were inside a building or not. "I have the sense they're outside, though, but they're near a building. There's a larger buildinglike structure. Feels like it has sort of one function. One primary function. And although they're outside, they're relating to the building and its function." In fact the experimenters were on the open station platform waiting for a train. About 11:22 he said, "I have the impression that Russell is feeling a smooth metal surface. Sort of large plates, large metal plates. Somewhat rectangular." The timing and description are highly accurate. Figure 3(d) illustrates Mr. Targ looking at the large metal BART route map, just before the train's arrival. At exactly 11:25 D. E. said "everything changed" and "I don't see them anymore." That is the precise time the target pair boarded the BART train and left the station.

In addition to the remote viewing of local targets, one subject (H. H.) participated in a long-distance experiment. In this experiment one of the experimenters (Dr. Puthoff) spent a week traveling through Central America on a combination business/pleasure trip. That is all that was known to the subject about the traveler's itinerary. The experiment called for Dr. Puthoff to keep a detailed record of his location and activities, including photographs, each day at 1330 PDT. Five daily responses were obtained from the subject. Two were in excellent agreement, two had elements in common but were not clear correspondences, and one was clearly a miss. In the first of the two matches, Dr. Puthoff was driving in rugged terrain at the base of a volcano (Fig. 4) and the subject's response was "larger bare table mountain, jungle below, dark cool moist atmosphere," a match both with regard to topography and ambience. In the second match the subject submitted that all she got was a "picture of Dr. Puthoff sitting in a beach chair by a pool," which was entirely correct.

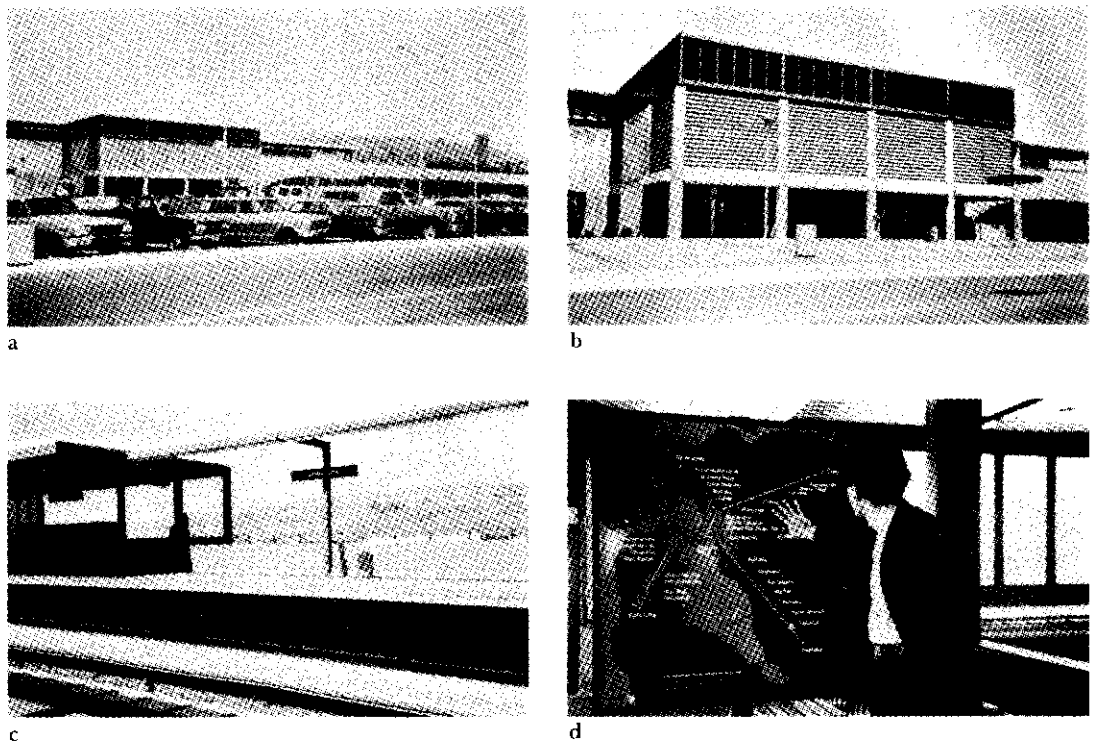


Figure 3. BART station at Union City, California, used as remote-viewing target. (a) Seen from parking lot. (b) Central portion of building. (c) Train platform on upper level. (d) Russell Targ at BART system map.

Figure 4. Terrain at base of volcano used as remote-viewing target.

