Remote Viewing Revisited

Well-controlled experiments don't find the "RV effect," while poorly controlled ones do. These and numerous other problems lead to the conclusion that remote viewing is a cognitive illusion.

David F. Marks

The 1970s saw the emergence of an astonishing psychic phenomenon that the principal investigators called "remote viewing." This refers to an alleged ability to perceive information from remote sources not available to any known sense. Actually this product of the paranormal is not a new one—it is really good old faithful ESP in a new package and with a different brandname. The main promoters of remote viewing are two physicists at SRI International (formerly the Stanford Research Institute), Russell Targ and Harold Puthoff. The remote-viewing effect could apparently be obtained by anybody and it required no special training or unique abilities. The results were allegedly reliable and repeatable. In fact, remote viewing was every parapsychologist's dream come true.

This is how one observes remote viewing. Someone (let's call him the traveler, T) gets into a car and drives to a place some distance away (e.g., a park, a church, a city hall, a railway station, or a golf course). Someone else (let's call him P) waits with the subject (S) with a tape recorder and a drawing pad. At a prearranged time, when T will have arrived at the target location, S tries to describe the location using his or her imagination. Experimenter P may assist S by asking various questions to clarify the description. S may also draw a picture of the target location. T allegedly acts as a kind of "psychic beacon" beaming back information from the target using some unknown sensory modality. After a prearranged interval (say 15 or 30 minutes) of remote viewing by S, T returns and escorts S to the target site to provide feedback on how well S has done. The experiment

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is repeated a number of times (e.g., 9).

Generally speaking, S, T, and P are all highly delighted with the results and all kinds of matching elements are found between S's descriptions and aspects of the target sites. I can personally vouch for the reliability of the remote-viewing effect when evaluated by simple inspection of the target site immediately after S has produced his response. I have found the remote-viewing experience compelling and direct and, on occasion, eerie. However it is obviously important to validate the effect on a more objective level. To this end, S's taped descriptions are transcribed and, together with any drawings that may have been produced, the transcripts are given to a judge who tries to match them against the series of targets. The judge normally visits all the sites and ranks the transcripts at each site in the order of their degree of matching.

Targ and Puthoff (1974, 1976, 1977) have reported extremely successful results from this judging process, and so a compelling subjective phenomenon has apparently been quantified numerically in the form of probability values. The implications of remote viewing (if real) for science are enormous. Textbooks of psychology, physiology, anatomy, and physics would all need to be completely rewritten, as our knowledge of the bases of perception and psychophysics built up over the ages would have to undergo major revision. Before this revolution in science begins, however, it would seem prudent to examine the phenomenon of remote viewing more closely to determine whether there is any possibility of artifacts, flaws in the methodology, experimenter bias, or some other parsimonious explanation.

With this in mind I began an investigation in 1975, in association with Richard Kammann, the results of which were published in our co-authored book *The Psychology of the Psychic*. Like many other investigators we were unable to replicate the effect claimed by Puthoff and Targ, as none of our judges could match transcripts accurately. Following visits to SRI and multiple discussions with Targ, Puthoff, and their key judge, Arthur Hastings, it became clear that the SRI research program, promoted as well-controlled science, was actually a massive litany of fallacies and flaws. To avoid duplication, this article will take up the story more or less where our book left it two years ago. This review relates to the two series of experiments with Price and Hammid, and various attempted replications by other investigators.

Data Suppression

Science separates itself form pseudoscience along a number of dimensions. One of these dimensions is accessibility of the data. Scientific data are consensually validated by open inspection of the recorded observations or through replication of the relevant phenomena. Following publication of major observations it is an accepted practice in science for researchers to

allow colleagues who are doing serious research in the same field to have access to their original data. When researchers consistently refuse to allow colleagues such access, something important is being signaled. Of course data may get lost or destroyed or be difficult or costly to retrieve in the form required. Or they may be classified information or have commercial value that a scientist may wish to exploit prior to their general release. However, when none of these considerations is applicable, a refusal to supply a copy of a set of data leads to the unpleasant inference that something is wrong, that the data do not support what is claimed for them, that the data are an embarrassment following an extravagant claim that cannot be substantiated.

