INTRODUCTION

Several caveates are necessary in order that this review be considered a fair appraisal of the state of the research described.

- First, there are available only three progress reports covering a period 28 January to 1 August 1974. Evidently, the major portion of research data both basic and applied has yet to be submitted to the sponsor.
- No interviews were held with the principal investigators or their staff to clarify some of the techniques and procedures described in the progress report.
- Little or no description beyond general impressions has been obtained by the clients' monitors of this project.
- As a result of the incomplete reporting and data analysis, the reviewer must be extremely careful not to give a biased report because supposed weaknesses or strengths of the initial reports may not be perpetuated in a final and more comprehensive reporting of the research.

Background Section

The purpose as stated in the progress report on the program is "to determine the characteristics of those perceptual modalities through which individuals obtain information about their environment, wherein such information is not presented to any known sense."

The program is"divided into two categories of investigation of approximately equal effort: applied research and basic research. The purpose of the applied research is to explore experimentally the potential for applications of perceptual abilities of interest, with special attention give to accuracy and reliability. The purpose of the basic research is to identify the characteristics of individual possessing such abilities, and to identify neurophysiological correlates and basic mechanisms involved in such functions." This review must by necessity be concentrated on what the

reviewer assumes to be the applied research effort. There are little data available in the three progress reports concerning the neurophysiological correlates and basic mechanisms. Since the information is presented in progress report form, the organization of this review must be artificial and perhaps does not represent in order of importance of the subjects discussed.

An Overivew

A reading of the three progress reports leaves the impression that the research was done on a pragmatic and perhaps "catch-as-catch-can" basis. Such an approach may have been necessitated by the availability of certain subjects or may be a reflection of the absence of a long-range plan.

It is also somewhat difficult to separate the research that was begun in January 1974 from research conducted by SRI during previous periods. This is particularly true because in the first two progress reports there are enclosures (in the form of appendices) that were prepared under different sponsorship. One is undated. Thus, it is difficult to determine the period during which the research was conducted. The reviewer believes this paper, entitled "Information transmission under conditions os sensory shielding," may have been sponsored just prior to the present reporting period. It is questionable whether this portion of the progress report should be considered here, but the reviewer has examined it in order that the review be comprehensive.

This appendix covers the work done with Mr. Geller who performed under a variety of test situations. When one examines the data and the analyses of Mr. Geller's ability to reproduce stimulus material enclosed in sealed envelopes, it is necessary on two counts to look at pragmatic useage of the skills or unique talent demonstrated.

The first point concerns the degree of replicability of the stimulus material. How accurate must the reproduction be to have value or meaning. If one seeks exact reproduction as a criterion one would reach certain conclusions from the test. If one allows for analyses of symbolism or near-identity or even similarity, other interpretations are possible.

The second point concerns the methodology of submitting Mr. Geller's responses to judges in order to see if they can match responses to stimili.

The findings of the judges would indicate a very high matching of stimulus to response material. The reviewer questions the value of this matching procedure. There were no false responses or false stimulus material. These were very limited test materials for matching purposes. This is an appropriate procedure only if one is interested in symbolism or similarities rather than actual or exact reproductions. The reviewer feels that if one is not pragmatically concerned with exact reproductions, or mental Xerox copies of the stimulus material, then he has a purpose for this information which would require symbolic analysis and interpretation of the response material that escapes the reviewer. To see something like the target material rather than the target material might give hints to its true identity or configuration but if the responses made by Mr. Geller have elements of symbolism, and they appear to, then interpretation becomes a much more ambiguous and difficult task.

These statements in no way imply that Mr. Geller's response stimulus materials are not interesting or that on the surface without examination of the experimental methodology are not above chance expectation. One must, however, seek and interpret these results in terms of the objectives of the research. The reviewer cannot evaluate the conditions under which these experiments were conducted. There is no way to exclude the possibility that clairvoyance precognition, or even elements of psychokinesis, or a mixture of the three, may not have been operating. In addition, one cannot judge from these reports whether there were flaws in handling the test material.

