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## A Preliminary Study for Determining Honesty Evaluation Through Verbal Testing Procedures

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A PRELIMINARY STUDY FOR  
DETERMINING HONESTY EVALUATION THROUGH  
VERBAL TESTING PROCEDURES

by

John R. Davis

A Thesis Submitted to the Faculty of the Institute of  
Industrial Relations of Loyola University in Partial  
Fulfillment of the Requirements for the Degree  
of Master of Science in Industrial Relations

June

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## ABOUT THE AUTHOR

John R. Davis is the president of John R. Davis Associates, Inc., an organization specializing in furnishing security services, counsel and polygraph testing to banking, retail and manufacturing institutions.

After his discharge as a first lieutenant from the United States Army Air Force during World War II, the author returned to Michigan State University for completion of his studies in Police Administration. In 1946 he graduated with a Bachelor of Science degree in Police Administration.

Mr. Davis is also a graduate of the Keeler Polygraph Institute and a licensed polygraph examiner in the State of Illinois.

In 1957 his manuscript entitled Industrial Plant Protection was published by the Charles C. Thomas publishing house. This text was subsequently accepted throughout industry in all parts of the world. It is presently being used in many universities offering curriculums in Industrial Security.

For many years he was consulting editor for Police, a professional journal for law enforcement officers. In addition to being a regular contributor of articles for Police he has written many articles for business, security, and personnel periodicals.

The author is a member of the faculty of Michigan State University as a lecturer in police administration.

He has regularly lectured at the law enforcement seminars of Purdue University, Indiana University, University of Michigan and many professional seminars.

Mr. Davis is a member of the American Polygraph Association, the International Association of Police Chiefs, the American Academy of Forensic Sciences, the Special Agents Association and the American Society for Industrial Security.

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## CHAPTER I

### INTRODUCTION

#### Purpose

The purpose of this work is to develop formally a personality assessment instrument which is a favorable criterion in predicting the honesty or dishonesty of an individual.

#### The Need

The modern, industrial complex has become vitally concerned with problems of employee dishonesty. Estimates of losses incurred through personnel have soared annually into millions of dollars. Without exception, no single firm has avoided this concern, whether it be a hospital, a bank, food store or a steel foundry.

Solution to this problem was of great concern in the early 30's when Leonarde Keeler, the pioneer of the polygraph, demonstrated that screening of applicants and employees lead to a drastic reduction in pilfering, embezzelment, and

shortages. He concluded and proved that individuals vary in degrees of honesty traits. Thus, a subject prone to dishonesty, when detected, could be better placed in a capacity offering little temptation. On the other hand, those individuals with a high degree of honesty traits could be utilized in those positions requiring greater personal responsibilities.

Inasmuch as the polygraph technique was first developed and utilized by the police organizations of the United States, it became a headline word for its use in murder, rape, and arson cases. Unfortunately it became a controversial instrument to which a great stigma was attached by the average, law-abiding citizen. Meanwhile, psychological testing for purposes of work assignments, duties, abilities, and attributes was rapidly moving forward in industry unnoticed. Such testing procedures, naturally, did not attract the sensational association of the polygraph.

Even though polygraph testing has become accepted world-wide by industry, it still lagged behind by reason of its reputation.

Many employers, for this reason, hesitate to request a prospective applicant or employee to undergo a polygraph examination. Only under extreme conditions of losses do they finally resort to this method.

Recognizing this factor of employer-employee relations, it became apparent to the author that there was a distinct need for a verbal type of test, carrying no negative suggestions, which would be valid in the selection and placement of employees in various positions of trust and which could be administered on the organization's premises and yet be unobtrusive and unoffending to the testee.



## CHAPTER II

### REVIEW OF THE LITERATURE

At the beginning of this study very little literature could be found which had been published by psychologists concerning studies in honesty and integrity.

In 1922 the late Doctor Henry F. Cope, secretary of a religious education association, solicited the Institute of Social and Religious Research for a grant with which to make a study of deceit for the purpose of determining what influence religion had been to young people and its effects with their honesty.

On approval by the Institute, in 1924 he secured the services of Doctor Hugh Hartshorne and Doctor Mark A. May, who was then a professor of psychology at Syracuse University. The teacher's college at Columbia University also became interested in this project and subsequently appointed Professor Edward L. Thorndyke to aid in the research.

Their primary studies, which were carried on for some five years, led to the development of a large battery of deception tests. Among these tests there were two concerned

with lying and two with stealing.

Hartshorne and May<sup>1</sup> concluded that one form of deceit or another may be associated with dullness, retardation, emotional instability, socio-economic handicaps, cultural limitations, and certain national, religious groupings.

These deception factors, in their conclusions, occurred in families in about the same way as intelligence and physical characteristics. Of course, this did not indicate that deception is inherited by any means.

William Healy<sup>2</sup> conducted an inquiry into the causes of juvenile offenses against property. Through his personal observations of many hundreds of cases it was his conclusion that in all instances of stealing, there was extreme concealment. Thus, a person stealing property belonging to another will always work with great stealth and subsequently attempt to hide himself after the act. These motives of concealment undoubtedly originated in our primitive tendencies. Our primitive ancestors had to conceal their acts due to the basic

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<sup>1</sup>Hugh Hartshorne and Mark A. May, Studies in Deceit, New York, The MacMillan Company, 1930

<sup>2</sup>William Healy and Augusta F. Bronner, New Light on Delinquency and Its Treatment, New Haven, Yale University Press, 1949

fear that the ones from whom they stole would be physically stronger than they. Modern man conceals his thieving activities because of a fear of discovery by legal authorities which has developed in our society.

## CHAPTER III

### FORMULATION & DESCRIPTION OF THE VERBAL TEST ITEMS

In the formulation of question items which may indicate traits of honesty, it is necessary to be concerned with the subject of deception. Deception may be defined, for our purpose, as an indication of social friction. Roget's Thesaurus (May 1928)<sup>3</sup> bears out that it has long been a matter of interest. This thesaurus contains no less than 800 or 900 words in phrases which are intimately related to this concept. The practice of deception has been with us longer than the written language. This is evident even in our observations of animal life. (What more perfect example is there than the crafty fox being trailed by the hounding dogs?)

In recognizing this basic trait, the mores of our civilization are developing codes applicable to business, personal and religious experience. It is through these codes

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<sup>3</sup>Mark A. May and Hugh Hartshorne, Studies in Deceit, New York, The MacMillan Company, 1928, p. 19.

and public ethics that we must relieve the friction of society.

In measuring traits of stealing one must examine deceit and lying as well. The three are closely related.

The experimental method of word association<sup>4</sup> in which the subject "gives himself away" by selecting the critical word which is related to the crime was found to be impractical for the author's needs.

It was decided to utilize the question item technique because it would be more practical to administer and score.

The items should be constructed on the premise that lying may be described of an individual for two motives:  
(1) To obtain approval; (2) To avoid disapproval.

Approval Motives.--There are many acts of conduct which have approval of society but yet are rarely carried out by the individual. For example, the question item could be; "Do you go to church every single Sunday?" The subject prone to dishonesty would possibly answer "Yes" to win approval but in reality he knows that he does not attend church every single Sunday.

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<sup>4</sup>Mark A. May and Hugh Hartshorne, Studies in Deceit, New York, The MacMillan Company, 1930, p.29.

Disapproval Motives.--Lying may also be regarded as making a false statement, instead of a true statement, when the truth is known by him. For example, we may construct a question item as follows: "If you saw another employee take merchandise, would you tell your supervisor about it?"

The testee should probably wish to avoid disapproval by admitting he condones this act of dishonesty when in reality he possibly would not inform the supervisor.

By utilizing the lying for approval and lying for disapproval motives, a series of questions were constructed. The questions are intermingled with specific and general significant ones. The series of 78 were selected as follows:

1. Do you agree to take a lie-detector test about the truth of all the answers that you give in this booklet?
2. Do you believe you will be punished one way or another if you do something dishonest?
3. Would you agree to take a lie-detector test about any thefts that might occur during the time of your employment.
4. Do you believe you will be rewarded one way or another if you do something good?
5. Would you want to take a lie-detector test regarding losses of merchandise or money occurring during your employment here?
6. If fellow workers made fun of me I would not mind a bit.

7. Do you think a man who wastes time on the job is as dishonest as a man who takes merchandise from his company?
8. Have you ever worked with someone who stole money or merchandise?
9. If an employer leaves his wallet in the employee's locker room and it disappears do you feel the employer is as guilty as the person who takes the wallet because he tempted him?
10. Did any co-worker ever ask you to help him in stealing merchandise?
11. Do you feel most employers will take advantage of their workers if they can?
12. Do you think most people who steal are caught?
13. Have you ever had a boss who seemed to pick on you?
14. Do you think most companies make too much money off their employee's work?
15. If you worked through a coffee-break do you feel you should be rewarded in some way?
16. If a man steals something then returns it, should the theft be overlooked?
17. Is it fair for a company to dock an employee's pay if he is a few minutes late occasionally?
18. If you had a son 10 years old who picked up something in the dime store without paying for it would you make him go back to the store with it?

