AN EXPERIMENTAL STUDY OF PERSONALITY DEVELOPMENT
IN THE STENOGRAPHY CLASS OF THE
EDINBURG HIGH SCHOOL

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AN EXPERIMENTAL STUDY OF PERSONALITY DEVELOPMENT
IN THE STENOGRAPHY CLASS OF THE
EDINBURG HIGH SCHOOL

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By

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CHAPTER I

INTRODUCTION

Statement of the Problem

Today's philosophy of education centers primarily around the development of character. In the past emphasis has been placed upon the physical and intellectual development of the individual, largely to the exclusion of any social and emotional adjustment. Outstanding educators feel that it is desirable to develop well adjusted personalities which are capable of participating in the social life of the present time and to subordinate individual interests to the good of the social group.

The purpose of this study is (1) to make a survey of all personality training procedures in an attempt to adapt those methods to the instructional problems of schools having a large Latin-American enrollment, and (2) to correlate personality development with the study of stenography and job finding by giving it specific emphasis in such a course.

This experiment grew out of the need for personality development because many of the writer's students, both Anglo-American and Latin-American, take jobs in business offices after graduating from Edinburg High School, Edinburg, Texas. There appeared to be a need for a personality program that
would help the student adjust himself to his new environment quickly and with a minimum of friction upon the beginning of a secretarial career.

There can be no doubt that personality training is an important factor to those who expect to earn their living in a business office, and the writer proposes to combine the information gathered from outstanding authorities concerning personality development and to justify its teaching in a class in stenography.

Authors agree that personality training is an important factor in making a satisfactory adjustment in the business world, but the following will probably give the full meaning of the importance of personality training for those who enter the business world. Paul W. Chapman is quoted as saying:

Your personality affects your relationships with people. It determines, in a large measure your happiness from day to day. Your social life is controlled by your personality, and what may be most important of all, it is the major factor in making possible a satisfactory occupational adjustment; that is, personality—to a greater extent than anything else—determines the degree to which you succeed or fail in the life work of your choice. 1

Howard M. Doutt elucidates the meaning and the importance of personality by saying:

Some employers go so far as to say that personality is the one outstanding consideration when employing a secretary. While this statement is not entirely accurate, as will be seen later, it contains so much truth that no one can afford to neglect those personal attributes

1Paul W. Chapman, Your Personality and Your Job, p. 7.
which go so far toward making or marring one's future. Education and training alone are by no means a guarantee of success.\(^2\)

Earl W. Barnhart gives the following quotation:

> Typists employed in offices have to work for and with other people. High speed and great accuracy alone are not enough for satisfactory service as a typist in most offices. Those workers, whose speech, conduct, dress, and social attitudes are such as to win the dislike of their associates or of a supervisor, are not considered desirable workers. Consequently, techniques need to be supplemented by such training as the school can give to aid beginners to know how to win the liking or at least the approval of employers, supervisors and working associates. More attention needs to be given in almost every class to developing some ability contributing to agreeable relationships in the social contacts of a typist.\(^3\)

Paul W. Chapman quoting from Donald A. Laird's book, *How to Make People Like You*, confirms the above statement and gives this further pertinent information:

> Mastery of the details of one's calling is not enough to bring a man to the point of maximum earning if he has not the personality to back his knowledge and assist in smoothing the way to apply it.\(^4\)

Paul W. Chapman gives backing to the above quotations, that personality is an important factor in the business world, by quoting the ensuing statement:

> A psychologist at Purdue University found evidence of this in the careers of graduate engineers who had been employed for five years. The group which rated highest in personality was earning an average income of $3,000 a year. The group of lowest personality

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rating was earning only $2,058 a year. Personality was paying the former group about $1,000 more a year. Those highest in intelligence were earning $2,628 a year. While those lowest in intelligence were earning $2,478 a year. Superior intelligence paid each $150 a year—while a superior personality paid more than six times as much.\(^5\)

In view of the foregoing, it is worthwhile to note the information quoted by Paul W. Chapman from the following survey:

The Harvard Bureau of Vocational Guidance, for example, found in the study of 4,400 persons who were discharged from jobs that personality factors were the cause of failure in 66 per cent of the cases. Lack of technical knowledge was the basic reason for the failure of only 34 per cent of the cases.\(^6\)

The Carnegie Foundation also saw the need of this type of training and issued this statement: "On the basis of our studies we find that technical training counts only 15 per cent in the success of an individual while personal qualities count for 85 per cent."\(^7\)

The following is quoted from an article by G. A. Prosser and substantiates the above findings: "In a recent survey of 4,000 discharged office and clerical employees of 76 organizations, only 10 per cent lost out because of a lack of specific skills, while 90 per cent lost their jobs because of undesirable character traits."\(^8\)

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\(^5\)Ibid., p. 8.

\(^6\)Paul W. Chapman, Your Personality and Your Job, p. 8.

\(^7\)Ibid.

It is clear from our study of what authors have to say that personality traits need to be specifically developed. A. H. Maslow makes this comment:

That what people feel, think, and wish is as important as what they do if the aim is to understand personality. In this we agree with the psychoanalysts, who have long claimed that the academic psychologist scratched the surface and neglected the most important aspects of personality. At the same time we do feel that it is quite possible to study inner personality in an acceptably scientific fashion, undoubtedly the most promising mode of approach available now is one that would simultaneously study both inner and outer aspects of important facets of personality.  

Authors and psychologists aver that personality is one of the most important assets to people in the business world. Then, people planning to enter the business world should know what personality traits employers seek in their employees. In his book *Your Personality and Your Job*, Paul W. Chapman gives the following facts:

Several thousand employers were asked which personality traits and characteristics they sought in their employees. From this representative opinion, coming from all parts of the United States and including all kinds of business enterprises, and all types of occupations it was concluded that all major aspects of "Personality" could be classified under ten headings as follows:

| Appearance | Expression |
| Agreableness | Intelligence |
| Manners | Self-Confidence |
| Interest | Dependability |
| Temperament | Loyalty |


Bothilda Mahler reveals the following information in a "Business Personality Survey" made during January, 1938, with the businessmen and women of Des Moines, Iowa, to determine the character and personality traits that they considered most important in obtaining and holding a job. Approximately eighty men and women were interviewed personally. The findings were computed from fifty questionnaires filled out at the time of the interviews. Sixty different traits were mentioned, sixteen of these were repeated often enough that they were selected as the most important; these are listed below:

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Transcription</th>
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<tr>
<td>Personality</td>
<td>Health</td>
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<tr>
<td>Capability</td>
<td>Experience</td>
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<tr>
<td>Initiative</td>
<td>Education</td>
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<tr>
<td>Loyalty</td>
<td>Neatness</td>
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<tr>
<td>Shorthand skill</td>
<td>Honesty</td>
</tr>
<tr>
<td>Typing and Accuracy</td>
<td>Dependability</td>
</tr>
<tr>
<td>Co-operation</td>
<td>Punctuality</td>
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</tbody>
</table>

Many more examples of the importance of personality to success may be added, but each one would be similar to these; that is, it would show that persons usually get or do not get a job on the basis of personal character which includes appearance, agreeableness, cooperation, courtesy, and many others.

