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Minutes of Pandora Meeting of May 12, 1969 (U)

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MINUTES OF PANDORA MEETING OF MAY 12, 1969

Meeting Convened: 0930

IDA Rm. No.: 10K5

DA

Present:

Science Advisory Committee

Walter Reed Army Institute of Research

Dr. Joseph E. Barmack  
Dr. H. Allen Ecker  
General Frederic J. Hughes, Jr.  
Dr. Joseph F. Kubis  
Dr. Lysle H. Peterson, Chairman  
Dr. Herbert Pollack

Colonel Joseph V. Brady  
Dr. Thomas W. Frazier  
Mr. T. Daryl Hawkins  
Colonel Merrill C. Johnson  
Major James T. McIlwain

Dr. John F. Collins (CNO), USN  
Mr. H. Mark Grove, Wright-Patterson AFB  
Mr. Albert Rubenstein, ARPA

(S) The primary order of business was the preliminary protocol proposal for human studies which was requested at the previous meeting on April 21, 1969. The protocol had been distributed toward the end of the previous week and, therefore, had not been received by many of the panel. Time to pursue the proposal was taken before discussion began.

(S) Dr. Brady noted that the proposal had been the combined effort of himself, Thomas Frazier, Merrill Johnson, and Daryl Hawkins and desired the advice of the committee on the ninety-day protocol. Dr. Brady noted that they had considered two basic strategies: (i) assumes that there is an effect of the signal (based upon previous experience) and the protocol is designed to maximize the yield and (ii) assumes that there may or may not be an effect (null hypothesis) and the protocol would include "extreme" operations, i.e., high-forcing functions and large "n"s. If an effect is seen, then fine responses are defined.

(S) In view of previous experiences and evidence available, the first alternative was chosen, i.e., based upon the assumption that there is an effect. Therefore, protocol is an attempt to optimize economic considerations, use small "n"s and primarily to define the effects of the signal.

(S) The panel discussed the over-all strategy and alternatives and agreed with Dr. Brady. Also, re human experiments, this approach regarded most defensible as a prerequisite to more demanding studies, if needed.

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(S) It was noted that a major question regarding any such study relates to the evaluation of behavioral effects since the spectrum of possibilities is so broad compared to physical evaluation. Thus, the major part of the discussion related to behavioral aspects of the program. It was also noted that any energy form, if large enough, will produce biological effects. It was agreed that the signal used would be the special signal at the levels developed and used with the primates, i.e., between 4.5 and 5 mw/cm<sup>2</sup>. Discussion revealed several distinct questions:

(i) Because the "n" is small (eight subjects) there, the question was raised as to whether the protocol will permit the characterization of the individual, i.e., the individual as his own control and at the same time to also permit the characterization of the group, i.e., significance of the findings in individuals in a small "n" group.

(ii) To what extent is the instrumentation appropriate to carry out the objectives of the experiment, e.g., signal beam incidence, range of power levels, polarization, etc. The protocol had not detailed the electromagnetic aspects of the experimental design. Also, what are the effects, if any, of the signal on the instrumentation, e.g., EEG electrodes?

(iii) What are the dependent variables re behavior?

(iv) What are the considerations relative to monitoring the physical (biomedical) parameters re two purposes: as a monitor of the subject's general health and as scientific data re effects of signal?

(v) What are the classification considerations of the program re its management and scientific effectiveness?

(S) The discussion provided consensus regarding these points as follows:

DOD regards the general line of effort to acquire human-based data on effects of the signal, with appropriate safeguards, as a high priority. ARPA believes that the entire effort should be classified for several reasons. It was urged that DOD provide written security specifications and guide for the program.

(S) An appropriate cover relates to the purpose of the program to evaluate the validity of U. S. S. R. reports that nonthermal effects of nonionizing radiation are significant.

(S) It is urged that the special signal (or any improved signal, i.e., to better simulate the Moscow signal) be used. Currently,

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special signal-producing, available equipment can develop less than 10 or 20 mw/cm<sup>2</sup>. Monkey studies have been done at 4.6 mw/cm<sup>2</sup>. Also recommendation to use same carrier frequency. While polarization can be varied, it was urged that the same polarization (radiation beam toward back of animal and vertical) be used in humans but that absorbent seat and gonadal protection be provided. While posterior presentation is utilized, protection of eyes should be considered.

(S) It was recommended that a medical examination function be established as a separate entity from the research function. Thus, the physical well-being of the subjects would be ascertained and reviewed periodically by medical expertise, which is not directly associated with the purpose of the effort. This medical examining function would not be privy to Pandora but would be given the cover story. It was noted that this separate examination procedure, if properly defined, could provide useful data as well as a safety check for the program. General Hughes thought that such a medical evaluation function could be arranged through the new commander of Walter Reed. In view of the fact that the morphological changes (cytological) which have been found in the CNS of animals exposed to the signal appeared in the visual cortex (as well as other areas), flicker fusion studies should be incorporated into the medical examination. Also, slit lamp and visual field checks should be made and audiograms done. It was also recommended that a separate psychiatric evaluation should be accomplished before and after the study. It was not resolved as to whether there should be separate psychiatric screening in addition to the research program screening procedures. This separate medical function or task force may be referred to as the "medical monitoring task force." It was recommended that a specific chain-of-command be established to be certain that in the changing personnel structure of Walter Reed, the appropriate responsibilities are established, and thus, the research team will know whom to work through re the medical monitoring function. It was recommended that the medical monitoring procedure include:

slit lamp examination: initially 90 days, 180 days  
visual fields examination: initially 90 days, 180 days  
\*audiogram: initially 90 days, 180 days

EKG: once per week

\*\*Physician perform general check-up once per week

\*At end of day

\*\*Have responsibility to be certain that all data are entered on record