19. If an employee takes merchandise, is he as guilty of theft as an employee who takes cash?
20. Would you spank your 10 year old son for picking up something in the dime store without paying for it and let it go this time provided he promised never to do it again?
21. Do most of your friends have more luxury items or money than you do?
22. Do you think most companies cheat on their income tax?
23. Do you think that people who take money or merchandise do so because they are in need?
24. If a man is caught after stealing money and makes restitution should the company fire him anyway?
25. Do you think people who take money or merchandise from their employer do so because of the excitement?
26. Is it dishonest for employees to spend their working time talking to each other?
27. Do you think you are capable of more responsible work than you have had so far?
28. Do you usually have one good close friend you can confide in?
29. Would you like to see the company you work for make more money?
30. Robin Hood stole from the rich and gave to the poor; he kept nothing for himself. Would you say he did wrong?



31. If your supervisor takes home merchandise without paying for it, is this his way of telling you that you can do the same?
32. Do you think it is fair that one man makes \$50,000 a year while another man works just as hard but earns only \$5,000?
33. Should an employee make phone calls without his supervisor's knowledge?
34. If your employer put \$15 too much on your paycheck would you ask him why?
35. Did you ever punch a fellow-employee's time card for him for any reason?
36. Did you ever borrow anything from a company where you were employed?
37. Did you ever ask a fellow-employee to punch your time card for you?
38. Is it possible for someone at your company to steal without being caught?
39. Have you ever applied for unemployment compensation?
40. Did you ever play hooky as a child?
41. Do you think most people take little things like gum, bottles of Coke, and so forth from grocery stores without paying for them at some time or another?
42. Does your attitude toward work change sometimes for no apparent reason?
43. Do you know if your parents took anything from a store without paying for it?

44. Do you think most employers check on your references when you apply for a job?
45. Do you think lie-detector tests work?
46. Do you think you qualify for higher pay than you usually receive?
47. Do you think most companies expect employees to take some merchandise?
48. Do you think most religions prepare a child for what goes on in the world?
49. If you worked a cash register and the tape showed the register should contain \$200, but at the end of the day it actually contains \$205, would you be entitled to the difference?
50. Have you ever daydreamed about robbing someone?
51. If your company carried green stamps and you took a few extra stamps, would this be the same as taking cash?
52. Do you think that the laws and judges are usually in favor of the rich man?
53. If your company carried green stamps and you took a few extra stamps, would this be the same as taking merchandise?
54. Do you think most employers got where they are through pull?
55. If you found a ten-dollar bill on the street would you turn it in to the nearest police station?
56. Do you believe that most laws are fair?

57. If you found a package from a department store with no name on it would you return it to the store?
58. Do you think most people cheat on their income tax?
59. If you owned a store and a man applied for a job and he told you he had stole from his last employer, would you hire him?
60. Have you ever borrowed money from the petty cash fund overnight and returned it the next day?
61. I usually argue my own opinions strongly.
62. Would you blame an employee who was underpaid for taking a discount on merchandise even if his employer did not okay it?
63. My parents were always blaming me.
64. Do you believe that most people will help themselves to money or merchandise at some time?
65. Sometimes people do not understand me.
66. Do you feel that sometimes a person has a right to merchandise or small amounts of money?
67. I liked school (grade and/or high school).
68. Do you think that an employee who takes \$5 is as guilty as an employee who takes \$100?
69. If you stole something would your conscience bother you?
70. Is it fair for an employer to ask a worker to do some extra menial task he was not hired to do?

71. Do you think it is possible for some people to steal from a company for years and not get caught?
72. Do you feel the average employee would tell his supervisor if he saw another employee stealing something?
73. Do you think your moral standards are higher than those of the average person?
74. Do you think most people will cheat if they think they can get by with it?
75. Have you ever cheated on your income tax?
76. Do you keep your feelings pretty much to yourself?
77. Is it natural for people to feel anger occasionally toward their parents?
78. Do most employers treat their employees fair?

## CHAPTER IV

### HISTORY AND THEORY OF THE POLYGRAPH

The most important aspect of this study is determining the validity of the foregoing instrument through the results of the polygraph. This particular physiological investigation indicates the necessity of a survey of the main characteristics of theory and technique.

History of the Polygraph.--In 900 BC Vedas set forth specific instructions for the detection of poisoners by their behavior. "A person who gives poison may be recognized. He does not answer questions, or they are evasive answers; he speaks nonsense, rubs the great toe along the ground, and shivers; his face is discolored; he rubs the roots of his hair with his fingers; and he tries by every means to leave the house..."<sup>5</sup>

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<sup>5</sup>Paul Trovillo, A History of Lie Detection, American Journal of Police Science, March 1939, 6, p.849.

The celebrated Greek physician, Erasistratus set forth his opinion that attempts to detect deceit would be discovered by feeling the pulse.<sup>6</sup>

Lombroso in 1895 was probably the first to determine truthfulness or deception of actual criminal suspects on the basis of blood pressure changes. He was the first person to use an instrument in determining lies. For this study he used a medical instrument known then as a "hydrosphygmograph".<sup>7</sup>

Marston, in 1917, upon testing two hundred subjects experimentally in which he measured systolic blood pressure at frequent intervals arrived at the conclusion that the systolic pressure constituted an accurate means for detecting deception.<sup>8</sup>

Benussi, in 1914,<sup>9</sup> concluded from his experiments that apparent changes in the inspiration-expiration ratio, i/e, was indicative of deception.

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<sup>6</sup>Paul Trovillo, A History of Lie Detection, American Journal of Police Science, March 1939, 6, p.849.

<sup>7</sup>C. Lombroso, L'Homme Criminal, Ed. 2, Vol. 1, pp. 336-346, 1895.

<sup>8</sup>W. M. Marston, Systolic Blood Pressure Symptoms of Deception, Journal of Experimental Psychology, 2(2) 117, 1917.

<sup>9</sup>V. Benussi, Die Abmungssyptome der Luge Arch, Ges Psychologie, 31:244, 1914.

Probably the first working model of the polygraph was assembled by Larson in 1921. He combined the Erlanger sphygmomanometer in combination with the pneumograph. Working with Chief August Volner of the Berkley Police Department, he examined some 400 suspects and subjected them to testing. Larson's results showed a high degree of accuracy. Unfortunately he did not treat his material statistically.<sup>10</sup>

Shortly thereafter, Leonarde Keeler, a psychologist from the University of California, joined with Larson in attempting to refine the technique and develop a sophisticated instrument.<sup>11</sup> These two scientists cannot be credited with inventing a lie-detector as they merely modified the existing apparatus. Keeler (1936) very definitely defined the so-called lie-detector instrument by stating his position thusly:

"To begin with, there is no such thing as a lie-detector. There are no instruments recording bodily changes such as blood pressure, pulse respiration or galvanic reflex that deserve the name "lie-detector" any more than a stethoscope, a clinical thermometer or a blood-count apparatus with a microscope can be called an appendicitis detector."<sup>12</sup>

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<sup>10</sup>J. A. Larson, Modification of the Marston Deception Test, Journal of Criminology, 12(3):390, 1921.

<sup>11</sup>Leonarde Keeler, A Method for Detection Deception, American Journal of Police Science, (1) 38, 1930.

<sup>12</sup>Leonarde Keeler, The Detection of Deception, Outline Scientific Criminal Investigation, Northwestern University, School of Law, 1936, 42-50.

Physiological Aspect of the Polygraph.--Deception, guilt or innocence, can be diagnosed from certain symptoms just as appendicitis, paranoia, or any other physical or mental disorder can be diagnosed. In every case, the examiner must make his diagnosis from tangible symptoms, using whatever mechanical aids he has at his disposal.

Keeler and Larson's sophisticated instrument recorded relative changes in the blood pressure, pulse, and respiration patterns.

It was the conclusion of these early pioneers that the detection of deception could be based on the fact that various autonomic and voluntary bodily changes would always accompany deception particularly when the subject was aware of the examination procedure and the purpose of the test.

There are essential emotional factors that must be present in order for a test to be successful.

Very little is known today of the mental processes that are involved in deception. However, we do know that body changes accompany the emotion of fear. That is, primarily the fear of the consequence of exposure. This fear is intensified when the subject is aware of the possibility of his deceit being discovered. This, consequently, accentuates the accompanying bodily changes.



The subject most likely will present a conscious effort to prevent his exposure. In his attempt to suppress these physical changes he effects changes in respiration.

On the other hand, the innocent subject will not present symptoms of fear. For example, if a subject is questioned as to whether or not he robbed a bank when he had not, he will not have a fear of the question. However, there is present in all subjects a slight amount of fear which results because that subject is in a new situation. This particular type of fear leaves as the testing procedure continues.