It is possible to comment on the die experiments conducted with the sensitive, but only in a tentative fashion because of the brief description and data available. In order to appropriately evaluate one needs to know more about the pass circumstances when the subject chose not to respond. The fact that the stimulus material is known (six possible choices) makes this a more structured task. eliminating confusing interpretations. The results seem impressive. However, the reviewer is not acquainted with the potential means of manipulation of dice in these circumstances. More data should be collected under controlled conditions.

A second series of experiments was conducted using pictures of every day objects drawn by the experimenters and artists and sealed in envelopes. The hundred targets were divided randomly into two groups of 20 for 3 days of experiments. On each of the 3 days of these experiments Mr. Geller did not respond. He declined to associate any envelope with the drawing that he had made. On each day he made approximately two recognizable drawings which Mr. Geller felt were related to the target pool (100). On each of the three days, two of his drawings were considered reasonably associated with 2 of the 20 daily targets. On the third day, two of his drawings were considered close replications to that day's pictures. The experimenters did not consider these results significant nor would the reviewer. Evidently, the researchers believed the significant factor was that no person associated with the research staff had knowledge of what the pictures or targets were. This suggests that Mr. Geller may need to read somebody's mental impressions rather than the target material. This hypothesis needs further study and evaluation, because it introduces variables not controlled for totally in these studies. Mr. Geller's subjective impression was that having a target pool of 100 stimuli in contrast to a single target for each judgement confused the identity of the target. This explanation is difficult to evaluate. Perhaps if Mr. Geller is used in later studies the experimenters can get at this factor. Until this matter is clarified the precise ESP condition that is operating cannot be determined.

Remote Viewing by Mr. Price

There is little description of the actual narratives of Mr. Price. One cannot determine whether he was aware of the nine sites or had visited them prior to the experiment. It is known that he was not aware of which site was being visited at any particular time. It is also clear that the experimenter did not know which site was visited, but whether he had knowledge of the site selected was not clearly articulated.

In order for the judges to match narratives against the sites they visited may be potentially significant. However, without more original data and transcripts of the narratives it is impossible for the reviewer to

evaluate these experiments, particularly when it is said several times that the descriptions contained inaccuracies.

There is a question of the value of the technique of having judges compare narratives and then visit the sites to match them. How many factors are considered as matches or misses in a nature preserve or the Redwood City Arena or a drive-in theater is difficult to know. There are too many unexplained variables here for a proper review.

Additionally, from the pragmatic point of view of the client, one has to know the accuracy that is necesary in these narratives to make remote viewing valuable.

The EEG Research

The findings of the Targ-Putoff initial work measuring EEG activity as an indicator of information transmission between an isolated receiver and a remote sender is interesting but certainly preliminary. Six subjects were used. The second analyses gave no evidence of EEG driving in any receiver although in control runs the receivers did exhibit driving when physically stimulated with the flashes. One of the six subjects, HH, showed a consistent alpha blocking effort. Therefore, this subject was studied further and most of the data recorded is based on HH's performance. The only other data offered were the guesses or the subjects' conscious assessment for each trial to see if they could say when the stimulus was generated. This was found to be at chance level. Thus, only HH's work showed significant EEG changes associated with the presence of remote stimuli under conditions of sensory shielding. No judgement can be made of this preliminary work on such limited data.

The summary or discussion session section of this Targ-Putoff report seems to be the basis for background in the present proposal for work. Here they state a channel exists which may involve either direct reception of hidden information content, perception of mental images of persons knowledgeable about target information, precognition, or some combination of these or other information channels. The authors feel that they have obtained some evidence that suggests a channel exists whereby information about a remote location can be obtained by a means that is an as yet unidentified perceptual modality. The reviewer cannot challence this finding but cautions only that these data, like other data submitted for the same hypothesis over the years, may leave many unconvinced. The second

