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# RESEARCH INTO THE SEMANTICS OF THE IRRELEVANT QUESTION

By

Bob Roy Frisby

## Introduction

One of the earliest and most enduring problems a lie detector examiner faces involves simulated guilt responses based on semantics, rather than on actual guilt or knowledge of guilt. Often the examiner is suspicious that the guilt reactions he sees while interpreting his charts may not be guilt at all, despite the care he exercises in constructing his test questions.

The problem is inconsequential in the "Peak of Tension" test, since the only difference between questions used in this test is in the key word or phrase in each question, based on some element of the crime known only to the victim, the perpetrator and the investigator. However, this latter requirement, which is essential to use of the "Peak of Tension" test, is often compromised (25, 27) by disclosure of elements of the crime by the press, through overzealous or excessive interrogation and even through common gossip. Therefore, while the "Peak of Tension" test and derivations therefrom, such as those proposed by Lee (14) generally are conceded to be the most effective types of tests extant, no further examination of them will be made in this study.

In the absence of "Peak of Tension" material, the examiner must resort to the "General Questions" type test, wherein questions which are relevant to the issues of the case under investigation are interspersed with irrelevant questions. Of these two types of questions, more difficulties may be associated with the irrelevant than with the relevant questions, because the relevant questions have been more thoroughly studied, and the discussions of the semantic problems related to them have been clearer and more comprehensive.

Such words as murder, rape, embezzle, etc., are legalistic and somewhat ambiguous words which invite rationalization and can, therefore, interfere with competent examination (9, 25). A group of basically antisocial words, such as steal, kill, etc., are capable of creating some response even in innocent persons, since they are antithetical to our social teaching since childhood ("Thou shalt not ..."). Instead of these ambiguous or anti-social words, words and phrases are used which describe definite and unmistakable physical acts which are related to the crime's locale, participants, tools

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This paper was prepared as a Master's Thesis at Washington State University in 1961. Despite its age, we believe the paper deserves publication as we know of no other research on this aspect of question formulation(ed.). For copies of reprints write to the author at Box 1741, Corsicana, Texas 75110.

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and modus operandi. Even so, to construct competent tests, it is necessary to state the questions clearly, simply and succinctly, bearing in mind that the questions must mean the same to both examiner and examinee and be free of any meaning or idiom which might generate a reaction from any other cause than guilt.

The irrelevant question poses a rather different problem. Its purpose in a "General Question" (relevant-irrelevant) test, is to provide relief to the examinee (1, 10, 25), or create a norm (7, 17) in that it provides an interval between relevant questions wherein reduction of response from them occurs. The word "relief" becomes the key to the problem, because the Lie Detector is, in reality, only an emotion detector (3, 14, 21, 25). Since this is the case, anger, hunger, pain, fear, disgust or distaste, and any of many other catalogueable emotions which arise from desire for or satisfaction of gustatory, olfactory, aesthetic or physical needs which register as reactions, and, depending on the examinee's personal drives, desires and makeup, which may be of the same magnitude as the reactions caused by guilt. Extraneous thought generated by the question can also cause reactions. Thus, it is reasonable to assume that if the irrelevant questions are such that they could create such reactions, their basic purpose is not being served.

Instruction at Camp Gordon (25), and the texts written by Inbau and Reid (7) and Clarence Lee (15) suggest the following as examples of irrelevant questions to be used in general questions tests:

- "Do you ever smoke?" (7)
- "Did you have something to eat today?" (7)
- "Can you drive an automobile?" (15)
- "Do you smoke?" (15)
- "Did you have breakfast this morning?" (25)
- "Is your hair \_\_\_\_\_?" (a certain color?) (25)
- "Do you enjoy playing \_\_\_\_\_?" (certain game?) (25)

In late 1954 or early 1955 an article written by Cleve Backster, then Director of the National Training Center of Lie Detection in New York City, and Chairman of the Research and Instrument Committee of the Academy for Scientific Interrogation, appeared in a manual for lie detector examiners prepared by the C. H. Stoelting Co. (1). In this article, Backster indicated, essentially, that relief for the examinee would best be achieved by asking exclusively that type of irrelevant question which would serve to identify the examinee, making certain beforehand that the examinee is aware that establishing identity is the overt purpose of such questions. This latter qualification helps to assure that the questions are meaningful in the eyes of the examinee, otherwise he might feel that they are superfluous to the examination and thereby generate internal extraneous thought processes. The following are some of the identity based questions (and variations) suggested by Backster:

- "Is your first (middle, last) name \_\_\_\_\_?"
- "Were you born in the city (town, country, state, county) of \_\_\_\_\_?"
- "Were you born in the year (month) of \_\_\_\_\_?"
- "Do you now live in the state (city, town, country, county) of \_\_\_\_\_?"

Backster further theorized that extraneous thought processes and outright emotional reactions to the type of irrelevant questions suggested by earlier authorities would actually usurp the relief-giving purpose of the irrelevant question.

### The Problem

The books of Inbau and Reid and Lee are pioneer texts in the field of lie detector examination and are still standard texts used in the training of examiners. The Camp Gordon School, in addition to training virtually all of the examiners used by the armed forces, has trained many examiners for other federal agencies, and by now, by virtue of retirements and discharges, has trained many examiners currently employed by civilian law enforcement agencies and private firms. Therefore, it can be assumed that the type of irrelevant questions that these authorities suggest are in wide use by practicing examiners in the field.

Backster's theories are antithetical, and haven't been as widely disseminated, although superficially they are quite believable. No known attempt has been made to objectively determine the superiority of either type of irrelevant question in any kind of a comparative study. The purpose of this study is to evaluate the relief-giving characteristics of the two types of irrelevant questions; those suggested by Backster and those suggested by earlier authorities.

### Apparatus

A desk-mounted Stoelting #22496 Traveling Case "Deceptograph" type instrument and a Stoelting #22498B adjustable chair for the subject were used in the experiment.

This instrument makes constant cardiographic (cardio), pneumographic (pneumo), and galvanic skin response (GSR) tracings.

The adjustable chair was designed especially for lie detector use, and positions the subject for maximum comfort while at the same time allowing maximum cardio tracing amplitudes by keeping the arm at the heart level.

### Examination Room

The examination room used met the ideal requirements as set forth by Inbau and Reid (8), except that of soundproofing. The room had no windows except an observation window (periscope type with one-way viewing arrangement), and its only door opens into another room. The inner and outer doors were kept closed during all examinations, and interruptions were minimized and quiet requested by a notice posted on the outer door. The room's location on the top floor of the building also contributed materially to sound control.

### Subjects

Students in Police Science classes were asked to volunteer for a "graduate lie detector project." Of the group which volunteered, 24 male and 24 female subjects, ranging in age from 19 to 26 were selected and examined. Prior to the request for volunteers, questionnaires entitled "Future Placement

Referrals" were distributed and completed by all members of the classes. In pre-test interviews, each subject was told nothing further as to the nature of the project, but it was inferred that a purpose of the examinations would be a screening process, and the completed questionnaires were prominently displayed during the interview. The purpose of this subterfuge was to shroud the real purpose of the experiment and prevent synthetic reactions caused by subjects who might be over-cooperative or lacking in cooperation.

The pre-test interview also dealt with an explanation of the instrument, techniques and tests which were to be administered; the type and degree of cooperation required of the subject during the examination; and a conditioning period was used, in part, to establish a degree of rapport between subject and examiner which would facilitate cooperation and attentiveness on the part of the subject.

### The Tests

During the conditioning period, the instrument was put in operation for a period of time approximating that of a normal test. This procedure acquainted the subject with the "feel" of the machine while the subject was in a state of relative repose, aided in examiner's explanation of the instrument, and displayed the subject's physiological patterns at a time when no stimulus was applied. The chart produced was a "norm" chart, a standard examination procedure, and was used in this project as one means of detecting medical or constitutional aberrations which would identify the unfit subject.

On completion of the norm chart, the subject was given a set of five numbered cards, was told that the examiner would leave the room shortly, after which the subject was to choose a card, write down the number chosen on a slip of paper provided him, and then secrete the slip of paper somewhere on his person. A "peak of tension" test, designed to discern the card chosen by the subject was then administered, after which the subject was instructed to return to the examiner the secret slip of paper. Comparison of the chart and its tracings with the number transcribed on the slip of paper indicated whether the subject was capable of giving a valid reaction.

The last, and most important test administered was the "General Questions" test, using four questions of the type suggested by Backster and four of the type suggested by earlier authorities. A ninth question was added to heighten the impression that a purpose of the examination was to test the validity of information cited by the subjects on their questionnaires.

Although all subjects were asked the same nine questions, two different question sequences were used wherein the order of the questions' appearance in the sequence was changed. The purpose of this precaution was to prevent inordinate weight of reaction to fall on any question merely because of its relative position in the test.

The questions were discussed with the subjects before the tests, but in a different sequence than that used in the test. This was intended to prevent surprise (18) and at the same time minimize anticipation.

An equal number of each of the two test sequences were administered, but without regard for male-female ratio. Following are the two test sequences used:

### First Sequence

1. "Is your first name \_\_\_\_\_?"
2. "Were you born in the city of \_\_\_\_\_?"
3. "Do you smoke?"
4. "Were you born in the year of \_\_\_\_\_?"
5. "Do you know how to drive a car?"
6. "Did you have breakfast this morning?"
7. "Do you now live at \_\_\_\_\_ (campus address)?"
8. "Is your hair \_\_\_\_\_ (certain color)?"
9. "Did you tell the truth in your questionnaire?"

### Second Sequence

1. "Do you smoke?"
2. "Do you know how to drive a car?"
3. "Is your first name \_\_\_\_\_?"
4. "Did you have breakfast this morning?"
5. "Were you born in the city of \_\_\_\_\_?"
6. "Were you born in the year of \_\_\_\_\_?"
7. "Is your hair \_\_\_\_\_ (certain color)?"
8. "Do you now live at \_\_\_\_\_ (campus address)?"
9. "Did you tell the truth in your questionnaire?"

At the end of each examination, the subject was detached from the instrument and interviewed. Without reference to the charts generated in the two tests, each subject was asked what, if any, thoughts crossed their minds in relation to the questions they were asked during the tests, and to explain any thought processes other than the required "yes" or "no" answers. Their responses to these post-test questions were recorded on 5 x 8 cards, and filed away with the charts, question sheets and questionnaires in packets identified hereafter as subject dossiers. No attempt was made to interpret or evaluate the charts until the whole group of subjects had been examined.

### Chart Interpretation

After all examinations were completed, the "General Questions" tests were detached from the subject dossiers and assembled. There was nothing on the charts to indicate which of the two sequences were used, and the only identifying marks on the charts were the subjects' names and dossier numbers, the dates on which the examination was administered, and the examiner's name. This control was needed to prevent the examiner from intentionally or inadvertently weighing his evaluations of the chart to reflect his bias.

The charts were thereafter given a gross evaluation, with obviously simulated guilt reactions being marked with a broad lettering pen for later study. After all 48 charts were given their first evaluation in this manner, they were again scrutinized individually with a view toward classification of each classifiable response noted in each of the three tracings. A descriptive classification code was used and as the responses were noted and evaluated, the appropriate classification code was recorded in the appropriate block of a worksheet, an example of which is set forth in part for illustration in Figure 1.

Test Sequence--Mixed

Question #		1	2	3	4
Subj. #1	Cardio	+, IAC	DAC	DAC, D	
	Pneumo	4 IAP	5 LB, S	3 S	2 DAP
	G.S.R.	AR	AR, DS		DS
Subj. #2	Cardio	-	I, +, DAB	I	D, IAC, I
	Pneumo	2 S	7 S, IAP	3 LB	6 S, DAR
	G.S.R.		AR, DS	AR	DS
Subj. #3	Cardio	+, VS		-, VS, D	-
	Pneumo	6 S, LB	S	DAB, S, LB	3 LB
	G.S.R.	AR, DS		AR, DS	AR

Legend of Classification Symbols Used: + or -, increase or decrease in relative blood pressure; D or I, pulse decrease or increase; DAC or IAC, decrease or increase in cardio amplitude; VS, suppression of vagus wave; S, pneumo suppression; LB, loss of pneumo baseline; AR, abrupt G.S.R. rise; DS, "double-saddle" G.S.R. response. These are but 10 of the 26 classification symbols used in evaluation. A complete list of classification codes is set forth in Appendix A.

Fig. 1.--Example of interpretation worksheets

After all the charts had been evaluated and "mixed sequence" worksheets completed, the numbers of total responses to each question per subject were added to the appropriate blocks as shown in Figure 1. Thereafter, the totals were transcribed onto another worksheet, this time related to their proper question sequence. The subject dossiers were, for the first time in the evaluation process, referred to for the purpose of placing the subjects in their proper question sequence. Assuming, for purposes of further illustration, that subjects 1 and 3 as shown in Figure 1 had been given first sequence tests, the number of responses transposed onto the first sequence worksheets would be as shown in Figure 2. When all worksheets for each of the two sequences were completed, the columns were added, and the product was the total number of classifiable responses per question for that particular sequence.

A master worksheet, in which total results were assembled, was compiled for further study. A reproduction of the worksheet is included as Appendix B.

Test Sequence--1

Question #		1	2	3	4
Subj. #1	Cardio				
	Pneumo	4	5	3	2
	G.S.R.				
Subj. #3	Cardio				
	Pneumo	6	1	8	3
	G.S.R.				

Fig. 2.--Example of interpretation worksheets



## Results

Since the experiment's purpose is to compare the Backster type questions and the traditional questions and determine which of the two, if either gives the most relief, the total number of responses to each question from all subjects is the matter of primary concern. This relationship is shown in the vertical bar graph set forth in Figure 3. The two numbers above each of the eight vertical bars are identified as follows: the first number is the position of the question in the first test sequence; the number in parenthesis is the position of the question in the second test sequence.

The data set forth in Figure 3 illustrate that the questions are ranked, in terms of least response, in the following order:

1. "Is your first name \_\_\_\_\_?"(Backster)
2. "Do you live at (in, on) \_\_\_\_\_?"(Backster)
3. "Is your hair \_\_\_\_\_(certain color)?"(Traditional)
4. "Were you born in the year of \_\_\_\_\_?"(Backster)
5. "Were you born in the city of \_\_\_\_\_?"(Backster)
6. "Do you know how to drive a car?"(Traditional)
7. "Have you had breakfast this morning?"(Traditional) / Tie
7. "Do you smoke?"(Traditional)

Some variations in response was expected due to the order in which the questions were asked. Figure 4 illustrates the variation which occurred.

It is noted that the rankings of questions, again in terms of least response, between the two sequences agree only in the case of ranks 1, 3, and 4 (questions based on first name, living group or address and hair color, respectively).

Greatest variation occurred at the question based on place of birth, with the first sequence group manifesting 32 more reactions to this question than the second sequence group. Next in importance was the question based on year of birth, with the second sequence group manifesting 24 more reactions than the first sequence group. The last variation to be discussed at this point was in response to the "Do you smoke?" question, to which the first sequence group manifested 14 more reactions than the second group.

It is significant at this point to note the unbalance in the male/female ratio between the two sequences. In the first sequence, the females dominate with a ratio of 17/7. In the second sequence, males dominate with a ratio of 17/7.

In general, verbal responses from subjects in the post-test interviews indicated that: the place of birth question generated more thoughts of home to the females, and they are exposed to more stringent parental concern over smoking; whereas the males, being in large part under 21 years of age and fond of alcoholic beverage, have found it expedient to have two dates of birth -- one official date and one for inquisitive bartenders.

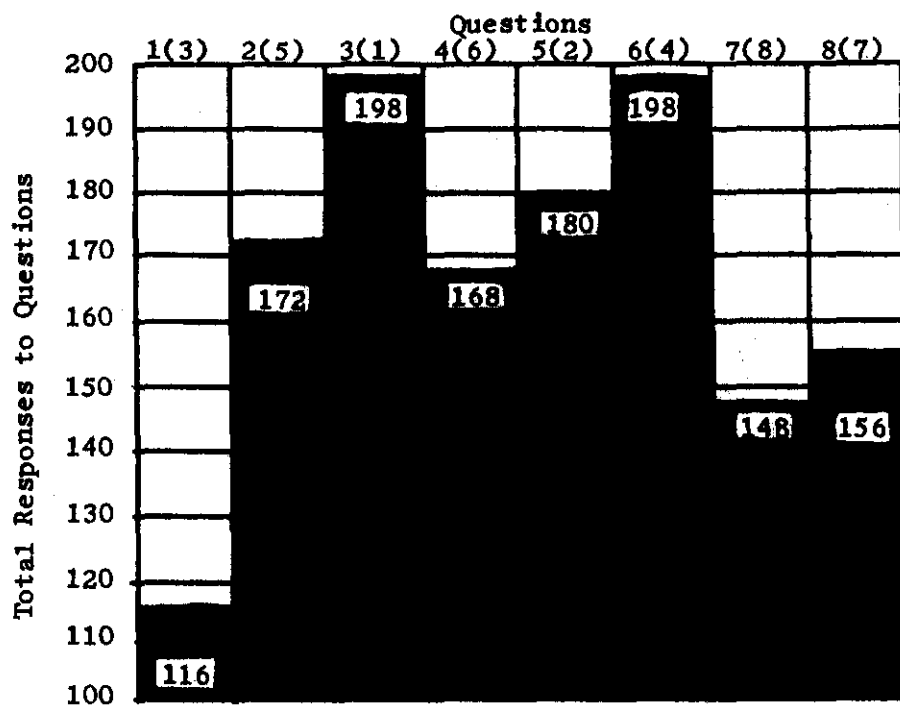


Fig. 3.--Total response distribution

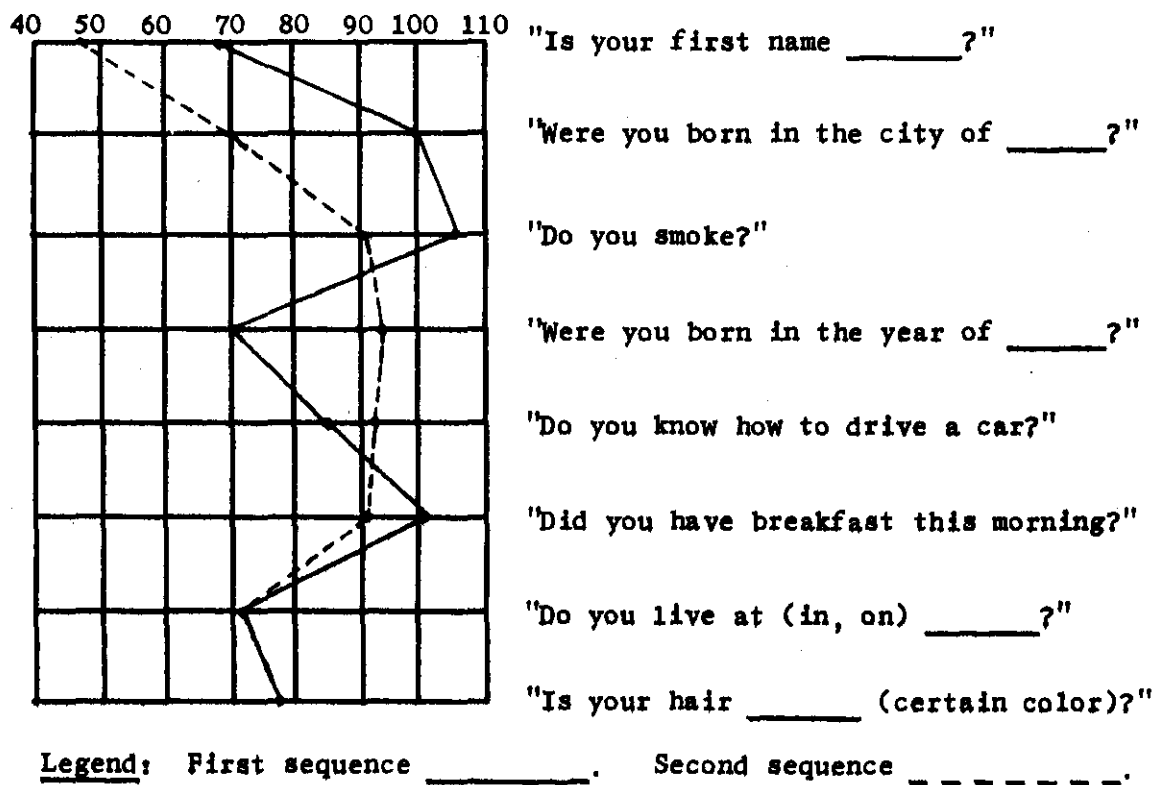


Fig. 4.--Response distribution to each sequence

These factors tend to partially account for the unbalance between the reactions of the two sequences insomuch as these three questions are concerned.

Despite the differences between the total responses in the two sequences, the arithmetical mean of the responses to each question in the two sequences ranks the questions identically with the total response distribution rankings (Figure 3). Figure 5 illustrates mean variation between the sequences.

The agreement on rankings of questions between Figures 3 and 5 indicates a definite superiority of the Backster questions over the traditional ones, since four of the top five rankings were assigned to Backster questions, and the three lowest ranked questions were of the traditional type. Had the male/female ratio in each question sequence been equal, it is likely that the superiority of the Backster questions would have been even more marked. However, this variable was not anticipated in time to provide an additional control factor.

The first hypothesis to be tested is whether the differences between the reactions to the two types of questions in each sequence, as shown in Figure 4, are significant. The  $\chi^2$  method may be employed in solution of this problem, using the following data: In the Backster questions, the total reaction to the first sequence questions was 317, and in the second sequence, 287; total reaction to first sequence traditional questions was 373, and to second sequence questions, 359. The null hypothesis would be that sequence has no effect on response to the type of question asked. Figure 6 illustrates the  $\chi^2$  application.

The  $\chi^2$  value is .303, and with 1<sup>o</sup> of freedom the null hypothesis is accepted. The difference between the responses caused by sequence, if left to chance alone, could have occurred 95 out of 100 times attempted. Therefore, the effect of sequence on the variance in total response between Backster and traditional question types is negligible.

The most important hypothesis to be tested is the question of which of the two types of questions, if either, is superior to the other in providing relief. Backster questions generated a total of only 604 responses, as compared to the 732 generated by the traditional questions. Figure 7 is an application of the  $\chi^2$  method to the problem based on the null hypothesis that there should be no difference in simulated guilt responses between the two types of questions.

The difference in frequency can occur by chance due to sampling fluctuations, but if the differences become very large, chance must be ruled out as an explanation. In the present sample, the difference that resulted could occur by chance much less than one per cent of the time, so the null hypothesis of no difference is rejected in favor of the alternate hypothesis that a real difference does exist in the manner in which the two types of questions elicit the kind of response mentioned.