One of the most troublesome emotional factors concerned with deception is the arousing of memories of past experiences which may be similar to the situation about which the subject is being examined. Consequently, his reactions to the specific problem may produce deceptive responses.

Finally, the disturbing emotional factors of a guilty subject will be removed by his confession. Upon the event of such a confession, if it is a true one, his emotional equilibrium is usually restored. This condition is especially beneficial to the examiner as he is then in a position to determine if the confession is true or not.

The Polygraph Instrument.--The modern, refined instrument today is transistorized and carefully assembled with great

detail. It consists primarily of three units.

- (1) The first unit, in which a recording is continuously and quantitatively made of the blood pressure and the pulse, is known as the cardio-sphygmomanometer unit. It is composed of a blood pressure cuff connected by rubber tubing to the bellows of the instrument. The sphygmomanometer section of this unit is merely a pressure-gauge which indicates to the examiner visually the sufficient amount of pressure at which he must conduct the examination.
- (2) The second unit is known as a pneumograph unit. It too, has a light rubber tubing which connects to the pneumograph chest tube which is placed snugly around the subject's chest. This also is connected to a bellows unit within the instrument; however, there is no pressure gauge for this particular component.
- (3) The third unit is known as the kymograph which is merely the mechanism which contains a gear train in sprockets for chart paper to simultaneously move with the recording of the instrument pens.

The Operation of the Polygraph.--During the actual examination, the blood pressure cuff is snugly placed about the upper arm of the individual. The pressure system is inflated to a point midway between the mean pressure. To establish the pressure in the system which must equal the subject's mean pressure, the examiner must note the appearance

of the dicrotic notch at the middle of the pulse wave. When the dicrotic notch appears at the top of the wave, the pressure in the system equals the diastolic pressure. Likewise, when the dicrotic notch appears at the base of the pulse wave the pressure in the system would equal the systolic pressure.

After the system has been inflated to the pressure equal to the mean blood pressure the valves are then closed to prevent leakage. The system pressure then remains constant. The variations produced by the subject's pulse and blood pressure are subsequently recorded continuously on the chart paper.

The pneumograph tube is adjusted to the thoracic or the abdominal region so that it fits snugly but not so tightly as to interfere with normal, respiratory movement. Proper position is maintained for the recording, and any consequent changes will be induced by the subject's emotional fears.

Interpretation of Simple Reactions Recorded on the Polygraph.--There are some 27 deceptive responses in which a normal subject may indicate deception; however, for our purpose we shall only cover a few of these, including the following:

- (1) General gradual rise of the blood pressure curve.

- (2) General irregularity of blood pressure curve preceeding the point of deception followed by a smoother curve.
- (3) Great variation in the blood pressure curve following stimulus.
- (4) Decrease in pulse frequency usually followed by slight increase.

In the respiratory section of the pneumograph, the examiner is mainly interested in the following deceptive resultant responses:

- (1) Respiratory blocking which is known as apnoea.
- (2) Decreased amplitude in rate between the deception stimulus and the next stimulus followed by relief.
- (3) Suppressed respiration during the entire period preceeding the deception stimulus followed by deeper respiration for the remainder of the test.
- (4) Irregular respiration preceeding the deception stimulus followed by regular respiration.

Polygraph Question Formulation.---One of the most commonly used types of test with the polygraph technique is known as the relevant and irrelevant type test. This particular test is used predominately because the subject usually has knowledge of facts in the case before being submitted for examination.

The relevant questions which are considered the stimulus are composed of questions dealing with the matter

for which the subject is being tested. An example of the relevant type of question in the case of an examination to determine knowledge and complicity in money shortages would be; "Do you know of anyone stealing money from this store?" "Did you steal any money from this store?" "Have you worked in collusion with anyone to steal money from this store?" "Did you know in advance that the money was going to be stolen?"

Assuming that the subject has knowledge or is guilty of stealing money from that particular store, the critical or relevant questions will subsequently stimulate the autonomic nervous system which in turn causes changes in his cardio and respiratory patterns.

These relevant questions are usually interspersed with irrelevant questions or those questions which have no relationship with the matter that is being explored. An example of an irrelevant question would be; "Is your first name John?" "Do you smoke?" "Are you married?" "Do you drink coffee?"

These irrelevant questions are primarily designed to provide an indication of the subject's normal tracing and excitement level with the verbal stimulus. The periods before, between, and after question insertions are intended to provide an indication of the subject's normal tracing and excitement

level without verbal stimulus. The relevant questions are designed to indicate any significant changes from these, where questions concerning the objects of examination are inserted, as an aid to deception diagnosis by proper interpretation of any such changes.

Usually, the subject is submitted to two tests. Whenever the subject is administered an excessive number of tests without proper interrogation the subject's ability to react will generally diminish over a period of time--even though he is deceptive only through loss in a physiological sense to a point where he has no more fear of detection.

## CHAPTER V

### VALIDATION BY POLYGRAPH TESTING

From this review of the essentials and historical development of the polygraph, coupled with the experience in training of the author, it seemed appropriate to select an instrument in the determination of the criterion.

Selection of Experimental Group.--Twenty-six client subjects were selected at random from individuals referred, by their employers, to our office for polygraph testing. Mainly, they were to be given a polygraph test for the determination of their guilt or knowledge in thefts of merchandise or money which were under investigation by the company officials. Intermingled with this group were a few job applicants who were to be tested for previous work history, honesty patterns, arrest record, and other information which would aid the personnel manager in his selection.

During this initial study, statistical considerations as to age, sex, education or occupation were eliminated.

Test Administration Procedures.--The tests were administered in a sound-proof testing room with excellent

lighting and acoustical walls to insure quietness. The room was equipped with a table and a chair with no distracting pictures or facilities to smoke. The tester carefully explained the manner in which the items were to be answered without indicating the purpose or the nature of the instrument.

Approximately twenty minutes were allowed for each subject to complete his or her questionnaire.

Upon completing the questionnaire the subject returned the booklet to the tester for subsequent scoring. Without any referral to this particular test the subject was administered the polygraph examination.

Upon completion of the polygraph test the analysis sheet containing his or her admissions, the opinion of the examiner, and the verification of whether or not the truth was determined through the polygraph results were submitted to the administrative assistant for scoring in the appropriate columns the question items which the subject had answered incorrectly.

Findings.--Upon the final compilation of this group of twenty-six subjects it was found that eight of the group had been cleared and determined truthful by the examiner. Of the remaining eighteen it was found that they were guilty by both the examiner's opinion and in most instances by their admissions following the polygraph testing.



The honest subjects had a mean score of 19.0 with a range of 17-23. The dishonest subjects' mean score was 24.8 with the range 17:37.

Selection of Control Group.--It was found necessary to establish a control group of a population not suspected of dishonesty and consequently not involved in polygraph testing situations. This group should provide a "yardstick" to compare with the polygraph experimental group of dishonest and honest subjects.

The selected population was composed of individuals who had exemplified through their academic studies, ambitions, and personal attributes characteristics that would indicate that they would become good citizens and responsible in their duties to society and their professions. Such a constructed group would normally, in our society, be expected to represent a model of reasonable, honest individuals.

With this hypothesis, a class of 24 graduate students of DePaul University were administered the instrument.

To avoid as much as possible the aspect of receiving defensive answers, the students were instructed not to sign their names or provide any identifying factors. Nor was the purpose of the examination made known to the class.

Findings.--The raw score of the norm was 19.8 with a wrong answer distribution of 13 to 29.

## CHAPTER VI

### SUMMARY AND CONCLUSIONS

This preliminary study was constructed to investigate the possibility of developing a testing instrument which would predict the honesty and dishonesty patterns of an individual. The control group of randomly sampled graduate students, which was assumed to be an ideal group of individuals indicating traits of responsibility, intelligence and accomplishments, was administered the test items. Its mean score was 19.8 with a range from 29 to 13.

From this control group it was possible to establish a "yardstick" to compare with those subjects given a polygraph test.

The polygraph experimental group of twenty-six was selected on no particular basis, rather they were tested as they appeared in our offices in the customary manner.

Of the twenty-six subjects, eighteen failed the polygraph test of which fourteen admitted dishonest acts and four did not make any admissions. This dishonest group consisted of four pre-employment type testees who were

referred to our office by their employers for verification of their background, arrest records and history of dishonesty.

With this group a significant value for correlation was established when such a high percentage admitted their dishonesty after this was detected through the polygraph. Prior to the polygraph test they had denied any knowledge or complicity in their specific acts under investigation.

The remaining eight of this group of twenty-six were cleared by the polygram charts and the opinion of the examiner.