During the course of the Central America experiment, on one occasion when the test subject was unavailable, one of the authors (RT) volunteered a drawing of an image he obtained at the beginning of one of the daily experiments. (The target for that day was an airport, an unexpected target associated with a side excursion at midpoint of the week's activity.) The match was good, as shown in Figs. 5 and 6.

CONCLUSION

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 whose remote perceptual abilities were sufficiently developed that they were able to describe geographical material blocked from ordinary perception.

From these experiments we conclude that

(1) A channel exists whereby information about a remote location can be obtained by means of an as yet unidentified perceptual modality.
(2) As with all biological systems, the information channel appears to be imperfect, containing noise along with the signal.

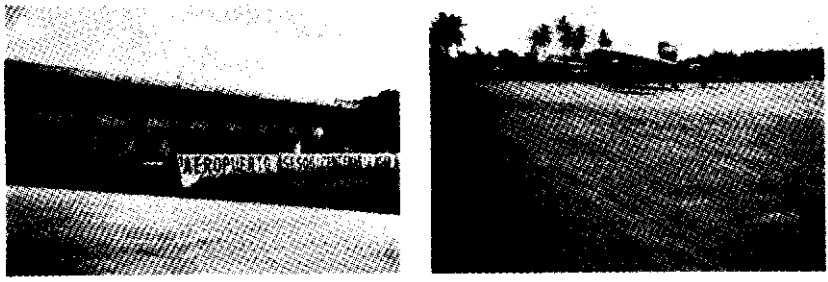


Figure 5. Airport in San Andres, Colombia, used as remote-viewing target.

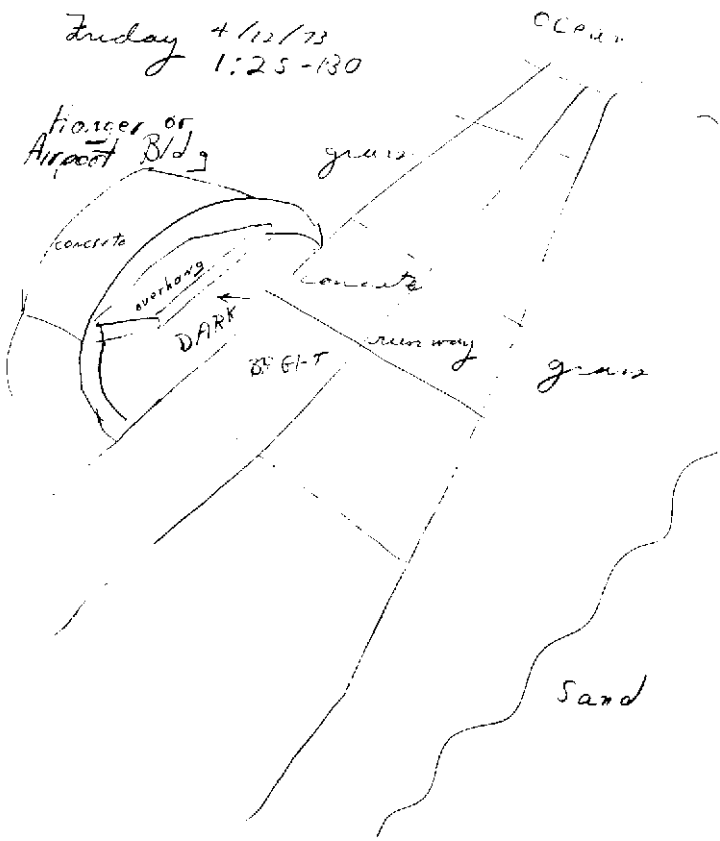
(3) While a quantitative signal-to-noise ratio in the information-theoretical sense cannot as yet be determined, the results of our experiments indicate that the functioning is at the level of useful information transfer.

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.

APPENDIX: TRANSCRIPT OF EXPERIMENT 7 WITH PAT PRICE

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. (See Fig. 7.)

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



SKETCH PRODUCED BY SUBJECT FROM SAN ANDRES, COLOMBIA, AIRPORT USED AS REMOTE VIEWING TARGET

Figure 6. Sketch produced by subject from San Andres, Colombia, airport used as remote-viewing target.

IT'S 1:58. OUR TRAVELERS 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.

Figure 7. Allied Arts garden plaza.

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 parklike 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 traveled.

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 golf course . . . 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 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 × 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 two 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 fieldstone 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 came over and walked 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?