As the writer felt that it was her responsibility to know which traits business men considered most important, a composite list of traits was made embodying all the personality

traits given in the studies made and reported on pages 5 and 6 of this study. These were written on the blackboard at Edinburg, and after some class discussion the traits listed below were chosen as the most applicable to the project at hand:

1. Appearance 8. Honesty
3. Initiative 10. Self-Confidence
5. Interest 12. Dependability
7. Accuracy 14. Tact

The above traits were listed according to their importance starting with Number 1 and so on to the least important which was Number 14.

The first step in this study was to find out how each student ranked on each trait—whether he was very low, low, average, high or superior.

Nature of the Study

Two groups—a control group designated as Group C and an experimental group designated as Group E—participated in this experiment. Each of these groups contained thirty students, boys and girls, twelve Latin-American and eighteen Anglo-American. During the first week of the school year the class in stenography, which is designated as Group E was given the information in the surveys as quoted on pages 3 and 4 of this chapter. They were also told of the importance of personality as stated by Paul W. Chapman and Howard M. Doug which is given on page 2 of this chapter. The importance
of personality training was then discussed. The students were asked if they would like to cooperate in taking some personality tests during their class period. They agreed unanimously to do so.

As the next step in the procedure, this study was explained to the study hall students and they were asked if they would cooperate in making this study and they said they would. The groups were told that they would take four tests. The scores of the first test, the California Test of Mental Maturity, were to be used to equate the groups. The following three tests were given at the beginning of school and served as an inventory of the students' personality traits: The Guilford-Martin Inventory I, Every-Day Life, and the California Test of Personality--Secondary Form A.15

Group E received specific training in personality development during the year, while the study hall group, which will be referred to as Group C--or control group--did not receive such training. The same tests were given near the close of school to determine if the students in the E group made higher scores than the students in the C group. These scores are compared in Chapter III.


13The Guilford-Martin Inventory I, 1943.

14Leland Stotts, Every-Day Life, 1941.

It seems that in developing personality two important elements are involved: (1) the inheritance of the child under instruction; and (2) the environment of the child.

Paul S. Lomax, Helen Reynolds, and Margaret H. Ely say:

The inheritance of the child probably fixes the limits of intelligence and appreciation of values within which those concerned with the development of his personality traits must work. The essential features of moral training becomes important factors in determining how his personality is going to develop. 16

Paul S. Lomax, Helen Reynolds, and Margaret H. Ely make the following statement:

The home environment of the child must always play a very large part in his development. It is only when the school has the full cooperation of the home in a wholehearted effort to assist the child in acquiring desirable ideals that the best results can be obtained. 17

In regard to environment, Kenneth V. Francis and Ella A. Fillmore make this comparison:

In comparing the immediate physical environment of the children and the parents attitudes with their effect on the child's personality adjustment, the physical environment by itself is shown to be of comparatively little importance, whereas a number of the parents attitudes appear to be significantly influential. Thus the factors originally thought to be important, namely, poor economic conditions, broken homes, foreign born parents, and physical sickness, have little effect on their own account. 18

16 Paul S. Lomax, Helen Reynolds, Margaret H. Ely, Problems of Teaching Typing, p. 18.


Garry Cleveland Myers says:

The child or youth is never neutral in any social situation; he is always influenced in one way or another by his social environment. For this reason the words and the deeds of all who train the young, or who are even bystanders while the training is in progress, are of importance in shaping the child's personality.19

Since the child is always influenced in one way or another all teachers of Latin-American students should be very careful because these students as a general rule struggle under a sense of inferiority. They lack the self-confidence and dependability that is essential to his well being and happiness in this community.

Sources of Data

The data for this study were collected from books and magazine articles written on personality training, personality development, and teaching ideals. Three personality tests were given at the beginning of school and again near the close of school. One I. Q. test, personality charts, and personality rating scales were also used. The testees were segregated into two groups. The control group which consisted of thirty boys and girls in the twelfth grade is designated as Group G. An experimental group which consisted of thirty boys and girls is designated as Group E. Original materials gathered from the class were also utilized in the study. Near the close of school the students were asked to write a paragraph on their opinion

19 Garry Cleveland Myers, Building Personality in Children, p. ix.
of the course in which they were enrolled. Personalities of persons with whom the students came in contact during the day were discussed during different phases of the course. Great care was taken to see that no reference was made to name, race, or religion of the individual discussed.

Definition of Terms

1. Character is referred to, in this study, as a distinctive quality of trait.

Paul S. Lomax, Helen Reynolds, and Margaret H. Ely say:

Character refers to the most basic traits (a trait may be considered as a unit type of reaction), such as integrity, loyalty, industriousness, etc. A man may be notably lacking in such qualities or traits as courtesy, judgment, adaptability, thrift; yet if he possesses the basic traits of integrity, loyalty, and industriousness, he may be considered a man of sterling character. On the other hand, the 'confidence' man who is utterly lacking in integrity and consideration for the feelings of others may possess an outstanding personality, exhibiting in generous degree such traits as courtesy, sociability, neatness, accuracy, initiative, adaptability, punctuality, etc. While the school as a whole should be primarily interested in the basic traits which we have designated as character traits, the teacher must be concerned as well with personality traits, which are particularly essential in the performance of the duties required of a stenographer. 20

2. Personality is defined by Myron C. Fisher and John A.

PENDERY in the following statement:

"Everyone has personality, whether it is good or bad. When most of us think of personality, we usually have in mind the outward appearance of a person and the way the person affects other people. Although the qualities that go to make up a person's

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20 Paul S. Lomax, Helen Reynolds, Margaret H. Ely, Problems of Teaching Typewriting, p. 32.
outward appearance are important in developing personality, there are traits and characteristics that are much deeper and much more influential on personality development.21

Louis Peter Thorpe makes this comment:

The term personality is probably one of the most ambiguous in modern psychology. Practically every writer has his own notion of what it means and what definition should be attached to it. While we all recognize that each person possesses a unique individuality which is peculiar to him alone we do not know exactly how to describe this individuality and so we have fallen into the habit of giving it a general unanalysed label, viz., Personality.22

While it is recognized that each person possesses a unique individuality, J. C. Chapman says:

We may define personality as the sum total of the reactions of any individual—physical, mental, and emotional. A man's effective personality at any time is shown by the manner in which he thinks, feels, and acts in the manifold situations of life.23

Ross Stagner defines personality in the following manner:

"Strictly speaking, 'personality' is a quality or attitude of behavior."24

Charles G. Reigner gives this definition:


22 Louis Peter Thorpe, Psychology Foundations of Personality, p. 7.


24 Ross Stagner, Psychology of Personality, p. 5.
Your personality is a compound of your various qualities—spiritual, emotional, and physical. Modern business is built on the cooperation of many minds and hands. Willingness to cooperate with other people in getting things done is really the basic factor in the successful secretary's attitude.  