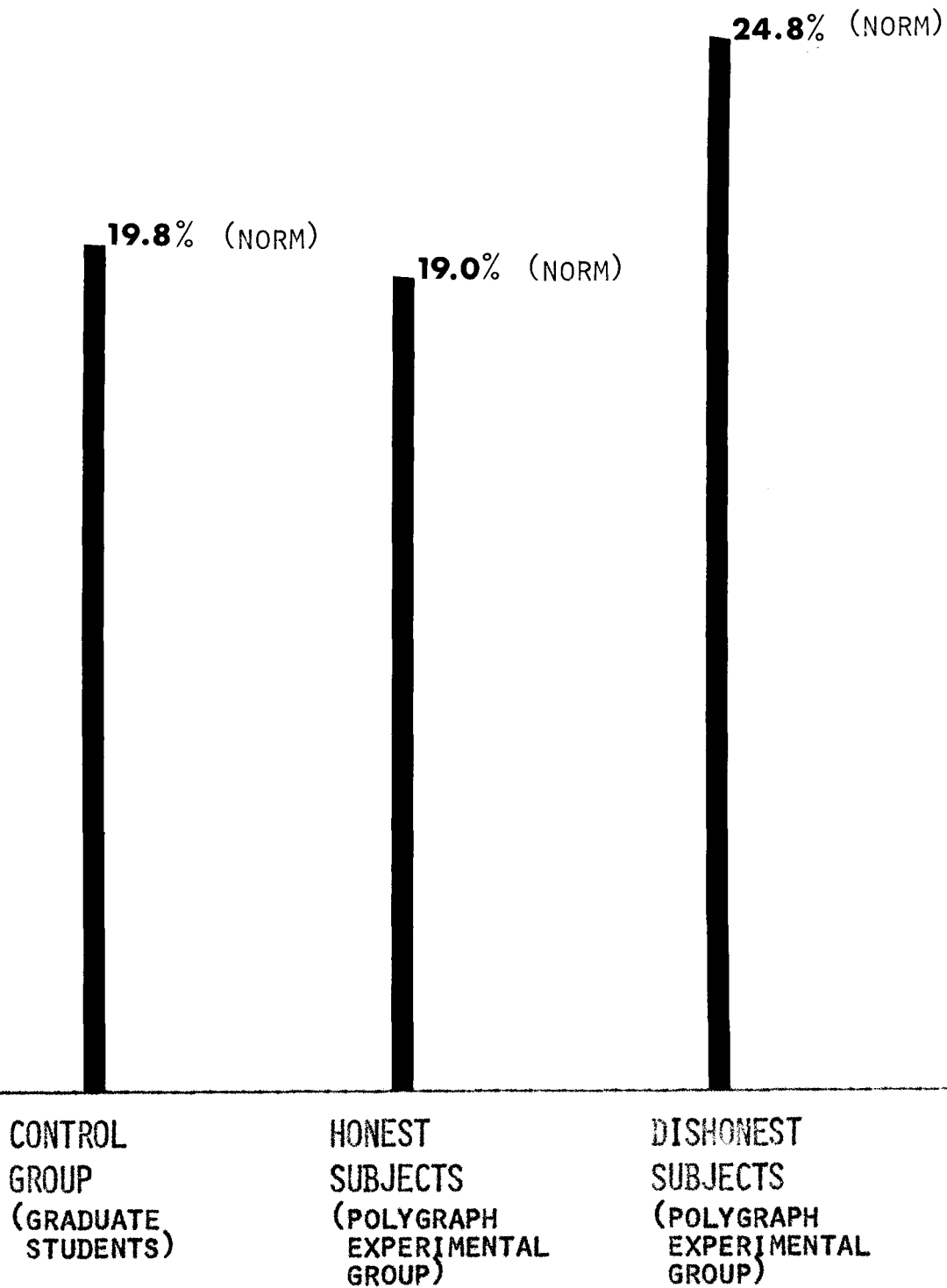
Their mean score was 19.0 with a range of 23 to 17. Seven of the eight were referred to our offices for specific examinations for the purpose of determining their guilt or innocence in acts of thefts of merchandise and money under investigation by company officials. The remaining one was a pre-employment examination.

The correlation and study of the items missed compared with that of the polygraph grouping was extremely encouraging in this preliminary study. Upon this basis we considered our hypothesis to be confirmed.

It was also apparent that there are existing question items which seemingly do not correlate to any appreciable degree. A personnel assessment instrument of this nature could be especially of value today in industry in the

placement of personnel in sensitive and non-sensitive positions which will not endanger the company properties and monies. It should not be treated unlike other psychological tests since there are indications of individuals scoring in numerical strength which is in converse relation to the polygraph testing results.

APPENDIX



## SCORES OF DISHONEST SUBJECTS

<u>SUBJECT</u>	<u>SCORE</u>
A	21
B	24
C	29
E	27
H	18
I	20
J	34
L	20
M	23
N	30
R	28
S	34
T	17
U	20
W	18
X	20
Y	26
Z	<del>3</del>
	<hr/>
	446

$$\bar{X} = 18 \quad \begin{array}{r} 24.77 \\ \hline 446. \\ 36 \\ \hline 86 \\ 72 \\ \hline 140 \\ 126 \\ \hline 140 \\ 126 \\ \hline \end{array}$$

$$\bar{X} = 24.8$$

Name A  Female  Male Caucasian  Negro  Asian Age 53

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 12

Employment Record:  Good  Fair  Poor Job Title MAID

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record:  Yes  No Purpose of Exam:  Pre-employment  Specific

POLYGRAPH RESULTS

Subject told truth: Yes  No

Examiner's Opinion:  Cleared  Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 21

Admissions: Theft of \$150 from room of guest of hotel.



Name B Female  Male  Caucasian  Negro  Asian Age 38

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 12

Employment Record: Good Fair Poor Job Title MEAT CUTTER

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record:  Yes  No Purpose of Exam: Pre-employment  Specific

POLYGRAPH RESULTS

Subject told truth: Yes  No

Examiner's Opinion: Cleared  Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 24

Admissions: Theft of \$900 in Cigarettes.

Arrested and convicted of robbery of A & P store.

Name C Female  Male Caucasian  Negro Asian Age 23

Marriages 0  1 2 Div. Wid. Sep. Yrs. of School 6

Employment Record: Good  Fair Poor Job Title JANITOR

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record:  Yes Purpose of Exam: Pre-employment  
No  Specific

POLYGRAPH RESULTS

Subject told truth: Yes  No

Examiner's Opinion: Cleared

Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 29

Admissions: Admits to armed robbery and  
theft of \$200 in meat from self serving  
room

Name E Female  Male  Caucasian  Negro  Asian Age 32

Marriages 0  1  2 Div. Wid. Sep. Yrs. of School 9

Employment Record:  Good  Fair  Poor Job Title ASS'T STORE MGR

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes  No  Purpose of Exam: Pre-employment  Specific

**POLYGRAPH RESULTS**

Subject told truth: Yes  No

Examiner's Opinion: Cleared  Failed

**QUESTION ITEMS**

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 27

Admissions: Circle Market Manager. Theft of cash register. Collusion to market fraudulent prices on merchandise approximately \$500. Set of pots and pans, 1,000 S/H stamps, 30 cartons of cigarettes.

Name H Female  Male  Caucasian  Negro  Asian Age 45

Marriages 0 1  2 Div. Wid.  Sep. Yrs. of School 5

Employment Record: Good Fair  Poor Job Title ROUTE SALESMAN

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record:  Yes Purpose of Exam: Pre-employment  
No  Specific

**POLYGRAPH RESULTS**

Subject told truth: Yes  No

Examiner's Opinion: Cleared

Failed

**QUESTION ITEMS**

- |   |                                     |                                     |                                     |                                     |                                     |                                     |    |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----|-------------------------------------|
| 1 | <input checked="" type="radio"/> 10 | <input checked="" type="radio"/> 19 | 28                                  | 37                                  | 46                                  | 55                                  | 64 | <input checked="" type="radio"/> 73 |
| 2 | <input checked="" type="radio"/> 11 | <input checked="" type="radio"/> 20 | 29                                  | <input checked="" type="radio"/> 38 | <input checked="" type="radio"/> 47 | <input checked="" type="radio"/> 56 | 65 | 74                                  |
| 3 | <input checked="" type="radio"/> 12 | <input checked="" type="radio"/> 21 | 30                                  | 39                                  | <input checked="" type="radio"/> 48 | 57                                  | 66 | 75                                  |
| 4 | <input checked="" type="radio"/> 13 | 22                                  | 31                                  | <input checked="" type="radio"/> 40 | 49                                  | <input checked="" type="radio"/> 58 | 67 | 76                                  |
| 5 | 14                                  | 23                                  | <input checked="" type="radio"/> 32 | 41                                  | <input checked="" type="radio"/> 50 | 59                                  | 68 | 77                                  |
| 6 | 15                                  | 24                                  | 33                                  | 42                                  | 51                                  | 60                                  | 69 | 78                                  |
| 7 | 16                                  | 25                                  | <input checked="" type="radio"/> 34 | 43                                  | <input checked="" type="radio"/> 52 | 61                                  | 70 |                                     |
| 8 | 17                                  | 26                                  | 35                                  | 44                                  | 53                                  | 62                                  | 71 |                                     |
| 9 | 18                                  | <input checked="" type="radio"/> 27 | 36                                  | 45                                  | 54                                  | 63                                  | 72 |                                     |