DISCUSSION

HILL: I would really like to know if your subjects had any success in remote viewing when the people who went to the place were not known to them, when they had not personally met them? I also wonder whether or not you conducted any experiments where, say, Price had only psychometric contact with somebody, where he might have touched something the person had but did not know anything about the person?

TARG: We did a number of experiments in which the subjects, Price and Swann in particular, were given only geographical coordinates, and Hal (Puthoff) and I did not know where the place was. This was for places both near and far, and the absence of a designator person at the site would apply in that case. That is to say,

not only did he not know who was there, but he did not even know if anyone was there at all.

WALKER: Did you say that there were two or four ordinary subjects whom you selected out of about 145 that were tested?

TARG: There were two subjects that we drafted. There were 147 subjects in the NASA screening program.

WALKER: The point that I want to make is that the subjects went through a period of instruction on the learning machine, and they were then selected. Also the others, Geller, Price, and Swann, were selected out of a fairly large population. But I want to correct the idea that the distribution of this ability in the population is the kind you would get if you had absolutely naive subjects without any learning period. The viewgraph presentation that I have contains a calculation which is appropriate to the kinds of experiments that were run by Rhine, in which I selected data that seemed to deal with naive subjects. Now, it is very difficult to get naive human subjects for this kind of experiment, simply because people may have had such experience all their life. This is of course difficult to deal with. However, if there is a learning period, everyone has potentially the ability to use this to precisely the amount I mentioned, on the order of 10^4 bits per second. Everyone uses this faculty continually, to maintain his state of consciousness and to operate the machine of his brain, but generally does not have the opportunity to learn how to use remote viewing, or to check it, verify, or learn how to perform it consciously.

Another thing that I wanted to bring up is whether you have an indication or have tried to figure out what data rate seems to be indicated by very good subjects? I know it is difficult to establish definitely, but it may be possible, say, within two orders of magnitude. One can take as a reference the data rate encountered with TV screens which provide about 10^6 bits per second.

TARG: In the case where Geller drew pictures for us under very good conditions, we estimate that his rate was about one bit per minute. That is an order of magnitude guess based on the following consideration. We guessed that there were about a thousand target pictures that a person might in principle either draw, or guess at and draw. Geller would take about ten minutes to figure out what it is. So, we estimate on the basis of probability that a typical drawing would contain about 10 bits of information.

WALKER: I had more in mind relying to some extent simply on the description of what the person says that he sees, under optimum conditions. That is, if you take an individual and ask him to describe or draw a scene which he has just seen, you will be able to find that apparently his conscious states contain around 10 to 100 bits per second. Naturally, the real count is much much higher than that.

TARG: I can tell you what the observable is first and then tell you what I think is happening. We have done some experiments with walkie-talkies subsequent to this whole series we have described here, where we wanted to give the subject a direct feedback to help him learn. So Harold will go out some place with a walkie-talkie, and his input to me will be, "I'm at my target, what do you see?"

The subject will then say what he sees and Harold will say, "That's correct," or "That's partly correct, tell me more" or something like that. In the cases where the subject is doing well, you have the appearance that the subject is simply looking at the scene in real time. We have a tape of the last experiment we did with our ordinary ungifted lady subject. The dialogue goes something like, "I'm at my target, what do you see?" and she says, "I see a tower made of grey wood with a round roof, with brown shingles overlapping."

Harold says, "That's completely correct. I'll go to my next target." He then goes to the next target and says, "I'm at my new target, what do you see?"

She'll say, "I see an elliptical brick structure surrounded with green, with irridescent blue flowers inside."

Harold will say, "Say again what the color is," and she'll say, "Peacock blue." And he'll say, "The brick planter is there with the surround of green, but it's magenta." She'll say, "Well, I must be looking someplace else, because the flowers I see are blue."

Then he'll go on to some other place.

So the feeling that one gets, in listening to the tape, is that she essentially has video bandwidth information input.

Now, in reality, there may be a lot fewer bits necessary, since you can get a tachystoscopic view of this, and then use your stored information to try and make up something.

In our most recent data, with this subject and with Swann, Harold has been going to high strangeness areas, so that the stored information would not really do that.

Recently, in a similar experiment, Swann gave a description of Hal walking across some blacktop, stopping in front of a blue building, and then walking into a depression, and stopping at a fountain.

Now, you really have to have a very high level of confidence in your perceptions, in order to say that somebody stopped near a blue building. The probability of encountering a blue building is about the same as a purple cow, but Harold in fact did stop in front of a blue building on his way to the depression.