Frances S. Miller and Helen Laitan say:

The mental hygienist thinks of personality in a broader sense. To him personality does not include merely a person's social traits; it is the sum total of all his ideas, beliefs, and attitudes. To him the term wholesome personality is more important than pleasing or forceful personality.

W. W. Charters also says:

The personality of an individual is the product of his reactions to a million situations, just as the giant redwood is the product of the reactions of a thousand years in the millions of cells which compose its body.

To take the term personality out of its more complicated meaning it is simply the reaction of an individual to his environment.

Raymond B. Cattell, in his Description and Measurements of Personality, says: "The reactions which constitute the data of personality study are all the reactions of the organism; its reaction to people, things, and ideals; its partial reaction, as in reflexes, and its total reaction; its conscious reactions and its unconscious reactions."

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25 Charles G. Reigner, College Secretarial Practice, p. 146.

26 Frances S. Miller and Helen Laitan, Personal Problems of The High School Girl, pp. 1-2.


28 Raymond B. Cattell, Description and Measurements of Personality, pp. 15-16.
Willis L. Uhl and Francis F. Powers define personality in this manner:

Personality is the result of the effect that we have on other people and upon ourselves. These effects are produced by a combination of physical and social factors. Many of them are within our own control.\(^{29}\)

Newman L. Hoopingarner says: "Personality may be defined as the sum total results of all of one's qualities and characteristics as these act and interact to affect other people."\(^{30}\)

3. Frances S. Miller and Helen Laitan say: "Environment in which the student lives includes surroundings, conditions, influences, or forces; that is, his home and his community."\(^{31}\)

4. Stenography as is given in Edinburg High School is a senior course which meets for two hours daily. The first hour is used in studying shorthand, and the second hour is spent at the typewriter.

5. Latin-American students are those of Spanish descent most of whose parents and grandparents have lived in the United States all their lives.

6. Anglo-American students are English-speaking students.


Related Studies

Dixie Crockett in her Master's thesis, "A Comparative Study of the Personality of Town Pupils and School Bus Pupils in the Elementary Grades," presents a comparable study of personality rating. In the study which was made in the Decatur Elementary School with three different classes, compared personalities of town pupils and school bus pupils. Miss Crockett used the California Test of Personality Elementary Form A. She found each group ranked about the same.

A test of the personalities of the freshmen and senior women at North Texas State Teachers College was made by Anna Bond Odell in 1941. She used the California Test of Personality. The test revealed that the women, both freshmen and seniors, were, as a whole, adjusted to the problems and conditions of their environment, and were developing a normal, happy, and socially effective personality. She makes the recommendations that school systems should develop a common philosophy concerning student guidance programs.

Lucille Cottrell in her Master's thesis, "The Accuracy of Teachers' Rating of Pupil Personality and Achievement as

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compared with standardized tests,"\(^{34}\) also presents a comparable study of personality rating. In the study which was made in the Albany Elementary School with the fourth to the seventh grades inclusive and eight of the teachers participating Miss Cottrell used the California Test of Personality Elementary Form A\(^{35}\) and compared the subjective rating of pupils by teachers with their respective standardized test rating. The results showed that there was a high correlation between the teachers' rating of each pupil's achievement and the standardized test scores. The study also showed that the teachers were more accurate in their rating of each pupil's personality than they were in rating the pupil's achievement as compared to the standardized tests.

Bothilda Mahler,\(^{36}\) in her "Business Personality Survey" to determine the traits of character and personality most important in obtaining and holding a position, found that appearance and personality traits were considered the most important by a majority of the employers. She also found that inefficiency, lack of interest, lack of initiative, and

\(^{34}\) Lucille Cottrell, "The Accuracy of Teachers Ratings of Pupil Personality and Achievement as Compared with Standardized Test Scores," (Unpublished Master's Thesis, Department of Education, North Texas State Teachers College, 1946.)

\(^{35}\) Louis P. Thorpe, Willis W. Clark and Ernest W. Tieg, California Test of Personality Elementary Form A.

carelessness of appearance were the chief causes of dismissal from jobs. Employers considered accuracy in typing the most important technical skill for office workers.

Jacque Ozanne,\textsuperscript{37} endeavored to determine to what extent present commercial education is meeting the needs of business in training potential employees, and to discover possible ways in which curricula, course content, and teaching methods might be revised to meet these needs. He also sought to provide data that will permit more effective guidance of students contemplating a commercial career.

Questionnaires were sent to 256 firms. The findings were as follows: (1) that it is probable that courses in personality can be organized; (2) the solution seems to be through teachers of commercial classes aiding the student in personal appearance details through direct contact with the student; (3) that instructions in oral and written English should be given in connection with almost every subject in the commercial curriculum; and (4) that employers place as much, if not more, emphasis on qualifications other than the acquisition of specific clerical skills.

Dorothy C. Finkelhor,\textsuperscript{38} in a questionnaire sent to 115 employers attempted to determine the adjustments necessary


\textsuperscript{38}Dorothy C. Finkelhor, "Occupational Adjustments of Beginning Office Workers," (Business Training College, Pittsburgh, Pa. 1942.)
for the beginner in getting and keeping an office position. The questionnaire was divided into three parts—hiring, office policies and procedures, and relationship. Some of the things she found to need adjustment were personal appearance, learning details of work from fellow employees, getting along with fellow workers, and working overtime. She also found that many beginners did not get along with supervisors.

J. H. Dodd, in his study, "Commercial Occupational Survey of Virginia," sought to find: (1) the percentage of commercial workers employed according to sex and age, (2) the kinds of office appliances used, (3) the opinion of employers as relative importance of certain subjects taught in the high school, (4) the turnover of employees, and (5) the chief weaknesses, both personality and skill, of commercial employees as seen by employers.

A survey was made in fourteen different business offices by the questionnaire method, and a summary of the chief weaknesses was compiled as follows: (1) inadequate teaching of subject matter; (2) lack of proper development of qualities known as personality, attitudes, judgment, initiative, and attention to details; (3) weaknesses in formal instruction in written English, in penmanship, in spoken English, and in arithmetic.

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Dodd's study included experienced and inexperienced workers without a distinction of group weaknesses.

Organization of Data

The data collected in this investigation are organized into the following divisions:

Chapter I sets out the background of the problem, states the problem, gives the purpose of the problem, nature of the study, sources of data, definition of terms, related studies, and organization of the data by chapters.

Chapter II deals with the approach to the problem, class materials and instruments used in securing the data, and the procedure in making the study.

Chapter III gives the results of the investigation, the comparison of the groups, tables of results, and student's opinions.

Chapter IV presents the findings, conclusions drawn by the writer, and the recommendations.

Chapter V gives an outline of the course of study, and the suggested methods of teaching personality traits.

The Appendix includes the four tests with their respective manuals which were used in securing the data utilized in this experiment. The test include the following: The California Test of Mental Maturity—Advanced Series, The Guilford-Martin Inventory I, Stott's Every-Day Life, and the California Test of Personality—Secondary Form A.
The Bibliography contains the books, the unpublished materials, and the articles consulted and quoted in this study.
CHAPTER II

APPROACH TO THE PROBLEM

Instruments Used in Securing Data

This study has grown out of a need for personality training in the stenography course in Edinburg High School and is designed to help the students fit into their environments. It is also the desire of the writer to assist in helping the students improve their personalities.