Over the past few years I have made frequent requests to Puthoff and Targ for copies of their remote viewing (RV) transcripts obtained in their experiments reported in *Nature* (1974), *Proceedings of the Institute of Electrical and Electronic Engineers* (1976), and *Mind-Reach* (1977). Targ and Puthoff have consistently refused to supply this important information, as they have to all others I know who made this request. The only concession has been to supply a single transcript from the Price series (Experiment 7), which is published in *Mind-Reach*. Normally no explanation or reply follows such requests. However in May 1979, while preparing the manuscript of *Psychology of the Psychic* I did receive the following explanation from Puthoff:

> With regard to your request, at the present time we are subjecting the transcripts to a number of blind judging procedures in order to assess which of several approaches constitutes the best way to handle free-response text in remote viewing studies. As a result we are not ready to release the materials, since premature disclosure would prevent further blind analysis work. I am sure you can appreciate the fact that after spending years building up a data base, we don't want to do anything that would jeopardize our options with regard to blind analysis of this data pool.
>
> By the way, this work is proceeding quite well. We have several research analysts breaking transcripts down into concepts which are then individually rated against concepts generated for the targets. . . .
>
> *When our blind analysis work has been completed, you may of course have access to the raw data.* I do not think it will be in 1979, however, as our analysis contracts extend beyond that; thus, I doubt it will be in time for your book." [Italics mine.]

Three years later I'm still waiting! Surely "several research analysts" are not still "breaking transcripts down into concepts." *I would like to publicly ask Targ and Puthoff to release all of their remote-viewing transcripts in their original unedited form.* This would enable members of the more skeptical scientific community to evaluate the data for themselves.

Targ and Puthoff supplied John Wilhelm with a single transcript (Price series, Experiment 4, Redwood City Marina), reproduced in Wil-

helm's book *The Search for Superman* (pp. 213-18). Although this was purported to be a complete transcript, it actually had two pages missing. A copy of the whole transcript given to me by Arthur Hastings (the SRI judge) contained nine pages. Pages 6 and 7 are missing from Wilhelm's version, and one can only speculate on the implications of the fact that one of Targ's most blatant cues ("Nothing like having 3 successes behind you") was on the missing page 7. Who could avoid the conclusion after reading this cue that this experiment was number 4 in the series?

The refusal to release the data-base for their controversial claims is a disturbing feature of Puthoff and Targ's remote-viewing project. The task of presenting an accurate and fair evaluation of the research is made none the easier as a consequence.

Fortunately, the main judge in the SRI research team, Arthur Hastings, was more helpful. Hastings loaned me a complete set of nine transcripts from the Price series and showed me six of the nine Hammid transcripts. However, Hastings said he felt "paranoid" about releasing this information and soon requested their return as they had become "confidential." How much longer these data will remain confidential is anybody's guess. It may be forever.

Sensory Cues

Most of the information in the RV transcripts is descriptive material, honest attempts by the subjects to describe the remote locations. Examination of the RV transcripts supplied by Hastings, however, revealed an enormous array of extraneous information and cues. Basically these are bits and pieces of information about the experiments that enable the judge to place the transcripts in their correct sequence: dates, times, references to previously visited targets, statements made by the experimenter monitoring the subject (including leading questions), and other information of this type. For both the Price and Hammid series there are enough cues to place the transcripts in almost perfect sequence. I could hardly believe my eyes when I saw that four of the six Hammid transcripts actually carried dates. Hastings told me one transcript even carried the name of the associated target, although he returned this one to SRI!

Being able to place a series of transcripts in correct sequence is useful only if the target sequence is also available to the judge. I was dumbfounded to discover that Puthoff and Targ gave Hastings a target list for the Price series in correct sequence. Hastings gave me a copy of the actual list he received from SRI. However, on 10 July 1978, Puthoff wrote me a letter in which he stated: "With regard to your assumption that the judges knew the order of target visitation, that is incorrect. Neither the single judge (Hastings) nor the panel of five judges were given the order; they were kept blind." This information was quite false. Two years later, Puthoff retracted it: "You are correct that, in the case of the Price series,

the published list of the targets was in the order of target usage, and that, furthermore, when the target list was provided to the judge, it was inadvertently (through an error) given in the same order" (letter from Puthoff, August 25, 1980).