Score: 18-- Incomplete

Admissions: Served six months on a bad check  
Charge. Court martialled and six months served  
for stealing money. Arrested on shoplifting  
charge

Name I Female  Male  Caucasian  Negro  Asian Age 25  
 Marriages 0  1  2 Div. Wid. Sep. Yrs. of School 16  
 Employment Record:  Good  Fair  Poor Job Title ASS'T MGR.  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment  
                    No  Specific

POLYGRAPH RESULTS

Subject told truth: Yes  No   
 Examiner's Opinion:  Cleared  Failed

QUESTION ITEMS

1	10	<input checked="" type="radio"/> 19	28	37	46	55	64	73
2	<input checked="" type="radio"/> 11	20	<input checked="" type="radio"/> 29	38	47	56	65	<input checked="" type="radio"/> 74
<input checked="" type="radio"/> 3	<input checked="" type="radio"/> 12	21	30	39	48	57	66	<input checked="" type="radio"/> 75
4	13	22	31	<input checked="" type="radio"/> 40	49	58	67	<input checked="" type="radio"/> 76
5	14	23	<input checked="" type="radio"/> 32	41	50	59	68	77
<input checked="" type="radio"/> 6	15	24	<input checked="" type="radio"/> 33	42	<input checked="" type="radio"/> 51	<input checked="" type="radio"/> 60	69	78
7	16	25	<input checked="" type="radio"/> 34	43	52	<input checked="" type="radio"/> 61	70	
8	<input checked="" type="radio"/> 17	26	35	44	53	62	<input checked="" type="radio"/> 71	
9	18	27	<input checked="" type="radio"/> 36	45	54	<input checked="" type="radio"/> 63	72	

Score: 20

Admissions: Theft of \$100. Stolen from office  
safe

Name J Female  Male  Caucasian  Negro  Asian Age 21

Marriages  0  1  2 Div. Wid. Sep. Yrs. of School 12

Employment Record: Good Fair  Poor  Job Title STORE MANAGER

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record:  Yes  No Purpose of Exam: Pre-employment  Specific

POLYGRAPH RESULTS

Subject told truth:  Yes  No

Examiner's Opinion: Cleared

Failed

QUESTION ITEMS

<input checked="" type="radio"/> 1	<input checked="" type="radio"/> 10	19	28	<input checked="" type="radio"/> 37	<input checked="" type="radio"/> 46	<input checked="" type="radio"/> 55	<input checked="" type="radio"/> 64	73
<input checked="" type="radio"/> 2	11	20	<input checked="" type="radio"/> 29	<input checked="" type="radio"/> 38	47	<input checked="" type="radio"/> 56	<input checked="" type="radio"/> 65	74
3	12	<input checked="" type="radio"/> 21	30	39	<input checked="" type="radio"/> 48	57	66	<input checked="" type="radio"/> 75
<input checked="" type="radio"/> 4	13	22	31	<input checked="" type="radio"/> 40	49	58	67	<input checked="" type="radio"/> 76
<input checked="" type="radio"/> 5	14	23	32	41	<input checked="" type="radio"/> 50	59	<input checked="" type="radio"/> 68	<input checked="" type="radio"/> 77
<input checked="" type="radio"/> 6	<input checked="" type="radio"/> 15	<input checked="" type="radio"/> 24	33	<input checked="" type="radio"/> 42	51	<input checked="" type="radio"/> 60	<input checked="" type="radio"/> 69	78
7	16	25	<input checked="" type="radio"/> 34	43	52	<input checked="" type="radio"/> 61	70	
8	17	26	35	44	53	<input checked="" type="radio"/> 62	71	
9	18	27	<input checked="" type="radio"/> 36	<input checked="" type="radio"/> 45	<input checked="" type="radio"/> 54	<input checked="" type="radio"/> 63	<input checked="" type="radio"/> 72	

Score: 35

Admissions: 3 fifths of whiskey  
15 cups ice cream  
Cookies, etc.  
30 cartons of cigarettes

Name L Female Male Caucasian Negro Asian Age 20

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 12

Employment Record: Good Fair Poor Job Title CHECKER & CASHIER  
FOOD STORE

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment  
No Specific

POLYGRAPH RESULTS

Subject told truth: Yes No

Examiner's Opinion: Cleared  
Failed

QUESTION ITEMS

1	10	<u>19</u>	28	<u>37</u>	46	55	64	73
2	<u>11</u>	20	29	38	47	56	65	<u>74</u>
3	<u>12</u>	<u>21</u>	30	<u>39</u>	48	57	66	<u>75</u>
4	13	22	31	<u>40</u>	49	58	67	<u>76</u>
5	14	23	32	41	<u>50</u>	59	<u>68</u>	77
6	<u>15</u>	24	<u>33</u>	42	<u>51</u>	<u>60</u>	<u>69</u>	78
7	16	25	<u>34</u>	<u>43</u>	<u>52</u>	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	<u>54</u>	63	72	

Score: 20

Admissions: \$140 in cash

\$260 in merchandise

400 S&H green stamps

Name M Female  Male  Caucasian  Negro  Asian Age 31  
 Marriages 0  1  2 Div. Wid. Sep. Yrs. of School 10  
 Employment Record:  Good  Fair  Poor Job Title ASS'T MGR. FOOD STORE  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment  
 No  Specific

POLYGRAPH RESULTS

Subject told truth:  Yes  No  
 Examiner's Opinion:  Cleared  
 Failed

QUESTION ITEMS

1	<input checked="" type="radio"/> 10	19	28	37	<input checked="" type="radio"/> 46	<input checked="" type="radio"/> 55	64	73
2	<input checked="" type="radio"/> 11	20	29	<input checked="" type="radio"/> 38	<input checked="" type="radio"/> 47	<input checked="" type="radio"/> 56	65	74
3	12	<input checked="" type="radio"/> 21	30	39	48	57	66	<input checked="" type="radio"/> 75
4	13	<input checked="" type="radio"/> 22	31	<input checked="" type="radio"/> 40	<input checked="" type="radio"/> 49	58	67	76
5	14	23	32	41	<input checked="" type="radio"/> 50	<input checked="" type="radio"/> 59	<input checked="" type="radio"/> 68	77
<input checked="" type="radio"/> 6	15	24	<input checked="" type="radio"/> 33	42	<input checked="" type="radio"/> 51	<input checked="" type="radio"/> 60	69	78
7	16	25	34	43	<input checked="" type="radio"/> 52	61	70	
8	17	26	35	<input checked="" type="radio"/> 44	53	62	<input checked="" type="radio"/> 71	
<input checked="" type="radio"/> 9	<input checked="" type="radio"/> 18	27	<input checked="" type="radio"/> 36	45	54	63	72	

Score: 23

Admissions: \$275 in merchandise, 1,000 Salt stamps  
\$500 in cash for past two years Two books  
American Express money orders



Name N Female Male Caucasian Negro Asian Age 30  
 Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 10  
 Employment Record: Good Fair Poor Job Title FOOD SERVICE  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes Purpose of Exam: Pre-employment  
 No Specific

POLYGRAPH RESULTS

Subject told truth: Yes No  
 Examiner's Opinion: Cleared  
Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 30 Incomplete

Admissions: Traffic charges, 30 years of prison.  
Fight in a CTA bus, stole part of rail  
and dining room table.

Name R Female  Male  Caucasian  Negro  Asian Age 21  
 Marriages 0 1 2 Div. Wid. Sep. Yrs. of School \_\_\_\_\_  
 Employment Record: Good Fair Poor Job Title SERVICE STATION ATTENDANT  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes  No  Purpose of Exam:  Pre-employment  Specific

POLYGRAPH RESULTS

Subject told truth: Yes  No   
 Examiner's Opinion: Cleared  Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 28Admissions: \$15 cash, power register

Approximately \$20 a week being used to ring up sales.  
One battery, four sets of spark plugs.  
Sub ignition sets, one turning light

Name S Female  Male  Caucasian  Negro  Asian Age 23

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 10

Employment Record: Good  Fair  Poor Job Title STICK ROOM CLERK

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment

No  Yes  Specific  General

POLYGRAPH RESULTS

Subject told truth: Yes  No

Examiner's Opinion: Cleared

Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 34

Admissions: Took "pot" in service. Approximately two cases of whiskey out of back door. Two bottles of cigarettes. Two boxes of cigars.