An unorganized personality program was previously carried on for three years in the stenography classes with evidence of success in improved attitudes and personalities, but up to the time of this experiment no objective methods had been used to measure personality development.

During the first week of the 1947-1948 session of school the writer explained to the students in the stenography class some of the things that would be required of them if they entered the business world. In this discussion personality was mentioned, and a brief summary was given of the surveys quoted in Chapter I, pages 3 and 4. The importance of personality training was emphasized at this first meeting.

The students were asked if they would like to participate in a study of personality traits, the purpose being to improve their own personality. They all said they would be glad to participate.
This training was to be a part of the course of study in stenography and was to be carried out during the class period.

The plan of the course was then set up, as follows:

1. At the first meeting the class discussed the personality traits that businessmen most generally seek in a secretary. These are listed in Chapter I, pages 5 and 6.

2. A brief explanation was made of the surveys giving the findings quoted in Chapter I, pages 3 and 4.

3. Some plans were made on how the class could determine to what extent each student was lacking in basic personality traits. Tests were discussed here, and the list of personality traits in Chapter I, page 6 was discussed.

4. The students were told that they were to rate each other on the personality traits, then rate themselves, and then have five teachers rate each one.

5. It was decided to use standardized tests listed and described in Chapter I, page 8.

6. After the tests were given and the scores tabulated a discussion followed with the needs of each student recorded.

At this first meeting the writer explained that the students would rate each other, then rate themselves, and then have five teachers rate them on the personality traits selected by the class. These traits are listed in Chapter I, page 7.

The writer also explained that four tests would be given. One test would be an I.Q. test, which was to serve as a basis for equating the groups, and three of the tests were to measure personality variables. The four tests were to be given at the beginning of the school year. Near the close of the school year the students were to rate each other again using the same personality variables that they used at the beginning of
school; they were also to rate each other; then rate themselves; and then have the same teachers rate them. The three personality tests were to be given again near the close of school. The stenography class is known as the experimental group, and in this study will be referred to as Group E.

As the next step in the procedure was the selecting of a control group, the writer met with a study hall group which contained all twelfth grade students, and explained the study of personality development to them. They were asked if they would participate in this study, and they all agreed to do so.

Group E took the I. Q. test first, which is the California Test of Mental Maturity,¹ and all data were tabulated. In order to select a control group, it was necessary to give the same test to the study hall group of sixty students. The same test was given to this study hall group at approximately the same time of the school day, and under approximately the same conditions. These students will be referred to throughout this study as Group C.

Groups C and E were to be as nearly equal as possible. The balancing of groups for experimental purposes was accomplished by pairing individuals from the two groups according to I. Q., chronological age, and mental age.

¹ Elizabeth T. Sullivan, Willis W. Clark, and Ernest Tiegs, California Test of Mental Maturity—Advanced Series, Grades 9–Adult, 1947.
The California Test of Mental Maturity, was given to Group C and the scores paired with Group E, for example, student Number 1 of Group C was 16.5 years of age with an I.Q. of 127. Student Number 10 of the tested beginning possible students to be put in Group C was also 16.5 years of age and had an I.Q. of 127. This procedure was followed in choosing the students to be put in Group C until every student in Group E was paired with one of approximately the same age and I.Q. The findings are tabulated in Chapter III.

This experiment covered a school year and was made with two different groups, designated as Group C and Group E. The control group which is referred to as Group C consists of thirty twelfth grade students—twelve Latin-Americans and eighteen Anglo-Americans. Their average age was 16.58 years. Group E—the experimental group—consisted of thirty twelfth grade students, twelve Latin-Americans and eighteen Anglo-Americans all enrolled in stenography. Their average age was 16.24 years.

One battery of tests was given to both groups near the beginning of school; other tests were given to both groups near the close of school. Group E was given personality training during the year, while Group C received no specific training in personality.

The following four tests were used: (1) California Test of Mental Maturity--Advanced Series; (2) Every-Day Life; (3) The Guilford-Martin Inventory I; (4) California Test of Personality--Secondary Form A. The California Test of Mental Maturity is an I.Q. test, and measures memory, spatial relationships, logical reasoning, numerical reasoning, and vocabulary. Every-Day Life measures the three personality traits of independence, resourcefulness, and personal responsibility. Independence in personal matters, as expressed here, shows that the individual prefers to make his own decisions, and to rely on his own judgment. A high score shows that he is inclined to meet and solve his own problems and difficulties in his own way. A high score in resourcefulness shows that an individual is willing to work and lead in a group situation, to make suggestions and contributions, and to participate actively in a group discussion. In the variable personal responsibility, a high score would show a dependable individual --who can be depended upon to do his job, and one who is conscientious in meeting his obligations.

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4 Leland Stotts, Every-Day Life, 1941.

5 The Guilford-Martin Inventory I, 1943.

In The Guilford-Martin Inventory I test the following traits are tested: Objectivity, agreeableness, and cooperation. In this test objectivity will show that the student does not take things personally, and that he is not touchy about things. Agreeableness shows that the person is not belligerent nor does he possess a dominating disposition. Cooperation is opposed to overcriticism, fault-finding, and suspiciousness. A high score on these traits would indicate a well-balanced personality.

The personality traits were not discussed as a part of the test, but all of them were included in the discussions that were held. As an example of this, independence was discussed and it was brought out that a person should make his own decisions. He should not rely on his friends to make decisions for him. He should bring to class each day the materials needed for that day, and should not wait until he gets to class to borrow paper, a pen, or an eraser from some other student. Objectivity was another example. Here it was brought out that being suspicious, and thinking that other people were talking about him and trying to do him harm could lead to a more serious situation. Mention was made as to how people could ward off and overcome such emotional reactions. The same method was used with social skills and social standards.

The California Test of Personality provides data for aiding students to measure their self-adjustment and their social-adjustment. "Students' reactions to items are obtained, not
primarily for the usefulness of total or section scores, but
to detect the areas and specific types of tendencies to think,
feel, and act which reveal undesirable individual adjustment. 7
The test is divided into two sections, self-adjustment and
social-adjustment. Louis P. Thorpe, Willis W. Clark and
Ernest W. Tieg say:

The purpose of Section I is to indicate how the
student feels and thinks about himself, his self-
reliance, his estimate of his own worth, his sense of
personal freedom, his feeling of belonging. In this
section the student also reveals certain withdrawing
and nervous tendencies which he may possess. Section
II consists of social adjustment components. Its
purpose is to show how the student functions as a
social being, his knowledge of social standards, his
social skills, his freedom from anti-social tendencies,
and his family, school, and community relationships. 8

Eighteen personality variables are included in the three
tests, which include a rather broad scope of the student's
personality. Each one of the authors of the tests claims a
validity and reliability for the rating on the variables. The
validity of a test is determined by the degree to which it
measures what it is supposed to measure; while the reliability
of a test is determined by the consistency of measurement.