Since Backster has written that his questions provide more relief than the traditional ones, a directional (one-tailed) test was applied. The

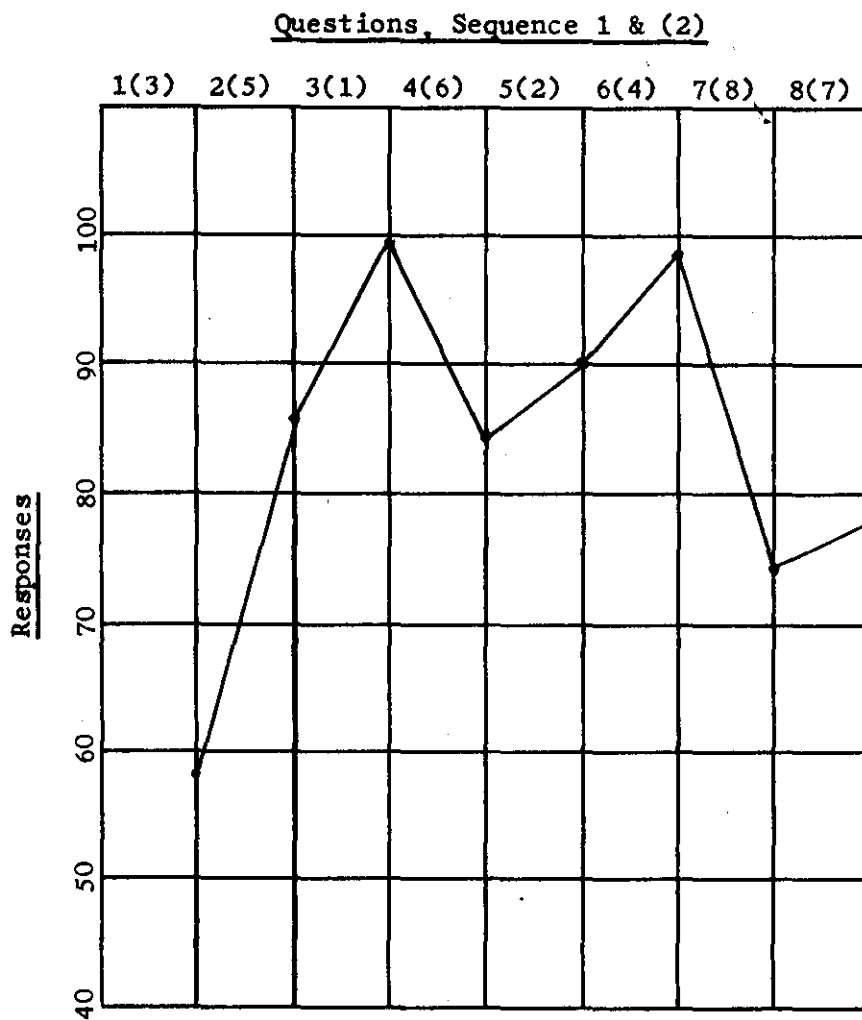


Fig. 5.—Mean responses between sequences 1 & 2

	S <sub>1</sub>	S <sub>2</sub>	
B	317 (312)	287 (292)	604
T	373 (378)	359 (354)	732
	690	646	1336 $X^2 = .303$

Fig. 6.—Testing the hypothesis that sequence has no effect on response to the type of question used.

differences between proportions based on binomial distribution was applied as the "one-tailed" test. In this application, the hypothesis that "p" (.452) is less than .500 is tested, where "p" is the proportion of total simulated guilt responses elicited by Backster questions and "q" is the proportion elicited by the traditional questions. The formula used is:

$$Z = \frac{.500 - .452}{S_p} \quad \text{and}$$

$$S_p = \frac{pq}{n}$$

For this test,  $S_p$  equals .0136 and  $Z$  equals 3.53, the critical ration (C.R.), Results of this test indicate that differences as large as those found in comparing the two types of questions could have occurred by chance less than one in a thousand attempts.

Figure 7. - - Testing the hypothesis that reactions of both groups should be the same.

	f	F	f-F	(f-F) <sup>2</sup>	(f-F) <sup>2</sup> /F
B	604	668	-64	4096	6.13
T	732	668	+64	4096	6.13
f = actual frequency F = expected frequency					12.26 = $\chi^2$

### Discussion of the Results

The problem, as stated, has been resolved, and the superiority of the Backster questions in the matter of providing relief has been conclusively established and tested for significance. The complete effect of their relatively greater value to the examiner, however, requires that notice be taken of the fact that the four Backster questions used are, due to their variability, actually at least fifteen questions. The first Backster question may use either the subject's first, middle (if any) and last name, or even initials. Even nicknames may be used by asked, "Are you called \_\_\_\_?" The city, town, country, or county of birth and present residence (basis of two questions used in the experiment) may be used, as may the month, year, and even the day of birth.

The examiner can control simulated guilt response to the Backster questions far beyond the limits of this experiment, by discreet pre-test inquiry designed to test the feelings of the subject for his name, date and place of birth, and place of present residence. Control demanded that the same basic questions be asked uniformly throughout this experiment. The working examiner, having no such restrictions, will note a subject's like or dislike for his first name, and use, instead, the middle or last name. Therefore, by elimination through pre-test inquiry of those questions likely to produce response, the careful examiner can keep response to his irrelevant questions at a very low level.

Some observations, based on statements made by experimental subjects after the tests, may aid in understanding causes of reactions to the questions, and may also serve as guides to examiners in their selection of irrelevant questions. Many of the subjects, though often manifesting gross reactions, could furnish few, if any reasons for their reactions. However, it is assumed that the reasons are fairly uniform throughout the group tested, despite the lack of stated reasons.

"Is your first name \_\_\_\_\_?"

Three subjects stated that they disliked their first names and used contractions of their first names habitually. Still another disliked her name and used her middle name. Two subjects had foreign first names, which were frequently mispronounced, causing them some irritation. The examiner made this mistake during the examination. Experience has demonstrated (27) that the middle name is more often a problem than first or last names, since they are seldom used and the subjects are unaccustomed to hearing them. Second, parents often satisfy the whim of a relative in middle name choices, and exercise more care (and perhaps taste) in selection of the first name, since it is the one the child will more probably be known by. The prudent examiner can keep down response by asking the subject what he's generally called, and by paying attention to the way the subject pronounces it.

"Were you born in the city of \_\_\_\_\_?"

This was the lowest ranking of the four Backster questions, although relatively few reasons for subjects' reactions were forthcoming in post-test interview. Four female subjects said they had had random thoughts of home at the time the question was asked. Two thought they knew exactly where they were born, but became uncertain during the examination. Both were from small towns and believed that because of local non-availability of hospitals, had been born in nearby larger towns. Two subjects thought that "it sounded funny" to hear the small towns they were born in referred to as cities. One subject said he made mental note of the fact that he'd never really lived in the town in which he was born.

Two precautions which would keep response to a minimum in using this question would be to: (1) make certain that the subject knows, without question, where he was born, and (2) determine whether the subject considers his place of birth a village, town or city if this isn't already known to the examiner. Another precaution, though not generated in the discussion of this question with subjects would be to let the subject first pronounce the name of the town, especially if it is unusual, and use his pronunciation in future reference to it.

"Were you born in the year of \_\_\_\_\_?"

As noted in the results, several subjects, predominately male (5 males and 1 female) admitted use of false identification cards to facilitate liquor and beer purchases, since they were legally under age. Another subject stated that he'd done "a little mental arithmetic" at the time the question was asked. Some problems with this question could be expected with older subjects, and particularly females; however, there was no apparent problem with the group studied since the oldest male was 26 and the oldest female, 22.

"Do you now live at (in, on) \_\_\_\_\_?"

One subject said he'd reacted to the question because the examiner mispronounced the name of the street. Two subjects, who lived in "greek" houses, said that they'd reacted because their grades have been so low that their future residence there was uncertain.

"Do you smoke?"

As might be expected at this point, more definite reasons for reactions to this question were forthcoming than to any of the others. The three main reasons stated (9 subjects each) were: (1) the subject does smoke, but over strong parental concern and objection, (2) the subject smokes, and wanted a cigarette at the time the question was asked, and (3) the subject smokes only infrequently, and feeling that the question referred to habitual smoking, was uncertain as to how it should be answered. Of the last group, all did answer affirmatively. Another group of four subjects had smoked, but quit due to the alleged adverse health aspects of smoking. Four others simply felt that smoking was a distasteful habit. Three had quit smoking, but were uncertain about the future. Two others had been trying to quit without success. Two female subjects who smoke had boyfriends who violently opposed smoking, and one was so concerned that she only smoked in her dormitory room. As noted in the results, more females than males (seven to two) cited parental concern as the probable reaction cause. Six of the nine infrequent smokers were females.

"Do you know how to drive a car?"

The largest group of subjects (nine) stated that they had thought about previous arrests or receipt of tickets for traffic offenses when the question was asked. Five others said they had thought of traffic accidents in which they had been involved. Four said they thought of the pleasure they found in driving, but have had no automobiles at their disposal since their last trip to their homes. Three others read degree into the question and thought that although they drive, their driving is not expert.

"Did you have breakfast this morning?"

Four subjects said that they "hadn't really" had breakfast, only coffee and doughnuts or candy, etc. Four had thought their breakfast's substandard on the day of the test, while another said he'd had an extraordinarily good one that day, and had thought of that. Two subjects said they didn't ever like to eat breakfast; two others who usually have and enjoy breakfast had overslept and missed it on the day of the test. One subject, who had reacted, said he had "had to think it over" before answering.

"Is your hair \_\_\_\_\_?"

Four subjects admitted uncertainty as to the exact color of their hair and one female said she'd reacted because of her use of an artificial hair coloring agent.

The two types of questions were treated differently in this discussion largely because of the difference in their relative value, as demonstrated by the results. Discussion of the traditional questions, therefore, was limited

to stated causes of reactions and lacks comment regarding measures which would tend to improve them.

### Conclusions and Recommendations

We may conclude that the type of irrelevant questions suggested by Backster serve the purpose of providing relief in general questions type lie detector tests to a substantially greater degree than do the questions suggested by earlier authorities. The versatility of the Backster questions, in the changing of words such as month to year, city to state, etc., allows their repeated use through several general questions tests in an examination, and thereby enhances their value.

Although their superiority is proven, several recommendations regarding their employment, observed during this experiment, will maintain and probably improve their effectiveness.

1. As noted by Backster, the subject should be told that the purpose of the irrelevant questions is to positively identify the subject and is standard examination procedure. This is a true statement, of course, but its real objective is to give the questions meaning and purpose in the eyes of the examinee.
2. Discreet pre-test inquiry should disclose any antipathy the subject may have for any of his names, his birthplace or present residence, and thereafter, questions can be selected which will bypass avoidable responses.
3. The examiner should cause the subject to pronounce his name, names of cities or towns and names of streets which may be used in the examinations, and thereafter emulate the subject's pronunciation. This seems particularly important in those cases when foreign or Indian names are involved.
4. When a person's age is to be a basis for a question, and response is anticipated due to vanity of the subject or other reason which makes it likely that he is age-conscious, the day and month of birth are probably better than the year of birth.
5. If the subject is away from his home town and pre-test interview indicates the possibility that homesickness or milder nostalgic forms may be present; and if his place of birth was his home town or nearby, the other Backster questions would be more suitable than the one based on place of birth.
6. If the place of birth question is to be used, the examiner should ascertain beforehand that the subject knows, without question, his place of birth. As elementary as this may seem, the fact that at least two intelligent college students used in this experiment, one a 22-year-old senior, did not know definitely, should illustrate that it is a factor to be reckoned with.
7. When the place of residence or birth is used, and the place is not known to the examiner, the subject should be asked if it is, in his mind a



village, town, or city, since the examiner's classification may not coincide with that of the subject, and create extraneous thought at the time the question is asked in the test.

8. When unusual reactions to the irrelevant questions are noted, the subject should be queried about them as soon as the test is concluded. Reasons given seem to be more clearcut and genuine than those given when the subject is asked after several additional tests have been administered.

\* \* \* \* \*

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## APPENDIX A

### CRITERIA AND CLASSIFICATION SYMBOLS USED IN CHART INTERPRETATION

<u>Symbol</u>	<u>Description</u>
<u>Cardio Tracing</u>	
+	Blood pressure gain
-	Blood pressure loss
VS	Vagus suppression at stimulus
D	Pulse decrease
I	Pulse increase
BPW	Blood pressure wavers from stimulus
B	Extrasystoles, when a pattern is formed
DAC	Decrease in amplitude
IAC	Increase in amplitude
DC	Change in dicrotic notch
<u>Pneumo Tracing</u>	
IE	Change in inspiration-exhalation ratio
LB	Loss of baseline
CB	Change of baseline
H	Hyperventilation
S	Suppression
B	Blocking or apnoea
IAP	Increase of amplitude
DAP	Decrease of amplitude
VA	Varying amplitude from stimulus
SS	Staircase effect
NS	Notched or serrated inhalation or exhalation at stimulus, when not noted throughout the chart.
<u>G.S.R. Tracing</u>	
AR	Abrupt rise at the point of stimulus
PR	Prolonged reaction
DS	"Double-saddle" response
GC	General change in GSR activity, either in conjunction with or not included in the other criteria

# APPENDIX B

## MASTER WORKSHEET

	B	B	T	B	T	T	B	T	M/F Ratio
Questions, Seq. 1	1	2	3	4	5	6	7	8	17 Females/ 7 Males
Questions, Seq. 2	3	5	1	6	2	4	8	7	
To Seq. 1 Questions	18	30	24	14	21	14	12	24	
	19	24	24	20	14	21	23	13	
	16	23	23	22	18	29	19	17	
	16	25	35	16	32	40	20	24	
Sub-total	69	102	106	72	85	104	74	78	17 Males/ 7 Females
Sub-rank <sup>a</sup>	1	6	8	2	5	7	3	4	
To Seq. 2 Questions	10	14	20	19	17	20	15	13	
	9	14	18	26	23	19	19	19	
	9	25	22	25	27	25	17	18	
	19	17	32	26	28	30	23	28	
Sub-total	47	70	92	96	95	94	74	78	17 Males/ 7 Females
Sub-rank <sup>a</sup>	1	2	5	8	7	6	3	4	
Grand Total	116	172	198	168	180	198	148	156	
Final Rank <sup>a</sup>	1	5	7 <sup>b</sup>	4	6	7 <sup>b</sup>	2	3	

<sup>a</sup>Rankings are assigned in terms of least response to each question.

<sup>b</sup>Tie for lowest final rank.

### QUESTIONS USED (shown in First Sequence with Second sequence numbers in parenthesis)

- 1 (3) "Is your first name \_\_\_\_\_?" (B)
- 2 (5) "Were you born in the city of \_\_\_\_\_?" (B)
- 3 (1) "Do you smoke?" (T)
- 4 (6) "Were you born in the year of \_\_\_\_\_?" (B)
- 5 (2) "Do you know how to drive a car?" (T)
- 6 (4) "Did you have breakfast this morning?" (T)
- 7 (8) "Do you live at (in, on) \_\_\_\_\_?" (B)
- 8 (7) "Is your hair \_\_\_\_\_ (certain color)?" (T)

AN ANALYSIS OF THE USE OF THE POLYGRAPH  
ON CRIMINAL TRIALS

By

Paul Alan Samakow

Introduction

The polygraph, commonly and erroneously referred to as the lie detector, monitors and measures certain physiological responses of a person who is answering "yes" or "no" to a set of questions. The instrument produces an electromechanical recording of uncontrollable physiological changes occasioned by the internal stress caused by an examinee's conscious insincerity.<sup>1</sup>

This article will examine and consider the admissibility of the results of the polygraph into evidence in criminal trials. Ultimately, it will consider whether, given widespread use and acceptance of the polygraph by the courts, it is desirable to use the technique.

The most basic requirement for admitting polygraph results is the validity of those results. The elements of validity then are accuracy, which is the degree chance is improved upon, and reliability, which measures how often chance is improved upon. For purposes of discussion, accuracy and reliability are assumed hereafter to be at a maximum. Accordingly, these elements will not be discussed here. Proponents and critics of the accuracy and reliability of the polygraph are sufficiently cited in the notes to provide a foundation for a thorough treatment of these issues.<sup>2</sup>

It is this writer's opinion that eventually polygraph results will be fully accepted by the courts as evidence. Assuming accuracy and reliability then, the question posed here is whether it is desirable to use polygraph test results. The reason submitted here for hesitating to offer a strong positive reply to the foregoing question is a fear that widespread use of the polygraph would become a norm, from which deviations, non-use, would render the deviants suspect.

This article will examine three areas of treatment the polygraph has received in the courts. Each area contains basic inconsistencies of action, or of action and words by the courts. The first area of inconsistency dealt with here examines the standards applied to the polygraph for admissibility of its results into evidence, as compared with the standards applied to other scientific devices. The second area has to do with a practice allowing polygraph results into evidence upon the strength of a pre-examination stipulation by both parties concerning the accuracy of the polygraph technique. The third area of inconsistency discussed here is the courts' simultaneous approval

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of the use of the polygraph for investigation purposes and their denial of its results into evidence. This article will conclude by entertaining considerations concerning social policy issues and the desirability of using polygraph results in court.

It is clear that the courts in this country have treated the polygraph and its results inconsistently in an effort to keep the results out of evidence. It is my contention that the courts' attention in this regard has been improperly directed, because the real issue is a policy decision which examines the desirability of the use of the polygraph, rather than the procedural stumbling blocks which have resulted in the inconsistencies alluded to above. If polygraph results are not desirable in court as evidence, they are being kept out for the wrong reasons.

### Scientific Standards

Inconsistencies have been generated with respect to the standards set for polygraph test results offered into evidence, and those set for other scientific evidence similarly offered. Two themes have run through the courts' decisions denying polygraph results while admitting the results of other scientific devices. The first discernible theme appears when courts cite or allude to the standard set in Frye v. United States<sup>3</sup> and then exclude the polygraph evidence because of lack of accuracy or reliability, or lack of general acceptance. These same courts are then seen admitting other scientific evidence, enunciating different, often lesser standards of accuracy and reliability. The second theme appears when the courts denying the admission of polygraphic evidence admit other scientific devices ignoring or denouncing Frye. These courts reason that accuracy and reliability are considerations relative to the weight of the evidence, and not the admissibility of the evidence. The courts have not applied this "weight" versus "admissibility" reasoning to the polygraph.

An example of the first theme referred to above concerning a court's inconsistency with regard to standards for polygraph admissibility is in the New York court system in early 1938. In People v. Kenney<sup>4</sup> the results of a psychogalvanometer, an early polygraph, were admitted into evidence because a proper foundation was laid by showing that the device had gone beyond the experimental stage, reaching that "definite demonstrable stage" where it had now received general scientific acceptance. Two months later in People v. Forte<sup>5</sup> a neighboring county court denied admissibility to the results of the same instrument despite acknowledged identical foundational testimony as in Kenney. The Forte court, in denying admissibility, noted that no rules for the examination existed, nor had the device gained general scientific acceptance.<sup>6</sup> Seemingly the standard did not change for admissibility from the Kenney court to the Forte court; rather either the requirements necessary to satisfy that standard changed, or the "standard" was vague enough to evoke radically differing interpretations.

While Forte's standard requirements were adopted by one New York court in People v. Nasella<sup>7</sup> for aid in determining admissibility of radar detection results of automobile speed, another court felt that scientific acceptance was not the test, but rather that expert testimony was all that would be necessary for establishing the accuracy of "new" devices. Thus in People of City

of Rochester v. Torpey<sup>8</sup> radar results were admitted on the strength of expert testimony. Clearly, a standard was lacking for admitting new scientific devices. Hence, when polygraph evidence was offered in People v. Dobler,<sup>9</sup> which was decided after Nasella and Torpey, the court applied the more stringent standards and refused to allow the polygraph evidence into evidence.

Relying on past decisions and restating that the polygraph had not yet proven reliable enough, the Minnesota Supreme Court in 1976 in State v. Goblirsch<sup>10</sup> refused to admit polygraph results into evidence. In contrast the court in State v. Dille<sup>11</sup> admitted testimony concerning a chemical test which determined alcoholic content in the blood. It stated that "the proponent of a chemical or scientific test must establish that the test itself is reliable and that its administration in the particular instance conformed to the procedure necessary to ensure reliability."<sup>12</sup> It is interesting that chemical or scientific tests are to be established by their proponent, yet polygraph tests are held simply to be not yet proven scientifically reliable. The standard for establishing polygraphic reliability is obviously more stringent when applied to the polygraph in the Minnesota court, than for other scientific tests, since clearly polygraph proponents would attest to its reliability.

A similar inconsistency is observed in the California Appeals Courts in People v. Williams<sup>13</sup> in 1958 and People v. Spigno<sup>14</sup> in 1957. The Spigno court refused to admit polygraph evidence because of lack of general scientific acceptance, while the Williams court admitted the results of a Nal-line test which showed addiction to narcotics stating: "[it] has been generally accepted by those who would be expected to be familiar with its use. In this age of specialization more should not be required."<sup>15</sup>

The North Carolina Supreme Court in State v. Crowder<sup>16</sup> in 1974 admitted evidence of spectrophotometry, which showed the defendant had fired a gun by the discharge residues on his hand, despite recognition by the court that "the evidence [did] not exclude every remote possibility of error." The court determined that the test possessed the degree of reliability to render it competent. Given this reasoning then, what degree of reliability did the court require the next year when it decided two polygraph cases -- State v. Jackson<sup>17</sup> and State v. Brunson?<sup>18</sup> Seemingly the court required that the polygraph exclude every remote possibility of error. In both cases the defendants sought to admit polygraph evidence, only to be refused because of precedent, which included reasoning that the polygraph had not yet gained scientific recognition.

The cases and the inconsistencies that can be drawn from them are abundant. The emphasis, however, remains constant: when the polygraph and another scientific test are held to supposedly the identical standard for admissibility, more is required by the polygraph to satisfy that standard. When a standard is set up to admit scientific evidence, it somehow changes, becoming more demanding when the test is the polygraph.<sup>19</sup>

Professor McCormick, a leading authority on the law of evidence, noted in 1954:

One reason usually given for these general pronouncements is that the tests [polygraph] have not yet won sufficient

scientific acceptance of their validity. Frequently the opinions seem to demand a universality of scientific approval, which has no basis in the standard applied to other kinds of expert testimony in scientific matters. If we thus deflate the requirement to the normal standard which simply demands that the theory or device be accepted by a substantial body of scientific opinion, there can be little doubt that the lie-detector technique meets this requirement. An inquiry made in 1952 among polygraph examiners and psychologists seems to substantiate the foregoing statement.<sup>20</sup>

A second theme appears often in the cases comparing the polygraph and other scientific tests. Many cases urge that accuracy and reliability considerations relate to the weight, and not to the admissibility of the offered evidence. The inconsistency in this connection surfaces when the very same courts espousing logic about accuracy and reliability going to weight rather than admissibility of the evidence refuse to admit the polygraph evidence because it is not yet accurate or reliable.

The Arizona Supreme Court then, in State v. Olivas<sup>21</sup>, held that "where there is a lack of unanimity in the medical profession whether intoxication can be determined by breath, the scientific disagreement affects only the weight and not the admissibility of the evidence." The court, however, demanded, "greater standardization of the instrument, technique and examiner qualifications and the endorsement by a larger segment of the psychology and physiology branches of science" before it would allow general use of polygraph evidence in court when it ruled on polygraph admissibility in State v. Valdez.<sup>22</sup>

The Kansas Supreme Court similarly applied a weight of the evidence standard for considering accuracy when it dealt with scientific devices, except when the device was the polygraph, where it then made accuracy a factor for determining admissibility. In City of Abilene v. Hall<sup>23</sup> testimony of an expert witness concerning the results of a test to determine alcoholic content of the appellant's blood were said to be admissible because such testimony went to the weight of the evidence and not its admissibility. The same day the court ruled on the admissibility of polygraph evidence in Holt v. State.<sup>24</sup> Citing precedent it held the results inadmissible because of lack of accuracy.<sup>25</sup>

Similar inconsistent treatment resulted in two cases seven months apart, in the Oklahoma Criminal Court of Appeals. In the first, Toms v. State,<sup>26</sup> the court held that even though "the defendant argues that there is a lack of unanimity in the medical profession as to whether intoxication can be determined by breath . . . this objection goes to weight of the testimony and does not destroy its admissibility." Then in Leeks v. State<sup>27</sup> the court denied polygraph evidence after a discussion questioning its accuracy.