Using only the extraneous information in each transcript, together with the same list of target names provided to Hastings, independent judges in New Zealand (about 12,000 km from the target sites) were able to blind-match the transcripts against the Price targets with exactly the same degree of accuracy as that achieved by Hastings. I have called this phenomenon "remote judging" (see Marks and Kammann 1980, pp. 29-31, for more details).

The same excellent results from remote judging have been obtained from the Hammid series. The Hammid series is a little more complex than the Price series but basically the remote-judging results are as good as those obtained by the original SRI judge, as shown in Table 1.

It is important to remember that the three remote judges had access only to the cues provided in the Hammid transcript together with the target lists and the map provided to the SRI judge. No site visits were possible and none of the descriptive material from the SRI transcripts was available.

To illustrate how the remote judging process works, a total of 24 cues found in six Hammid transcripts, together with the conclusions that can be drawn from them, are shown in Table 2.

In the light of Table 2 the following claim (Tart, Puthoff, and Targ 1980) is very difficult to believe: "In the extensive replication studies, which

TABLE 1

Distribution of Rankings Assigned to Transcripts
Associated with Each Target Location in the Hammid Series

Target	Remote Judges			SRI
	A	B	C	Judge
Methodist Church	2	2	1	1
Merry-go-round	2	2	1	1
Parking Garage	1	1	1	2
Railroad Trestle Bridge	2	1	2	2
Pumpkin Patch	2	1	2	1
Pedestrian Overpass	1	1	1	2
Total sum of ranks	10	8	8	9
p value	.005	.001	.001	.002

TABLE 2

Sensory Cues Available in the Transcripts for the Hammid Series and Conclusions That Can Be Drawn from Them about the Experimental Sequence

Experiment Number	Transcript[a] Number	Cue No.	Text Phrases Relevant as Cues	Conclusions
1 (Courtyard)	Not available[b]		(Almost certainly mentions date and/or time. Other cues?)	(First target?)
2 (Auditorium)	Not available[b]		(Date and/or time? Other cues?)	(Second target?)
3 (Merry-go-round)	3	(1)	The time is 11:07	Possibly first of the day.
		(2)	This is the 18th of September	Target early in series.
		(3)	Russell Targ has gone to the remote site	Target possibly outside SRI.
		(4)	"My mind is unfortunately clouded by his parting words when he kissed me goodbye and said 'I'll see you in church.' I wish he hadn't said that."	Maybe the church target or a target to be visited near the church (merry-go-round?).
		(5)	"All the various subliminal images I discounted yesterday."	Not first target of series.
		(6)	"I keep seeing him riding his motorcycle maybe because I know that he went there with a motorcycle."	Probably a target outside SRI (confirms cue 3).
		(7)	"His body isn't moving like it was yesterday."	Not first target of series (confirms cue 5).
4 (Church)	8	(8)	September 18th . . . Russell Targ at the location.	Target close to target associated with transcript 3?
		(9)	"Is this going to be one of those where you tell me or not?" (Hammid's question.)	Not first target of series.
		(10)	"We haven't decided yet. We haven't given you any feedback today?" (Puthoff's answer and question.)	Second target of the day.
		(11)	"No we only did one." (Hammid's reply.)	Target must follow target associated with transcript 3.
5 (Pumpkin patch)	6[c]	(12)	October 11	Target must follow targets associated with transcripts 3 and 8.
		(13)	a.m.	Target precedes target associated with transcript 9.
		(14)	Reference to Hal (Puthoff) as visitor to target? (Other cues?)	
6 (Railroad bridge)	9	(15)	"Our second experiment of the morning."	Target immediately follows target associated with transcript 6.
		(16)	"It is a quarter to twelve."	
		(17)	"Hal has gone to a second target."	
7 (Overpass)	2	(18)	October 11, 1974.	Target immediately follows targets associated with transcripts 6 and 9, but must have at least 2 afterwards—*must be the 7th target.*
		(19)	"Hal has gone to the first of three remote sites that he will visit in this experiment."	
		(20)	"At 3:45 Hal will be at his first target selected outside SRI."	
		(21)	"—I have something in mind too—maybe its because I noticed it on the way back when I looked at the pumpkin field."	Target must be after the pumpkin patch. (Confirms cues 18-20.)
8 (Parking garage)	7	(22)	"Hella has made a drawing of Hal's first location."	Target immediately follows target associated with transcript 2.
		(23)	Four-fifteen to four-thirty.	
		(24)	"Is it a new thing—or from the previous site?"	
9 (Bicycle shed)	Not available[b]		(Almost certainly mentions date and/or time. Other cues?)	Transcript must be the last of the series (see cues 19, 20, 22-24.)