The computations of the test scores have gone through a
series of steps that will show the mean, standard error of the
mean, standard error of the difference of the mean, and the

7Louis P. Thorpe, Willis W. Clark, Ernest W. Tieg, Manual of Directions, California Test of Personality—Secondary
Form A. 1942, p. 2.

8Ibid., p. 2.
difference between the two means, or critical ratio for Group C and Group E.

In computing the test scores, the raw scores were added and the arithmetic mean found. The arithmetic mean was used throughout as it is a more accurate measure of central tendency than the median or mode. The mean is a point on the scale where the sum of the deviations above a selected point is exactly equal to the sum of the deviations below the point. The formula for the arithmetic means for grouped data is:

\[ M = \frac{\sum X}{N} \]

The standard error of the mean was computed by dividing the standard deviation by the square root of \( N \). The purpose of the standard error of mean is to show the fluctuation of variability from the true mean. The formula for the standard error of mean is:

\[ \hat{\sigma}_X = \frac{\sigma}{\sqrt{N}} \]

Whatever the value of the true mean it is reasonably sure that two out of three sample means will fall within plus and minus one standard error of the mean.

The standard error of the difference between the means is computed by securing the standard error of the mean for the two means to be compared. They are then squared and added and the square root of this sum gives the standard error of difference between the means. The formula is:

\[ \sigma_{\hat{Y}_E - \hat{Y}_F} = \sqrt{\sigma_{\hat{Y}_E}^2 + \sigma_{\hat{X}_F}^2} \]
The final step in the computations is found by subtracting the arithmetic mean of two samples to be compared, which is the observed difference, and dividing the result by the standard error of the difference between the means of the two samples. The formula is:

\[ \frac{X}{\sigma} \]

Class Methods and Procedure

Approximately thirty minutes was spent in explaining why the students in business should have this training, and a list of personality traits given in Chapter I, pages 5 and 6, that employers desired in their employees were put on the blackboard. From this list the class chose fourteen traits that they considered most important for office workers. It was suggested that the students think of their class period as a business office, and try to conduct themselves each day as they would if they were employed.

The class procedure was centered around four fundamental steps as follows:

1. **Realization** of the need for improvement.
2. **Motivation**, a strong desire for improvement.
3. **Inventory**, an analysis or stocktaking of strong and weak points.
4. **Systematic Plan** for improvement.

---

As there should be a realization of the need for improvement the students were given a personality rating sheet with the same variables that were written on the blackboard. Each put his name on one of these sheets and then all of the sheets were passed around among the members of the class. The students rated each other as to whether they ranked very low, low, high, average or superior on each trait. Then they rated themselves, and then five teachers gave them ratings. The standardized tests mentioned in this chapter on page 25 were also given to the class.

The desire for self-improvement, public approval, security and power was expressed by the class at this first meeting.

The students were to make an inventory and record their strong points and their weak points. These points were to be taken from the personality tests, and other peoples' ratings of the individual student.

A systematic plan for improvement was incorporated, whereby weak points were to be improved, one area at a time. This type of planning in personality development is the most difficult to do. It takes determination, tenacity of purpose, and self-control.

This plan consisted of a three weeks' study of the personality traits that the class selected as the most important traits. This list is found in Chapter I, page 7.

A few minutes were spent each day in the discussion of one trait, and so on until the list was completed.
The students were told that they could improve their personalities by being tactful, courteous, and agreeable in their dealings with other people. Students were also told that cooperation, dependability and a happy disposition would help them in winning friends. Also, that a determination to improve weak points would help them in every-day living.

The students were to consult their inventory and try to improve on each point whenever the opportunity presented itself.
CHAPTER III

RESULTS OF INVESTIGATION

Method of Procedures

Group C was the control group and Group E was the experimental group as described in Chapter II. Between the time of the first and second tests Group E received personality training using the discussion method of procedure. The topics used in this class are described in the preceding chapter. The group designated as Group C did not receive special training in personality traits.

At the beginning of the semester the stenography class discussed the personality traits given in the surveys in Chapter I, pages 5 and 6, and chose fourteen variables as the most suitable to rate themselves on. The variables are listed in Chapter I, page 7.

These variables were mimeographed and each student put his name on a sheet, and these were passed among the group. The students rated each other, and then rated themselves, and then five teachers rated them as to whether they were very low, low, average, high or superior. A very low rating was marked 1, low 2, average 3, high 4, and superior 5. All data were tabulated and the results will be found in Table 1 in this chapter.
<table>
<thead>
<tr>
<th>Personality Variables*</th>
<th>Average Student Rating</th>
<th>Average Self-Rating</th>
<th>Average Teacher Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Test</td>
<td>Second Test</td>
<td>First Test</td>
</tr>
<tr>
<td>Appearance</td>
<td>3.5</td>
<td>4.5</td>
<td>3</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>4.3</td>
<td>4.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Initiative</td>
<td>3.9</td>
<td>4.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Courtesy</td>
<td>3.9</td>
<td>4.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Interest</td>
<td>4.1</td>
<td>4.6</td>
<td>4.2</td>
</tr>
<tr>
<td>Loyalty</td>
<td>4.7</td>
<td>4.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Accuracy</td>
<td>3.9</td>
<td>4.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Honesty</td>
<td>4.7</td>
<td>4.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Co-operation</td>
<td>4.2</td>
<td>4.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>4.1</td>
<td>4.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Neatness</td>
<td>3.8</td>
<td>4.6</td>
<td>4.2</td>
</tr>
<tr>
<td>Dependability</td>
<td>4</td>
<td>4.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Punctuality</td>
<td>4.3</td>
<td>4.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Tact</td>
<td>3.9</td>
<td>4.3</td>
<td>3.9</td>
</tr>
</tbody>
</table>

*Selected from the complete list of variables as being the most applicable to the study being made.
In computing the findings of this rating the scores for the variables were added and then divided by the number of students which is 30.

In comparing the two groups, Table 1 indicates that the scores were low on all personality variables on the first student rating. However, all personality variables show a gain on the second student rating.

The student rating of themselves was low on the first test. This is to be expected due to the fact that they were modest or that they realized a lack of personality. The second student rating shows a gain on all personality variables.

Teacher ratings show that the students improved on all personality variables between the time of the first rating and the second rating.

It is interesting to note that the scores for student rating and teacher rating coincide in many instances.

The next step in the study was to equate the groups. This is described in Chapter II, page 24.

Data for the equated groups are tabulated in Table 2, page 35, which shows that the two groups are as nearly equal as possible as to I.Q., chronological age, and mental age. There is a difference of .23 of a mean point in I.Q., a difference of .34 of a mean point in chronological age and a difference of .22 of a mean point in mental age.
Student rating, self-rating, teacher rating and the second battery of personality tests were given near the close of the school year to test the possible gain or development in personality and attitudes, and for comparison of scores of the two groups. The results of the computations of the test scores are found in Table 3, Table 4, and Table 5 in this chapter.