It is possible to cite innumerable cases further depicting inconsistency. In certain commentators' opinions, the polygraph has not been afforded fair treatment by the courts. Professor McCormick, after citing Frye, asserts that "[G]eneral scientific acceptance is a proper condition upon the court's taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence . . . the objection goes to its weight and not its admissibility."<sup>28</sup>



## The Stipulation Paradox

Often parties will agree prior to a polygraph examination that the results will be admissible at trial. Thus they enter into a stipulated agreement, which will often include the place, time and location, as well as the subject matter of the exam and the choice of the examiner. Courts allow the evidence to come in because of the stipulation, and without it there would be no admission.

The commentators have had a proverbial "field day" with this inconsistency. One asks "by what logic should stipulated polygraph evidence be admissible when the same evidence without stipulation is barred?"<sup>29</sup> Another asks "how does the mere signing of one's name add validity to the test? Is there some manner of judicial magic in such a stipulation?"<sup>30</sup> Still a third writer notes that "the distinction between 'reliable enough for a stipulation' and 'reliable enough for trial' is simply not meaningful . . . Therefore, when a court admits polygraph evidence upon stipulation, it is probably because of a tacit belief in the accuracy of the technique."<sup>31</sup>

Although there were few cases prior to 1962 dealing with stipulation,<sup>32</sup> the leading case on the subject came that year in State v. Valdez,<sup>33</sup> decided by the Arizona Supreme Court. The parties there stipulated in writing before trial that the results of the yet untaken polygraph examination would be admissible at the trial. Upon finding the results unfavorable, the defendant sought to prevent their admission, arguing a theory of unreliability. The court considered in detail the history of the polygraph, its status in the courts, and finally ruled that stipulated polygraph evidence was admissible at trial providing four conditions were met.<sup>34</sup> The court also noted that in the absence of a stipulation lie-detector evidence would not be received in an Arizona court.<sup>35</sup> The conditions the court set out apparently were meant to provide some assurances of fairness, and most importantly to establish that the evidence as admitted was not a judicial acceptance of its accuracy or reliability.

The first three conditions the court imposed required all parties' signatures on the stipulation, provided that the trial court judge maintained discretion to keep the results out of evidence, notwithstanding the stipulation and provided for cross-examination of the polygraph examiner. Certainly cross-examination, as well as court discretion, exist without the court expressly providing for them. In essence then the first three conditions for the stipulation are but reiterations of normal court procedures, plus a signature. The fourth condition provided:

[I]f such evidence is admitted the trial judge should instruct the jury that the examiner's testimony does not tend to prove or disprove any element of the crime with which a defendant is charged but at most tends only to indicate that at the time of the examination defendant was not telling the truth. Further, the jury members should be instructed that it is for them to determine what corroborative weight and effect such testimony should be given.<sup>36</sup>

The fourth condition is an effort to deal with the fear that polygraph evidence will have an undue influence on the jury. The effort falls short. One

commentator asks about the fourth condition: "Just what function does the evidence serve other than that of impeaching the defendant's testimony if he takes the stand? . . . The results obtained by the polygraph either can or cannot be used as substantive evidence."<sup>37</sup>

The basic inconsistency surrounding stipulated polygraph admissions has been noticed and commented upon by some courts.<sup>38</sup> These courts, at least as far as dealing with stipulations, have remained consistent in their treatment of the polygraph, by either continuing to deny admissibility or by admitting once other standards have been met. The Illinois Supreme Court in People v. Zazzetta<sup>39</sup> noted:

[I]t is inconsistent for a court to affirm the unreliability of lie-detector tests and at the same time admit into evidence the results of a stipulated test. If such tests are as unpredictable and misleading as the courts are so certain they are, then their reliability and usefulness to the court and jury upon the ultimate question of guilt or innocence remains the same, regardless if they are admitted by stipulation or not.<sup>40</sup>

Fourteen years after Valdez, and thirteen years after Zazetta, in 1976, a writer noted that "a minority of jurisdictions, the number of which is increasing, make admissibility turn upon a valid stipulation between the parties."<sup>41</sup> As noted before, it seems clear that many courts now recognize that the polygraph is accurate and reliable. One commentator perceptively suggested that "it would be better to recognize openly the accuracy of polygraphy and to restrict testimony to those 'experts' who . . . qualify . . ."<sup>42</sup>

#### Investigative Purposes

Court decisions have acknowledged, and even encouraged the use of the polygraph by law enforcement officials for investigation purposes. It seems, however, that these very decisions which encourage the use of the polygraph technique to supply information do not in turn value that information enough to admit it into evidence. Hence in theory, the courts are condoning a practice whereby an accused can be held for trial based on evidence which cannot be used against him, or released, based on evidence which cannot be used in his behalf.

Court approval of the polygraph for investigation purposes can be seen as continued encouragement of police and prosecutorial discretion. Police may thus use the polygraph to facilitate greater efficiency in the apprehension of criminals, and prosecutors for determining which cases to try.<sup>43</sup> Hence, granting both officials' discretion, the polygraph test results become an element which greatly affects the exercise of that prosecutorial discretion. The courts will point to such discretion as aiding the alleviation of caseloads, yet fail to see, or ignore, how introduction of such evidence at trial might reduce a lengthy, circuitous proceeding to one short, direct and to the point because it would no longer involve procedural problems occasioned by perjurious testimony.

Examination of a few cases will make clear the concerns raised here

regarding the inconsistent treatment the polygraph has received. In State v. Kolander<sup>44</sup> the Minnesota Supreme Court granted a new trial based on a prejudicial error at the original trial, the admission of evidence of appellant's refusal to take a lie detector test. The court commented on the admissibility of polygraph evidence generally:

We have no doubt that the lie detector is valuable in investigative work of law enforcement agencies and may frequently lead to confessions of the discovery of facts which may ultimately lead to the solution of many crimes; but we are in accord with the rule that the lie detector has not yet attained such scientific and psychological accuracy . . . to justify submission thereof to a jury as evidence . . .<sup>45</sup>

It is difficult to understand how a device which is accurate enough to supply information is not accurate enough to be admitted into court, even for the purpose of substantiating the validity of that information.

The North Carolina Supreme Court considered polygraph evidence in State v. Foye<sup>46</sup> in 1961. Two defendants in this case were charged with murder. The first defendant was given a polygraph exam which indicated that he did not commit, and was telling the truth about the murder with which he was being charged. The results of the test were allowed in the trial court, but conviction followed. The Supreme Court then heard the case on an assignment of error which alleged that the admission of the polygraph results was prejudicial to the second defendant, in that the trial judge instructed the jury that the results would only apply to the first defendant. After it examined reasons for excluding polygraph evidence generally, the Court stated:

We are of the opinion that the foregoing enumerated difficulties alone in conjunction with the lie detector use presents obstacles to its acceptability as an instrument of evidence . . . notwithstanding its recognized utility in the field of discovery and investigation, for uncovering clues and obtaining confession.<sup>47</sup>

Interpretation of the language above leads to the conclusion that the polygraph will be held to one standard for admission into evidence, and a lesser standard for satisfactory use in investigation. What justification is there for the differing standards? If accuracy and reliability are the justifications, as the court states they are in the "foregoing enumerated difficulties," then how can the court reconcile the use of an inaccurate device for discovery and investigation? Answering this question might well resolve the inconsistency.

Analogous to the line of cases suggesting the polygraph is sufficient for investigation but not for evidence are the few decisions holding enforceable agreements by state officials to drop prosecution if the accused passes the polygraph test. Clearly one step removed, in that it is the force of the agreement and not the polygraph which is being passed upon, the analogy lies in the approval by the court of the agreement at the outset. If the very basis of the agreement here relies on a thing the courts have refused to recognize, how then can they let the agreement stand? Contracts are often held invalid because of flaws in the nature of the contract, such as unconscionability or illegality, despite the agreement between the parties.

The courts have not applied this contract principle applicable to the polygraph, and there are cases which point to their willingness to enforce such agreements.<sup>48</sup> Unfortunately, for analysis purposes, in the two cases which make up the significant law in this area, the defendants passed the tests, and the agreements were with the prosecutors, so that the courts never got to pass on the question of admissibility of the results. Other cases from the jurisdiction from which these cases came, however, have held polygraph evidence inadmissible.<sup>49</sup> The conclusion once again, as in summary of the polygraph and other scientific devices, and stipulations, is that the polygraph is not being treated consistently when one considers its use in investigation, but not in court.

#### Further Difficulties — Social Policy Consideration and Resolution

In my opinion the polygraph will eventually be accepted by most courts. Several courts have already laid the groundwork for this general acceptance by admitting unstipulated polygraph evidence.<sup>50</sup> The trend of admitting stipulated polygraph evidence also serves notice that more courts are moving toward wholesale acceptance.<sup>51</sup> Certain commentators have predicted that the polygraph will be fully accepted. In 1957 a writer noted:

[A]n estimated 200,000 persons have been subjected to lie detector tests during the past 20 years, and with headlines being visited ever more frequently with accounts of these tests, the public consciousness has been awakened, and as is inevitable in a democratic society the reflections of the press and public may find expression in the judicial process . . .

He continued, noting:

[O]ne cannot help but be impressed by the fact that many courts, scholars and scientists are seeking an answer to the question of whether the polygraph has now received general scientific recognition, and if not now, the hand is on the pulse to determine the instant at which it does achieve such recognition . . . <sup>52</sup>

Pending possible wholesale acceptance of polygraphic evidence, it is this writer's opinion that whatever exclusions of polygraphic evidence which continue to appear in the courts should only appear based on sound judicial reasoning. It is my opinion that the various methods and rationales for excluding such evidence, many of which have already been discussed, are often pretexts for the true reason for denial. That true reason is one based in social policy. While some courts have grappled with the weighty issues of social policy, most have followed the pattern of cases discussed above. This section will hopefully describe issues of social policy involved with the polygraph and how those few courts dealing with these issues have resolved them.

Courts and commentators alike have expressed concern over the feared, but yet unmeasured influence the polygraph will have on the jury. These concerns have taken basically three forms. The first deals with the excessive weight and influence that is feared will attach once the polygraph is admitted into evidence. The second deals with the untold effect of

informing the jury that the accused has taken a polygraph test, where the results of the test are not admissible in evidence. The third concerns the effect of the polygraph upon the Fifth Amendment privileges.

Addressing the first concern then, the courts and the commentators seem split in their estimations of the jury's ability to handle polygraph evidence in perspective. In United States v. Wilson the District Court stated:

[Because] of the numerous subtleties of interpretation inherent in modern polygraph and the mysteriousness of the technique to the citizen, the danger of confusion of the jury is great. The jury may be misled, and may give undue weight to the testimony . . . The specter of "trial by polygraph" replacing trial by jury is more than a felicitous slogan.<sup>53</sup>

A writer analyzing Wilson attacked its logic:

[T]o those who fear "usurpation" of the jury function through undue reliance by the jury on polygraph evidence there are three answers . . . first . . . it merits such substantial reliance in a process whose primary purpose is the search for "truth" . . . second . . . the administration of justice would not collapse, but improve . . . the polygrapher's testimony . . . can be subjected to careful and searching cross-examination . . . [and] the third answer is that the concern for the "overwhelming impact" of the polygraph is greatly exaggerated and totally unjustified when viewed in the context of several actual cases in which polygraph evidence was admitted.<sup>54</sup>

One of the "actual cases" is United States v. Grasso.<sup>55</sup> The jury in that case was questioned about the polygraph evidence they heard, after their verdict of not guilty. Generally the jurors responded that the evidence was not helpful to them in deciding and that they gave it very little weight.<sup>56</sup> Other post-trial interviews however, have confirmed Wilson's fears. A second writer reports on the interviews with the jurors after their finding the defendants guilty in State v. Loniello & Grignano.<sup>57</sup> He qualified their responses by noting that they were responding to the judge of that trial, who had given them the instructions on how to view the evidence. Nevertheless, their answers indicated that the polygraph evidence gave them considerable help in determining the credibility of not only the defendants themselves, but also the witnesses for the state who contradicted the testimony of the defendants.<sup>58</sup> Finally, a third writer points out that "it may not be until polygraph examination results are commonly admitted and jurors' responses are observed, or until studies of their potential impact on jurors can control the 'exaggerated significance' that it is feared the jury will attach to the examiner's testimony."<sup>60</sup> He added that "in Commonwealth of New Jersey v. Edgerly<sup>61</sup> polygraph test results adverse to the defendant were admitted by agreement of counsel, but the jury acquitted the defendant."<sup>62</sup> While the "undue influence" debate continues, it seems the comments of this last writer above are probably the most perceptive.

Turning now to the possible prejudicial effect of informing the jury that the accused has taken a polygraph test, where the results of the test would be inadmissible in evidence, it is clear that at the very least the jury will feel evidence is being withheld from them. An in-court reference, brought about in some manner by the defense counsel, that the defendant took a polygraph exam, will logically leave the jury with the belief that the results were favorable to the defendant when these results are not presented to them. Similarly, a reference made by the prosecution will have the opposite effect, that the results were unfavorable to the defendant. In both cases objections by opposing counsel only serves to add to the solidification of these jury beliefs.

While courts have uniformly held that such references or disclosures are improper because the jury could make inferences about the test results, there has been a split in authority as to what to do once such disclosure is made.<sup>63</sup> The devision revolves around distinguishing prejudicial from non-prejudicial, disclosures. To constitute error, the disclosure must be prejudicial, such that the jury would draw inferences about the defendant's guilt. The cases finding prejudice tend to support the view that once the polygraph is fully accepted, a defendant not taking the test will no longer rest easily on a presumption of innocence. The Supreme Court of Minnesota noted:

The impact upon the minds of the jurors of a refusal to submit to something which they might well assume would effectively determine guilt or innocence, under these conditions, might well be more devastating than a disclosure of the results of such tests if given after a proper foundation had been laid showing how the apparatus functioned . . . We believe it was prejudicial error to permit such refusal of defendant to submit to the test to be shown.<sup>64</sup>

Conversely, cases finding no prejudicial effect tend to downplay the disappearance of the presumption of innocence. The Supreme Court of North Carolina reasoned that there was no error in disclosing that the defendant took a polygraph test because "there was no evidence, before the jury, as to the nature of the test, the questions propounded, the answers given, or the results of the test."<sup>65</sup> What in a given case or range of cases will constitute prejudicial error is beyond the scope of this article, but noting it here is important because it brings into discussion factors vital to predicting jury expectations.

The third concern involves the Fifth Amendment. A jury's expectation for hearing polygraph evidence where the defendant did not take the test seemingly presents a Fifth Amendment problem by default. A defendant, exercising his Fifth Amendment right by refusing to take the test might well be caught in a position of feeling a need to explain why he did not submit to the exam. This feeling, the need to explain, is contrary to the criminal justice system as we know it, where the defendant is presumed innocent and the prosecution has the burden of establishing the guilt, beyond a reasonable doubt, of the accused. Clearly no one would argue that the defendant must offer explanation, but without it, one might well wonder how the jury would react, given their expectation of hearing polygraph evidence.

It has been universally held that a defendant cannot be compelled to take a polygraph test.<sup>66</sup> Therefore, it is argued, he may not be penalized for his failure to do so.<sup>67</sup>

The failure, however, to produce certain evidence, and the failure to call certain witnesses have always been held to permit an inference to be drawn against the nonproducing party.<sup>68</sup>

Yet where the protection of the privilege against self incrimination comes in conflict with the application of the inference rule, the privilege excludes the evidence in question.<sup>69</sup> Thus the inference is a silent one.

It is clear that the inference is based, not on the bare fact that [the defendant] did not take the test, or that he took it but is not offering the results, but on his non-production when it would be natural to produce the results if the facts as he would allege them were true.<sup>70</sup>

Federal cases have established that comment in court about the defendant's silence is prohibited by the Fifth Amendment, whether or not the defendant testifies.<sup>71</sup> The question then is whether the prejudicial inferences that might be drawn from the defendant's apparent refusal to take the test, without comment by the prosecutor, can be considered a "penalty . . . for exercising a constitutional privilege?"<sup>72</sup>

The analysis of Fifth Amendment concerns has a final manifestation relevant to the topic here. Given that test results are allowed into evidence, and that the jury might conclude guilt by the defendant's non-production of those results, it has been suggested that the adversary system we now have would in effect become one of inquisition.<sup>73</sup> The contention would appear to have some merit. As a leading commentator said:

Judicial procedure must be adversary and not inquisitorial. It is the essence of adversary procedure that at none of its stages must the accused be made its mere "object" . . . [and] that the accused is, at all times, a "party" to the trial, that he "conducts" the defense ...<sup>74</sup>

The concern then is one that cannot be treated on a case by case basis. Clearly there is no reason to deny polygraph evidence in a given case where the defendant has voluntarily taken it, and in so doing has consciously waived his Fifth Amendment rights.

The problem presented concerns the class of defendants who choose not to take the test, and the impact on the jury by their omission. In 1956 a writer predicted that "as soon as the test is admitted in any case, failure to submit to it will be interpreted as an admission of guilt, and we shall be faced with the awkward phenomenon of 'lie-detector sex offenders' along with 'fifth amendment Communists.'"<sup>75</sup> The prediction, fortunately, has not yet proven true, yet. However, given further and further acceptance, and greater public familiarity, it might. It has been suggested that the question turns on general principles of government, that the issue is not whether to use the polygraph, but whether the search for truth is to push aside the

maintenance of dignity. Dignity here might suffer greatly because of the compulsion one would feel to supply polygraphic evidence in light of a disappearing presumption of innocence brought about by not producing polygraph evidence. Hence one writer suggested:

In the light of the numerous cases of "convicting the innocent" it would be absurd to deny that the discovery of truth is a part of justice which must be conscientiously pursued. Surely, there can be neither justice nor dignity in finding the innocent guilty and the guilty innocent. But in the administration of justice, truth is but a means, whereas dignity is an end. Criminal justice would be devoid of meaning were it incidentally to deny the very human dignity which it is its ultimate purpose to protect.<sup>76</sup>

### Conclusion

In too many instances, polygraph admissibility has been denied for reasons fraught with inconsistencies. Potentially valid reasons, based on social policy issues, for denying the polygraphic evidence admission, need to be further explored and fully considered, then dealt with accordingly. A reappraisal of the use of polygraphy in criminal justice is necessary, considering not only its procedural or technical merits, but its implications. After this reappraisal, the decision whether to use the polygraph in criminal trials will at least gain the credibility that is now lacking because of the inconsistencies that exist, and that decision might well help further define the point at which freedoms are traded off for protections.

### Footnotes

1. United States v. DeBetham, 348 F.Supp. 1377, 1380 (S.D. Cal 1972).
2. See generally: United States v. Ridling, 350 F.Supp. 90 (E.D. Mich. 1972); United States v. Zeiger, 350 F.Supp. 685 (D.D.C. 1972), aff'd 475 F.2d 1280 (D.C.Cir. 1972); Reid, John and Inbau, Fred, Truth and Deception (1966); Tarlow, Barry, Admissibility of Polygraph Evidence in 1975: An Aid in Determining Credibility in A Perjury-Plagued System, 26 Hastings L.J. 917 (1975) (Hereinafter cited as Tarlow).

Very strong criticisms can be found in: United States v. Wilson, 356 F.Supp. 463 (D.MD. 1973), aff'd 361 F.Supp. 510 (D.MD. 1973); Seattle Police Officer's Guild v. City of Seattle, 80 Wash.2d 307, 315, 494 P.2d 485, 493 (1972) (Rosellini, J. dissent); Skolnick, Jerome, Scientific Theory and Scientific Evidence, An Analysis of Lie Detection, 70 Yale L.J. 694 (1961); Highleyman, Samuel, The Deceptive Character of the "Lie Detector", 10 Hastings L.J. 47 (1958); Sternbach, Gustafson, and Collier, "Don't Trust the Lie Detector," Harv. Bus. Rev. (1962, Nov.-Dec.).

3. Frye v. United States, 293 F. 1013 (1923).
4. 167 Misc. 51, 55, 3 N.Y.S.2d 348, 352 (1938).
5. 167 Misc. 868, 3 N.Y.S.2d 913 (1938).
6. 167 Misc. at 874, 3 N.Y.S.2d at 919.



7. 3 Misc. 2d 418, 155 N.Y.S.2d 463 (1956).
8. 204 Misc. 1023, 128 N.Y.S.2d 864 (1953).
9. 29 Misc.2d 481, 484, 215 N.Y.S.2d 313, 136 (1961).
10. 309 Minn. 401, 246 N.W.2d 12 (1976).
11. Minn., 258 N.W.2d 565 (1977).
12. 258 N.W.2d at 567.
13. 164 Cal.App.2d 858, 331 P.2d 251 (1958).
14. 156 Cal.App.2d 279, 319 P.2d 458 (1957).
15. 164 Cal.App.2d at 861, 331 P.2d at 254.
16. 285 N.C. 42, 47, 203 S.E.2d 38, 42 (1974).
17. 287 N.C. 436, 215 S.E.2d 94 (1975).
18. 287 N.C. 470, 215 S.E.2d 123 (1975).
19. For a good discussion of the differing standards applied to specific devices and the polygraph, see: Kaplan, Adria, The Lie Detector: An Analysis of Its Place in the Law of Evidence, 10 Wayne L.R. 381, 390-409 (1964).
20. McCormick, Charles, Handbook of the Law of Evidence, section 174, at 371 (1954) (hereinafter cited as McCormick). The 1952 inquiry which is referred to can be found in its entirety in: A Consensus as to the Validity of Polygraph Procedures, 22 Tenn.L.R. 728 (1953).
21. 77 Ariz. 118, 119, 267 P.2d 893, 894 (1954).
22. 91 Ariz. 274, 279, 371 P.2d 894, 899 (1962).
23. 202 Kan. 636, 642, 451 P.2d 188, 194 (1969).
24. 202 Kan. 759, 451 P.2d 221 (1969).
25. 202 Kan. at 762, 451 P.2d at 224. The case the court cited was State v. Lowry, 163 Kan. 622, 185 P.2d 147 (1947).
26. 95 Okla.Crim. 60, 69, 239 P.2d 764, 771 (1952).
27. 95 Okla.Crim. 326, 333, 245 P.2d 764, 771 (1952).
28. McCormick, Supra note 21, section 170 at 363.
29. Kupiers, John, The Polygraph Technique, a Selective Analysis, 20 Drake L.R. 330, 341 (1971) (hereinafter cited as Kupiers).
30. Ellis, Frank, Jr., Lie Detector Admissibility Under Pre-Trial Stipulation, 15 Ala.L.R. 248, 255 (1962).
31. Tarlow, supra note 2, at 955.
32. State v. McNamara, 252 Iowa 19, 104 N.W.2d 568 (1960); People v. Houser, 85 Cal.App.2d 686, 193 P.2d 937 (1948); LeFevre v. State, 242 Wis. 416, 8 N.W.2d 288 (1942). For a discussion of pre 1962 case-law on stipulations see: Admitting Lie Detector Results by Stipulation, 19-20 Wash. and Lee L.R. 173 (1962). For a complete discussion of case-law on stipulations see: Annot., 53 A.L.R.3d 1005.
33. Supra note 23.