SCHMIDT: I understand that you selected part of the subjects from a large pool in the order of 150 or so persons, whom you pre-tested with the precognition machine. Is that right? Did you use a kind of routine selection, or did you apply your very personal approach already at this stage?

TARG: I am going to give you names of two people, so I can talk about them.

Mr. Elgin from Stanford Research Institute is the one who worked with the teaching machine through the entire year. He maintained high scores, in both the pre-test and the post-test, at a level of 10^{-6}. He was selected on that basis. It was a completely routinized procedure. He wanted personal attention, but we gave him very little. We talked to him from time to time, but it was a time when we were engaged with other things.

The lady in this work had done very little with the teaching machine, but had shown success with the EEG part of that program. The EEG work involved flashing a light in a remote location, and observing a decrease in her alpha production during those periods when the light was flashing. We did that experiment on eleven separate occasions, and in each of the experiments we observed a systematic decrease in alpha waves, corresponding to arousal, at those times when the light flashed.

So those two subjects were screened from the NASA program, but they were screened by different experimental protocols. The lady had not worked with the machine, and the man had not participated in the EEG program.

BASTIN: Did you tell the subjects of their success or otherwise, as a matter of deliberate protocol?

TARG: We at all moments told the subject that he was doing wonderfully.

BASTIN: No, that's not what I meant. Have you ever tried not telling them their success at all, keeping them completely in the dark? I am very interested in the effect it has on success to be told the result.

TARG: In the case of the coordinates, Price was given very limited feedback, as to the overall nature of the correctness of what he described. He gets a little feedback, to the extent that we tell him that what he has said is by and large correct. But in the present instance, for example, we were not able to verify until quite recently some of the aspects of what he described. So at the present time, he has described some correct aspects of a target location that we know is correct and he does not know is correct, because the last time we saw him, we had been unable to verify that.

FIRSOFF: I merely want to suggest an experiment. In 1976, two soft lander probes, Viking I and II, are to be landed on Mars. They will be equipped with television, and it would be very interesting if your subjects could describe what these probes find.

It could be done straightaway, and confirmed or not when the actual data are reported.

I had a dream of the photographs of Mercury, taken by Mariner 10. It proved to be completely wrong.

PUTHOFF: Swann did do that experiment as a personal exercise for both the Jupiter probe and the Mercury probe. In the case of the Jupiter probe, which he has described in a book about to be published, he got much more data than the probe relayed. So we do not know whether his data are accurate or not, and it will be difficult to determine. In the case of the Mercury probe, he is now having people go through detailed analysis of it, and Janet Mitchell of City College will publish a paper on the topic shortly.

FIRSOFF: The Mercury probe is not quite complete yet, because there is a further series of pictures and observations to come in during September 1974.

WALKER: I want to mention a little bit more about the complexity of the task, as opposed to simple tasks. Some time ago, maybe back in the 1950s, there was a series of PK experiments done, by Pratt or perhaps Rhine, using various numbers of dice. It was found that, as one went from first pairs of dice to six, raising the number made it easier to get more data rapidly. But they were surprised to find that it also increased per die the probability of affecting the throws. This held for 12, 24, and as I recall, it appeared to level off around 36. But this makes a lot of sense, since the more dice one uses or the more complex the system, the more ways, the more interactions, the more paths, and the more possible states that occur in quantum mechanical linear combination, which includes the target.

Now, to pin it down a little bit more, you should properly calculate the probability of the resultant target state. Of course, in general, this is a very difficult task to do. In simple systems it can be done, but then you're back to the other limit, if you get too far. With dice one can handle the problem reasonably well. But there was a challenge thrown out at the beginning of Targ's talk, to take this data, go home, do the homework, and see what can be made out of it. I would like to do it the other way around: Why don't you design an experiment, and before running it, let's have a hand at computing what the result should be. If it is a reasonable system to analyze, not too complex, and if I have data concerning the past performance level of the subject, I think I can calculate the magnitude or character of effect.

TARG: Well, our purpose in experimenting or in looking for new experiments is to find a kind of perceptual modality which functions sufficiently well that we don't have to calculate a probability to determine whether or not something happens.

WALKER: We are talking about different probabilities now.

TARG: We feel that it is 100% evident in most cases that there is some kind of information channel. The best analogy that I feel we can find is that this represents approximately real-time video bandwidths; one could step to either side of the process to calculate the data rate, but it looks as though the person has real-time video information about what is going on. People in television engineering could very accurately tell you what that would be.