Frederick E. Croxton and Dudley J. Cowden say:

The question may be raised as to just how great the observed difference must be in relation to the standard error of the difference, if the difference is to be considered significant. Some statisticians suggest the 'rule of thumb' procedure: that when

\[
\frac{X}{\sigma} = 3.0 \text{ or more, the difference may be considered as not due to chance.}
\]

\[\text{(1)}\]

Frederick E. Croxton and Dudley J. Cowden for convenience say:

\[
\frac{Y}{\sigma} \quad \text{Conclusion}
\]

- 3.0 or more: Clearly significant
- 2.0-3.0: Probably significant
- 1.0-2.0: Probably not significant
- Under 1.0: Not significant

The above terminology here is used throughout the interpretations of these results.

The mean score for objectivity on the first test for Group C was 41.2. Group E had a mean score of 32.03. The critical ratio was 2.4 in favor of Group C which is probably significant. Group C had a mean score of 39 on the second test, and Group E had a mean score of 49. Group C gained 2.2 points, while Group E gained 10 points. The critical ratio was 3.69 in favor of Group E which is clearly significant.

The mean score for cooperation on the first test for Group C was 51.5. Group E had a mean score of 44. The critical ratio was 1.93 in favor of Group C which is probably not significant. On the second test Group C had a mean score of 52. Group E had a mean score of 65 on the second test. The critical ratio was 4.72 in favor of Group E which is clearly significant.

---

### TABLE 3

THE MEAN, STANDARD ERROR OF MEAN, STANDARD ERROR OF THE
DIFFERENCE, THE STANDARD ERROR OF THE DIFFERENCE
BETWEEN THE MEAN OF GROUPS C AND E

<table>
<thead>
<tr>
<th>Personality Variables*</th>
<th>Mean</th>
<th>( \sigma )</th>
<th>( \sigma_{Xc}^- )</th>
<th>( \sigma_{XE}^- )</th>
<th>( \chi )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
<td>C</td>
<td>E</td>
<td>Group</td>
<td>C</td>
</tr>
<tr>
<td>Objectivity</td>
<td>41.20</td>
<td>32.03</td>
<td>3.09</td>
<td>2.21</td>
<td>3.79</td>
</tr>
<tr>
<td>Cooperation</td>
<td>51.50</td>
<td>44.00</td>
<td>3.04</td>
<td>2.44</td>
<td>3.88</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>33.50</td>
<td>28.00</td>
<td>1.93</td>
<td>1.47</td>
<td>2.42</td>
</tr>
<tr>
<td>Independence</td>
<td>58.50</td>
<td>61.33</td>
<td>3.87</td>
<td>3.18</td>
<td>4.79</td>
</tr>
<tr>
<td>Resourcefulness</td>
<td>56.61</td>
<td>56.36</td>
<td>2.81</td>
<td>1.93</td>
<td>3.25</td>
</tr>
<tr>
<td>Responsibility</td>
<td>71.60</td>
<td>76.10</td>
<td>5.26</td>
<td>4.47</td>
<td>6.89</td>
</tr>
<tr>
<td>Self-reliance</td>
<td>9.23</td>
<td>11.70</td>
<td>0.74</td>
<td>0.43</td>
<td>0.85</td>
</tr>
<tr>
<td>Sense of personal worth</td>
<td>12.16</td>
<td>14.10</td>
<td>0.54</td>
<td>0.44</td>
<td>0.69</td>
</tr>
<tr>
<td>Sense of personal freedom</td>
<td>12.90</td>
<td>13.06</td>
<td>0.54</td>
<td>0.25</td>
<td>0.59</td>
</tr>
<tr>
<td>Feeling of belonging</td>
<td>13.16</td>
<td>14.23</td>
<td>0.42</td>
<td>0.19</td>
<td>0.46</td>
</tr>
<tr>
<td>Withdrawing tendencies</td>
<td>10.5</td>
<td>12.00</td>
<td>0.62</td>
<td>0.34</td>
<td>0.70</td>
</tr>
<tr>
<td>Nervous symptoms</td>
<td>9.6</td>
<td>10.73</td>
<td>0.65</td>
<td>0.42</td>
<td>0.77</td>
</tr>
<tr>
<td>Social standards</td>
<td>13.97</td>
<td>14.00</td>
<td>0.27</td>
<td>0.25</td>
<td>0.37</td>
</tr>
<tr>
<td>Social skills</td>
<td>13.50</td>
<td>12.81</td>
<td>0.37</td>
<td>0.32</td>
<td>0.49</td>
</tr>
<tr>
<td>Anti-social tendencies</td>
<td>13.23</td>
<td>13.10</td>
<td>0.46</td>
<td>0.30</td>
<td>0.55</td>
</tr>
<tr>
<td>Family relations</td>
<td>12.23</td>
<td>12.33</td>
<td>0.37</td>
<td>0.20</td>
<td>0.42</td>
</tr>
<tr>
<td>Social relations</td>
<td>11.40</td>
<td>11.74</td>
<td>0.32</td>
<td>0.25</td>
<td>0.40</td>
</tr>
<tr>
<td>Community relations</td>
<td>12.60</td>
<td>12.80</td>
<td>0.53</td>
<td>0.40</td>
<td>0.66</td>
</tr>
</tbody>
</table>

*Compiled from the three lists of variables utilized in the personality tests.
TABLE 4
THE MEAN, STANDARD ERROR OF MEAN, STANDARD ERROR OF THE
DIFFERENCE, THE STANDARD ERROR OF THE DIFFERENCE
BETWEEN THE MEANS OF GROUP C AND E

<table>
<thead>
<tr>
<th>Personality Variables*</th>
<th>Mean Group</th>
<th>$\sigma_{X}$ Group</th>
<th>$\sigma_{X-E}$</th>
<th>$\frac{X}{\delta}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>E</td>
<td>C</td>
<td>E</td>
</tr>
<tr>
<td>Objectivity</td>
<td>39.00</td>
<td>49.00</td>
<td>1.76</td>
<td>2.10</td>
</tr>
<tr>
<td>Cooperation</td>
<td>52.00</td>
<td>65.00</td>
<td>2.71</td>
<td>1.54</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>35.50</td>
<td>48.00</td>
<td>1.93</td>
<td>1.44</td>
</tr>
<tr>
<td>Independence</td>
<td>58.90</td>
<td>78.60</td>
<td>3.67</td>
<td>2.09</td>
</tr>
<tr>
<td>Resourcefulness</td>
<td>57.10</td>
<td>67.20</td>
<td>2.61</td>
<td>1.05</td>
</tr>
<tr>
<td>Responsibility</td>
<td>73.00</td>
<td>96.20</td>
<td>4.86</td>
<td>2.68</td>
</tr>
<tr>
<td>Self-reliance</td>
<td>10.00</td>
<td>13.50</td>
<td>2.21</td>
<td>2.20</td>
</tr>
<tr>
<td>Sense of personal freedom</td>
<td>12.00</td>
<td>14.20</td>
<td>5.55</td>
<td>4.45</td>
</tr>
<tr>
<td>Feeling of belonging</td>
<td>13.40</td>
<td>14.50</td>
<td>2.25</td>
<td>2.09</td>
</tr>
<tr>
<td>Withdrawing tendencies</td>
<td>11.40</td>
<td>14.10</td>
<td>3.22</td>
<td>4.55</td>
</tr>
<tr>
<td>Nervous symptoms</td>
<td>10.50</td>
<td>12.40</td>
<td>6.22</td>
<td>4.66</td>
</tr>
<tr>
<td>Social standards</td>
<td>13.50</td>
<td>14.23</td>
<td>3.77</td>
<td>1.99</td>
</tr>
<tr>
<td>Family relations</td>
<td>12.40</td>
<td>14.10</td>
<td>4.66</td>
<td>2.52</td>
</tr>
<tr>
<td>Social relations</td>
<td>11.40</td>
<td>13.16</td>
<td>3.33</td>
<td>4.22</td>
</tr>
<tr>
<td>Community relations</td>
<td>12.40</td>
<td>14.23</td>
<td>4.66</td>
<td>1.99</td>
</tr>
</tbody>
</table>

