

A/B, I, 42, 2

22 October 1951

ATG MEMORANDUM FOR : _____

SUBJECT : Proposal for Research on Improvements in Interrogation Techniques by the Use of Aural Side Tone Delay.

CB
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GA

1. Approximately two weeks ago, _____, called me because of his knowledge of my previous connection with research matters and brought to my attention the subject proposal, copies of which are attached hereto. _____ was in town and arrangements were made for myself and _____ to witness a demonstration. We were very much impressed with this demonstration and feel that this device may be possibly used in connection with CIA, _____ endeavors. This proposal was referred to _____ of I&S. It has since been returned to me with a notation that this particular device would not have any feasible use in their program.

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2. I am passing this on to you in order that you may put this proposal into the proper channels, CIA, wide because I believe it has a potential use in some of our operations. It is my suggestion that it may be of value to determine how well our agents may be able to react under pressure. It could also be of use in connection with prisoner of war interrogation. It appears also, as was demonstrated, to have a potential use in connection with the program wherein after the interrogator has developed critical areas, by skillful use this particular type of detection might result in a confession. If any activity here is interested in a demonstration or development of this proposal, I would be very glad to assist them in making arrangements as far as how to contact the proper people in the _____ If, within a

reasonable time, there

B reasonable time, there is no interest shown we should
notify the _____ to that effect.

A+G _____

Attachment : Proposal for Research on
Improvements in Interrogation
Techniques by the Use of Aural
Side Tone Delay.

A+G _____

cc:
Orig. & 1 - Addressee
G 2 - _____

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PROPOSAL FOR RESEARCH ON IMPROVEMENTS IN
INTERROGATION TECHNIQUES BY THE USE OF AURAL
SIDE TONE DELAY

By

C =

C September 14, 1951

04323

Proposal for Research on Improvements in Interrogation Techniques by the Use
of Aural Side Tone Delay

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As a result of some discussions between _____ of the _____ and the undersigned on the subject of _____ observations on the effects of side tone delay and the possible application of _____ effect to criminal and prisoner of war interrogation, some experiments were conducted to gain an idea of the possible scope and potential importance and practicability of the technique.

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Subsequently, in a demonstration, _____, witnessed by _____ of the _____, a subject, who had come in for routine lie-detector examination in connection with _____ confessed with unusual abruptness when he was subjected to side tone delay during his answers to the particular questions to which he had previously given abnormal blood pressure responses under test with the _____ Polygraph.

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The apparatus utilized was comparatively simple, consisting of a Magnecord Model IT53-A4 Recorder and Magnecord Model IT63-J Amplifier. This recorder has three magnetic heads for erasing, recording and monitoring a tape as it is pulled through the system at 7.5 inches per second. The recording head is separated from the playback head by 1-1/4 inches, providing a fixed delay of about 0.2 seconds between a sound uttered by the subject into the recording microphone and the recorded-playback signal in the ear-phones worn by the subject being interrogated. An alternative delay of 0.1 second, obtained with the same record-playback headspacing but with a tape speed of 15 inches per second is available but preliminary tests indicated, as was to be expected from _____ work, that a 0.2 second delay has considerable more effect on the subject than a 0.1 second delay. Consequently, the 0.2 second delay was used in further testing.

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The subject strongly maintained his innocence in preliminary questioning and during and after the test using the _____ Polygraph, which records blood pressure, heart rate, respiration rate and muscular movement. The polygraph record showed abnormal deviations during several key questions. The subject was then interrogated with the aid of the side tone delay apparatus using the key questions and a variety of irrelevant questions. The side tone delay was employed during the answers to the questions which had previously given abnormal polygraph responses and was cut out so that there was no delay during the answers to questions which had occasioned no abnormal polygraph responses. After concluding this part of the interrogation the record was played back and the subject was asked the reason for his difficulty in giving answers to the key questions. The confession followed almost immediately.

It should be pointed out that this technique, or a refined modification of it, if employed with an innocent subject who has given pseudo-guilty reactions, cannot result in false self-incrimination in the nature of things, but at most would result in a somewhat confused state of mind on the part of the subject.

It is therefore our desire to pursue this line of investigation and to devote particular attention to several points. These are:

1. Through investigation of the variables such as length of delay used, the smooth variation of delay during the interval of passing from an irrelevant to a key (guilty response) question, the timing of questions, the reading of a prepared statement versus questioning during the test, the length of answer desired from the subject, etc.

2. The adaptation of the technique to prisoner of war interrogation, since we believe from these preliminary experiments that striking increases in speed and efficiency of the interrogation and subsequent divulgence of desired information may be found possible.

3. The investigation of remote reading instrumentation, since it appears to us that one of the important differences between criminal and prisoner of war interrogation lies in the non-volunteer nature of the latter and therefore questioning without instrumentation attached to the subject may have decided advantages over the usual polygraph technique. It appears reasonable, for instance, that remote indicating infra-red radiation level indicators, which have reached a high degree of development in other fields, could take the place of the blood pressure polygraph attachment without the subject being aware of the measurement taking place. This assumption is based on what appears to be a reasonable expectation of a heart rate, skin radiation correlation.

4. The investigation of the possibility of producing side tone delay and allied effects without the use of earphones. It is believed reasonable to expect that by use of a microphone, ostensibly for recording purposes, but which is a modified throat type of microphone so that undesirable feed-back can be avoided, coupled with focussing speakers, that raise the level of sound in the vicinity of the subject's ears sufficiently above that of his direct voice level so that he is aware only of the sound from the speakers, the effect of side tone delay may be gained without attached earphones. This may be desirable for non-volunteer questioning.

5. Reception detection polygraph techniques have not reached the state at which their use is simple and automatic. As a matter of fact, sober analysis shows that highly experienced operators and interpreters are a prime necessity because of wide individual differences among subjects. It may ultimately prove possible, however, with improvements in polygraph techniques to operate directly side tone delay by abnormal polygraph responses. Needless to say, the matter is relatively simple from a mechanical and electronic point of view. Servo mechanism techniques would provide wide latitude in the selection of desirable response characteristics. If lie-

detector techniques can be sufficiently improved the direct control of side
tone delay will be an almost immediate reality.

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It might be stated at this point that if the

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_____ agree to choose this laboratory for the experimental work suggested that the business case load will have to be reduced to accommodate the project. However, it must be further stated that the experiments, by necessity and for adequate results, must be administered using actual laboratory case subjects. It has always been the allegation of _____ that failures in lie detection experimentation have been due to the use of experimental case subjects who demonstrate a willingness to cooperate so that the experiments will be a success. Actual case subjects, by the nature of their plight, will not show the same willingness to cooperate to assist the experiment.

_____ We believe facilities are adequate and _____ actual case load sufficient to complete the experiment.

B _____ This preliminary proposal is submitted to the _____ for the purpose of ascertaining the possibility of naval interest in and financial support of a research program along the lines discussed above. It is foreseen that a full time investigator will be required. Instrumentation, some of which is available from stock and some of which will have to be specially designed and built, will be required. _____ will serve as director on a part-time basis.

Very truly yours,

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