Name T Female Male Caucasian Negro Asian Age 50

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 10

Employment Record: Good Fair Poor Job Title CASHIER

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment  
No Specific

POLYGRAPH RESULTS

Subject told truth: Yes No  
Examiner's Opinion: Cleared  
Failed

QUESTION ITEMS

1	10	<u>19</u>	28	37	<u>46</u>	55	64	73
2	<u>21</u>	20	29	<u>38</u>	47	<u>56</u>	65	74
3	<u>12</u>	<u>21</u>	30	39	48	57	66	<u>75</u>
4	<u>13</u>	22	31	<u>40</u>	49	58	67	<u>76</u>
5	14	23	32	41	50	59	68	<u>77</u>
6	15	24	<u>33</u>	<u>42</u>	<u>51</u>	60	69	78
7	16	25	<u>34</u>	43	52	61	70	
8	17	26	<u>35</u>	44	53	62	<u>71</u>	
9	18	27	36	<u>45</u>	54	63	72	

Score: 17

Admissions: 1 2 Div. Wid. Sep. Yrs. of School

Employment Record: Good Fair Poor Job Title

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment  
No Specific

POLYGRAPH RESULTS

Subject told truth: Yes No  
Examiner's Opinion: Cleared  
Failed

QUESTION ITEMS

1	10	<u>19</u>	28	37	<u>46</u>	55	64	73
2	<u>21</u>	20	29	<u>38</u>	47	<u>56</u>	65	74
3	<u>12</u>	<u>21</u>	30	39	48	57	66	<u>75</u>
4	<u>13</u>	22	31	<u>40</u>	49	58	67	<u>76</u>
5	14	23	32	41	50	59	68	<u>77</u>
6	15	24	<u>33</u>	<u>42</u>	<u>51</u>	60	69	78
7	16	25	<u>34</u>	43	52	61	70	
8	17	26	<u>35</u>	44	53	62	<u>71</u>	
9	18	27	36	<u>45</u>	54	63	72	

Name U Female Male Caucasian Negro Asian Age 22  
 Marriages 0 1 2 Div. Wid. Sep. Yrs. of School \_\_\_\_\_  
 Employment Record: Good Fair Poor Job Title CHECKER  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes Purpose of Exam: Pre-employment  
No Specific

POLYGRAPH RESULTSSubject told truth: Yes NoExaminer's Opinion: Cleared  
FailedQUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 20

Admissions: Would not admit to giving discounts  
to friends and failing to ring up sales. Reported  
by Shopping Service to failing to ring up sale of  
\$1.05.

Name W Female  Male  Caucasian  Negro  Asian Age 29  
 Marriages 0  2 Div. Wid. Sep. Yrs. of School 12  
 Employment Record:  Good  Fair  Poor Job Title BANK TELLER  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes  No  Purpose of Exam: Pre-employment  Specific

POLYGRAPH RESULTSSubject told truth:  Yes  NoExaminer's Opinion:  Cleared FailedQUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 18

Admissions:

*Not involved in this particular theft  
 of money -- admits "borrowing" cash but  
 claims to have always repaid it.*

Name X Female Male Caucasian Negro Asian Age 44  
 Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 10  
 Employment Record: Good Fair Poor Job Title GROCERY MGR.  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes Purpose of Exam: Pre-employment  
 No Specific

POLYGRAPH RESULTS

Subject told truth: Yes No  
 Examiner's Opinion: Cleared  
Failed

QUESTION ITEMS

1	10	<u>19</u>	28	37	46	55	64	73
2	<u>11</u>	<u>20</u>	<u>29</u>	<u>38</u>	47	56	65	74
3	12	<u>21</u>	30	39	<u>48</u>	57	66	75
4	13	22	31	<u>40</u>	49	58	67	76
5	14	23	32	41	<u>50</u>	59	68	77
<u>6</u>	<u>15</u>	<u>24</u>	<u>33</u>	42	51	<u>60</u>	69	78
7	16	25	<u>34</u>	43	<u>52</u>	<u>61</u>	70	
8	17	26	35	44	53	62	<u>71</u>	
<u>9</u>	18	27	<u>36</u>	45	54	63	72	

Score: 20

Admissions: Stole case of cigarettes  
Stole 25 pounds flour

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes Purpose of Exam: Pre-employment  
 No Specific

POLYGRAPH RESULTS

Subject told truth: Yes No  
 Examiner's Opinion: Cleared  
Failed

QUESTION ITEMS

1	10	<u>19</u>	28	37	46	55	64	73
2	<u>11</u>	<u>20</u>	<u>29</u>	<u>38</u>	47	56	65	74
3	12	<u>21</u>	30	39	<u>48</u>	57	66	75
4	13	22	31	<u>40</u>	49	58	67	76
5	14	23	32	41	<u>50</u>	59	68	77
<u>6</u>	<u>15</u>	<u>24</u>	<u>33</u>	42	51	<u>60</u>	69	78
7	16	25	<u>34</u>	43	<u>52</u>	<u>61</u>	70	
8	17	26	35	44	53	62	<u>71</u>	
<u>9</u>	18	27	<u>36</u>	45	54	63	72	

Name Y Female  Male  Caucasian  Negro  Asian Age 29  
 Marriages 0  2 Div. Wid. Sep. Yrs. of School 10  
 Employment Record:  Good  Fair  Poor Job Title DAIRY MGR.  
 Income \_\_\_\_\_ Mortgage Bal. 11,000 Other Debts 4,020  
 Arrest Record:  Yes  No Purpose of Exam:  Pre-employment  Specific

POLYGRAPH RESULTSSubject told truth:  Yes  NoExaminer's Opinion:  Cleared FailedQUESTION ITEMS

1	<input checked="" type="radio"/> 10	<input checked="" type="radio"/> 19	28	37	46	55	64	73
2	<input checked="" type="radio"/> 11	<input checked="" type="radio"/> 20	29	<input checked="" type="radio"/> 38	<input checked="" type="radio"/> 47	<input checked="" type="radio"/> 56	<input checked="" type="radio"/> 65	<input checked="" type="radio"/> 74
3	12	<input checked="" type="radio"/> 21	30	39	<input checked="" type="radio"/> 48	57	66	75
4	13	22	31	<input checked="" type="radio"/> 40	49	<input checked="" type="radio"/> 58	67	76
5	14	23	32	41	<input checked="" type="radio"/> 50	<input checked="" type="radio"/> 59	68	77
6	15	24	<input checked="" type="radio"/> 33	42	<input checked="" type="radio"/> 51	<input checked="" type="radio"/> 60	69	78
7	<input checked="" type="radio"/> 16	25	<input checked="" type="radio"/> 34	43	52	<input checked="" type="radio"/> 61	70	
8	<input checked="" type="radio"/> 17	26	35	44	53	<input checked="" type="radio"/> 62	71	
9	18	27	36	45	54	<input checked="" type="radio"/> 63	72	

Score: 26Admissions: Signed statement, stole over\$1,226.35 in merchandise



Name 2 Female  Male Caucasian  Negro Asian Age 39

Marriages 0  1 2  Div. Wid. Sep. Yrs. of School 12

Employment Record: Good  Fair Poor Job Title JANITORIAL SUPERVISOR

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record:  Yes  No Purpose of Exam:  Pre-employment  Specific

POLYGRAPH RESULTS

Subject told truth: Yes  No

Examiner's Opinion:  Cleared  Failed

QUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 37

Admissions: None no admissions

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SCORES OF HONEST SUBJECTS

<u>SUBJECT</u>	<u>SCORE</u>
D	20
F	18
G	18
K	18
O	19
P	23
Q	19
V	17
	<hr/>
	152

$$\bar{X} = 8 \begin{array}{r} 19.00 \\ )152. \\ \hline 8 \\ 72 \\ \hline 72 \end{array}$$

$$\bar{X} = 19.0$$

Name D Female  Male  Caucasian  Negro  Asian Age 21  
 Marriages 0  1  2 Div. Wid. Sep. Yrs. of School 11  
 Employment Record:  Good  Fair  Poor Job Title NURSE AID  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes  No  Purpose of Exam: Pre-employment  Specific

**POLYGRAPH RESULTS**

Subject told truth:  Yes  No  
 Examiner's Opinion:  Cleared  Failed

**QUESTION ITEMS**

1	<input checked="" type="radio"/> 10	19	28	37	46	55	64	73
2	<input checked="" type="radio"/> 11	20	29	38	<input checked="" type="radio"/> 47	56	65	74
3	12	<input checked="" type="radio"/> 21	30	<input checked="" type="radio"/> 39	<input checked="" type="radio"/> 48	57	66	75
4	13	22	31	40	49	58	67	<input checked="" type="radio"/> 76
5	14	23	<input checked="" type="radio"/> 32	41	<input checked="" type="radio"/> 50	59	<input checked="" type="radio"/> 68	77
6	<input checked="" type="radio"/> 15	24	<input checked="" type="radio"/> 33	<input checked="" type="radio"/> 42	51	60	69	78
7	16	25	<input checked="" type="radio"/> 34	43	52	<input checked="" type="radio"/> 61	<input checked="" type="radio"/> 70	
8	17	26	35	44	53	<input checked="" type="radio"/> 62	<input checked="" type="radio"/> 71	
9	18	27	36	<input checked="" type="radio"/> 45	54	<input checked="" type="radio"/> 63	72	

Score: 20

Admissions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Name F Female  Male  Caucasian  Negro  Asian Age 28