*Compiled from the three lists of variables utilized in the personality tests.
The mean score for *agreeableness* on the first test for Group C was 33.5, and Group E had a mean score of 28. The critical ratio is 2.27 in favor of Group C which is probably significant. On the second test Group C had a mean score of 35.5 while Group E had a mean score of 48. The critical ratio was 5.83 in favor of Group E which is clearly significant.

The mean score for *independence* on the first test for Group C was 58.5. Group E had a mean score of 61.33. The critical ratio was .59 in favor of Group E which is not significant. On the second test Group C had a mean score of 58.9 and Group E had a mean score of 78.6. The critical ratio was 4.61 in favor of Group E which is significant.

The mean score for *resourcefulness* on the first test for Group C was 56.61. Group E had a mean score of 56.38. The critical ratio was .07 in favor of Group E which is not significant. On the second test Group C had a mean score of 57.1 and Group E had a mean score of 67.2. The critical ratio was 4.02 in favor of Group E which is clearly significant.

The mean score for the variable *responsibility* on the first test for Group C was 71.6, and the mean score for Group E was 76.1. The critical ratio was .64 in favor of Group E which is not significant. On the second test Group C had a mean score of 73. Group E had a mean score of 96.2. The critical ratio was 4.11 in favor of Group E which is clearly significant.

The mean score for *self-reliance* for Group C on the first test was 9.23. Group E had a mean score of 11.7. The
critical ratio was 2.9 in favor of Group B which is probably significant. On the second test Group C had a mean score of 10, while Group B had a mean score of 13.5. The critical ratio was 12.06 in favor of Group B which is clearly significant.

The mean score for the personality variable *sense of personal worth* on the first test for Group C was 12.16. For Group B the mean score was 14.1. The critical ratio for the first test was 2.81 in favor of Group B which is probably significant. On the second test Group C had a mean score of 12.4. Group B had a mean score of 14.23 on the second test. The critical ratio was 3.73 in favor of Group B which is clearly significant.

The mean score for *sense of personal freedom* for Group C was 12.9. The mean score for Group B was 13.06. The critical ratio was .27 in favor of Group B which is not significant. The mean score for Group C on the second test was 12. The mean score for Group B was 14.2. The critical ratio was 3.09 in favor of Group B which is clearly significant.

The mean score for *feeling of belonging* on the first test for Group C was 13.16, and Group B had a mean score of 14.23. The critical ratio was 2.32 in favor of Group B which is probably significant. On the second test Group C had a mean score of 13.4. Group B had a mean score of 14.5 on the second test. The critical ratio was 4.22 in favor of Group B which is clearly significant.
The mean score for withdrawing tendencies for Group C on the first test was 10.5, and the mean score for Group E on the first test was 12. The critical ratio was 2.14 in favor of Group E which is probably significant. The mean score on the second test for Group C was 11.4. The mean score on the second test for Group E was 14.1. The critical ratio was 5 in favor of Group E which is clearly significant.

The mean score for the variable freedom from nervous symptoms for the first test Group C had a mean score of 9.6. Group E had a mean score of 10.73 on the first test. The critical ratio was 1.46 in favor of Group E which is significant. On the second test Group had a mean score of 10.5, and Group E had a mean score of 12.4. The critical ratio was 3.77 in favor of Group E which is clearly significant.

The mean score for social standards for Group C on the first test was 13.97. Group E had a mean score of 14 on the first test. The critical ratio was .08 in favor of Group E which is not significant. On the second test Group C had a mean score of 13.5. Group E had a mean score of 14.23 on the second test. The critical ratio was 1.78 in favor of Group E which is probably significant.

The mean score on the first test for social-skills for Group C was 13.5. On the first test Group E had a mean score of 12.81. The critical ratio was 1.4 in favor of Group C. On the second test Group C had a mean score of 12.4, and Group E had a mean score of 14.23. The critical ratio was 4.66 in favor of Group E which is clearly significant.
The mean score for anti-social tendencies on the first test for Group C was 13.23. The mean score for Group E on the first test was 13.1. The critical ratio was .18 in favor of Group C which is not significant. On the second test Group C had a mean score of 14.93 while Group E had a mean score of 13.3. The critical ratio was 3.32 in favor of Group C which is clearly significant.

The mean score for family relations on the first test for Group C was 12.23. The mean score on the first test for Group E was 12.33. The critical ratio was .24 in favor of Group E which is not significant. On the second test Group C had a mean score of 12.4. Group E had a mean score of 14.1 on the second test. The critical ratio was 3.27 in favor of Group E which is clearly significant.

The mean score for social relations on the first test for Group C was 11.4. Group E had a mean score of 11.74 on the first test. The critical ratio was .35 in favor of Group C which is not significant. On the second test Group C had a mean score of 11.4. The mean score for Group E on the second test was 13.16. The critical ratio was 3.32 in favor of Group E which is clearly significant.

The mean score for community relations on the first test for Group C was 12.6. The mean score on the first test for Group E was 12.8. The critical ratio was .30 in favor of Group E which is not significant. On the second test Group C had a mean score of 12.4, and Group E had a mean score of 14.23. The
critical ratio was 3.73 in favor of Group E which is significant.

The three variables measured by The Guilford-Martin test (objectivity, agreeableness and cooperation) are psychological traits and can be expected to fluctuate with training. Group C had a higher mean score on the first test; however, Group E had a higher mean score on the second test. The critical ratio shows that the students in Group E improved during the personality training period.

The three variables of Every-Day Life—dependence, resourcefulness, and responsibility show a low mean score on the first test. The second test shows a substantial gain for Group E, and the critical ratios are clearly significant.

The twelve variables for the California Test of Personality show a substantial gain for Group E on the second test. The critical ratios are clearly significant with the exception of social standards with a critical ratio of 1.76 which is not too significant. The fact that Group E did not gain on this variable may be due to the lack of directions or the lack of personality training.