34. 91 Ariz. at 280, 371 P.2d at 900.
35. 91 Ariz. at 278, 371 P.2d at 898.
36. 91 Ariz. at 280, 371 P.2d at 900.
37. Ellis, supra note 31, at 254.
38. See generally, 29 U.Fla.L.R. 286, 310 n. 139 (1977).
39. 27 Ill.2d 302, 308, 189 N.E.2d 260, 269 (1963).
40. See generally: Tarlow, supra note 2, at 953 n. 176; supra note 39 at 309 no. 131.
41. Jacobs, Thomas, Polygraph Test Results Admissible in North Carolina Upon A Stipulation, 12 Wake Forest L.R. 1128, 1134 (1976).
42. Tarlow, supra note 2, at 956.
43. See: The Emergence of the Polygraph at Trial, 73 Col. L.R. 1120, 1127 n. 40-42 (1973).
44. 236 Minn. 209, 52 N.W.2d 458 (1952).
45. 236 Minn. at 215, 52 N.W.2d at 465.
46. 254 N.C. 704, 120 S.E.2d 169 (1961).
47. 254 N.C. at 707, 120 S.E.2d at 172.
48. State v. Davis, Fla., 188 So.2d 24 (1966); Butler v. State, Fla., 228 So.2d 421, 36 A.L.R.3d 1274 (1969); also see: Annot., 36 A.L.R.3d 1280.
49. State v. Brown, Fla., 177 So.2d 523 (1965).
50. United States v. Ridling, 350 F.Supp. 90 (E.D.Mich. 1972); United States v. Hart, 344 F.Supp. 522 (E.D.N.Y. 1971); United States v. Dioguardi, Cr. No. 72-1102 (1972)(not officially reported, noted in N.Y. Times, Dec. 2, 1972 at 39); Matter of Stenzel v. B., 71 Misc. 2d 316, 339 N.Y.S.2d 386 (1972); State v. Dorsey, 88 N.M. 184, 539 P.2d 204 (1975); State v. Watson, 115 N.J.Super. 213, 278 A.2d 543 (1971).
51. See notes 33, 42 supra.
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53. 361 F.Supp. at 513.
54. Tarlow, supra note 2, at 966-68.
55. Id. at 968; case unreported, CR-79-197 LC (D. Mass. June 1973).
56. Id. at 969.
57. For an account of the proceedings of this unreported case, see Inbau, Fred, Detection of Deception Technique Admitted as Evidence, 26 J. J.Crim.L.Crim. & Pol.Sc. 262, 262 (1935-36).
58. Koffler, supra note 54, at 136.
59. See generally: Calvin, Harry and Zeisel, Hans, The American Jury, 1966.
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62. Altarescu, supra note 62, at 387 and accompanying notes, 107-108.
63. See: Annot., 88 A.L.R.3d 227.
64. State v. Perry, 274 Minn. 1, 7, 142 N.W.2d 573, 580 (1966).
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66. Commonwealth v. A Juvenile, 365 Mass. 421, 428, 313 N.E.2d, 120, 127 (1974).
67. Griffin v. California, 380 U.S. 609 (1965).
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69. 8 J. Wigmore, Evidence, section 2273 at 445 (1961).
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75. Id. at 692.
76. Id. at 700.

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As has been finely expressed, "Principle is a passion for truth." And as an earlier and homelier writer hath it, "The truths we believe in are the pillars of our world."

— Bulwer

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## TESTIFYING IN COURT

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There are three parts in Truth: First, the inquiry,  
which is the wooing of it; secondly, the knowledge of  
it, which is the presence of it; and thirdly, the be-  
lief, which is the enjoyment of it.

— Bacon.

\* \* \* \* \*

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AMPLITUDE RANK SCORE ANALYSIS OF GSR IN THE DETECTION OF DECEPTION:  
DETECTION RATES UNDER VARIOUS EXAMINATION CONDITIONS

By

Akihiro Suzuki, Kazuo Ohnishi, Kazunori Matsuno, Masana Arasuna

Preface

In order to establish the use of polygraph for scientific evaluation, it is necessary to provide systematically the theoretical background for detection of deception while verifying the degree of validity and reliability.

There are several reports on validity and reliability (Hikita, 1971; Suzuki et al., 1973b) but these are based on subjective analysis of response data. If the subjective analysis is highly valid, the deception can be detected accurately and if it is highly reliable, the same result should be obtained regardless of the qualification of the examiner. However, if a decision is made by subjective analysis of even an experienced examiner, it may lack persuasive power despite the accurate result because of the indistinct analysis process. In order to avoid this situation, objective analysis of responses is desirable. Furthermore, development of objective chart analysis facilitates more uniform judgements, standardization of testing procedures, more effective training of examiners, and lie-detection research.

The authors of this report have made studies on the objective analysis of responses (Ohmishi et al, 1971; Suzuki & Yamashita, 1968). In regard to GSR we observed a high correlation between results of subjective analysis and objective analysis (Suzuki et al, 1973a). Reports on the objective analysis method showed high detection rates but those results were only preliminary.

The objective analysis of GSR carried out by Suzuki, et. al. (1973a), gave a rank score to responses (card test) according to the amplitude of GSR. The materials used were 30 pre-test (card test) results taken before the actual testing. Although there is a resemblance in results between the pre-test and actual testing, because the examiners do not know the critical question during the pre-testing and because of the degree of attention and deceit of examinees during the pre-test (Ohmishi et al., 1973; Suzuki et al, 1970), it is believed some differences should exist. Thus, in this study, analysis of GSR rank scores from records of pre-tests, from confirmed positive and negative examinations in actual testing, from countermeasures attempted by examinees and from inappropriate critical questions was carried out to find the factors which can lead to inaccuracy in results.

Procedures

Analysis method. Materials analyzed consisted of 50 pre-test records, 50 positive confirmations, 50 negative confirmations, 20 countermeasure attempts and 20 inappropriate critical items.

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The pre-test records were taken from the polygraph testing conducted by the Osaka Prefectural Police Headquarters from January 1972. The procedure of pre-testing was similar to that used by Suzuki, et. al., (1973a), but the questioning in the three series was different.

The positive confirmation records also came from the Osaka Prefectural Police Headquarters. These records were confirmed by confession of examinees. These tests were conducted from January 1973 until the 25th positive result was obtained. The test consisted of 6 questions with each repeated 3 times using a peak of tension (POT) test method. Since two random charts relevant to the case were arbitrarily selected from each case, a total of 50 records were obtained.

The negative confirmation records were obtained under the same conditions and from the same source as in the case of the positive confirmation records. The negative results were confirmed by the confessions made by persons other than those being tested.

The experiment of countermeasures attempted was carried out in August 1973. Subjects included 16 members of the Osaka Prefectural Police Headquarters's Scientific Investigation Laboratory, two newspaper reporters and two visitors.

The collection of inappropriate critical items for testing came from the Osaka Prefectural Police Headquarters. These tests were conducted from August 1973 until the 20th record was completed. One question list of a Known Solution Peak of Tension (KSPOT) which consisted of 6 questions, including an inappropriate critical item, was performed 3 times on each subject. The innocence of the subjects was confirmed by the method used for the negative confirmation test.

Detailed procedures on countermeasure actions and inappropriate critical questions will be stated later.

Equipment and examiner. All records used for analysis were recorded by a TRP-1 Polygraph manufactured by Takei Company. Tests were conducted by the three contributing authors of this report. They are qualified by the National Police Agency of Japan and have experience ranging from 300 to 3,000 cases.

Test method. The records used in this study were obtained in accordance with standard polygraph procedure (Imamura, et al., 1965).

A so-called "card" test was used in pre-testing which followed the method used by Suzuki, et al., (1973a).

The records for positive and negative confirmation were based on the KSPOT test procedures. The procedure for the countermeasure group was generally similar to the card test method used by Suzuki, et. al., (1973a). However, the difference was in number writing. Examinees were asked to write any number between 20-70 on a piece of paper and dispose of it. They were again asked to write 6 of the numbers from 20-70 at random but not to include the number written previously. Examiners then informed the subjects of being tested on these second numbers. They were told to use any countermeasure to



to render these numbers undetectable.

Generally speaking in actual cases crime details only known to criminals, victims and investigating authorities including the examiners are used as critical items in the KSPOT method. Ordinarily, a check is made to see whether the suspect is aware of the critical items through the press, rumor, or prior investigation. For example, in a robbery case involving money, the amount of money stolen may be asked as a critical item. If the suspect answers that he does not know the amount the POT method is applied. Thus, inappropriate items are those obtained through examination carried out by disregarding the examinee's admission of already being aware of the critical item.

These materials were collected intentionally for the purpose of supplementing the standard POT tests. The questionings were not to find out whether the subjects knew the details of the incidents or not, but the questions were restructured to see if the subjects did the crime. Therefore, the answers to these questions were all in a negative form.

Analysis materials. All records for 5 types of tests mentioned above were based on 6 questions given in a series of three. Respiration rates, GSR and pulse wave were measured, but only the GSR was used in the objective analysis given in this report. Responses of the 3 indices were used for subjective analysis of pre-test records.

The GSR to each question was given a rank order by the size of amplitudes. When a similar amplitude was shown for each question in a series, average values in the order of questioning were assigned. The values to each question in the series were totaled, hereinafter referred to as the total points. The question with the least total points was ranked as 1 and others followed in sequential order by points. In our previous report (Suzuki et. al., 1973a), the total points were further divided by number of series but in this report, the values of each question were totaled and the mean rank score was not calculated.

A determination was made on whether the critical questioning is rated number 1 in total points. For further analysis, an example of the analysis process is shown in Table 1.

Table 1: An example of GSR Analysis By Rank

Question	A	B	C*	D	E	F
Series I	4.5	1.0	2.0	6.0	3.0	4.5
Series II	2.0	4.0	1.0	3.0	5.0	6.0
Series III	6.0	4.5	1.0	3.0	4.5	2.0
Total Points	12.5	9.5	4.0	12.0	12.5	12.5
Rank Order in Series	5	2	1	3	5	5

\* critical question

## Results and Discussion

Pretest Records. In a previous report (Suzuki et. al., 1973a), 30 records were used for the rank score analysis, a total of 50 records were used in this experiment. The reliability of the analysis method was examined by comparing with the results of the two studies.

The results are shown in Table 2. According to this, 39 of the 59 (78.0%) critical items were ranked first. Results of our previous report showed 23 of 30 (76.6%) ranked first. The difference between the two is not significant ( $\chi^2 = 0.00095$ ,  $df = 1$ ,  $P < .93$ ).

The total score for critical questioning in this study ranges from 3.0 to 12.0 as compared to 3.0 to 11.3 for previous report. The value of critical points to avoid making a "false positive" in terms of rank score is 1.66 for this experiment and 1.99 for the previous study.

Table 2: Results of Pre-Test

Total Points	Critical Question Ranked 1	Critical Question Ranked 2 and over	Non-Critical Question Ranked 1
3.0 - 3.9	17		
4.0 - 4.9	6		
5.0 - 5.9	9		3
6.0 - 6.9	4		4
7.0 - 7.9	2	3	3
8.0 - 8.9		2	
9.0 - 9.9	1	2	
10.0 - 10.9		1*	
11.0 - 11.9		2	
12.0 - 12.9		1	
Total	39	11	10

\* Hardly any GSR noted

In this experiment, each question was given in series of three, whereas Suzuki et. al., (1973a) used a series of four, but hardly any difference is noted in total points distribution or in the critical point of mean rank score. These results suggest that as long as the testing procedure, questions and other situations are the same, the detection rate of this method is reliable regardless of the number of question presentations.

The results of the three individual subjective analyses and objective analyses based on the criterion of a number 1 ranking to the critical question

are as shown in Table 3. The rates of correct subjective judgements are 73.0%, 68.0%, and 78.0% or an average of 72.6% compared to the average subjective judgement of 44.3% by 26 evaluators in the earlier Suzuki et. al. study (1973b). In this study, examiners changed the order of question presentation intentionally to simplify the analysis of responses registered by examinees. For example, if similar responses were registered consecutively in the first series, these questions were given separately in the second series. This may be the reason for the difference in the results of subjective analysis in the two studies but the real reason is not definite yet.

Table 3: Results of Subjective and Objective Analysis

Correct/Incorrect	Objective Analysis			
	Evaluator A	Evaluator B	Evaluator C	Objective Analysis
Correct	36	34	39	39
Incorrect	5	3	6	10
Inconclusive	9	13	5	1
Total	50	50	50	50

The average correct judgement rate of 72.6% in the subjective analysis is slightly lower than the rate obtained in the objective analysis. However, a comparison of incorrect judgement rates shows 20.0% for objective analysis and 9.3% for subjective analysis or about one-half. Because the objective analysis can be performed automatically, there is very little which cannot be analyzed but the dependence on too simple of a procedure of analysis could invite mistakes. It is necessary to examine the absolute value of GSR for further development.

Actual confirmed positive records. The results of the rank score analysis of the GSR in pre-testing showed almost the same detection rates both in this report and in a previous report (Suzuki et. al., 1973a). In order to investigate the applicability of this method for practical use, a rank score analysis of 50 positive confirmed records was made. The results are shown in Table 4.

Among the 50 records analyzed, 34 or 68% ranked first in the critical questioning series as compared to 39 or 78% for pre-testing. The difference is not significant ( $\chi^2 = 1.266$ ,  $df = 1$ ,  $p < .20$ ), but there is a difference of 10%. Also, the range of 3.0 to 4.9 for the total points in non-critical questioning is not seen in the pre-testing, but two cases (4%) of non-critical questions in the positive confirmation are not in this range. Significant differences cannot be detected in the results of pre-testing and positive

confirmation, but there is a slight tendency of weakening detection power in the positive confirmation.

Table 4: Results of Positive Confirmed

Total Points	Critical Question Ranked 1	Critical Question Ranked 2 and Over	Non-Critical Question Ranked 1
3.0 - 3.9	12		1
4.0 - 4.9	11		1
5.0 - 5.9	5		2
6.0 - 6.9	2		
7.0 - 7.9	3	1	3
8.0 - 8.9	1	1	4
9.0 - 9.9		4	3
10.0 - 10.9		5*	
11.0 - 11.9			
12.0 - 12.9		5	
Total	34	16	14

\* Hardly any GSR noted in two cases.

The measurements of respiration and pulse wave are included with the GSR in the actual testing and also, several POT question lists rather than just one are taken in actual cases. Therefore, the results obtained in this experiment cannot easily be applied to actual testing. However, there are factors which can reduce the detection rate. One of the factors will be discussed later.

Actual confirmed negative records. We have made investigation on the possibility of a "false positive" when an examinee is innocent according to the rank score analysis. The results of the rank score analysis made on 50 samples is shown in Table 5.

According to the table, 42 of the 50 showed a rank score of less than 2 or correct negative in critical questioning. Among these, 3 charts produced no GSR response and if these are eliminated, 39 (78%) were correctly interpreted. This correct interpretation rate is identical to the rate shown by pre-testing and 10% higher than the positive confirmation chart.

Generally in a polygraph testing it is essential to have a lower false positive rate. Although the correct interpretation rates between the positive and negative confirmation is not significant ( $\chi^2 = 1.26$ ,  $df = 1$ ,  $P < .20$ ), the higher accuracy on the latter records is desirable.

Table 5: Results of Negative Confirmed

Total Points	Critical Question Ranked 1	Critical Question Ranked 2 and Over
3.0 - 3.9	1	
4.0 - 4.9	1	
5.0 - 5.9	1	
6.0 - 6.9	3	2
7.0 - 7.9	2	3
8.0 - 8.9		4
9.0 - 9.9		3
10.0 - 10.9		11*
11.0 - 11.9		7
12.0 - 12.9		12
Total	8	42

\* No GSR were noted in three cases.

Table 5 also shows that there were 8 of confirmed negative records ranked in error. The reasons for this were found in 5 cases through investigation, but the reason for the other 3 could not be determined. It was found that 2 of the 5 cases were due to introspection of the examinee's during testing and the other 3 were due to incorrect interpretation arising from examinee's denial of facts that they were in fact aware of. As shown in table 5, the inadequacy of this procedure results in a conspicuous response showing first order rank and small total points. The error lies in the method of questioning and the questions used rather than in the analysis method.

Actual Test Including Countermeasures. An objective analysis of GSR by rank score produces a high rate of correct interpretation as indicated previously. However, it is not 100% foolproof. The following is necessary to make it more complete.

- (1) Improvement in measurement accuracy
- (2) Improvement in analysis method

Rather than placing reliance on GSR alone for lie-detection, a development of objective analysis of other indexes is necessary so that the changes in physiological responses of the examinees can be studied from various standpoints. However, an emphasis on the development of measurement devices and analysis method alone places a limitation on the detection of deception. There are other factors which must be considered such as types of questions and method of question presentation, psychological attitude and understanding

of examinees toward the polygraph test, the testing room environment, and so forth.

Therefore, analysis of the effect of the question method and countermeasures on the examinee's GSR rank scores was made. The results of this analysis are shown in Table 6.

Table 6: Results of Countermeasure Experiment

Total Points	Critical Question Ranked 1	Critical Question Ranked 2 and Over	Non-Critical Question Ranked 1
3.0 - 3.9	2		
4.0 - 4.9	5		1
5.0 - 5.9	2		
6.0 - 6.9	1		1
7.0 - 7.9	2	1	
8.0 - 8.9			2
9.0 - 9.9		2	
10.0 - 10.9		3	2
11.0 - 11.9		2	
12.0 - 12.9			1
Total	12	8	8

Table 6 shows that 12 cases out of 20 or 60% were ranked first in critical questioning. This compared to the 78.0% found in the analysis of pre-testing shows a 18.0% drop in the detection rate. The difference is significant ( $\chi^2 = 6.01$ ,  $df = 1$ ,  $P < .02$ ).

It was found that a significant change in the detection rate was seen when a certain procedural or instructional format was altered despite the same equipment, analysis method and questions used in the pre-testing. From this it can be suggested that the following factors may have lowered the detection rate: (1) two selections of numbers, (2) countermeasure instructions and (3) complicated procedures but less tension than in actual testing. In the case of factor (1) above, the first choice number of only one of the eight erroneous cases was ranked first. It is assumed that this factor did not greatly affect the erroneous detection. Assuming that examinees made an attempt to create greater responses to a certain non-critical item, their attempts cannot be said to be successful because the distribution of total points of non-critical questions ranked 1 are scattered in a wide range as shown in Table 6. Generally speaking, examinee's experience less tension in experimental testing than in actual testing; therefore, the detection rate is said to be lower. However, experiments conducted by

Onishi, et. al., (1973) showed a detection rate of 73% which is 13% higher than the results obtained in this countermeasure experiment. Thus, it cannot be said simply that the detection rate is lower in an experimental situation. In this countermeasure experiment, the complicated procedures and instructions made the experiment ambiguous to the examinees which presumably led to a lower detection rate.

Actual Cases Including Inappropriate Critical Item. A sharp distinction of deception is a must in a lie detection technology. This not only allows deception to be found correctly but also prevents erroneous interpretation when an examinee is telling the truth. However, as seen previously in the section on the actual negative confirmation records, 16% were incorrect in the rank score analysis. This section deals with a consideration of the factors leading to those errors.

In a normal actual case, it is difficult to assume that an innocent examinee will carry out a willful act of distorting the results (countermeasures). But, it can be assumed that inappropriate questioning can result in an erroneous interpretation.

In a POT test, criminal facts related to the case and known only to the criminal, victim and the testing authority can be used for critical questioning. However, critical questions may become known inadvertently to the examinee even though he may be innocent. Normally, the testing procedure is fully explained and the facts and the method of acquisition of these facts are described to examinee so that only the appropriate critical matters are used.

Sometimes, however, an innocent person who is aware of certain information will not tell the investigator about this because of his anxiety that this may create doubts within the investigator's mind. Thus, a study using the previously described method was conducted to see the effect on the rank score analysis when a person who only knows the facts offered by a third party is questioned about his part in the crime. The results are shown in Table 7. According to this table, 9 of the 20 (45%) showed confirmed innocent persons erroneous deception (false positive). In the analysis of the 50 actual negative confirmation records, false positive detection was 16%, compared to 45% for inappropriate critical questions. The difference is significant ( $\chi^2 = 6.53$ ,  $df = 1$ ,  $P < .02$ ).

It is not known how often an inappropriate question item is asked in actual testing, but this is assumed to be possible. The results of this experiment therefore show that inappropriate questioning becomes a factor in the discrimination of deception. Probably the reason for only a small percentage of erroneous interpretations in actual testing is because an examinee is tested on several sets of questions which tend to offset the effect of any inappropriate questions.

In the inappropriate questioning considered in this report, the subjects had not taken part in the matters under investigation but were aware of the information. From the standpoint of whether this information had been detected or not, 9 of the 20 cases or 45% showed an order rank of number 1. When compared to 78% obtained in the actual pre-testing, the difference is significant ( $\chi^2 = 7.21$ ,  $df = 1$ ,  $P < .01$ ). However, the detection

rate of 45% is significantly higher than chance probability (binomial distribution,  $1/6$ ,  $n = 20$ ,  $P > 0.01$ ). These facts suggest that polygraph technology excels in seeking information from an individual and that the instructions, testing condition, stimulus (types of questions, etc., can greatly offset the deception detection rate.

Table 7: Results of Test of Inappropriate Critical Items Were Used

Total Points	Critical Question Ranked 1	Critical Question Ranked 2 and Over
3.0 - 3.9	2	
4.0 - 4.9	1	
5.0 - 5.9	2	
6.0 - 6.9	1	1
7.0 - 7.9	2	
8.0 - 8.9	1	4
9.0 - 9.9		2
10.0 - 10.9		2
11.0 - 11.9		1
12.0 - 12.9		1
Total	9	11

These findings suggest that development of better equipment and method of analysis is needed and that studies on the psychological and situational determinants of deception detection are also necessary in order to improve the detection rate.

#### Summary

The purpose of this paper was to use the GSR rank score analysis on records obtained from five different test conditions and to examine its validity in field tests and to explore factors affecting the detection rate. The results obtained were as follows:

(1) The detection rates of actual pre-testing (card tests) in a previous study and in this report showed 76.6% and 78.0%. From these findings, it can be said that the GSR rank score analysis is reliable when this method is applied to data obtained from similar test conditions.

(2) The actual positive confirmation (deceptive) records showed a deception detection rate of 68.0%.

(3) The actual negative confirmation (truthful) records showed a correct interpretation rate of 78%.



(4) The tests including deliberate countermeasure attempts showed a deception detection rate of 60%.

(5) An inappropriate question in actual negative confirmation showed 55% correct interpretation.

The results suggest that the test conditions seriously affect the detection rate; to improve the deception detection rate, further study not only on the analysis method but also on the psychological and situational determinants is necessary.

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Receiving a truth is adding a new sense.

— Liebig.

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## USE OF THE SIGN INTERPRETER IN TESTING THE DEAF

By

William E. Wagner

The polygraph examiner in today's field is faced with many challenges in the testing of various types of handicapped persons. Though much has been written and published on the basic techniques and procedures used in normal testing conditions, little has been done in setting standard guidelines for the testing of subjects with physical disabilities, or identifying and solving problems that may arise when these examinations are performed. I will attempt to explore one area of handicapped testing, examining the deaf through the use of a Sign Interpreter, and to present a practical method which will hopefully enable the polygraph examiner to conduct a more efficient and problem-free examination session.

In testing the deaf subject a brief background in the concept of deaf communication is needed. Deaf communication is based on the degree of deafness of the subject which determines the method adapted by them to meet their communication needs. To the deaf there are four basic modes to utilize for communication. They are: (1) Oral - which is spoken or voice communication, (2) Aural - which is hearing and listening, (3) Sign - the "talking with the hands" - a sign will mean a specific word or concept, and (4) Fingerspelling - where the words are spelled out by hand position and configuration for each of the twenty-six letters of the alphabet. In teaching today at the major schools and colleges for the deaf, the use of the four modes are combined and used together in which is termed the Simultaneous Method or more popularly termed "Total Communication". This concept is based on the simultaneous use of the aural-oral modalities and combinations of signs and fingerspelling. The four reinforce and supplement each other.

