

The discussion continued on the techniques of how different liars lied, and on the patterning of the autonomic variables. Although there may not be a typical pattern of autonomic responses indicative of lying in general, nevertheless each individual may exhibit a consistent pattern of responses whenever he lies. From this came the concept that it might be possible to establish a man's normal responses as a basis for judging whenever he lies; this was called "titrating the man."

An individual's social role, such as chief of state, may create a situation in which it is his duty to lie and, as such, lead him not to exhibit any emotional response connected with lying. In dealing with a chief of state, the general conclusion was that subjective inference of intent would probably override any "objective" evidence collected by polygraph methods. The evaluation of false negative and false positive responses would have to be taken into account.

Countermeasures to the use of lie detection techniques were also discussed. The existence of many false positive reactions would undermine the lie detection technique. Several possible countermeasures were considered:

(a) The "Hindu" system of going into a trance may make the person oblivious to stimuli.

(b) The deliberate use of muscular tension can introduce irrelevant responses into the recording techniques.

(c) The development of an exciting image within the subject's own imagination could confuse the recording to a very large extent.

Thus, there are many ways of contaminating the responses and of increasing the difficulty of interpretation. However, the use of such countermeasures could be detected and thus the operator would be alerted to take corrective measures. The validity of the polygraph recordings depends upon the operator's ability to identify such sources of error and on the suspect's ability to induce spurious reactions which would not be noticed. The role of drugs in stripping an individual of his resistance and of altering his responsiveness was discussed very briefly. It was concluded that the use of drugs is merely an adjunct to the interrogation and measurement process. Though it may have some value, great care must be used in interpreting the results.

The discussion then moved over to political aspects in the use of lie detection techniques. Final proof of an attempt to circumvent an arms control agreement would require physical evidence. Hence, even lie detection techniques of low reliability may be acceptable if they are used to indicate a reason to search. There was a short discussion on the influence of anxiety on the individual's selected at random to represent a typical sample of scientists or political figures by methods similar to those used in questionnaire or public opinion surveys. It was considered possible that the Communists might limit the knowledge of nuclear tests to platoons or cells, as the Communist countries call them, as a means of evading nonphysical detection techniques. Clearly, an individual would not react to a lie detection technique if he did not have any guilty knowledge.

Three questions were asked but not answered in the discussion: Is the technique scientifically valid? Is it socially acceptable? Is it politically acceptable? There was a short discussion on the influence of anxiety on the individual's autonomic responsiveness, on the stabilization of the cardiovascular and vasomotor response with different age groups, and of their effects on this type of recording.

The guilty knowledge technique rests on the assumption that a guilty person will show some involuntary physiological responses to stimuli related to remembered details of his crime. If the crime is such that the investigator can discover a number of factual details with which only the guilty person should be familiar, then the guilty knowledge method can be used. The guilty knowledge items are interspersed with other similar but irrelevant items in a stimulus list. In a test ban agreement, the examiner could use a preliminary interview method to establish the details for which he would be looking in a guilty knowledge test and thereby help him search for knowledge of new weapons, with unknown characteristics, not included in a test ban agreement.

The final part of the session was concerned with future planning. The group developed the following research concepts, listed without regard to order of importance.

1. Lie detection instrumentation and techniques should be reevaluated under real field conditions.

2. Multiple variables must be chosen very carefully and only the most critical ones should be used. These were considered to be changes in respiration, muscle tension, skin resistance, cardiovascular and vasomotor reactions, and eye motion.