conclusion appears to be that the information channel is imperfect containing noise along with the signal. This is not a useful conclusion because it does not define noise, it does not consider intensity or of signal, it does not explain what other channels of information and biological systems may contribute. Their third conclusion is that "while a quantative signal-to-noise ratio information-theoretical sense cannot as yet be determined, the results of our experiments indicate that the functioning is at a useful level of information transfer." The use of signal-to-noise ratio has been discussed previously. The concept of usefeulness is undefined, and it has yet to be determined whether such information so obtained is useful for interesting. This is not to deny that people obtain information of some quality as yet to be determined through methods we do not understand. To immediately hypothesize that it is extrasensory, beyond the ordinary channels of information, is not in the reviewer's mind supportable or parsimonious. Science has yet to exhaust potential information obtained through the known and studied sense mechanisms. Moreover, the ways in which these information channels are sources of data and function as integrators is still not thoroughly known. The authors go on to say that "the remote perceptual ability may be widely distributed in the general population but because perception is generally below an individual's level of awareness it is repressed or not noticed." These are loose statements without evidence for repression or "not noticed." We have little evidence whether the perception is below a person's level of awareness. This criticism is directed solely at use of words that tend to offer little explanation.

The statement by the authors that our cultural constraints have prevented the surfacing of these abilities is of interest. The reviewer's experience would indicate that the present cultural freedom for new ideas, life styles, and the like, is much more conducive to the study and awareness of these phenomena than conditions for the last 75 years have been. If good cases are to surface, if people with high ability are going to feel free to express this gift, this is the time.

The authors conclude that experiments in the area of so-called paranormal phenomena can be scientifically conducted and that these results offer a basis from which departures as a function of other observables can be studied. The reviewer cannot disagree with this statement as long as it is not meant to imply that previous studies or others now under way are being conducted in an unscientific or un-reliable fashion. The experimenters have produced no new technologies untried in some fashion in the past or present. The reviewer believes the current methodologies are adequate for the study of these pehnomena but at present and in this study there is too great dependence on probability and mathematical determinations of events. Although such figures are impressive, they do not offer much explanation of the events. They only tend to prove that something is happening above chance level. It may be that they have chosen, in the case of using judges, the wrong methodology or wrong variable to examine.

Similarly, the use of such terminology as noise-to-signal ratio also does not really get at the problem, but introduces a concept that is neither applicable nor helpful, at least as far as describing ongoing events.

Progress Report 2

Progress report 2 mentions the continuation of remote viewing, including targets in Costa Rica. It gives no real data for examination.

The report talks about detection of variable-density target material in which the goal was differentiation of 12 low-density cards, six pencil and nine blank cards. These were to be sorted by the subject after they had been randomized and placed inside unnumbered opaque envelopes. The two series proved to give results that did not differ significantly by change. They do mention, however, the ranking of cards by number of times chosen. This was evidently perceiv ed to be significant, but does not appear to this reviewer to signify much. Too little information is given to do a careful analysis of what these results mean. These data should be looked at carefully and discussed to determine whether they are of value, but this cannot be accomplished in progress report form.

Basic Research

There is nothing in the program of the psychological testing to be commented upon. The reviewer does not know that the hypotheses are associated with the hemisphere specialization of the brain, except as reported in the appendix. Since there are no results of data available, this matter cannot be reviewed.

The Measurement Program EEG

There is reference here to the EEG work reported in the first progress report. Three trials or observations are repeated in order to test the hypothesis that certain observed characteristics of paranormal functioning might involve right hemispheric specialization. In the three sessions the right and left occipital regions were monitored, and a section of alpha activity (arousal response) that correlated with remote stimuli, as reported in the previous experiments was found. As will be recalled, the results did not seem very promising for remote receiving except in one individual, so the meaning and importance of this section of the report are unclear. The authors now believe or say that this occurred eseentially only in the right hemisphere where the average alpha reduction was 16 percent (2 percent in the left) during the 16Hz trials, as compared woth no flash trials. These results, the authors suggest, indicate initial support for the hypothesis of right hemisphere specialization and that further investigations of that hemisphere are indicated. Their reasoning concerning the placing paranormal functioning in the right hemisphere is quite unclear. It is certainly confusing to hear now that there were results from remote stimulation in the earlier studies. Until the data are available, one must trust only the progress report.