In the concept of Sign or Sign Language, there are five systems which tend to overlap each other through their use. The first is non-verbal communication which includes facial expressions, natural gestures, pantomime and body movements. The second and most widely used today is the American Sign Language (ASL), or AMESLAN as it is also known. This method is based on standard signs for concepts. The third is Sign English and like American Sign Language, it is also based on similar signs for concepts. This method differs from American Sign in that it has a closer word order style to English. American Sign does not follow any similar word order comparable to English. The fourth is Manual English. The system is the closest to standard written English and uses word endings, prefixes and verb tenses. The communications are put into sentence form and standard punctuation is used. The last system is Fingerspelling and, as mentioned previously, is a letter to letter representation of what is being said. Fingerspelling is also used within the American Sign Language and Sign English. There is no set standard sign system in use today. All of the above are used by the

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deaf in this country and may be mixed with each other through different learning processes. Because of this, the importance of a qualified interpreter knowledgeable in all areas of deaf communication cannot be over emphasized. The polygraph examiner will probably not be skilled in the use of any of the deaf communication techniques, but the understanding of their basic concepts will better enable the effectiveness of the use of the Sign Interpreter. Through the use of "Total Communication", the Sign Interpreter can obtain the fullest and most effective form of expressing the issue areas and their importance to the deaf subject being tested. This will enable the polygraph examiner to create, through the Sign Interpreter, the essential aspect of psychological set which is needed to assure conclusive testing.

To conduct an examination using the Sign Interpreter technique there are basic factors which will have to be considered by the examiner prior to testing. The first is the Sign Interpreter. The examiner should attempt to locate a competent interpreter skilled in all areas of deaf communication and proficient in its use. Professional educators or instructors who use the concept of "Total Communication" on a daily basis are preferred because they are generally more fluent and comfortable in their communication technique. The examiner can use several avenues to locate interpreters for their testing needs. If they are in an area where a school for the deaf is located they can inquire through it as to referrals to competent Sign Interpreters. If no school is available, the Federal Government, through the Department of Health, Education and Welfare may be contacted along with various other local social agencies for assistance.

Once a suitable interpreter is found, the examiner should arrange a meeting prior to any actual testing attempts in order to provide a basic background in the technique of polygraph. The examiner should provide the Sign Interpreter with a working knowledge of the testing procedure, the various test techniques used, and the theory behind each. The examiner and the Sign Interpreter should practice a simulated examination to develop a feel for working with each other and establish a rapport. The examiner should make the Sign Interpreter aware that the test procedure is a structured environment and that the role of the interpreter is that of an inanimate object. The interpreter only relays the conversation of the examiner and the subject being tested. The interpreter should be instructed that appearance should be conservative in dress and that while in the testing process any emotional facial or physical expressions should be avoided. The examiner should attempt to arrange testing so that the Sign Interpreter and the examinee do not know or have prior knowledge of each other. If at all possible, the Sign Interpreter and the subject being tested should be of the same gender to avoid any additional distraction during testing. This will also enable the Sign Interpreter to serve as an unbiased witness in case of any false accusations of improper testing procedures which could arise in a later proceeding. Finally, the Sign Interpreter should be asked to sign a confidential agreement with the examiner regarding each test he or she is utilized in. This agreement should cover all information, testing results, admissions or any other personal or private information the Sign Interpreter may be exposed to while rendering services.

Another factor for consideration in this type of testing is the subject. The examiner should attempt to ascertain as much background information as possible about the subject prior to the date of testing. The

important areas to the examiner and the interpreter are the subject's educational level, the degree of their deafness, and if accessible, the form of communication in which the subject is most proficient. The subject should be advised of the examination date and time as in standard testing.

On the day of the examination, the interpreter and the examiner should meet prior to testing to review the test questions. The examiner should have all the questions ready if possible, and have them reviewed by the Sign Interpreter for translation. In the concept of sign there will be occasions in which some wording or meaning might be changed or taken differently by the subject through translation. The examiner and Sign Interpreter must first agree on which is being asked and exactly what each question means. When the questions are reviewed with the subject, the Sign Interpreter will then be able to determine if the subject has the same understanding. The examiner should have decided upon the technique to be used prior to testing but must also have a back-up course of testing ready in the event the chosen technique should become unacceptable.

Upon arrival of the subject for testing, both the examiner and the Sign Interpreter should meet with him. At this point the subject is advised that the examiner will be conducting all phases of the testing procedure and that the interpreter plays no part except to translate. The subject is instructed that there will be no other conversation between himself and the interpreter unless it is to translate questions or instructions from the examiner. The examiner should direct all conversations to the subject and not to the interpreter. The interpreter should position next to the examiner also facing the subject. As in standard testing, the subject's rights will be explained and they will be advised that submitting to the polygraph examination is voluntary. The subject will be provided the appropriate test waiver forms and allowed to read and sign them. The subject will also be advised that they must complete a waiver allowing the use of the Sign Interpreter and that the Sign Interpreter has completed a confidentiality agreement in regards to the testing to be conducted. In the examination room, the examiner and the interpreter will position themselves directly in front of the subject with the examiner asking the questions and providing the instructions. As stated previously, the examiner should talk directly to the subject and use as much eye contact as possible. No special treatment should be given to the subject and the examiner and interpreter should present the image that this is just another test and that there is nothing out of the ordinary taking place. The balance of the pre-test is conducted as in normal testing situations with the examiner obtaining the necessary information, discussing the issues with the subject and reviewing the questions being asked.

At the conclusion of the pre-test interview the instrument is explained to the subject and the attachments are placed accordingly. The subject is advised that there will be several charts conducted and that they are to remain still during the examination and answer the questions truthfully. If the subject is capable of giving an audible response, "Yes" or "No," advise them to do so. If the subject is not capable of speech, instruct them to nod their answers with their head but to limit all other body movement. If the subsequent testing develops problems due to the subject's answering through head movement with unclear charts, the Silent Answer Technique can be employed. With the proper instruction, the examiner can obtain the same results as normal testing by having the subject think of the answer they have chosen to give

instead of attempting to answer aloud or by a move of the head.

Prior to the actual testing, the examiner and the Sign Interpreter should position themselves directly in front of the subject during all conversations and through the explanation of the instrument and the placing of the attachments. Once the attachments have been placed on the subject and adjusted, the examiner moves to the side of the subject and leaves the interpreter facing the subject alone. The Sign Interpreter will, on a hand signal from the examiner, announce the beginning of the examination in Sign. The questions will be asked by the Sign Interpreter in the same manner, on a hand cue from the examiner. The examiner will operate the instrument as in normal testing and observe the subject from the side position and out of the subject's peripheral view. The subject should not be able to see the movement of the hand signals given by the examiner to the interpreter. The interpreter will ask the question in Sign and upon completion of each question look away from the subject. The subject is instructed to look straight ahead and give the answer. The subject's answer will be either heard or observed by the examiner from his side position. The interpreter and the examiner are cautioned to refrain from any emotional facial expressions between each other or to any of the subject's answers or chart responses. Deaf persons are normally good readers of facial expressions and in the concept of "Total Communication", facial expression is a basic component of the communication process.

The exam should be conducted as under normal conditions. If the subject responds on relevant questions they should be advised of the responses and given an opportunity to explain them. If the subject makes admissions they should be put in writing on a separate piece of paper, both the question, written by the examiner, and the answer written by the subject. The examiner and the subject should write with a different color ink for identification purposes. The examiner will have been positioned in front of the subject and next to the interpreter for between chart questioning and also at the conclusion of the examination for any post-test interviewing or interrogation.

If the responses of the subject show deception, the examiner can question through the interpreter. This method gives the examiner a full means of communication with the subject and takes much less time than writing the questions and answers. Subjects who are determined to be non-deceptive are thanked for their time and cooperation.

The use of the Sign Interpreter will enable the polygraph examiner to conduct the testing of deaf subjects with the greatest possible efficiency and limit the chances of non-conclusive results. This procedure is time consuming process and requires more pre-test planning. If a permanent record is needed of the examination the best method, but also the most expensive, is to Video Tape the entire test. A tape recording of the examination should serve as an adequate record if the Sign Interpreter repeats, word for word, the answers of the subject throughout the proceedings.

The key to the success of this type of examination, as in any polygraph testing, depends on the education, skill and experience of the polygraph examiner. With the aid of a competent sign interpreter, and a practice session, this method of testing can be efficient, complete and most of all, conclusive.

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Without seeking, truth cannot be known at all.  
It can neither be declared from pulpits, nor set  
down in articles, nor in any wise prepared and sold  
in packages ready for use. Truth must be ground  
for every man by himself out of its husk, with such  
help as he can get, indeed, but not without stern  
labor of his own.

— Ruskin.

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## OBSESSIVE COMPULSIVE BEHAVIOR

### The Nuisance Offender

By

James T. Reese

Many crimes which appear to be sexually related have their origins in obsessive-compulsive behavior. Law enforcement officers have daily contact with individuals displaying this type of behavior in exaggerated forms. Therefore, officers should be aware of the personality involved in these crimes and know the motivating factors involved.

Researchers have provided common characteristics (profiles) of obsessive-compulsive nuisance offenders and keys to identifying their criminogenic patterns. They can describe the type of crimes they commit and suggest techniques for interviewing them. While this article focuses on the obsessive-compulsive individual, he is by no means the only type of person who is capable of committing the crimes of exhibitionism, voyeurism, and others set out. The psychopath, for example, may commit such crimes. However, the psychopath's motivations differ as do his actions in that there is an absence of the ritualization characteristics of the crimes committed by the obsessive-compulsive individual.

For the sake of clarity and brevity, the individual displaying obsessive-compulsive behavior may be referred to as an "obsessive-compulsive individual," but this is not a technical, diagnostic term.

Often referred to in the law enforcement community as nuisance offenses, acts of the obsessive-compulsive individual include exhibitionism, kleptomania, pyromania, voyeurism, fetishism, and obscene phone calls. A study of these crimes reveals sexual inadequacy, anxiety, and repeated stereotypic patterns of behavior or rituals on the part of the perpetrators. It is these ritualistic patterns, pervasive in the obsessional mechanism,<sup>1</sup> which provide the "key" to solving many crimes. To better understand the mental processes involved and to enable the law enforcement officer to identify readily these keys, it is necessary to examine the area of obsessive-compulsive behavior.

#### The Problem

In discussing obsessive-compulsive behavior, it is important to define the terms "obsessive" and "compulsive." Obsessions are irrational, unwanted thoughts, usually of no value to the individual, which persist and force themselves into the individual's consciousness. Obsessions may become so disturbing and repetitive that the individual develops a maladjusted lifestyle. These obsessive thoughts may deal with many topics. However, the

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most common themes of these obsessions are: (1) Hostility toward, or aggressive thoughts about, parents or other loved ones; (2) anti-Christ or blasphemous thoughts occurring to individuals of highly religious or moral background; (3) excessive concern with disease; and (4) thoughts of extremely perverse sexual acts.<sup>2</sup>

The behavior patterns which stem from these obsessions are called compulsions. A compulsion, generally speaking, is an act performed by an individual in an effort to relieve himself of the anxieties which both cause and result from the obsession. (Not all obsessions lead to compulsive behavior.) Some consider compulsions to be irresistible to the individual - he feels compelled to commit the act or demonstrate some other form of behavior.<sup>3</sup> Compulsions which do not result in criminal acts and are commonly demonstrated by individuals categorized as obsessive-compulsive include repeated handwashing, clearing of one's throat, mumbling to oneself, and counting.<sup>4</sup> These compulsions can frequently take on the appearance of complex ritualistic behavior, particularly in dressing or undressing.<sup>5</sup>

It is the ritual which provides the valuable key to the solution of a crime. The law enforcement officer can then predict with some degree of accuracy the future actions of an individual whose crime pattern reflects ritualization or obsessive-compulsive behavior. The ritualized modus operandi of the nuisance offender is the key.

B. von Haller Gilmer suggests that a large portion of the population, though considered normal, experience mild obsessions.<sup>6</sup> In the nonneurotic sense, these obsessions are unwanted thoughts that come into consciousness; their expulsion cannot be accomplished voluntarily. Everyday worries of the average person are a good example, "Did I lock the door when I left?" or "Did I unplug the iron?" Another everyday form of a mild obsession is experienced by the individual who is unable to expel voluntarily a particular tune from his mind. Such repetitive and unbidden thoughts are common, mild obsessions and do not demonstrate abnormal behavior.

The law enforcement officer will not be concerned with these common and normal obsessions. Rather he will be dealing with its more bizarre forms, since these rituals, when flavored with abnormal sexual activities and carried out in public, are dramatic and call for police action. It is not necessary for the police officer to diagnose whether the individual committing the crime falls into one category of obsessive-compulsive behavior or another. What is important to know is whether or not the crime committed reveals a ritualistic pattern, which will help the officer predict the perpetrator's future behavior.

The history of obsessive-compulsive behavior reaches back to the medieval period when individuals suffering from this type of behavior were considered to be under the influence of the devil or victims of witchcraft. Obsessions were generally referred to as acts of evil spirits.<sup>7</sup>

Numerous theories since then have been postulated on the etiology of obsessive-compulsive behavior. David Abrahamsen suggests that the thought intrusion (obsession) enters the consciousness of the individual without any external stimuli.<sup>8</sup> Sigmund Freud held that the seed for compulsive behavior is sown in early childhood, the behavior stemming from difficulties encountered during the psychosexual stage of development involving bowel training.<sup>9</sup>



Leon Salzman cites several factors in the onset of obsessive-compulsive behavior, but emphasizes the obsessional individual's striving for omniscience through intellectuality.<sup>10</sup> A final theory to be mentioned (keeping in mind there are many others) is that of Soloman Snyder, who describes the obsessive-compulsive's many rituals as methods which enable the individual to control some aspects of everyday life. Such an individual needs to maintain control at all times. He or she is usually frightened by change, fearing loss of this control.<sup>11</sup>

While it may be advantageous to the law enforcement officer to know the specific cause of nuisance behavior, the goal is to be able to determine whether the criminal act is a result of some type of obsessive-compulsive behavior. The rituals involved in dressing and undressing, for example, may be of importance to the psychoanalyst. Law enforcement's responsibility is to identify the criminogenic patterns of the individual experiencing obsessive-compulsive behavior and to be aware that some individuals carry out acts as a result of this behavior.

It is frequently asserted that the obsessive-compulsive individual cannot stop himself from committing a particular act, but this is questionable. It has been stated, "He knows that his criminal acts are criminal, and that he will be punished for them. When he engages in criminality he does so knowingly, deliberately, and willfully."<sup>12</sup> To provide an analogy, it may be fair to say that the obsessive-compulsive individual is to his act as a normal individual is to an act of superstition. For example, the normal individual when confronting a ladder can choose to walk around or under the ladder. He will do the act which is more comfortable to him.<sup>13</sup> A paradox in obsessive-compulsive behavior comes into play because the individual knows his behavior is self-defeating, yet if he resists acting on his compulsions he becomes ridden with anxiety, guilt, and frustration. Thus, the exhibitionist will expose himself with the realization that his act is abnormal because failure to commit the act leaves him anxiety-ridden.

### The Crimes

What makes nuisance offenses a problem? Aside from the police time consumed in attempts to investigate these offenses, they account for a substantial number of sex crimes. It has been generally established that exhibitionism alone accounts for one-third of all reported sex crimes in the United States, Canada, and Europe.<sup>14</sup> The remainder of nuisance offenses adds substantially to this percentage of sex crimes. This makes it important to examine each nuisance offense for the patterns exhibited.

### Exhibitionism

Many individuals categorized as exhibitionists, like other offenders discussed hereafter, may be experiencing obsessive-compulsive behavior. Individuals who expose their genitals to the opposite sex, and are subsequently arrested, are normally charged with indecent exposure. The motivation behind the exposure becomes important because there are differences between indecent exposure and exhibitionism. There are many reasons for indecent exposure, such as revenge, "kicks," or a dare. The factor which separates indecent exposure from exhibitionism is that the exhibitionist exposes his genitals to the opposite sex for the purpose of sexual gratification, without

any intention of sexual activity with the victims.<sup>15</sup> An exhibitionist exposes himself to show, among other reasons, that he is a man or to express symbolically his belief that he doesn't need women. Individuals in the latter category obtain their sexual gratification from the response of the victim. The exhibitionist customarily looks for a response of shock, fright, and other signs of recognition from the victim. The desired responses can vary from one exhibitionist to the next. While some may merely look for a visual response, others must talk "dirty" to the victim or direct lewd questions toward the victim during (and concerning) the exposure.

Indecent exposure is not a crime of recent history as substantiated by English court records of 1663. The first reported case of indecent exposure in England (1 Keb. 620, 83 ENG. REP. 1146 K.B. 1663) describes Sir Charles Sedley as standing on his balcony in the nude, urinating in bottles, and dropping them on passers-by into the street below.<sup>16</sup> Even before this, history records a certain amount of indecent exposure. Naked females were usually present to meet royalty and the like during royal visits to foreign countries. Together with indecent exposure, exhibitionism occurred long ago.

Research on general profiles of the exhibitionist reveals that exhibitionism is a male phenomenon. Women seem to have other releases for exhibitionistic urges, such as posing in pornographic magazines, acting in obscene movies, and enjoying liberalized dress codes.<sup>17</sup> Research conducted by McDonald on 200 individuals arrested for exhibitionistic acts in Denver, Colorado, revealed that exhibitionism takes place mostly in daylight hours (142 out of 200).<sup>18</sup> This study also found the average age of the exhibitionist at first conviction is 26.5 years old, as opposed to Mohr who calculated the age as 24.8 years old.<sup>19</sup> Mohr contended that age as determined by McDonald is derived from court records and that those court records are inaccurate. It is agreed, however, that young white males are the defendants in a majority of cases.<sup>20</sup>

Other commonalities found in the exhibitionist profile show most exhibitionists are or have been married,<sup>21</sup> and are intelligent<sup>22</sup> and well-educated.<sup>23</sup> Often he will have, or has had, a stammer when speaking.<sup>24</sup> There appears to be no common denominator in physical characteristics of the exhibitionist.

Cases show that the exhibitionist provides law enforcement with a key or pattern to his behavior, which may assist in his apprehension. His modus operandi reveals that he conducts his exhibitionist activities in the same type of area or neighborhood,<sup>25</sup> during the same time of day, and in the same manner each time.<sup>26</sup> Reinhardt advises that the victim of the exhibitionistic act must be a stranger to the subject.<sup>27</sup>

His ritual, therefore, has been established, and a study of past exhibitionistic acts may enable the officer to predict with some degree of accuracy the subject's future criminal behavior.

#### Pyromania

Pyromaniacs, like others who set fires and are arrested, are usually charged with arson. However, their motivation for starting the fire differ from other firesetters. There are those whose purpose for starting a fire

may range from revenge to monetary gain through insurance coverage.<sup>28</sup> The pyromaniac starts fires for the purpose of relieving sexual tension, and in many cases, his action is a substitute for the sex act.<sup>29</sup> This offender, in the vast majority of cases, is male.<sup>30</sup> He usually will not seek help on his own.<sup>31</sup> The profile of the pyromaniac often includes some traits found in other criminal typologies, namely a history of bedwetting,<sup>32</sup> cruelty to animals, and fire-setting.<sup>33</sup> For the pyromaniac the desire for thrill or orgasm is the sole reason for the fire,<sup>34</sup> and fire has for him the magical power to provide affection, potency, and love. The devastating power of the fire illustrates the intensity of the offender's sexual desires, as well as his sadism.<sup>35</sup> Thus, the pyromaniac's inadequate personal sexuality forms a foundation for his sexually symbolic offense.

The pyromaniac can be virtually anyone. However, James Reinhardt describes the pyromaniac as a male about 39 years old of borderline intelligence, poor social background, and low ethical standards. He continues that this offender is married in about 75 percent of the cases, usually to an older woman. However, one-third of these individuals are not living with their wives at the time of their arrest for starting fires. These individuals have often been arrested in the past for crimes other than firesetting and have a history of excessive use of alcohol.<sup>36</sup>

Most theorists believe that the pyromaniac usually stays at the scene of his fire, although there is some controversy on this point. There are those who state that some pyromaniacs simply start the fire and then leave.<sup>37</sup> If he is at the fire scene, he may appear to have a flushed face, wet pants, and uncontrolled urination. Also, he may constantly offer his help and make comments concerning the fire.<sup>38</sup> When there is suspicion of a pyromaniac, a standard investigative technique is to take photographs of individuals watching the fire at the crime scene. It is important that these photos be taken as soon as possible after discovery of the fire, because fire attracts many people for many reasons (curiosity, excitement, etc.). It is not unusual for the same person to be drawn to numerous fires because of his individual interest in them. The pyromaniac will be among the first at the scene, usually before the crowd gathers. Over a period of time and after several fires, the pyromaniac may stand out as a common denominator in each of the crime scene photos. It is also important to know that a pyromaniac may on occasion be a fireman or volunteer fireman, or may have wanted to be a fireman in the past.<sup>39</sup>

#### Kleptomania

Another obsessive-compulsive affliction appearing as a nuisance offense is kleptomania.<sup>40</sup> The kleptomaniac steals items of no value - items he neither needs nor desires for the purpose of sexual excitation.<sup>41</sup> Although there are other theories on what causes the individual to steal, the prevalent Freudian theory holds there is erotic motivation behind the act. This type of crime is motivated by sex, but is not a sex crime.

The majority of these offenders are females, who have been classified by some as extremely hostile and sexually unsatisfied. One theory depicts the kleptomaniac as a middle-aged woman, perhaps experiencing menopause, whose husband is "married to his profession." In addition, her children may have all left home, either to work or go to school, and she is left alone. The act of kleptomania has been described as the symbolic stealing of the love

and attention she cannot get at home. This theory is supported by the fact that unlike the occasional thief, the kleptomaniac steals openly and may cry and cause a considerable disturbance when caught. Even though under arrest, her thoughts may be that she is now getting the attention she needs.

The kleptomaniac is usually welloff financially,<sup>42</sup> although she may be found in all economic categories. As in other manifestations of obsessive-compulsive behavior, the kleptomaniac is able to exempt herself from human responsibility for her acts<sup>43</sup> and will not usually seek help on her own. When interviewed, like those manifesting exhibitionism and pyromania, she tends to be evasive and denies her guilt.<sup>44</sup> Kleptomaniacs often frequent the same department store and are unique from the professional thief or the occasional shoplifter. The kleptomaniac does not steal for profit or for useful items, but for the sexual thrill involved. However, kleptomania is not always driven by the obvious sexual urge.

### Voyeurism

The voyeur gains his sexual gratification from viewing a naked or semi-naked woman or watching couples engaged in sexual intercourse.<sup>45</sup> This type of viewing is a step beyond the normal male curiosity about the opposite sex. The voyeur goes to great lengths to prowl through residential sections of cities, usually at night, hoping for a glimpse of a female in the nude or sexually engaged. His observations are a replacement for the sexual act.<sup>46</sup> Commonly referred to as the "peeping tom," the voyeur may masturbate while watching his victim. Because of the practice of masturbation, he may have been arrested in the past for indecent exposure when a neighbor of the victim observed him while exposed.

This crime of young males<sup>47</sup> results in numerous prowler calls to police stations. Informal interviews with officers attending the FBI National Academy indicate that this offense tends to be a local offense, i.e., the voyeur usually operates close to the neighborhood in which he resides. He develops a pattern or route of selected windows throughout the neighborhood. In many cases, the voyeur operates at the same time of each evening, and often his voyeuristic practices are in conjunction with a legitimate function, such as taking the dog out for a walk. The voyeur acts during the hours of darkness as the night provides concealment and is the time when his victims are most likely to undress. His specific timetable each night may vary and be influenced by the undressing habits of the victims.