I am sorry that the population here is mainly in the area of quantum mechanics rather than relativity. I have the feeling, from what we observe, that rather than modifying our view of probability theory, as it were, or uncertainty analysis, that there is probably something the matter with our view of the metric that we live in. It is as though another whole channel exists, like the proposal of Adrian Dobbs, which Arthur Koestler described in *Roots of Coincidence,* where the person has direct access, through another dimension as it were, to the information. The data rate seems too high to have any other interpretation I can think of. It is as though there is something the matter with our picture of the metric. In particular, if one must guess in which area more can be said about the metric, it would be in the words that we used to describe the time axis that we are progressing along.

BASTIN: May I just get back, Russell, to your point about metrical considerations? I agree with the negative part very much. Indeed, I got into rather hot water yesterday for suggesting that one should play down interest in the statistics. But on the positive side, isn't there a certain conflict between what you said earlier about space and time independence, and your present desire to have theories which are more of the relativity type? The point is, such theories do depend so very strongly on the concept of the metric. That is practically what they are about. So you would expect at least to get some indication of metrical dependence in some sense, if you were going to exploit the sort of framework which relativity uses.

TARG: That would only be if our present picture of the metric is correct. If a person were to live in flatland, which is two dimensional, he could draw a picture and adequately hide it from the flatland residents by dropping it into a ring. But somebody who has access to another spatial dimension could just look down on the whole scene, and without any trouble at all, see what was hidden in the ring.

BASTIN: I do understand that, but it does seem a bit facile. If one could really conceive super-dimensional theories, would not one expect to have already found some sorts of tangles, or knots, or some kind of complicated topology which would explain events beyond our normal experience?

TARG: Well, that is an interesting idea, that we should have. One of the puzzles for me, and one of the puzzles to show up at the Parapsychological Association meeting is that, although Hal and I have been working a relatively short time, we have found a channel here that appears to operate at a very high data rate, working with a lot of people. It has a first-order effect that does not require probabilistic calculations. We have people deflecting magnetometers, pushing pendulums, collecting information that bleeds through space and time.

You might say, "Well, for goodness sake, if it is a first-order phenomenon, why do you only see it in California?"

I think that still another really only partial answer to what you are saying, too, is that society really greatly negatively reinforces any kind of psychic functioning. Probably, if we had been living for the past fifty years in a society where everybody agrees that there is the psychic channel, and half the population were freely collecting information through this other perceptual modality, then we would have a lot more information about how it works. We would also have more instances that would require an additional theoretical model. But I don't know if that is responsive to your question.

BASTIN: It is not entirely to the point. You want to be able to make some positive remarks which are metrical, rather than entirely negative statements.

FEINBERG: I would just like to follow up on the question that Bastin asked about not informing a subject whether he succeeded or failed. One straightforward effort to explain your data is to say that the subject is precognizing what you tell him at the end about where you have been. And from what you told me about the remote viewing of the Bay Area, plus what I saw when I visited you, it seems to me all of those exchanges involve an extreme amount of feedback to the subject at the end of the run. That is, from what I recall, when you came back you told the subject, "We were here, we saw this and this." In fact, sometimes you even then took the subject to those places. So these facts are certainly consistent with the hypothesis, and I think it would be interesting to do a randomization on whether you give them feedback or not, to see what correlation may or may not exist between giving them feedback and the accuracy of their scores.

TARG: That's a good suggestion. It would be particularly easy to do in the walkie-talkie experiments, wherein we are able to do a number of experiments, one right after the other. We could just randomly say nothing at the end of some of the subjects' trials, and give feedback during the other trials.

In your estimate, is that an experiment that has an end, or do we forever have to desist from giving the subject information on his success?

FEINBERG: Well, it depends on what your model is. In this short term memory model, it definitely has an end, fairly definitely on the order of an hour or so. If you waited a week, then anything you told them would be irrelevant. However, there are other models too, and all one can do is try to test various models and see what you come up with.

BEAUREGARD: Coming back to Professor Feinberg's question about feedback from personal contact, there is one experimental point that seems to go against that. It is the case where I think Price had seen the historical plate and the people had not seen it. It seems that if Price had really seen the scene, he would have pointed it out to the people that had come there.

PUTHOFF: Our answer though is that he might have seen the scene, his visiting of the site, precognitively.

BEAUREGARD: Yes, but this is a multiplication of the observation.

FEINBERG: I was indeed present at that circumstance, and that particular case is completely consistent with my hypothesis, because Price went to the place, roughly fifteen minutes after he made the prediction.

BEAUREGARD: But he had to take the people there.