Notes: a. Transcript identifiers were randomly assigned.

b. Dr. Hastings would not consent to the release of these transcripts.

c. This transcript was available for a cursory inspection only and therefore may have contained other cues unlisted in this table.

also yielded significant results, the Marks-Kammann criticisms do not apply in principle. Target lists and transcripts were separately randomized, and transcripts were carefully checked before judging to ensure absence of any phrasing for which even a weak post-hoc potential-cue argument could be made." How careful was a checking process that missed 24 cues in six transcripts?

The claim that the Hammid target list given to Hastings was randomized is also highly moot. It actually depends on which list one is talking about, because, although the SRI researchers appear unwilling to admit this, no less than *three* listings of targets in the Hammid series were given to the judge. *"I received three target lists"* (letter from Hastings, May 26, 1977). One of these lists was randomized; this is the one cited by Puthoff as *the* (implying *only*) target list given to the judge. The other two lists provided by SRI (described in detail by Hastings in his letter to me of May 26, 1977) were not random. One of the two nonrandom listings was "a series of pages, each with the name of a target and location. The order of those pages, as I now have them, is this: courtyard, auditorium, Methodist church, playground, overpass, parking garage, railroad bridge, pumpkin patch, bicycle shed" (Hastings's letter, May 26, 1977). The correlation of this target listing and the order of target usage is 0.833 ($p<.01$). This listing therefore would have provided an artifactual basis for correct matchings (see Marks 1981a).

The second nonrandom listing of Hammid targets given to the judge by SRI was a map of the Menlo Park/Palo Alto area indicating the location of the nine target sites. There is a strong correlation between map codes and pairs of targets visited outside SRI by Targ or Puthoff on different days and half-days over the series of experiments.

Here is a verbatim description from a remote judge of how he matched the six Hammid transcripts against the targets:

> The six transcripts fall into three pairs. The first pair are 8 and 3 [see Table 2]. Russell Targ is the traveller to both, on the same day, September 18. The give-away phrase in 3 is "I'll see you in church." Therefore I would say 3 is the Church and 8 is the Merry-go-round. The remaining two pairs are 6 with 9 and 2 with 7. Puthoff is the traveller. 6 and 9 were apparently visited one immediately after the other, on the morning of October 11. Looking at the map 6 and 9 either go with the Pumpkin Patch and the Railroad Bridge, which are very close together, or the Overpass and the Parking Garage, which are further apart. However this pair (6 and 9) must go with the Pumpkin Patch/Railroad Bridge combination because of the cue phrase in transcript 7 which mentions the "pumpkin field" as having already been visited. Therefore 6 and 9 go with the Pumpkin Patch/Railroad Bridge, and 2 and 7 go with the Overpass and the Garage. I am unsure of the order but I'll stick to the following: (6) Pumpkin Patch, (9) Railroad Bridge, (2) Overpass, (7) Parking Garage."

This remote judge (Judge B in Table 1) gained a sum of ranks of 8 giving a p

value of 0.001. This result achieved at a distance of 12,000 km and with no ESP ability—just plain logical thinking—exceeded that obtained by Hastings. Clearly the 24 cues available in the transcripts, the presence of which Targ, Puthoff, and Tart have denied, are sufficient to account for the entire RV effect claimed for the Hammid series.