### Fetishism

A fetish is a nonsexual item which takes the place of a sexual partner to gratify sexual desires. There are an untold number of fetishists, and their fetish items may vary from shoes<sup>48</sup> to automobile exhaust pipes.<sup>49</sup> The fetishist may masturbate while holding, viewing or fondling the fetish item; the embracing of the item can take on many forms, from kissing to tasting.<sup>50</sup> On occasion the item itself may not be the fetish, but rather its texture or odor.<sup>51</sup> The fetishist may resort to stealing in efforts to obtain his desired items; for example, stealing ladies undergarments from clotheslines.<sup>52</sup> On rare occasions a fetishist may resort to violence, as in the case where a woman was attacked on a public street by a man who ran off with one of her shoes.<sup>53</sup>

Reinhardt describes the sex murderer as a fetishist with a desire for some fetish organ or other part of the human body.<sup>54</sup> Males most commonly practice fetishism, although there are reported cases of female fetishists. Men are more likely to commit larceny in connection with obtaining the fetish items than are women.<sup>55</sup> The thefts committed by the fetishist are perhaps the most annoying problems faced by police (thefts from clotheslines), and in this sense, he becomes a true nuisance for police officers. Fetishists are found in all age groups.<sup>56</sup>

#### Obscene Phone Caller

The verbal exhibitionist, as referred to by Hirshfield, is able to reduce his anxieties by calling females on the telephone and talking in an obscene manner. He may receive his sexual gratification either from the victim's alarm or her indignant tone following his initial obscene comments.<sup>57</sup> It would appear that no age is spared in this category either - for the victim or the subject.

FBI National Academy attendees advised that this is a common offense. Many officers also reported that these obscene phone callers usually keep a log or diary of their calls. The numbers called are placed in the diary with a grade, or mark, concerning the victim's response. If poorly rated, she is usually not called again. These same informal surveys at the FBI Academy reveal that most obscene phone calls are numbers chosen randomly from telephone directories. If a negative response is received by the caller, but he continues to call the victim in spite of her lack of adequate response, chances are the caller knows the victim or knows of her. He merely needs to hear her voice or know she is on the phone. Average ages for the obscene phone caller range from 18 to 25 years old.

Often, voyeuristic acts may be employed by the obscene caller. He will view the victim through binoculars from a nearby apartment or house as she answers the phone.<sup>58</sup> This individual may also add obscene letters to his repertoire. Like a number of others discussed previously, this offender tends to follow a pattern, calling on the same day of the week and/or at the same time of day. Police officers' wives are frequent victims of obscene phone calls, but it is felt that these calls are for harassment or revenge, not the acts of the true obscene phone caller who calls for sexual release of tension and anxiety.

In the case of the obscene phone caller, as well as the kleptomaniac, pyromaniac, voyeur, and fetishist, it might be valuable to obtain a search warrant for the individual's residence. Conceivably, the obscene caller may have the log book of his calls at his residence, if not on him. The fetishist may maintain the items of clothing or other fetish items he has taken; the pyromaniac may have newspaper clippings regarding the fires he has started; and the voyeur may have a list of addresses with notations by each address of the best time to observe the victim, age of victim, and other related data.

Officers should also be aware that a number of nuisance offenders may consider suicide following their arrest. A large percentage of these criminals are married, and they can be pillars of their communities. Once arrested, the guilt for their acts becomes more acute. They begin to question how they can face their families or how they can reenter society with the

stigma of having been arrested for this type of crime. They should be watched closely during the time they are being booked and undergoing other arrest procedures.

#### Other Ritualistic Crimes

There are other crimes which show signs of ritualization. In many cases, such ritualizations may merely be a modus operandi with no obsessive-compulsive factors. Crimes such as rape and homicide often show a modus operandi in the normal sense. The rape committed out-of-doors, which is ritualized and motivated by compulsive behavior, can usually be distinguished by the fact that the rapist picks the area for the attack rather than picking the victim. The victims are always strangers to the subject, and in this crime, the subject waits for a likely victim of any age or description. The subject is always alone and often unable to complete the sexual act. It is not uncommon for the subject to apologize after the attack or show sudden concern for the well-being of the victim. He usually strikes in the same type of areas, uses the same methods of attack, speaks the same words on each occasion, and attacks at predictable intervals. The rape committed indoors is usually better planned, i.e., the victim tends to be the same age as the subject and of the same social strata. Often the indoor rape is preceded by voyeuristic activities.

Homicides, or homicides combined with rapes, may reveal patterns of ritualism. Numerous cases cite the subject's contention that he felt compelled to murder or that the thought of murder was an obsession with him. A study conducted by Palmer evaluated a number of convicted murderers and their brothers (a total population of 52). Thirty-four instances of phobias (morbid fears), compulsions, and obsessions were reported for the murderer group, while only three instances were found in the control group, the brothers.<sup>59</sup>

#### The Criminal and Interviewing Techniques

Many investigating officers of nuisance offenses consider interrogating the arrestee as a mere formality in order to meet departmental guidelines concerning the arrest report. They really do not expect the arrestee to admit to this particular type of crime, and thus consider the interview a waste of time. However, this individual may be responsible for a number of similar offenses in the area, and therefore is worth interviewing. The type of offense should indicate whether he or she may have committed a similar offense in the past. Entering an interrogation with the attitude that it is a mere formality will all but guarantee the end results to be just that. Interviewing this type of individual is not an easy task, but it can be an excellent education for the officer if he is able to gain rapport with the arrestee. The ultimate goal is, of course, to solve the crime at hand. However, one should try to determine the motivation behind the act and provide this individual with the type of help he may be seeking.

Prior to interviewing these individuals, certain personal characteristics and traits should be known. Individuals who fall into the category of nuisance offenders tend to carry idealism to extremes. They may appear to be generous, kind, and considerate, but this may merely be to conceal their hostility or curb their feelings of anger. Often these individuals emerge from

the superficial facade of kindness as stubborn and stingy people.<sup>60</sup> The rigidity of their personalities make them difficult to interview. This rigidity, coupled with a need for precision and accuracy, causes them to overemphasize details,<sup>61</sup> seem somewhat detached from their statements at times, and lead conversations away from the original intent of the investigator's questions.<sup>62</sup> Language is their magic, and this magic, together with the rituals, is prominent in obsessive-compulsive individuals.<sup>63</sup>

When interviewed by authorities, the obsessive-compulsive nuisance offender will not usually feel free to speak openly.<sup>64</sup> The initial response to accusing questions may be one of denial. His statements will appear intimate in that he demands intimacy (despite his absence), but he will initially avoid incriminating statements. His first thought may be that whatever he has done it must have been correct. He manufactures this thought because of his need to be in control, to be decisive, but never to be wrong. Concern for his responsibilities, regarding an offense appear lacking.<sup>65</sup>

Yet, if and when he admits his act, the verbal magic may begin along with evasive answers. Phrases such as "I am sorry," "I didn't mean it," and "Excuse me," often used by children to avoid spankings and other forms of punishment, are used by this individual for close to the same reasons. The difference is that the nuisance offender is attempting to excuse himself, and soon this verbal magic becomes automatic, a substitute for correcting his future actions. Here again we find the coupling of verbal magic with "verbal excuses." The excuses, together with the evasive and detailed answers leading away from the intent of the question, are used together to confuse and distort. These become almost automatic defenses for the offender.<sup>66</sup>

While appearing as a sexual deviant to law enforcement authorities, this individual may surprise the interviewing officer by proclaiming a very high standard of moral conduct, at least philosophically. More often than not, this is merely another mental step toward his personal need to appear perfect.<sup>67</sup>

Even the most normal individual is not likely to admit to a sexual crime because of the social stigma. He may show a certain amount of disgust at the very thought that he is suspect. If in fact he is the guilty party, he has an extra incentive to provide false information and be extremely uncooperative. Added to these reasons for uncooperativeness and elusiveness is the guilt and anxiety experienced by the obsessive-compulsive nuisance offender.

Since interrogating this individual, particularly following an arrest for a nuisance offense, may be a difficult task, an inappropriate introduction or the wrong initial question may bring the interrogation to an abrupt end. It is perhaps better to assume that this individual will not feel free to speak openly about his crime. This way, the law enforcement officer may be able to "get off on the right foot." It has been suggested that the officer use indirect questioning for the first 5 minutes or so when confronting a nuisance offender.<sup>68</sup> One could ask him how long he has resided in the particular neighborhood, his family background, and other similar questions.

A certain amount of empathy and understanding by the investigator may aid the individual in "opening up" about his crime and the motivation behind

it, if in fact he is aware of the motivating factors. This empathy should fall short of sympathy, so that the investigator's authority image is not completely eradicated during the interview. These indirect questions are an effort to reduce the individual's anxiety. It is usually helpful and makes the interview more successful if a good relationship is established between the subject and the interviewed. Legal guidelines must be followed, but there should be minimal introduction. This individual, due to his personal inadequacies and guilt over his crime, may become quite overwhelmed by excessive display of credentials, badges, legal forms, etc.

If the investigator continually asks direct questions, it makes the individual dependent on the investigator. This technique of interviewing should be avoided. A narrative response should be elicited. However, it should be remembered that the obsessive-compulsive individual may go into great detail in areas not pertinent to the questions being asked. Thus, it becomes the investigator's task to keep the answers in line with the questions at all times. The investigator must guide the interviewee when required to ask specific questions relating to the crime committed and should not overrespond to the answers given. Perhaps the best response would be simple reinforcing, such as saying "yes," or restating the last portion of the individual's comment.

In the case of more serious crimes, such as a ritualistic rape or ritualistic homicide, it may be worthwhile, along with minimal identification, to look "casual." It has often been said that uniforms don't get answers. Once the ground work has been set with indirect questions, the anxiety level reduced appreciatively, and some rapport developed, the interviewer should then gradually proceed into the specifics of the crime being investigated. Through this technique, the individual will be more relaxed and agreeable to a question and answer session. A distinction must be made between subtle coercion and these procedures, which merely assist the subject in relaxing and alleviating himself of some of his guilt feelings.

Questioning of the obsessive-compulsive nuisance offender is all but an art. Each individual will share certain personality traits, but will be different in other respects. Rapport must be gained for the interview to succeed. The offender will be more apt to respond if he believes the interviewer is on his side, even though the interviewer's capacity in questioning him is that of a law enforcement officer. Because of the obsessive-compulsive's timid exterior and the amount of guilt he is experiencing, the order of the questions, as well as the way they are phrased, may make an important difference in the responses. The initial and innocuous questions will not only build rapport but dissipate the tension and nervousness which is commonly experienced prior to an interview. The answers to such questions may also provide some psychological background information for use in later questioning.

The obsessive-compulsive individual rigidly adheres to rules he has set up for himself in an effort to overcome uneasiness and indecisiveness.<sup>69</sup> Decisions are therefore not an easy task for him. Often decisions which seem very strong and determined are in fact the results of his own efforts to overcome indecisiveness. This inability to make decisions should be understood, particularly when obtaining a signed statement or confession. He is as unable to make an easy decision as a difficult one; hence, his resulting decisions may be impulsive.



## Conclusion

The obsessive-compulsive individual who carries on a pattern of criminal behavior usually will not elicit help. The possibility of this individual walking into the police station and confessing to his crimes is marginal. Therefore, the law enforcement officer must conduct a proper and thorough investigation to seek him out and cause his arrest. The keys set out can be a great source of information concerning the nuisance offender's behavior pattern, allowing the police officer the opportunity to predict his behavior. Individuals committing nuisance offenses can graduate to offenses which are far from a nuisance, such as rape and homicide. Thus, it is important for the law enforcement officer to identify the keys provided by the offender and make proper use of them. Ultimately, understanding these behavior patterns (rituals) and properly interpreting them may enable the law enforcement officer to bring the investigation of a nuisance offense to a speedy conclusion. By understanding the nuisance offender, law enforcement agencies may be able to deal more successfully with his crimes.

## Footnotes

<sup>1</sup>Leon Salzman, The Obsessive Personality (New York: Jason Aronson, Inc., 1973), p. 57.

<sup>2</sup>Walter J. Coville, Timothy W. Costello, and Fabian L. Rouke, Abnormal Psychology (New York: Barnes and Noble, 1960), pp. 112-113.

<sup>3</sup>B. von Haller Gilmer, Psychology, 2d ed. (New York: Harper and Row, 1970), p. 562.

<sup>4</sup>Coville, Costello, and Rouke, p. 113.

<sup>5</sup>Ibid., p. 113.

<sup>6</sup>Gilmer, p. 562.

<sup>7</sup>Harold E. Russell and Allan Beigel, Understanding Human Behavior for Effective Police Work (New York: Basic Books, Inc., 1976), p. 97.

<sup>8</sup>David Abrahamsen, The Psychology of Crime (New York: Columbia University Press, 1960), p. 127.

<sup>9</sup>Salzman, p. 12.

<sup>10</sup>Ibid., p. 15.

<sup>11</sup>Soloman H. Snyder, The Troubled Mind: A Guide to the Release from Distress (New York: McGraw-Hill Book Co., 1976), p. 13.

<sup>12</sup>Arthur S. Aubry, Jr., and Rudolph R. Caputo, Criminal Interrogation (Springfield, Ill.: Charles C. Thomas, 1965), p. 18.

<sup>13</sup>H. R. Beech, Obsessional States (London: Methuen & Company, 1974), p. 5.

<sup>14</sup>James C. Coleman, Abnormal Psychology and Modern Life, 5th ed. (Glenview, Ill.: Scott, Foresman & Company, 1976), p. 567.

<sup>15</sup>John M. McDonald, Indecent Exposure (Springfield, Ill.: Charles C. Thomas, 1973), p. 7.

<sup>16</sup>John Drzazga, Sex Crimes (Springfield, Ill.: Charles C. Thomas, 1960), p. 154.

<sup>17</sup>Russell and Beigel, p. 159.

- <sup>18</sup>MacDonald, Indecent Exposure, p. 26.
- <sup>19</sup>Ibid., p. 33.
- <sup>20</sup>Ibid., p. 71.
- <sup>21</sup>Ibid., p. 36.
- <sup>22</sup>Benjamin Karpman, The Sexual Offender and His Offenses (New York: Julian Press, Inc., 1954), p. 172.
- <sup>23</sup>MacDonald, Indecent Exposure, p. 37.
- <sup>24</sup>N. K. Rickles, Exhibitionism (Philadelphia, Pa.: J. B. Lippincott Co., 1950), p. 137.
- <sup>25</sup>Karpman, p. 184.
- <sup>26</sup>MacDonald, Indecent Exposure, p. 32.
- <sup>27</sup>James Melvin Reinhardt, Sex Perversions and Sex Crimes (Springfield, Ill.: Charles C. Thomas, 1957), p. 261.
- <sup>28</sup>John M. MacDonald, Bombers and Firesetters (Springfield, Ill.: Charles C. Thomas, 1977), p. 190.
- <sup>29</sup>Abrahamsen, p. 129.
- <sup>30</sup>MacDonald, Bombers and Firesetters, p. 190.
- <sup>31</sup>Abrahamsen, p. 127.
- <sup>32</sup>Karpman, p. 140.
- <sup>33</sup>MacDonald, Bombers and Firesetters, p. 4.
- <sup>34</sup>Karpman, p. 484.
- <sup>35</sup>Abrahamsen, p. 129.
- <sup>36</sup>Reinhardt, p. 102.
- <sup>37</sup>MacDonald, Bombers and Firesetters, p. 4.
- <sup>38</sup>Ibid., p. 223.
- <sup>39</sup>Karpman, p. 141.
- <sup>40</sup>Abrahamsen, p. 127.
- <sup>41</sup>Karpman, p. 138.
- <sup>42</sup>Salzman, p. 177.
- <sup>43</sup>Ibid., p. 90.
- <sup>44</sup>Ibid., p. 178.
- <sup>45</sup>MacDonald, Indecent Exposure, p. 64.
- <sup>46</sup>Coleman, p. 570.
- <sup>47</sup>Ibid., p. 570.
- <sup>48</sup>Drzazga, p. 164.
- <sup>49</sup>Coleman, p. 572.
- <sup>50</sup>Ibid., p. 571.

- <sup>51</sup>Ibid., p. 571.  
<sup>52</sup>Reinhardt, p. 241.  
<sup>53</sup>Drzazga, p. 164.  
<sup>54</sup>Reinhardt, p. 123.  
<sup>55</sup>Drzazga, p. 165.  
<sup>56</sup>Russell and Beigel, p. 155.  
<sup>57</sup>MacDonald, Indecent Exposure, p. 66.  
<sup>58</sup>Ibid., p. 67.  
<sup>59</sup>Stuart Palmer, The Psychology of Murder (New York: Thomas Y. Crowell Company, 1962), p. 34.  
<sup>60</sup>Coville, Costello, and Rouke, p. 113.  
<sup>61</sup>Snyder, p. 37.  
<sup>62</sup>Salzman, p. 33.  
<sup>63</sup>Ibid., p. 22.  
<sup>64</sup>Rickles, p. 106.  
<sup>65</sup>Ibid., pp. 22-24.  
<sup>66</sup>Salzman, p. 33.  
<sup>67</sup>Ibid., pp. 22-24.  
<sup>68</sup>David Soskis, M.D., portion of lecture before the FBI National Academy, Quantico, Virginia, February 14, 1978.  
<sup>69</sup>Salzman, p. 21.

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Truth is always consistent with itself, and needs nothing to help it out; it is always near at hand and sits upon our lips, and is ready to drop out before we are aware; whereas a lie is troublesome, and sets a man's invention on the rack, and one trick needs a great many more of the same kind to make it good.

- - Tillotson.

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and attention she cannot get at home. This theory is supported by the fact that unlike the occasional thief, the kleptomaniac steals openly and may cry and cause a considerable disturbance when caught. Even though under arrest, her thoughts may be that she is now getting the attention she needs.

The kleptomaniac is usually welloff financially,<sup>42</sup> although she may be found in all economic categories. As in other manifestations of obsessive-compulsive behavior, the kleptomaniac is able to exempt herself from human responsibility for her acts<sup>43</sup> and will not usually seek help on her own. When interviewed, like those manifesting exhibitionism and pyromania, she tends to be evasive and denies her guilt.<sup>44</sup> Kleptomaniacs often frequent the same department store and are unique from the professional thief or the occasional shoplifter. The kleptomaniac does not steal for profit or for useful items, but for the sexual thrill involved. However, kleptomania is not always driven by the obvious sexual urge.

### Voyeurism

The voyeur gains his sexual gratification from viewing a naked or semi-naked woman or watching couples engaged in sexual intercourse.<sup>45</sup> This type of viewing is a step beyond the normal male curiosity about the opposite sex. The voyeur goes to great lengths to prowl through residential sections of cities, usually at night, hoping for a glimpse of a female in the nude or sexually engaged. His observations are a replacement for the sexual act.<sup>46</sup> Commonly referred to as the "peeping tom," the voyeur may masturbate while watching his victim. Because of the practice of masturbation, he may have been arrested in the past for indecent exposure when a neighbor of the victim observed him while exposed.

This crime of young males<sup>47</sup> results in numerous prowler calls to police stations. Informal interviews with officers attending the FBI National Academy indicate that this offense tends to be a local offense, i.e., the voyeur usually operates close to the neighborhood in which he resides. He develops a pattern or route of selected windows throughout the neighborhood. In many cases, the voyeur operates at the same time of each evening, and often his voyeuristic practices are in conjunction with a legitimate function, such as taking the dog out for a walk. The voyeur acts during the hours of darkness as the night provides concealment and is the time when his victims are most likely to undress. His specific timetable each night may vary and be influenced by the undressing habits of the victims.

### Fetishism

A fetish is a nonsexual item which takes the place of a sexual partner to gratify sexual desires. There are an untold number of fetishists, and their fetish items may vary from shoes<sup>48</sup> to automobile exhaust pipes.<sup>49</sup> The fetishist may masturbate while holding, viewing or fondling the fetish item; the embracing of the item can take on many forms, from kissing to tasting.<sup>50</sup> On occasion the item itself may not be the fetish, but rather its texture or odor.<sup>51</sup> The fetishist may resort to stealing in efforts to obtain his desired items; for example, stealing ladies undergarments from clotheslines.<sup>52</sup> On rare occasions a fetishist may resort to violence, as in the case where a woman was attacked on a public street by a man who ran off with one of her shoes.<sup>53</sup>

PSYCHOLOGICAL POSSIBILITIES IN THE DECEPTION TESTS

By

William M. Marston<sup>1</sup>

Introductory Statement

The legal problems involved in the introduction of psychological tests into court or probation office procedure are very complicated and interesting; but before we can consider the legal possibilities of the use of psychological tests we must discover whether or not the psychological development in any particular field justifies the introduction of tests in question. This article is concerned with an examination of the state of the psychological authorities in the field of deception tests and the presentation of results of practical application of some tests during the war.

There are four types of psycho-physiological deception tests known. First, there is the galvanometer test. The spring galvanometer measures the electrical body currents, which have been found to vary greatly with the varying emotions of the subject. This test is of very little value in detecting deception, because the instrument registers nearly every emotion experienced during the testimony of the subject, and so renders it nearly impossible to distinguish those emotions caused by deception.

Secondly, we have the association reaction-time test. This consists in presenting to the subject lists of "crucial" and "non-crucial" words, the crucial words combined in groups of three to five or scattered singly through the non-crucial words at the choice of the operator. The crucial words are those which would have, to the guilty defendant, a meaning connected with the principal crime; but would carry no embarrassing significance to an innocent defendant. The subject is instructed to reply to each stimulus word with the first association which comes into his mind and to perform this reaction as quickly as possible. If the defendant is guilty his emotions concerning the crucial words usually delay his reaction times (although the writer during experiments in the Harvard Psychological Laboratory has obtained results which seem to indicate a "negative" type liar whose reactions on crucial words seem to be hastened.)<sup>1</sup> This association reaction time test is of some practical value, but is limited in any practical situation by the difficulty of finding stimulus words which are truly crucial, inasmuch as the defendant or witness has doubtless read all the details of evidence in the papers or has been thoroughly informed with regard to same by his attorney, so that very possibly a perfectly innocent defendant or witness would show the same psychological reaction to the crucial words as would the guilty person.

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<sup>1</sup>See "Reaction Time Symptoms of Deception," Journal of Experimental Psychology, February, 1920.

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Thirdly, we have Benussi's breathing test for deception. This test consists in the measurement of the length of the suspect's inspirations and expirations before and after making a statement. A different ratio between inspiration and expiration is found when the subject is lying. This test was used by the writer, assisted by Dr. H. E. Burt, in certain criminal courts in 1918 at the request of the Psychological Committee of the National Research Council. Certain results were obtained having psychological interest, but not susceptible of sufficiently definite analysis to prove legally acceptable. The practical limitation upon this test is the difficulty of breaking up the subject's testimony into isolated statements, the truth or falsity of which may be tested. Moreover, it is seriously to be doubted whether the mental content of a witness or defendant with regard to the crime or conduct in issue can actually be analyzed out into real psychological elements. In other words, the subject may be asked "Did you do this?" or "Did you do that?" and the Benussi test may indicate that he is lying. Yet the witness' consciousness of guilt may not relate to the act upon which he is questioned, as the operator understands it, inasmuch as that act may have a large number of secret complications unknown to the operator and irrelevant to the issue in hand which, nevertheless, serve to force the subject into a deceptive reaction. The final criticism of this test seems to be that Benussi's results are as yet uncorroborated by other experiments, and whereas there is no reason to doubt that the deceptive attitude is expressed in modifications of the subject's breathing, it seems probably that the test as reported by Benussi is a little too much of a "patent medicine." In other words, the breathing symptoms are nowhere nearly as clear cut and definite as the casual reader of Benussi's report might suppose.