Marriages 0  1  2  Div.  Wid.  Sep. Yrs. of School 12

Employment Record:  Good  Fair  Poor Job Title SALES CLERK

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes  No  Purpose of Exam:  Pre-employment  Specific

**POLYGRAPH RESULTS**

Subject told truth:  Yes  No

Examiner's Opinion:  Cleared  Failed

**QUESTION ITEMS**

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 18

Admissions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name G Female  Male  Caucasian  Negro  Asian Age 24  
 Marriages 0  1  2 Div. Wid. Sep. Yrs. of School 12  
 Employment Record:  Good  Fair  Poor Job Title X-RAY ASST  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes \_\_\_\_\_ No   
 Purpose of Exam: Pre-employment  Specific

POLYGRAPH RESULTSSubject told truth:  Yes  NoExaminer's Opinion:  Cleared FailedQUESTION ITEMS

1	10	19	28	37	46	55	64	73
2	<input checked="" type="radio"/> 11	20	<input checked="" type="radio"/> 29	38	47	56	65	74
<input checked="" type="radio"/> 3	<input checked="" type="radio"/> 12	<input checked="" type="radio"/> 21	30	39	<input checked="" type="radio"/> 48	57	66	75
4	13	22	31	<input checked="" type="radio"/> 40	49	58	67	76
5	<input checked="" type="radio"/> 14	23	32	41	<input checked="" type="radio"/> 50	59	68	77
6	15	<input checked="" type="radio"/> 24	33	42	51	<input checked="" type="radio"/> 60	69	<input checked="" type="radio"/> 78
7	16	25	<input checked="" type="radio"/> 34	43	<input checked="" type="radio"/> 52	61	70	
<input checked="" type="radio"/> 8	<input checked="" type="radio"/> 17	<input checked="" type="radio"/> 26	35	44	53	62	71	
9	<input checked="" type="radio"/> 18	27	36	45	54	63	72	

Score: 18

Admissions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name K Female Male Caucasian Negro Asian Age 29  
 Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 12  
 Employment Record: Good Fair Poor Job Title ASS'T MGR.  
 Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_  
 Arrest Record: Yes Purpose of Exam: Pre-employment  
No Specific

### POLYGRAPH RESULTS

Subject told truth: Yes No

Examiner's Opinion: Cleared

Failed

### QUESTION ITEMS

1	<u>10</u>	<u>19</u>	28	37	46	55	64	73
2	<u>11</u>	<u>20</u>	29	38	<u>47</u>	56	65	<u>74</u>
3	12	<u>21</u>	30	39	48	57	66	75
4	13	22	31	40	49	<u>58</u>	67	76
<u>5</u>	14	23	32	41	50	59	68	77
6	15	24	33	<u>42</u>	51	<u>60</u>	<u>69</u>	78
7	16	25	<u>34</u>	43	52	<u>61</u>	70	
8	17	26	35	44	<u>53</u>	62	<u>71</u>	
9	18	27	36	<u>45</u>	54	63	72	

Score: 18

Admissions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name 0 Female Male Caucasian Negro Asian Age 24

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 12

Employment Record: Good Fair Poor Job Title CHECKER

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes No Purpose of Exam: Pre-employment Specific

**POLYGRAPH RESULTS**

Subject told truth: Yes No  
Examiner's Opinion: Cleared  
Failed

**QUESTION ITEMS**

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	
8	17	26	35	44	53	62	71	
9	18	27	36	45	54	63	72	

Score: 19

Admissions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name P Female  Male Caucasian  Negro Asian Age 25

Marriages 0  2 Div. Wid. Sep. Yrs. of School 12

Employment Record: Good  Fair Poor Job Title MAIL CLERK

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes \_\_\_\_\_ Purpose of Exam: Pre-employment  
 No  Specific

POLYGRAPH RESULTS

Subject told truth:  Yes No

Examiner's Opinion:  Cleared  
Failed

QUESTION ITEMS

1	10	19	28	<input checked="" type="radio"/> 37	46	55	64	73
2	11	20	<input checked="" type="radio"/> 29	38	47	56	65	<input checked="" type="radio"/> 74
<input checked="" type="radio"/> 3	12	<input checked="" type="radio"/> 21	30	39	48	<input checked="" type="radio"/> 57	66	75
4	13	22	<input checked="" type="radio"/> 31	40	49	58	67	76
5	14	23	32	<input checked="" type="radio"/> 41	<input checked="" type="radio"/> 50	59	68	77
<input checked="" type="radio"/> 6	<input checked="" type="radio"/> 5	<input checked="" type="radio"/> 24	33	42	51	60	<input checked="" type="radio"/> 69	<input checked="" type="radio"/> 78
7	16	25	<input checked="" type="radio"/> 34	43	<input checked="" type="radio"/> 52	61	70	
8	17	26	35	<input checked="" type="radio"/> 44	53	<input checked="" type="radio"/> 62	71	
<input checked="" type="radio"/> 9	<input checked="" type="radio"/> 8	27	<input checked="" type="radio"/> 36	<input checked="" type="radio"/> 45	<input checked="" type="radio"/> 54	63	72	

Score: 23

Admissions: Smoking "pat."  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Name Q **Female** Male **Caucasian** Negro Asian Age 26

Marriages 0 **1** 2 Div. **Wid** Sep. Yrs. of School 8

Employment Record: Good **Fair** Poor Job Title NURSE ASSISTANT

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: **Yes** No Purpose of Exam: Pre-employment **Specific**

**POLYGRAPH RESULTS**

Subject told truth: **Yes** No

Examiner's Opinion: **Cleared**  
Failed

**QUESTION ITEMS**

1	<b>10</b>	<b>19</b>	28	37	<b>46</b>	<b>59</b>	64	73
2	<b>11</b>	20	29	38	47	<b>58</b>	65	<b>74</b>
3	12	21	30	39	48	57	66	75
4	13	22	31	<b>40</b>	<b>49</b>	58	67	76
5	14	23	32	41	50	59	68	77
<b>6</b>	<b>15</b>	24	33	42	<b>51</b>	<b>60</b>	<b>69</b>	78
7	16	25	<b>34</b>	<b>43</b>	<b>52</b>	61	70	
8	17	26	35	44	53	62	71	
<b>9</b>	18	27	36	45	<b>54</b>	63	72	

Score: 19

Admissions: Cleared of juvenile delinquency charge.  
Did not turn in \$17 to owner of beauty shop.

Name V Female  Male  Caucasian  Negro  Asian Age 31

Marriages 0 1 2 Div. Wid. Sep. Yrs. of School 12

Employment Record: Good Fair Poor Job Title MAIL TELLER

Income \_\_\_\_\_ Mortgage Bal. \_\_\_\_\_ Other Debts \_\_\_\_\_

Arrest Record: Yes  No  Purpose of Exam:  Pre-employment Specific

POLYGRAPH RESULTS

Subject told truth:  Yes  No

Examiner's Opinion:  Cleared  Failed

QUESTION ITEMS

1	10	19	28	37	<input checked="" type="radio"/> 46	55	64	73
<input checked="" type="radio"/> 2	<input checked="" type="radio"/> 11	<input checked="" type="radio"/> 20	<input checked="" type="radio"/> 29	38	47	56	65	<input checked="" type="radio"/> 74
3	12	21	30	39	48	57	66	75
<input checked="" type="radio"/> 4	13	22	31	<input checked="" type="radio"/> 40	49	58	67	76
5	14	23	32	41	<input checked="" type="radio"/> 50	59	<input checked="" type="radio"/> 68	<input checked="" type="radio"/> 77
6	15	24	<input checked="" type="radio"/> 33	42	51	60	69	78
7	16	25	<input checked="" type="radio"/> 34	43	<input checked="" type="radio"/> 52	61	70	
8	17	26	35	44	53	62	71	
9	<input checked="" type="radio"/> 18	27	36	45	<input checked="" type="radio"/> 54	63	72	

Score: 17

Admissions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<u>SUBJECT</u>	<u>SCORE</u>	<u>SUBJECT</u>	<u>SCORE</u>
A	29	M	21
B	26	N	20
C	25	O	18
D	24	P	18
E	23	Q	17
F	23	R	15
G	23	S	15
H	22	T	15
I	22	U	15
J	21	V	14
K	21	W	14
L	21	X	13

---

 475

$$\bar{X} = 24 \quad \begin{array}{r} 19.79 \\ \hline 475. \\ 24 \\ \hline 235 \\ 216 \\ \hline 190 \\ 168 \\ \hline 220 \\ 216 \end{array}$$

$$\bar{X} = 19.8$$

WRONG ANSWER DISTRIBUTION  
FROM 78 QUESTION ITEMS  
ADMINISTERED TO 24 UNIVERSITY  
GRADUATE STUDENTS.

QUESTION ITEMS MISSED BY POLYGRAPH SUBJECTS.

THE FOLLOWING THREE TABLES LIST THE 78

QUESTION ITEMS AND THE SUBJECT BY

LETTER NAME.