Physical Measurements

The section on physical measures is a description of what they plan to do and data they plan to have in April. The only other part of the second progress report is an appendix which, a very interesting paper entitled "Hemispheric Specialization in the Duality of Consciousness," by Galin and Ornstein from the Institute for the Study of Human Consciousness, Langley Porter Neuropsychiatric Institute. The reviewer's assumption is that this paper is not to be reviewed, since it evidently is included merely as an

explanation of hemispheric specialization and the investigators' EEG work to determine whether paranormal functioning was related to the right or left hemispheres. The paper is most fascinating and may be helpful as a model for looking at paranormal functioning, although it seems to be somewhat beyond the purposes of this particular contract. Obviously, one should follow basic research leads, but when so much is devoted in the second progress report to this particular item, and so little on the data collection, the emphasis seems unbalanced.

Progress Report 3

The first part of the progress report discusses Project Atlas remote viewing (European R&D Test facility). This subject matter can best be evaluated by the client and will not be commented on by the reviewer who has no access to the evaluation of the data or the data themselves.

B. The Costa Rica Remote Viewing Experiment

The results are said to be of high quality and presently being evaluated in detail. Only samples are given there. The descriptions are such that one does not feel able to determine the accuracy.

The data given is impressive and would seem to give an accurate description of the target described. However, it is difficult to give a hard evaluation on "sample" data.

C. Local Targets with Feedback

The data and the one example of a description in the form of communications between person on site and the person in the lab is just too confusing to draw any real conclusions. It would be necessary to accept their findings at this time including their statement about where viewing is weak. If one accepts this rather sketchy presentation, the data looks impressive.

D. Local Targets with Azimuth Bearing

This brief description cannot be evaluated.

B. Basic Research

This section describes procedures which would best be commented upon when all the data are in. Some of the information has already been referred to while discussing specific findings.

The section C on 4-state Electronic Random Stimulus Generator describes procedures and statistical analyses. There is no real way in which to evaluate these findings until more subject data are available.

#2. Identification of Measureable Characteristics Possessed by Gifted Subjects.

A. Medical Evaluation

This describes test procedures and the status of the various subjects. Again not enough data are available for a review. It is assumed that these data will be included in the final report and can be reviewed at that time. Few results are available on certain tests. Review would now give an incomplete evaluation

Appendices

Appendix 2 - Personal Observations of the use of the 4-State Electronic Random Stimulus Generator is a most interesting and insightful paper of one subject. Never before has the reviewer seen a more detailed self-analysis of how one prepares oneself for each response in a series of hundreds of responses. The paper is well written and will make a valuable contribution to the understanding of how at least one subject perceives clues for judgement on 4 choice generator. Hopefully data will be collected from other subjects in the same manner.

Summary Thoughts of the Reviewer

Reviewing these progress reports has been most frustrating because at times one feels that the experiments are going to offer excellent examples of the paranormal functioning. Unfortunately as was stated in the introduction they (progress reports) do not include sufficient analysis for final interpretation to substantiate this view.

The scope of the undertaking has been very broad and the plans seems comprehensive. If all can be accomplished and the final report contains the data promised then this will have been a very worthwhile undertaking. Unfortunately throughout one feels that the experimenters have not gone far enough to "milk" the experimental situation, and the research design may not have been totally adequate to prevent critics from finding flaws. Finally that too many avenues may have been explored so that time and money will not permit conclusive evidence in some of the major undertakings.

There is also the feeling by the reviewer that this has not been the multidisciplined investigation that one initially hoped for. It is assumed that the principal writing has been accomplished by the two investigators who interpreted much of the data collected by consultants. This of course is a customary procedure but one would have hoped that other specialists might have been brought more emphasis to the final presentation of data. Of course, this may well be the case in the final report but is not reflected in the progress reviews. One still has the feeling that the prevailing philosophy is to "prove" the existence of an information channel beyond those that customarily postulates and the effort to support this hypothesis will certainly affect the tone of the report.

The reviewer looks forward to seeing the final data.