This review of the SRI RV research unfortunately remains incomplete owing to the unavailability of the majority of raw data. Real difficulties can occur in evaluating research on the basis of incomplete information, and misinterpretations and errors may occur. An example of this can be found in *The Psychology of the Psychic* in relation to a mistaken inference concerning the Hammid experiments, which were hypothesized to have been selected from a longer series. Although training experiments were run prior to the published experiments, the allegation of data selection has been retracted (see Marks 1981b). However, I remain undecided about whether all of the drawings produced by Hammid were submitted for judging, since drawings were missing from some of the transcripts given to me by the SRI judge. But this is a minor point in the light of the remote-judging controls. The SRI experiments with subjects Price and Hammid can be seen as providing no evidence whatsoever for remote viewing. Contrary to Targ and Puthoff's claims, the quality of the subjects' descriptions is extremely poor and, without the cues, cannot be matched against the targets.

Replication Attempts

Attempts to replicate RV fall into two distinct groups. First there is a group of carefully controlled studies that avoided the flaws present in the Puthoff-Targ experiments and that found no evidence of RV (Allen et al. 1976; Rauscher et al. 1976; Karnes et al. 1979; Karnes and Susman 1979, 1980; Marks and Kammann 1980). When all normal or artifactual methods for matching the subjects' descriptions against target sites are eliminated, it is apparent that the RV effect completely diappears.

A second group of experimenters claim to have confirmed RV. However, all of these experiments are flawed in a variety of ways, some of them reminiscent of the original SRI research and some new. The size of the RV effect claimed in these studies actually correlates quite well with the magnitude of the flaws present.

Hastings and Hurt (1976) reported a single RV experiment that used as a target "a circular play area, filled with sand, and containing a log structure with chains hanging from it and a slide on one side. ... There were swings next to the play area, and a jungle gym alongside the sidewalk." A group of 36 subjects attempted to describe this target, which was selected from a set of six possible targets all within a 10-minute drive of the "laboratory." The names of the targets were written on cards, which were sealed inside envelopes. One envelope was randomly selected by

throwing a die, and David Hurt and a companion then departed with the sealed envelope. The envelope was opened in Hurt's car and the two travelers proceeded to the target site and spent 10 minutes there. Apparently the other five envelopes containing the names of the nontargets were left behind with the other experimenter (Arthur Hastings) and the group of subjects. It is a matter of some speculation what Hastings could possibly have discerned from the five envelopes left in his control. However, before the remote team returned, no less than 20 of the 36 participants had selected the correct target site from the six available alternatives named and described by Hastings. This procedure seems incredibly lax and poorly controlled and the potential for cueing and bias in the subjects' descriptions is enormous. To quote the experimenters' report: "We think that the effectiveness of the experiment was partly due to the way we conducted it." Hastings and Hurt recommend that in future research "the target pool should be made up by someone not at the experiment." Who would not agree?

Whitson, Bogart, Palmer, and Tart (1976) reported a study not dissimilar from the Hastings-Hurt experiment just described. A target was randomly selected from a set of ten sites. A group of 27 art students attempted to draw this site while it was viewed by one of the experimenters. A judge was asked to match a first and second choice from a set of 10 slides of the sites projected simultaneously on a screen. A bias was observed in the judge's rankings favoring the target site, a bike tunnel. A second experiment was run using another target and another art class of 14. The results of the second experiment displayed a drawing bias but, on this occasion, favoring a different site, which was not the target. This study illustrates an important control for RV research—it is essential to control for biases operating in the subject's responses. The next study provides a potent illustration of what can happen when response biases are ignored.

Vallee, Hastings, and Askevold (1976) reported a series of 33 experiments using a computer-conferencing network with 12 participants in various locations across North America. At prearranged times the participants used portable computer-terminals located in their homes or offices to type descriptions of a mineral sample, selected from an available set of 10. Eight out of 33 descriptions were correctly matched by a panel of five judges, compared with a chance expectation of 3.3.