INDICATES HONEST SUBJECT



INDICATES DISHONEST SUBJECT

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1				●		●									●											
2																							●			
3						●	●									●										
4																							●			
5											●															
6						●									●	●	●									
7																										
8								●							●											
9						●										●	●									
10			●								●						●									
11			●			●	●				●				●		●						●			
12							●																			
13																										
14							●								●											
15			●													●	●									
16																										
17							●																			
18							●								●								●			
19											●				●		●									
20											●												●			
21			●			●	●				●					●										
22																										
23															●											
24							●									●										
25																										
26							●								●											
27																										
28																										
29							●									●							●			
30																										
31																●										
32			●																							
33			●			●									●								●			



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
67																										
68				●																						
69											●					●	●									
70																										
71				●		●					●					●										
72																										
73																										
74											●					●	●									
75						●										●										
76				●		●																				
77																										
78						●	●									●	●									

did not answer

did not answer

GRAPHIC CORRELATION OF ITEMS MISSED  
BY HONEST AND DISHONEST SUBJECTS.

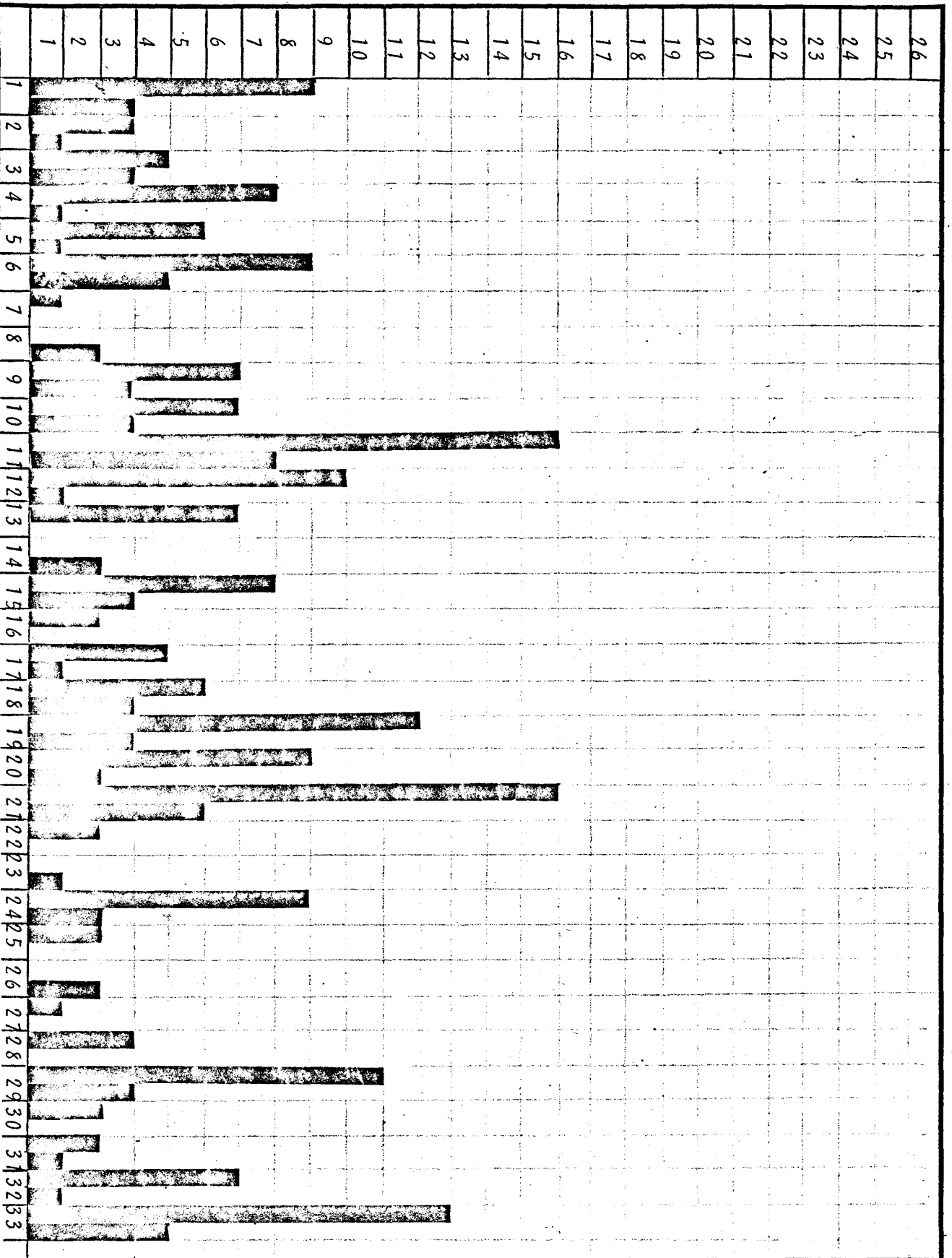


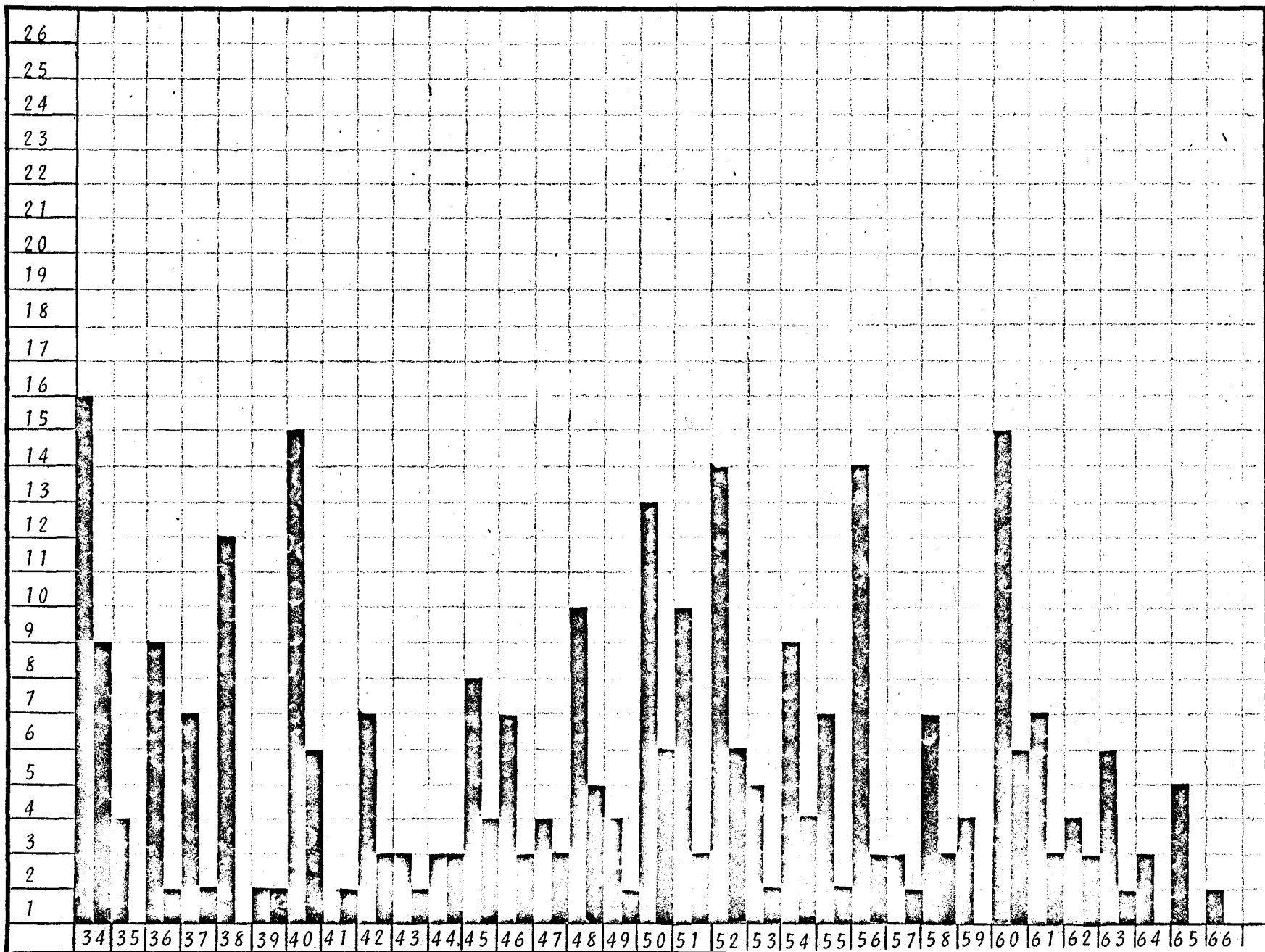
INDICATES HONEST



INDICATES DISHONEST









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APPROVAL SHEET

The thesis submitted by John R. Davis has been read and approved by three members of the faculty of the Institute of Industrial Relations.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Science in Industrial Relations.

Date June 4, 1969

Julius Perley  
Signature of Director