

EXHIBIT 50—REPORT ON ASSESSMENT OF LIE DETECTOR CAPABILITY BY
DR. JESSE ORLANSKY, INSTITUTE FOR DEFENSE ANALYSIS

MEMORANDUM FOR THE RECORD—PLANNING CONFERENCE BY INSTITUTE FOR DEFENSE
ANALYSIS ON TRUTH DEMONSTRATION TECHNIQUES, MINUTES OF MEETING HELD ON
JUNE 9, 1961, BY HERBERT POLLACK AND JESSE ORLANSKY, JULY 3, 1961

Planning Conference on Truth Demonstration Techniques

Minutes of meeting, June 9, 1961

The meeting was called to order at 9:30 a.m. by the chairman, Dr. Ralph Gerard, with the following participants in attendance:

Stephen Aldrich	Joseph Kubis	Kent K. Parrott
Albert F. Ax	John I. Lacey	Herbert Pollack
Lewis C. Bohn	David T. Lykken	Orr Reynolds
Charles W. Bray	Donald Michael	David Rhodes
Leonard J. Duhl	J. Mooney	John A. Talbot
John Ford	Linwood Murray	Marion A. Wenger
Ralph Hardin	Jay Orear	
Marshall Heyman	Jesse Orlansky	

The chairman said that the purpose of the meeting was to discuss the possible application of lie detection techniques as one means of inspection to enforce arms control agreements and also as a means of demonstrating the truthful intent of participants in negotiations. The meeting would be unclassified and only publicly available information would be discussed.

The following agenda was presented to the group:

1. Technical aspects:
 - Instrumentation.
 - Procedures.
 - Interpretation.
2. Political aspects:
 - Feasibility.
 - Appropriate channels.
 - Procedures.
3. Further steps.

The first topic to be discussed was instrumentation, of which the main purpose is the "objective" measurement of emotions. Up to some point, the interpretation of emotions improves as more variables are recorded and measured. The most useful variables are those which can be measured most accurately, such as the galvanic skin response, heart rate, pulse and blood pressure, etc., and which, of course, correlate highly with the emotional state of the subject. The interpretation of recordings with many variables requires sophisticated statistical procedures and the use of a computer. Attempts have been made to identify the most discriminating variables. There was some disagreement about the conclusion that one could identify specific emotions, such as anger or fear, by the pattern of automatic responses. It was felt that this type of identification is still a preliminary phase.

A distinction was made between "lie detection" and the "detection of guilty knowledge." The first assumes that lying involves a specific emotional arousal and that it can be detected by measuring autonomic responses. The second assumes that knowledge of guilty information is available only to the participants of a crime and therefore that a unique pattern of autonomic responses can exist only for those who possess guilty information. The use of the galvanic skin response alone has been sufficient to detect 100 percent of those who had guilty knowledge in an experiment involving students.

Much discussion was concerned with the relation between autonomic response and specific emotional states. The autonomic responses upon which lie detection depends would be influenced markedly by the context of particular words and the word habits of the individual. In one study, words with low response uncertainties gave low GSR responses, whereas words with high response uncertainties gave high GSR responses. An individual with multiple responses available to a given word tended to give GSR reactions of a highly emotional type.