Fourthly, deception may be tested by means of the measurement of the systolic blood pressure of a suspect while he is testifying. The success of this method was reported by the writer, working under Prof. Munsterberg at the Harvard Laboratory in 1915.<sup>2</sup> In October, 1917, at the request of the Psychological Committee of National Research Council, tests of this type were conducted in the Harvard Laboratory, with a view to determining their value in government service during the war, and were reported upon as having given 100% accuracy of judgment under very difficult conditions.<sup>3</sup> Finally, over 20 tests were given, as above mentioned, at the request of said Psychological Committee, to actual defendants in certain criminal courts. As far as findings could be verified, all judgments based upon the b.p. records were correct; although equal accuracy did not attend either association or breathing tests which were simultaneously given.

It should be noted, however, that this blood pressure test, as herein-after described, was never alleged to be a simple cure-all or patent medicine automatically detecting every deception on the part of the subject, but rather, in the belief of the writer, the systolic blood pressure test is to be regarded as a psychologically complicated indicator of deception requiring expert knowledge and skill in its application and interpretation. Psychologically, however, it may be said to have the very important advantage over

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<sup>2</sup>See Journal of Experimental Psychology, April, 1917.

<sup>3</sup>See Report in Psychological Committee files, under date November 13, 1917.

all other deception tests that the psychophysiological mechanism modifying the blood pressure is almost exclusively influenced by the emotions of fear and anger, which probably largely constitute the deceptive complex.

Inasmuch as the results hereinafter reported deal very largely with the systolic blood pressure test, a brief explanation of its method of application may be of interest. The simplicity of the apparatus and method of this test is its first recommendation for practical usefulness. The sphygmomanometer is attached to the subject's left arm above the elbow, the subject being seated comfortably before a table with his left arm resting on the top within each reach of the operator, who then proceeds to take the subject's blood pressure from time to time while the witness is being cross-examined either by the blood pressure operator, or, preferably, by a second operator who may be called the examiner. The effectiveness of the test depends almost entirely upon the construction and arrangement of the cross-examination and its proper correlation with the blood pressure readings, a system of signals between examiner and b.p. operator being necessary. Other tests of the nature of which the subject is ignorant, as well as periods of rest and series of questions upon irrelevant and indifferent subjects are also interjected into the examination of the subject in such a way as may, in each particular case, best enable the operator to determine the normal blood pressure of the subject and also the normal blood pressure plus the fixed increase presumably present throughout the whole examination due to the excitement caused by the test or by court procedure. The form of the blood pressure curve as correlated with the cross-examination is then carefully studied by the operators, and is found to indicate with surprising accuracy and minuteness the fluctuation of the witness' emotions during the telling of his story. It was found that in the cases of actual defendants it was of great practical advantage to request the person to tell his entire story first in his own way without either prompting or questions from the examiner. Irrelevant matter was next interposed, and the cross-examination could then be built up with great effectiveness upon the elements of the defendant's own voluntary story.

Two practical trials of deception tests are reported below. First, 3 types of deception tests were tried out upon actual defendants in the criminal courts. These tests were performed, with the consent of each defendant, in connection with the psychiatric and medical examination of various individuals referred for this purpose to the probation office; some before trial, and others at various points in the proceedings, with regard to continuance of probation, dismissal of the case, or recommendation of the probation office to the court. This opportunity for a practical try-out of these tests was made possible by the liberal and patriotic attitude of the court and the energetic efforts of Major Robert M. Yerkes and Dr. Angell of the National Research Council. The resulting records, although not used in court nor taken official cognizance of, yet proved of such considerable values as embodied in the doctor's reports that the probation office was considerably interested in the continuance of the tests; and the doctor, himself a man of large psychological experience and ability, was anxious to co-operate in a future extension of the work. The tests used were the Benussi test, the association reaction time test, and the systolic blood pressure test.

Secondly, the blood pressure tests were tried out at Camp Greenleaf in the Psychological Training School, where the attempt was made to train

expert operators and examiners for the installation of these deception tests on a large scale. This work virtually constituted a trial of the practicability of training a corps of experts for the widespread use of the deception tests. Fourteen psychological student officers, all of some legal experience, were chosen and trained, the results reported below serving to point the essential legal character, place, and possibilities of deception tests, and the skill and training necessary for their operation.

## II. Blood Pressure, Breathing, and Association Tests On Criminal Defendants.

The apparatus for all three of these tests was set up in a screened-off portion of the office of the examining physician, attached as an assistant probation officer to the criminal court. All the apparatus was hidden from the view of the subject, each defendant thrusting his left arm through a slit in a black curtain so that even the sphygmomanometer could not be seen. By order of the chief justice we were able to choose any one of the many cases sent up to the doctor's office for medical and psychological examination and we chose, as far as possible, those cases where the blood pressure judgment as to truth or falsity could be immediately checked up either by a medical examination or by an immediate hearing in the court below. Twenty individual cases where the b.p. judgment as to deception could be thus verified were selected for report. In a few cases the examiner's assistant was not able to be present so that the examiner was obliged, beside conducting the cross-examination, to record the psycho-physiological measurements. That this did not interfere materially with the results indicates the practicability of the application of the tests. In every one of the twenty cases where immediate determination of the accuracy of the b.p. judgments was possible, the judgments were found correct, and in at least five cases discoveries made by the examiner on the basis of his cross-examination, together with the b.p. behavior at these crucial points were of assistance to the doctor and through him to the court and probation office in disposing of the cases. It may be said that the association and breathing test data were so complicated and difficult of treatment that as a practical matter all the examiner's judgments were based upon the blood pressure alone.

The examiner made eight b.p. judgments of complete truth (Nos. 1, 2, 6a, 9, 12, 14, 17 and 18); eight b.p. judgements of consistent lying (Nos. 3, 8, 10, 11, 15, 16, 19, 20), and in five cases the examiner was able to pick out points upon which defendant lied and other points upon which defendant was telling the truth (Nos. 4, 5, 6b, 7 and 13).

The cases in detail follow:

### Case No. 1. Woman (White). Age, 42 Years.

Record of Case Given to Examiner Previous to Deception Test.

Several previous arrests for drinking; known to be an old drug user, arrested December 1st because hypodermic outfit was found in room where defendant spent the night. Defendant claims she is not now using drugs.

B.P. Judgment. Innocent. Woman is not now using drugs.



Verification. Medical examination showed increased weight, better all-around health, etc., which could not have existed were defendant now using drugs.

Case No. 2. Woman (Colored). Age, 31 Years.

Record of Case Given to Examiner Previous to Deception Test.

Colored woman, 31 years of age. Arrested six months ago for larceny of a ring, and placed on probation on the strength of the testimony of a colored man from whom a ring was alleged to have been stolen. Defendant during the six months had not made restitution, as she had been ordered to do, and was suspected by the probation officer of having avoided her calls. Examination was to determine whether or not she stole the ring in the first place.

B.P. Judgment. Innocent. Woman telling the truth as to the ring, having been given to her.

Verification. The judge dismissed the case, although probation officer advised six months further probation. New evidence had turned up indicating that the colored man who first alleged that defendant stole ring was a disreputable character, etc.

Case No. 3. Woman (White). Age, 29 Years.

Record of Case Given to Examiner Previous to Deception Test.

Twenty-nine years of age, white. No court record. Arrested for fornication in a disorderly house in South Boston. Woman denies ever having been to that house before, and claims that this is her first sexual offense. Secretary who examined defendant believed her story absolutely and told examiner there was no material there for him.

B.P. Judgement. Lying as to never having been to said disorderly house before, and guilty consciousness with regard to past experiences enjoyed with "lady friend," whom she was visiting at time of arrest. Also guilty consciousness with regard to her husband, probably was involved with him in some criminal acts.

Verification. While discussing B.P. judgment with the doctor ten minutes after examination, another woman from the same disorderly house, arrested for having drugs in her possession there, and already placed on probation, was brought in. She stated that she had seen and heard principal defendant at the house repeatedly previous to the evening of defendant's arrest. The doctor then looked up husband's record, and found that he had forged fifteen or more times, that there was evidence she knew of his criminal acts; that she knew the police were after him, and that she knew where he was. When the case came up for trial the judge told defendant that he did not believe a word she said and placed defendant on probation. Still later evidence turned up showing that defendant had lived with her husband at said disorderly house for over a month while he was being sought on several more forgery charges, and that, of course, defendant knew said warrant was out for husband.

Case No. 4. Woman (White). Age, 31 Years.

Record of Case Given to Examiner Previous to Deception Test.

White woman, 31 years of age. An old drug user cured by hospital treatment, three and half months ago. Now suspected of taking more drugs than she admits.

B.P. Judgment. Truthful. Defendant's account of the number of drugs she is taking is correct. Lied, however, about not having had sexual relations with other men.

Verification. Medical examination by the doctor showed defendant had serious glandular trouble in the neck and jaw, causing severe pain, and that defendant was apparently taking small doses of morphine whenever the pain became very serious; as nearly as could be judged she was taking about same amount she had admitted. The doctor's medical judgement, as sent down to the court, was identical with B.P. judgment. Not much evidence on point of promiscuous sexual intercourse, but general circumstantial evidence points to intercourse with at least three men other than her husband.

Case No. 5. Woman (White). Age, 46 Years.

Record of Case Given to Examiner Previous to Deception Test.

White woman, 46 years of age. Arrested for sale of liquor. Admits sale of liquor this once, but says that she never did it before. This statement probation officer suspects is untrue. Also says she only drinks whisky and milk three times a day; never drinks any other sort of alcoholic beverage. Probation officer suspects this is untrue.

B.P. Judgment. Lied as to only drinking milk and whisky three times a day. Probably drinks heavily whenever she can get liquor. As to sale of liquor, has feeling of guilt; probably knew when she sold it that it was against the law. Telling truth as to how she got the liquor and as to never having sold it before.

Verification. Medical examination by the doctor showed without question that defendant was a confirmed alcoholic who is now drinking heavily and continuously. Evidence by detective who made the arrest tends to show defendant knew her act in selling the liquor was illegal; also his evidence tends to show that she lied as to amount of money she took for the liquor. As to previous sale of liquor by defendant and as to how defendant got liquor in question, there was absolutely no evidence.

Case No. 6a. Woman(White). Age, 19 Years.

Record of Case Given to Examiner Previous to Deception Test.

White woman, 19 years of age. Arrested for larceny of goods to value of \$500 by use of department store coins found in a pocketbook lost by the owner in the South Station. Has been under examination in court and by the

probation officer all day long and has now confessed practically the whole affair, including the present location of the stolen goods. Details on which defendant is still suspected of deception are -

1. When she found department store coins.
2. Immorality with other men and as to whether she supported herself by this means.
3. Relations with husband, where she lived with him, etc.

B.P. Judgment. B.P. examination interrupted at end of free recital which did not touch on any of above mentioned crucial details. Judgment is truthful as to points covered during recital.

Verification. Recital as given verified by all the evidence now in the record of the case. Case to be sent back for further B.P. test on crucial details December 8th.

Case No. 6b.

Record of Case Given to Examiner Previous to Deception Test.

Girl tells probation officer she never took any of her mother's money; that she never took anything previous to principal offense except a coat, dress, and silk night dress, which she took three months ago. Also tells probation officer that she has never had any sexual relations with other men than her husband. Probation officer suspects all above statements to be false.

B.P. Judgment. Lies as to only having stolen three articles previous to principal offense, and also probably lies as to lack of sexual relations with other men. Also lies clearly about never having stolen money from her mother.

Verification. Mother calling at office later the same day says girl has frequently taken money from her pocketbook and that she has often caught her doing this, but was lax with her and had done nothing about it. Defendant has no previous criminal record, but probation officer has evidence from other girls with whom she has been going to the effect that defendant has stole several articles of clothing and one or two pieces of jewelry previous to principal offense. Also the evidence of these girl companions tends to establish the fact that defendant has had sexual intercourse with men other than her husband. This evidence, though not sufficient to convict of any previous larceny or fornication, was sufficient to induce the judge to find the girl guilty in the principal case and to place her on six months' probation, part of which is to be spent at the House of Good Shepherd in view of above mentioned evidence.

Case No. 7. Woman (White). Age, 39 Years.

Record of Case Given to Examiner Previous to Deception Test.

White woman, 39 years of age. Arrested for drunkenness. According to probation officer's suspicions, defendant's husband had been arrested and had served three months for beating her. Defendant claimed that she did not

remember this at all and defendant took the attitude that probation officer was trying to "put something over on her." She also maintained that her husband did not drink at all and that she never quarreled nor had any harsh words with him.

B.P. Judgment. Truth as to knowledge of husband's serving time for beating her, etc., but lies as to the amount she knows her husband drinks - probably drinks pretty steadily. Under the conditions of the B.P. examination, defendant immediately admitted that she had "little chewing matches" with her husband quite often and that on these occasions when he failed to come home promptly from work, she had quarrels when he would grab her by the shoulder and push her about a little.

Verification. Husband's record was looked up and it was discovered that his arrest for abuse of his wife occurred ten years ago. It also appeared that he did not serve any time, but paid a fine of \$25 to escape a sentence of three months and was released immediately. There is, of course, no absolute verification as to whether or not defendant remembered this incident, but the doctor gave as his informal medical judgment the opinion that defendant's long time memory was so poor that she probably could not remember with any distinctness events that happened more than three or four years ago. On the point of drinking, it was discovered from the records that husband was arrested last Saturday, December 1st, very early in the morning for drinking and disorderly conduct and was released again at 11 o'clock that night at defendant's earnest solicitation.

Case No. 8. Woman (White). Age, 19 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 19 years of age. Two girls arrested together for shoplifting. Several shirt-waists and camisoles were found in the possession of one of the girls. The other girl says she only took the waists for her companion and at her instigation; that she had never stolen before and that she had never had intercourse with any men. Also accuses her companion of having stolen the clothes she is at present wearing. Medico-psychological examination shows defendant to be a very low mental type, almost an f. m., and also shows that her affective reactions are sluggish almost to the point of non-existence.

B.P. Judgment. Lies as to all elements in her story, but particularly as to relations with men, the guilt of her companion, and on the point of defendant never having known others who stole. B.P. test was cut short in the midst of cross-examination by the entrance of an officer to take defendant to House of Good Shepherd. It will be noted that the B.P. follows the typical form of an "L" curve and it was the judgment of the experimenter that the very small actual amount of the B.P. rises was due to the dulled affective reactions of the subject.

Verification. Before being taken into court, defendant was examined physically and it was discovered that she had a well-developed case of syphilis with the other usual indications of continual sexual intercourse. For this reason, together with the extremely low level of her mentality, she was

sent away for preliminary medical treatment, and her case was indefinitely continued pending results of further medical and psychological examinations. There was, however, evidence in the hands of the police tending to show that this girl belonged to a shoplifting gang in which many feeble-minded and subnormal girls had been taught to steal by older women, who took all the loot and threw all the blame on girls like the defendant.

Case No. 9. Woman (White). Age, About 19 Years.

Record of Case Given to Examiner Previous to Deception Test.

White; arrested with stolen shirtwaists, etc., in her possession as noted under last case. Also a rather low mental type and very suggestible. Defendant confesses having taken the shirtwaists, etc., in co-operation with her companion, but denies ever having taken anything before, and denies instigating the present theft. Defendant takes an equal share of blame in the principal offense, but insists she deserves no more than an equal share.

B.P. Judgment. B.P. interrupted in the midst of cross-examination by entrance of officer. B.P. judgment based on record as far as test had gone was that defendant was absolutely truthful.

Verification. Case continued because of absolute lack of any evidence tending to show defendant had ever stolen before. This is, of course, only a negative verification, but no further positive evidence has as yet been turned in by the police.

Case No. 10. Woman (White). Age, 32 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 32 years of age. Arrested for larceny. (Experimenter was not told what defendant was alleged to have stolen or any further details concerning defendant's actions.) Defendant maintained complete innocence of offense charged.

B.P. Judgment. Has guilty consciousness with regard to the stolen goods and either lies concerning having met his brother at Higgins' saloon at just the time he was supposed to have stolen the goods, or else had some guilty consciousness with regard to some criminal actions in which his brother and probably himself have been involved.

Verification. Previous record of thirty arrests, mostly for drunkenness, but several for larceny. Case continued until next week, but police claim they have positive evidence that defendant stole the goods in question. Verification on point of brother's possible complicity entirely lacking, but at the suggestion of the doctor the police are investigating further along this line.

Case No. 11. Woman (White). Age, 46 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 46 years old. Defendant arrested for shop-lifting and is strongly suspected of having stolen before. Also is suspected of drinking heavily, although defendant denies this absolutely. Suggested by one of the defendant's neighbors that whole family were thieves.

B.P. Judgment. Lied as to drinking and also as to never having stolen before. Also lied in testifying that none of her children had ever stolen anything.

Verification. Medical examination showed that defendant was a confirmed and heavy drinker. On the point of previous thefts, no criminal record was found against defendant, but the police had strong evidence that defendant had been shop-lifting systematically for some time and on this evidence defendant was found guilty and placed on probation. Later defendant admitted that one of her two boys had been arrested for stealing and on being asked which, said the fifteen-year-old boy. Upon being told that there was a court record against her twelve-year-old boy in the Juvenile Court, she thereupon said that it was the twelve-year-old boy she referred to and that the fifteen-year-old boy was innocent. Evidence of neighbors and police tends to show that both boys have been engaged in petty thefts for several years, the twelve-year-old boy being now on probation in the Juvenile Court under conviction for larceny.

Case No. 12. Woman (Colored). Age, 21 Years.

Record of Case Given to Examiner Previous to Deception Test.

Colored, 21 years of age. Arrested for fornication. Admitted she lived three weeks with a man, but says she never had intercourse with anyone else. Probation officer suspects this statement to be untrue, and also suspects that she takes drink and drugs.

B.P. Judgment. Under conditions of B.P. examination, defendant admitted that she had lived four weeks with a man she was found with and that she had had intercourse with one other man. B.P. judgment was that defendant's story was wholly truthful.

Verification. Medical examination showed no traces of alcohol or drugs and the evidence leading the probation officer to suspect defendant had had intercourse with other men turned out to be evidence of intercourse with that man whom defendant confessed in B.P. examination to having had intercourse with.

Case No. 13. Woman (White). Age, 34 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 34 years old. Defendant arrested for sexual offense; has been married twice, first husband died and second divorced. Suspected of earning money by promiscuous sexual intercourse, also suspected of drinking heavily. Defendant denies having given her second husband just grounds for divorce by her relations with other men; she denies drinking during the last month and denies ever having earned any money by sexual intercourse. Also suspected of

taking drugs and was arrested in company of two other men and her landlady, one of the men being intoxicated, and it was suspected that defendant had been having intercourse with one of these men.

B.P. Judgment. Lies as to (1) having given any grounds to husband for divorce, (2) having had anything to drink for one month, and (3) as to never having earned money by sexual intercourse. Tells truth as to (1) taking no drugs, and (2) as to not having had intercourse with the man with whom she was discovered by the probation officer.

Verification. (1) Record of divorce suit shows husband presented very strong evidence tending to prove that defendant had had sexual intercourse with several other men and the finding of fact was in favor of the husband and divorce granted on grounds of adultery. (2) Medical examination showed that defendant had been drinking very heavily quite recently and later in court defendant admitted having had a little beer recently. (3) Defendant also admitted in court, after very strong evidence had been procured against her, that she had had intercourse six months ago with a certain man and had received \$5 therefor. Medical examination showed no traces of drugs and no further evidence was found by the probation officer as to whether or not defendant had had intercourse just previous to being discovered.

Case No. 14. Woman (White). Age, 17 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 17 years old. Defendant arrested at request of father as a stubborn child. Had run away from home twice and was reported by someone at the Franklin Square House where defendant worked while away from home, to have been discharged from employment there because of continued deception practiced upon the Franklin Square House authorities. Also defendant is suspected of often going to dances, etc., when she is supposed to be at evening school.

B.P. Judgment. Under conditions of B.P. test, defendant admitted coming in late several times at the Franklin House and skipping by the watchman and also having committed other infringements of the rules of that institution. She claimed, however, that she had never lied to the authorities there. Defendant also admitted that very frequently she went to the movies or to a dance when she was supposed to be at evening school, and said she did not tell her father because he got very angry. B.P. judgment was that defendant told the truth about everything.

Verification. Investigation at the Franklin House showed defendant and another girl continually broke the rules there, especially the rule about coming in late at night. A new watchman, apparently, had detected defendant and another girl slipping upstairs late one night and had mistaken them for two innocent girls. The resulting circumstances, accusations and investigation, had been very disagreeable for the two innocent girls, but defendant had voluntarily confessed and had thereupon been asked to leave the house because of her continued disobedience. Probation officer had based her general suspicions of the

defendant's veracity very largely on an inaccurate account of the Franklin Square House affair and when this was cleared up, all the evidence in the hands of the probation officer tended to show that defendant had confessed the whole truth.

Case No. 15. Woman (White). Age, 40 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 40 years old. An old drug user; has used morphine, coke and heroin for twenty years, taking at one time as much as a dram in two days. Six months ago defendant underwent a hospital cure and was thought to have been successfully turned against the habit. Defendant's probation was up and she had surrendered herself to the probation officer for disposition of her case. In making this disposition, the judge wished to know whether or not she had used any drugs since her supposed cure six months ago.

B.P. Judgment. Very marked general weakness in the sympathetic nervous system, undoubtedly produced by drugs during the past. This weakness is judged to account for the continual sharp fluctuations in the B.P. which were apparently caused by slight light, nervous excitement of any kind. In view of this very evident condition and the medical drug history of the case, lack of sustained B.P. at a high level in the form of an "L" curve cause experimenter to make a judgment of truthful with regard to witness' entire testimony as to her abstinence from drugs during the last six months.

Verification. Medical examination shows no traces whatsoever of recent use of drugs and also shows a general improvement in health, weight, etc., which probably could not have occurred were defendant now using drugs. Defendant's physical condition is still decidedly weak, however. On basis of medical judgment, defendant was dismissed.

Case No. 16. Man (White). Age, 17 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 17 years old. Defendant arrested for larceny. (Examiner was given no further details concerning this larceny or any other suspicions concerning defendant's case.)

B.P. Judgment. Guilty. Defendant also has guilty consciousness with regard to the way of spending his evenings while in New York City.

Verification. Defendant had no criminal record in either New York or Boston, but on special further inquiry it was found that the New York police had long been watching him as a suspicious character in view of the fact that he had entertained many companions of very questionable character in his rooms night after night, and carried on long conferences with these men in an unknown tongue. Both the Boston police and the New York police are convinced from circumstantial evidence that defendant had been pursuing a criminal career for several years. In the light of this evidence, defendant was found guilty and placed on six months' probation.



Case No. 17. Man (White). Age, 46 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 46 years of age. Defendant arrested for larceny. (Examiner given no further details.)

B.P. Judgment. Although defendant tells most improbably story about having found a pair of shoes in the hold of ship whereon he was working, B.P. shows his story to be clearly truthful.

Verification. Police discovered that several other longshoremen, working on the same ship (which was being loaded with relief supplies for Halifax), had been systematically stealing the supplies and it was further found that one of these men had taken the shoes in question, but had been obliged to drop them into the hold to avoid detection. Defendant's companions testified that he was badly intoxicated at the time he took the shoes and that he shouted up to the foreman in charge of the crew that he had found a pair of shoes in the elevator pit. Defendant has no criminal record and Officer C., who has known defendant for eight or nine years, testifies to his previous good character and clean record, both at Eastport, Me., and in other ports.