The implications of this result (if true) for human perception are absolutely mind-boggling. Apparently human beings can discriminate a baseball-sized object at a distance of 2,500 km, differentiate the object from nine others in an arbitrary and unknown set, through an incalculably huge number of physical barriers, and without interference from a huge landmass of rock and minerals in the North American continent. Before rewriting our textbooks on perception it would pay to examine the details of this experiment a little more closely. In fact we discover that although 12 participants took part in the experiment, results for only 6 subjects are

included in the experimental report. Of the 8 matching descriptions, 3 were obtained for target D (opals) and 2 for target F (common salt crystals). The results become a little less surprising when one notes the strong bias in the subjects' descriptions (as rated by the judges) toward opals and salt, regardless of which mineral was the target. The results for these two minerals when they were targets gave 5 correct matches in 10 attempts (50 percent). However, for the remaining 23 experiments, when samples D or F were *not* the target, 8 (or 35 percent) of the descriptions also matched D or F more closely than any other. When the results are considered in terms of rankings instead of the peculiar rating system used by the Vallee team, we find that the average ranking of the subjects' descriptions against samples D or F when D and F were targets was 2.80, and when they were not targets, 2.96, a minuscule difference. The results for the other 8 targets gave 3 correct descriptions in 23 attempts, almost exactly what we would expect purely by chance. Therefore, having corrected for response bias, these results lack any real substance in their support of RV.

Dunne and Bisaha (1979) conducted precognitive RV experiments in which the subjects allegedly described the targets *before* they were selected. In the first series of seven experiments subjects worked in pairs but independently. Dunne and Bisaha reported results for seven subjects (S4–S10). For some unexplained reason the results for the three other subjects (S1–S3) are missing from the experimental report. Also ten targets were selected, but the results for only seven are presented. The protocol differed from the SRI research in that photographs of the targets were used by the judges rather than on-site visits. Apparently several photographs were taken at each target site and a selection must have then been made, as only one photograph of each site was given to the judges. Since the photographs used in judging must have been selected *after* the subject had described the target, unless the selection was conducted by an independent third party, the experiment is worthless. The selection could obviously have been biased by the experimenter's knowledge of the subject's descriptions.

Dunne and Bisaha randomly divided the total of 14 transcripts into two sets, Group A and Group B. Two judges were asked to blind rank Group A, two judges to blind rank Group B, and two judges matched Group A transcripts against Group B transcripts. John Bisaha sent me the transcripts for this experiment and they do contain a few cues, although not on the same scale as the SRI transcripts I have seen. For example, transcript A-5 is labeled "Barb 5/9," the subject's name and the date. Transcript B-2 is labeled "Steve B 5/9,". Needless to say these two transcripts were correctly matched. Evidence of post-hoc data-selection is also present in one of the transcripts. The experimenters claim to have attached any drawings the subject made to the transcripts for judging. Yet Transcript A-2 from subject 5 for the Madonna del Strada target included no drawings even though the transcript states in two different places that a

drawing was done. Why was this drawing excluded? Was it a poor match?

An RV report claiming confirmation of the SRI research was published by Schlitz and Gruber (1980). A target in Rome was visited on each of 10 days at a prearranged time, while a second experimenter in Detroit sketched and wrote down her impressions as she concentrated on the distant target. Transcripts, translated into Italian, together with associated drawings, were given to five judges who visited the 10 sites and then ranked and rated the 10 transcripts against each target. The resulting scores were highly significant for four out of the five judges.

Schlitz and Gruber state that no cues were found in the transcripts so that no editing was necessary. However the drawings were attached to the transcripts following their translation into Italian. Were the drawings and transcripts dated or coded? If not, how could they have been put together correctly following the translation? What sort of coding was used? How were the targets listed when given to the judges? Were they in the correct order or in random order? Unfortunately we are not told this vital information and are left with an uncomfortable feeling of déjà vu.

Conclusion

Well-controlled experiments never find the RV effect, while poorly controlled experiments nearly always do. Data suppression, flawed methodology, and lack of replication lead to the conclusion that remote viewing is a cognitive illusion, an artifact of human error and wishful thinking.

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