FEINBERG: No, he did not take the people there. What happened is that the people who had been at this place came back, and then they drove Price, myself, Russell Targ, and some others back to the place that they had been to before. When we got there, we looked around and compared some of the things Price had said with the description. Some of the statements agreed with it, some of them did not.

Concerning the historical plate, Price said something was there which sounded a little bit like what actually was there. But then, one of the people who went there afterwards, said "Oh, look, here's something that looks a little bit like what he said there was." After that, everybody crowded around, saying, "Yes, yes, that's the historical marker."

So Price, at that point, knew very easily that there was an historical marker there. At that point, there was a trace of his brain saying, "historical marker at this place." So, if he had access fifteen minutes earlier to what would be in his brain fifteen minutes later, he would know there was an historical marker there.

Therefore, this particular case at least is consistent with the model.

BEAUREGARD: I am not saying it is not consistent, but that it is consistent in a much more sophisticated way than what would appear at first.

WALKER: I want to see if we can clear up a particular point in the conversation between Ted Bastin and Russell Targ. I gathered that Ted was asking, wouldn't you think that we would have discovered this entanglement or some effect in the metric through physical means?

BASTIN: No, not necessarily. It could be discovered through parapsychological means, or any other means.

WALKER: Well, my question would be, if there is a strong effect on the metric, why don't we see it physically? It is true that the only times we do see effects on the metric are after having observed Mercury's orbit for 100 years, or when light passes the sun.

TARG: It depends where you are looking. That is, Einstein did not say that Newton was wrong. He just said, if you go to a particular limit, you begin to see some new things. We are not saying that anybody is wrong. Quantum mechanics and relativity will have to help explain what we are observing. It is the same as when, after fifty years, we discovered that parity is not conserved. Now, we have to look very hard into the physical universe to discover that parity is not conserved, and it really hardly matters to anybody, except a certain small group of physicists, but it is very important to them. It tells them something further about the nature of the universe.

WALKER: Yes, but you discover this through physical measurements on systems, rather than dealing with the state of the brain. In the case of an effect on the metric, this discovery is due to the stress energy tensor. What I am really asking is, which physical characteristic of the brain would you identify, that is not present in the matter that we encounter in the laboratory, that would give you a very large term? You would have to identify something going on in the brain that is different in character from the systems that are generally investigated in the laboratory.

FEINBERG: Well, if one wants to be very speculative, I think it is easy to invent a theory that explains this by changing the character of space-time. I think using the words, "changing the metric," is perhaps not what you really want to say. One could for example introduce an extra dimension, and say that ordinary perception or ordinary motion keeps the value of the extra coordinate constant, whereas whatever is involved in this new channel is able to change the value of that coordinate. Once you allow that, then you find in that only the distance between two points on earth, whereas if you measure it in the ordinary three coordinates, it varies from zero to 8000 miles; if you allow motion in this extra coordinate, the distance is maybe much shorter between two points on earth. Once you allow that kind of motion, then all points on earth can be the same point or be very close to the same point. In order to do that, the coefficient in the metric of the extra coordinate must be negative compared to the first three, but there is no particular reason why that could not happen. You also then have the problem of explaining why you ordinarily cannot move in that dimension, but that can be done through whatever new method there is.

But I think a more serious problem with this model is what Ted Bastin said; it explains too much. That is, it is not clear then what kinds of predictions can be made on that basis. Maybe one can then

say that the points not on earth will have different values of distance even with this new coordinate, so that there should be some astronomical variation of it. But I think that this introduces a new hypothesis, which is not by itself sufficient. One would really have to work it out to see what other variations are implied.

PUTHOFF: We had gotten some subjective descriptions from Price while he was working on the laser-monitored pendulum. I will present one of these descriptions, which could suggest answers to these kinds of questions, if we take seriously some of the relatively far-out things that subjects say.

For example, one day when I had observed a change in the motion of the pendulum while Price was working on it, I asked him what he had done.

He said, "Well, I just put the laser 400 yards away from the pendulum."

Of course, the laser in the laboratory was just a few feet from the pendulum. So I asked him what he meant by that, because he obviously could not mean what I would take him to mean.

He said that he just somehow took over the space between the laser and the pendulum, and made it longer. By making it longer, the light took longer to get there, and when it got there, it did not have as much energy. He went through a whole description in great detail, which to the best of my ability, I checked to see if it was consistent with relativity, with general relativity, and it appeared to me that it was.

So perhaps with more subjective descriptions that we can check out in this manner, it may be possible to test new insights.