Case No. 18. Woman (White). Age, 23 Years.

Record of Case Given to Examiner Previous to Deception Test.

White. Defendant arrested for shop-lifting. Has lived with sister for over a year and has apparently done nothing to support herself. Is suspected of previous shop-lifting and of earning money by promiscuous sexual intercourse.

B.P. Judgment. Defendant truthful in saying she has never had any sexual intercourse and that she has never stolen anything before.

Verification. Medical examination showed that defendant had never had sexual intercourse and there was a total lack of evidence on the point of previous thefts, defendant's sister testifying that she had supplied her with clothes and board in exchange for defendant's assistance with the housework during the past year and three months. This evidence exactly corroborated defendant's story and the probation officer and police had no evidence whatsoever in rebuttal.

Case No. 19. Man (White). Age, 22 Years.

Record of Case Given to Examiner Previous to Deception Test.

White, 22 years of age. Defendant has criminal record of three convictions for larceny. Arrested this time for larceny of a thousand cigars which were found in his possession. Defendant has already been found guilty and placed on probation under a suspended sentence. Defendant, however, still denies that he stole the cigars from the Adams Express Company, and maintains that a friend of his gave them to him to sell.

B.P. Judgment. Lies both as to present and past innocence. Man who defendant claimed gave him cigars is pure fiction.

Verification. It will be noted in this case that the B.P. examination came after the defendant had been found guilty by the court on very strong and practically indisputable evidence. There is, therefore, of course, no question of verification. This case was specially requested by the examiner in order to test the effect of a previous disposition of a defendant's case upon his B.P. It will be noted that the B.P. record assumes an almost perfect form of lying curve, but that the total maximum rise from the probably norm plus excitement was very small in comparison with the other lying B.P. records. If this same B.P. curve had been found before the case came up for trial, however, the examiner believes that his judgment would have been the same, especially if subject was a low mental type.

### Conclusions

(1) The blood pressure deception test has demonstratable practical value in determining the truth or falsity of various elements in a witness' story, as well as of the story in its entirety; and also in determining the general attitude of innocence or guilt in a person accused of criminal acts.

(2) The blood pressure deception test seems to have value as a substitute for the oath now used in court procedure in that confessions seem to occur under the conditions of the psychological test which it had been previously impossible to extract in court or under the examination of the probation officer and police.

(3) By detecting guilty emotions focused upon hitherto unsuspected points of testimony the deception tests appear to open new and fruitful channels for police investigation.

### III. Training Tests at Camp Greenleaf

(From report submitted to Surgeon General's Office, Office of the Judge Advocate General, and Bureau of Military Intelligence.)

#### Problem.

The problems contemplated by these tests were two-fold: first, the investigation of the value and the applicability of the systolic blood pressure deception test to military situations arising in connection with courts-martial, where psychological examiners might be called upon to testify as to truth or falsity of testimony, or as to the sincerity of the accused, or in connection with investigations of alleged enemy agents by the Military Intelligence Department, where psychological examiners might be required to test the truth of the story of the person under suspicion; and, secondly, to determine the extent to which these deception tests could be confided to non-expert operatives.

#### Occasion.

The tests herein reported were given to the enlisted men and non-commissioned officers of Psychological Co. 1, School of Psychology, Camp Greenleaf,

Chickamauga Park, Georgia, under the direction of the writer, in 1918, in connection with courses given said Psychological Co. 1 upon Military Problems of Testimony.

#### Method.

A. Crime. About 50 articles, each of some intrinsic value to a soldier, together with ten five-cent pieces, were disposed about a room on the second floor of the Psychology Building. The men were then instructed to enter said room, examine contents, and if they so chose, to steal and conceal upon their person one or more of said articles. If they chose to steal they must hide the stolen articles within the Psychology Building within 5 minutes after taking same; and in 10 minutes thereafter, they must take the stolen article out of the building, convey it to their barracks, and there conceal it among their effects. When examined, they were instructed to do their utmost to convince their examiners of their innocence. If they stole and yet succeeded in deceiving their examiners, they could keep the article stolen; if detected they must return same.

B. Examiners. Fourteen men, all of some legal training, were selected by the writer to act as agents for the procuring of evidence against the accused, and to act as examiners when the suspects were summoned to testify. These agents were allowed to question any suspect, and to watch his movements as clearly as possible, after he emerged from the room where the articles were planted. Private Clifton Murphy (a member of the New York Bar) was placed in command of these agents, in order that they might be disposed effectively about the Psychology Building and barracks. All evidence was then sorted and distributed to those agents who were to examine the suspect involved thereby, the entire group of suspects having previously been divided and assigned among the agents for examination. The agents working in seven groups, two agents to a group, then prepared general outlines for the cross-examination of each suspect on the basis of the evidence collected against him. A brief preliminary instruction in use of apparatus and interpretation of B.P. curves was then given the agents by the writer, but none of said agents had ever previously given a single deception test. Agents alternated within group as cross-examiner, the other agent recording the b.p.

C. Apparatus. Three sphygmomanometers, Tycos type, were used. One instrument was very defective, as reported by the medical officer who used it; and one of the others was somewhat inaccurate.

D. Results. Thirty-five men were examined. Nineteen men chose to steal, while 16 men were innocent and told the truth under cross-examination. It will be noted that the choice between guilt and innocence was left wholly with the subjects, no check upon the proportion being retained by the experimenter. Twenty-six correct judgments, based solely upon the B.P. curves interpreted in light of the conditions of examination, were made by the agents and 9 incorrect judgments were recorded. This gave a total percentage correct agents' judgments of 74.3.

The writer, upon inspection of the curves turned over to him by the agents, made 34 correct and 1 incorrect judgment, giving a percentage correct judgments of 97.1. It is to be noted, however, that one of the records judged correctly by the writer was such that, on a second inspection (after the sealed

confessions had been opened), it seemed to him mere chance which had determined the correctness of his judgment, since the curve was not one upon which a judgment of "Guilty" could normally be based. The more accurate percentage of the writer's correct judgments would, then, be 94.2.

Eighteen judgments, based upon the evidence alone, were recorded by the examiners, although they were not required to record such judgments. Seventeen of these disagreed with the corresponding b.p. judgments; and of these, 15 evidence judgments were wrong, b.p. judgments being correct in each case. In one case evidence judgment was as to isolated inaccuracies of testimony, so that no comparison with b.p. judgment can be made. In one case evidence judgment was correct and b.p. judgement wrong. It may fairly be assumed that where no evidence judgment was recorded, said judgment coincided with the b.p. judgment.

It will be noted from the following detailed tabulation of results, that each group of agents examined 5 suspects, thus furnishing a fair basis for comparison between the groups with regard to expertness in interpreting the b.p. curves; and groups are arranged in the following table in order of their skill:

<u>Operatives and Experimenters</u>	<u>No. of Men Ex- amined</u>	<u>No. Cor- rect B.P. Judgments</u>	<u>No. G. Judged I.</u>	<u>No. I. Judged G.</u>	<u>Per Cent of Correct Judgment</u>
1. Murphy	5	5	0	0	100
Puhak					
Lt. Marston	..	5	0	0	100
2. Bundlie	5	4	0	1	80
Myhre					
Lt. Marston	..	4	0	0	100
3. Rushmore	5	4	1	0	80
Coleman					
Lt. Marston	..	5	0	0	100
4. Broehl	5	4	1	0	60
Allenberg					
Lt. Marston	..	5	0	0	100
5. Wilson	5	4	0	1	80
Watkins					
Lt. Marston	..	4	0	0	100
6. Lewis	5	3	1	1	60
Hanemann					
Lt. Marston	..	4	0	1	80
7. Schaoffer	5	2	2	1	40
Strauss					
Lt. Marston	..	4	0	0	100
Total -					
Operatives	35	26	5	4	74.3
Lt. Marston	..	34	0	1	97.1

One correct judgment based on record insufficient, on later inspection, to substantiate judgment. It might, therefore properly be recorded as an error, bringing total percentage Lt. Marston's correct judgments down to 94.2.

It is, therefore, a most significant feature of our results that one group of examiners stand out pre-eminently without a single error, while out of 9 mistakes, 3 were made by a single group. To test this point more fully, a second series of tests were given by the expert group, Murphy and Puhak. Ten subjects were selected from among the agents, instructed to do anything they wished for ten minutes, and were then examined by Murphy and Puhak to determine the truth or falsity of their accounts of their action during the said 10 minutes. The examiners recorded 10 correct judgments, thus substantiating the thesis that their former perfect record was due to expertness in interpreting the b.p. curve.

#### Conclusions.

(1) The total average percentage correct judgments attained by 14 examiners without any previous experience whatever in these tests, and especially the very high degree of accuracy of their b.p. judgments as compared to their spontaneous evidence judgments, would seem sufficiently high to indicate that this b.p. deception test has considerable practical value, even when applied by non-experts; but above results would not seem to justify the conclusion that courts-martial or military intelligence officers should rely solely upon the results obtained from these tests when operated by non-experts.

(2) The percentage of correct judgments, however, obtained by Privates Murphy and Puhak, and by Lieutenant Marston, would seem clearly indicative of the practically absolute reliability of this deception test when administered by examiners who, by virtue of previous extended experience with the tests or by virtue of natural aptitude for this type of work, may be termed experts.

(3) The fact that, in the single case where Lieutenant Marston made a wrong judgment, the examiner made a correct judgment, and that in the case where he made a correct judgment upon an insufficient curve he was present at the examination and noted errors in the recording of the b.p., would lead directly to the conclusion that the expert should himself give the examination, in order to be personally cognizant of all the conditions in the light of which the curve must be interpreted.

The general conclusion of the writer from the above reported results, and also from various other applications of the tests in question which are being published elsewhere, is that, at the present writing, expert upon deception in court, and that the use of deception tests in connection with probation office procedure and examination is, beyond question, justified. The writer is conducting at the present time researches in the Harvard Laboratory upon the numerous psychophysiological problems relative to blood pressure behavior under varying psychological conditions, and it is to be hoped that long before the legal problem of such tests is solved the fundamental psycho-physiological elements will be rather clearly analyzed out. Meanwhile, the legal application of these tests presents a very interesting problem which, as the forerunner of an endless series of problems concerning the introduction of psychological tests into legal procedure, seems worthy of immediate consideration.

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### William Moulton Marston - Biographical Sketch

William Moulton Marston was born in Cliftondale, Massachusetts on May 9, 1893. He earned an A.B. in 1915, LL.B. in 1918, and a Ph.D. in 1921, all from Harvard. In 1921 he married Elizabeth Holloway. Marston worked as a professor of psychology at Radcliffe, Tufts, Columbia, New York University, University of Southern California, Long Island University and the New School of Social Science. He was admitted to the Bar in 1918 and was a professor of legal psychology for a year, 1922-1923 at American University in Washington, D.C. It was during that year that he testified as a lie detector expert in the precedent setting case of Frye v. United States, 293 F. 1013.

Marston's interest in lie detection was initially stimulated by an experiment in deception by Elizabeth Holloway in 1914 or 1915 at Mt. Holyoke College. Marston considered the prior use of breathing, galvanic skin response, and plethysmograph records and decided that systolic blood pressure might be a more stable record. All of his work in lie detection until the 1930's was with systolic pressure. However, by the time he published his book The Lie Detector Test in 1938, he was using a standard polygraph instrument. Marston was well known as a lie detector expert because of his considerable success in criminal and espionage cases, and his publications about the topic.

Marston's other interests were varied. He was the author of seven books, including some on the theater. He was active in advertising, motion pictures, and cartooning. He was the originator and producer of the comic strip "Wonder Woman", and author of numerous professional and popular articles on psychology. He was also known for his work as an author of short stories. He died May 2, 1947, at the age of 54.

\* \* \* \* \*

Accustom your children to a strict attention to truth, even in the most minute particulars. If a thing happened at one window, and they, when relating it, say that it happened at another, do not let it pass, but instantly check them; you do not know where deviations from truth will end.

- - Johnson

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## B O O K   R E V I E W S

By

Norman Ansley

How to Talk With Practically Anybody About Practically Anything by Barbara Walters. New York: Dell Publishing Company, 1970. Paperback edition now in 17th printing, 1979. 241 pp.

A practical, useful, witty and thoroughly enjoyable book. Every generalized observation on the art of interviewing is supported by anecdotes and instances from her experience as a reporter, as a television interviewer, and as one who travels among celebrities. There is much here for every polygraph examiner, every clinical psychologist and anyone else who talks with others as part of their profession. There are pointers on interviewing, including what not to say, and topics to be avoided. There are suggestions on how to get into a touchy topic without being blunt. There are excellent examples of getting people to talk about themselves in ways they did not plan at all. Barbara Walters talks freely about her own feelings of anxiety and awe in approaching others for an interview, and the approaches she has used in interviewing kings and queens, tycoons, actors, politicians, the young and the old, husbands and wives of the famous, the handicapped, drunks, lechers, and gossips. There are whole chapters on some of these. This is one of those books that is both useful and enjoyable. You can find it at most newsstands and bookstores.

How To Sting the Polygraph by Doug Williams. Privately printed. Montgomery, Texas, 1979. 14 pp. illustrated. \$6.95.

The author states that he resigned from the Oklahoma City Police Department because he learned how to beat the polygraph. This booklet is his explanation of the technique. He describes a control question test and then tells the reader how to recognize the control questions, and how to produce reactions that are larger than his reactions to the relevant questions. He includes as control questions those that fit the usual description, plus irrelevant questions, and any surprise stimulus. The author includes the irrelevant questions as a control question so that the reader will create a reaction to them when taking a test employing the relevant-irrelevant technique. The reader is never informed of irrelevant question, guilt complex questions, symptomatic questions, or questions of any other type. Nor is the reader ever informed about peak of tension or a number of other techniques that would not be susceptible to his countermeasure methods. The reader is instructed on how to make excuses for his reactions, including those to irrelevant questions.

Williams tells the reader (with illustrations) how to breath so it will appear normal, thus preventing a reaction to a relevant question; and how to create breathing reactions to use with the control questions. Although Williams describes how to create any of five response patterns, he tells readers who feel inadequate to the task of duplicating a complicated pneumo reaction to simply cease breathing for about seven seconds, follow with two deep breaths, and then resume a normal pattern.

To create cardio reactions, the reader is told to tense the anal sphincter muscle; and to prevent a cardio reaction to relax the spincter muscle. The author politely tells the reader just where that is. However, Williams neglects to mention just how relaxing the sphincter muscle is supposed to prevent cardio reactions. It is, of course, a preposterous proposal.

As for the electrodermal channel, the author states that it is relatively unimportant and feebly suggests it may be manipulated by the control of the other tracings. He also claims that an examiner cannot base his opinion solely on the GSR reactions and that it is "common knowledge" that the GSR is the least reliable of the three patterns. These instructions are certainly not very reassuring to the prospective subject because there really isn't any countermeasure identified.

An example of a specific loss test is given, with each question labeled as control or relevant. (I have used I for the irrelevant questions, although the author used C for control.) 1-I, 2-I, 3-R, 4-R, 5-C, 6-R, 7-R, 8-R, 9-C, 10-R. Obviously, this is not at all like any standard control question technique in common use. If any reader recognizes this test series, or any of the others below, please let us know.

The author states that if the reader is confronted with an "irrelevant control question technique" he is told the question sequence will be as follows: 1-I, 2-I, 3-R, 4-R, 5-R, 6-I, 7-R, 8-R, 9-R, 10-R, 11-R, 12-R, 13-R, 14-R, 15-R, 16-C. Again, the author identified the irrelevant questions as controls, but only the 16th question was a control in the usual sense. This series by Williams is too long, does not have enough irrelevant questions, and asks one question that violates the APA Principles of Practice. That question, about being a union member, also violates Federal NLRB regulations. If Williams were the expert examiner, that he claims to be, he must have known that such a question is prohibited. Perhaps he included it to antagonize readers who are union members. Also, there is a question about being planted on the job. If the purpose is to detect the placement of police officers or security agents the question would violate the APA Principles of Practice. If it is to detect a union organizer, it violates the Principles and the NLRB rules. In any case, the question is unethical.

The author then describes a periodic examination and gives the following sequence: 1-I, 2-I, 3-R, 4-R, 5-C, 6-R, 7-R, 8-C, 9-R, 10-R, 11-C, 12-R, 13-R, 14-R, 15-C. Again, the author describes the first two irrelevant questions as controls. For the number 5 control he uses "What is the tenth letter of the alphabet?" and for the number 8 control he uses "What is seventeen times one hundred twelve?" For the number 11 control, Williams uses "Do you masturbate?" If any examiner were to use that question he should be expelled from the APA and his state association, should lose his state license, and be given an honorary membership in the ACLU for furthering their avowed aim to destroy the polygraph profession. I cannot imagine that the author used this question while a police examiner. If he did, I am glad that he is no longer connected with the profession. Like his question 15, the E.P.Q., any question about sex or suggesting that a sex question may be asked, has no place in screening examinations as control procedures. There are ineffective, inappropriate, and unethical. Perhaps Williams' fictional test, which does not follow any recognized procedure that we know of, includes these offensive questions to create indignation in the subject. The indignations may, in turn, help rationalize the reader's plan to cheat on the test. That, of course, is



pure speculation. I really don't know why Williams included these prohibited questions; nor do I know his motivation in writing the booklet, other than what he states in the conclusion. Williams says that he is not encouraging dishonesty but is protecting the reader's right to privacy.

It is fortunate, perhaps, that Williams' work is so inaccurate, incomplete, and misleading. Perhaps it is really a diabolical plot to encourage the deceptive subject to take a polygraph examination where his feeble attempts at countermeasures will be detected. Williams never tells the reader that competent examiners are trained to detect the forced reactions he recommends. He fails to mention that if relaxing the anal sphincter will prevent cardio and electrodermal responses, that knowledge should revolutionize our view of psychophysiological processes. His dismissal of electrodermal reactions as insignificant is specious.

I cannot recommend the book for the study of countermeasures. There is a much better disquisition on that topic by Gordon H. Barland and David C. Raskin in "Detection of Deception," chapter 9 of the book by William F. Prokasy and David C. Raskin, Electrodermal Activity in Psychological Research, Academic Press, 1973, pp. 456-470.

This review was written to make examiners aware of what has been published. The booklet by Williams has no value in question formulation, as some of the questions he suggests are unconscionable. It has no value in technique, as none of the series he describes are standard or useful. The booklet is a disservice to the lay liar, as he will be deceived into thinking he knows how to beat the polygraph.

Resources in Environment and Behavior edited by Will P. White. American Psychological Association, 1200 17th St., N.W., Washington, D.C. 20036. \$10.00 postpaid.

This book is for those in the field of environment and behavior. It is the final report of the APA's Task Force of Environment and Behavior, including an overview and history of this emerging field. It also includes teaching innovations offered in the U.S., Canada, and Great Britain, with a list of graduate programs. A discussion of career opportunities in environment and behavior is supplemented by a directory of people now in this area. The book has an annotated bibliography and a listing of journals likely to publish reference articles.

American Psychology in Historical Perspective edited by Ernest R. Hilgard. American Psychological Association, 1200 17th St., N.W., Washington, D.C. 20036. \$18.00 in hardcover, \$15.00 in paper, postpaid.

This new book offers an historical survey of American psychology and the American Psychological Association. In addition to presenting 21 important presidential addresses, the book examines the development of American psychology in four time periods: the first 25 years (1892-1916), the years of the two World Wars (1917-1945), the 20 years after World War II (1946-1967), and the recent past (1968-1977). Presidential addresses include classic papers by James, Cattell, Dewey, Thorndike, Woodworth, and Watson.

Keeping Your Cool Under Fire by Theodora Wells. McGraw-Hill, 1221 Avenue of the Americas, New York, New York 10020. 373 pages, \$12.95.

Subtitled Communicating Non-Defensively, this work features a practical approach to achieving positive communication with others. The author stresses the need to understand the basis for defensive communication and the ways in which it is revealed. She cites 30 case situations, which involve 90 individuals, as she explains how to renegotiate existing relationships and revise dealings with others. She gives positive ideas on how to retain control of situations without infringing on the rights of others. She describes how to evaluate the options in an encounter and make emotions work for an individual, and not against him.

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- - A B S T R A C T S - -

Electrodermal - Amnesia Case

Gisli H. Gudjonsson, "The Use of Electrodermal Responses in a Case of Amnesia (A Case Report)," Medicine, Science and the Law 19 (2)(April 1979): 138-140.

The study represents the use of an electrodermal apparatus to obtain information such as the month of birth, age, name and other identifying information from an amnesic patient. The patient said she was unaware of these facts. Each month of the year was presented to the patient in a scrambled order, and she answered "no" to each. This searching peak of tension technique was based on earlier research by the author in which the GSR was effective in detecting such information from normal subjects. However, the searching peaks were a failure in eliciting the information from the patient. To see if she was capable of responding, a card test (stimulus test) was administered, and she responded. Further investigation revealed an increase in electrodermal responsivity to items of personal relevance as the patient admitted more awareness of her past history, although still denying knowledge of her identity.

The author suggests that detectability may improve with heightened conscious awareness. Consequently, the larger the role played by malingering in amnesic patients, and the more conscious they are of deception, the stronger one would expect them to respond to target items. This does not, however, rule out the possibility that detection can be achieved where the information sought is inaccessible to voluntary control, as demonstrated in the experiments by Adams.

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The author is in the Department of Clinical Psychology, West Park Hospital, Surry, England. The journal is the Official Journal of the British Academy of Forensic Sciences. The reference to Adams is: J. K. Adams, "Laboratory Studies of Behaviour Without Awareness," Psychological Bulletin 54 (1957): 383-405. [Ed.]

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### Electrodermal

William M. Waid, Emily Carota Orne, Mary R. Cook and Martin T. Orne, "Effects of Attention, as Indexed by Subsequent Memory on Electrodermal Detection of Information," Journal of Applied Psychology 63 (6)(1978): 728-733.

Three closely related experiments tested the effects of attention, as indexed by subsequent memory, on electrodermal detection of information. A total of 62 male college students attempted to conceal six critical items of information from a polygraph examiner recording their electrodermal response (EDR). In the polygraph test the subject was asked if any of a list of 24 words, one every 10-15 sec., were critical items he was concealing. The list was comprised of three semantically similar control words along with each critical word. Afterward, without forewarning, a second experimenter asked the subject to remember all the words he had been asked about on the test. Deceptive subjects who gave a larger EDR to critical than to control words more often than could be expected by chance (i.e., were correctly detected as deceptive) remembered more control words than did other deceptive subjects who escaped detection. The results are interpreted to mean that the less thoroughly a subject processes the test words, as indexed by later memory, the less likely he is to be detected. [Author abstract.]

### Eye Witness Identification

Louis S. Katz and Jeremiah F. Reid, "Expert Testimony on the Fallibility of Eyewitness Identification," Criminal Justice Journal 1 (2)(Spring 1977): 177-206.

Many psychologists believe the testimony of an eyewitness to a crime may often be unreliable. This article addresses the question whether behavioral scientists should be permitted to testify at criminal trials to explain to the jury the inherent danger of relying on eyewitness identifications.

After a discussion of the legal admissibility of this testimony, an analysis of the nature and scope of the problem is presented, followed by a discussion of specific topics upon which an expert in eyewitness identification may testify. In conclusion, this article presents some guidelines to assist the trial judge in his exercise of discretion on this matter. [Author abstract.]

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"Always to be best and distinguished above  
the rest."

Motto of the University of St. Andrews.

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