The general comparison of the two groups shown in Table 5, page 44, shows that Group E improved in personality between the time of the first test and the second test.
### TABLE 5

**THE CRITICAL RATIO BETWEEN TEST ONE AND TEST TWO FOR THE EIGHTEEN PERSONALITY VARIABLES**

<table>
<thead>
<tr>
<th>Personality Variables</th>
<th>Test One</th>
<th>Test Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group C and E</td>
<td>Group C and E</td>
</tr>
<tr>
<td>Objectivity</td>
<td>2.40</td>
<td>3.69</td>
</tr>
<tr>
<td>Cooperation</td>
<td>1.93</td>
<td>4.72</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>2.27</td>
<td>5.83</td>
</tr>
<tr>
<td>Independence</td>
<td>0.59</td>
<td>4.61</td>
</tr>
<tr>
<td>Resourcefulness</td>
<td>0.07</td>
<td>4.02</td>
</tr>
<tr>
<td>Responsibility</td>
<td>0.64</td>
<td>4.11</td>
</tr>
<tr>
<td>Self-reliance</td>
<td>2.90</td>
<td>12.06</td>
</tr>
<tr>
<td>Sense of personal worth</td>
<td>2.81</td>
<td>3.73</td>
</tr>
<tr>
<td>Sense of personal freedom</td>
<td>0.27</td>
<td>3.09</td>
</tr>
<tr>
<td>Feeling of belonging</td>
<td>2.32</td>
<td>4.22</td>
</tr>
<tr>
<td>Withdrawing tendencies</td>
<td>2.14</td>
<td>5.00</td>
</tr>
<tr>
<td>Nervous symptoms</td>
<td>1.46</td>
<td>3.77</td>
</tr>
<tr>
<td>Social standards</td>
<td>0.08</td>
<td>1.78</td>
</tr>
<tr>
<td>Social skills</td>
<td>1.40</td>
<td>4.66</td>
</tr>
<tr>
<td>Anti-social tendencies</td>
<td>0.18</td>
<td>3.32</td>
</tr>
<tr>
<td>Family relations</td>
<td>0.24</td>
<td>3.27</td>
</tr>
<tr>
<td>Social relations</td>
<td>0.85</td>
<td>3.32</td>
</tr>
<tr>
<td>Community relations</td>
<td>0.30</td>
<td>3.73</td>
</tr>
</tbody>
</table>
Table 5, page 44 shows reliability in difference of score for the two groups in personality variables between the first and second test. It also shows that personality traits can be measured scientifically and can be improved through systematic training.

Table 1, page 33, shows that Group E improved in personality according to student and teacher ratings.

Table 2, page 35, shows that the groups were as nearly equal as possible as to I.Q., chronological age, and mental age.

The computations in Table 3 and Table 4 show that considerable gain has been made by the experimental group over the control group indicating that training is effective in personality improvement.

Student opinions and anecdotal records, although not measured objectively, also give evidence of personality development.

Student Opinions

Near the end of the semester the students were asked to write a paragraph giving their opinion of the study. They were not to sign their names; therefore, no footnotes will be used.

Some of the excerpts are as follows:

I think this study should be continued as I am sure that I shall be more courteous, neater, and have more confidence in myself in the future. I am more capable of making decisions for myself now than I have been.
This study has given me self-confidence, poise, and has taught me the value of being happy.

I learned a great many things in our study of personality development. For instance, this study helped me to overcome timidity. It taught me the importance of personal appearance, tact, and courtesy.

I think the course was worth a great deal to me. I learned more than I did in mathematics or English. I am sure that I have more friends now than I had at the beginning of school, and I feel that I can become adjusted to almost any situation in the business world.

I think the course was a very valuable course. It was not only interesting but useful in my everyday life.

I think this study should be continued. I know that I am more courteous, neater, and have more ability to get along with people.

The course has certainly been valuable for me. I have found a cure for self-consciousness.

These and many other quotations were handed in. To quote them all would be a repetition of those above.
CHAPTER IV

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The need for personality development as a part of the course of study in stenography has been pointed out in Chapter I, and this study shows that training for the purpose of meeting these needs, by improving personalities and attitudes, is successful.

The aim of this chapter is to summarize the conclusions that can be drawn from the analysis made and to suggest some recommendations which would be of benefit to the student, as well as to the school.

The purpose of this study is (1) to reveal by means of comparison the extent to which the student is adjusting to the problems and conditions which confront him and the extent to which he is developing a normal, happy, and socially effective personality, (2) to interpret rightly the data collected from standardized tests in order that plans for personality improvement may be made, and (3) to try to improve personality through systematic training.

Since reliability and validity has been established in this experiment for the development of personalities and attitudes of students in stenography, with particular types of materials and by the writer who recognizes the need for more specialized training for such work the writer makes the
following recommendations: (1) that more discussion of personality development in all classes be had from the first grade through college, (2) that standardized personality tests be used to determine the students' weak and strong points, and (3) that all teachers arrange their class time so as to give training in personality development.

Special Training

The home seems to be neglecting the child's needs and more and more of these problems are falling on the school. Due to the great importance of personality training the school should be prepared to meet the child's personality problems. This may be done in stenography classes, typing classes, or special classes.

Personality training can be used to meet students' personal and emotional needs and thus prevent mental disorder and bad behavior by developing proper attitudes and wholesome personalities. This training should begin in the primary classes and continue through high school and college. By starting with the child early in life and continuing this training through his school experience he would be better equipped to take his place in the world upon finishing high school.

Training of the child should include a program that will teach him how to live by strengthening his weak traits and by discussing every-day problems that are related to the student. Individual differences should be considered in this
training. Proper attitudes should be stressed as the person who has the ability to live and get along with people is the most successful in the business world.

Three primary factors should be considered in the individual who deals with personalities. These three factors are as follows: (1) pupil-teacher attitude, (2) interest for the work, and (3) an acceptable personality.

Since there is a great responsibility involved in teaching personality in stenography, the teacher should be selected with great care. He is responsible for the building of character and the developing of attitudes. The pupil-teacher attitude is probably one of the most important as far as the personality is concerned. The pupil must make his own adjustment to the group, but the teacher may be a strong mobilizing factor in the kinds of group relationships that are set up. If a teacher is accepted as an authority by the group he may be able to give more help to the student who is experiencing difficulty. It is in this relationship that the student who is low in personality must work out his adjustment in relation to his difficulty. If the teacher understands the personality of the maladjusted student, he is in a position to guide him into channels which will lead to security and growth.

With the organization of special training for personality comes the consideration of special materials for use in these classes. The materials and topics dealing with character traits, attitudes and personal behavior in every-day life were used. These are listed and described in Chapter V.
Visual aids were also used very effectively in this study. These are listed in Chapter V.

Conclusions

The purpose of this experiment has been to determine the extent to which personality may be developed in stenography classes by (1) using an intelligence test for the two groups to determine equality in I.Q., chronological age, and mental age, (2) using personality variables for rating the groups, (3) using three standardized personality tests for the two groups at the beginning of the semester as an inventory of personality traits, (4) using discussion-method for the improvement of the experimental group, (5) rating students on personality traits near the close of school, (6) giving the three tests to the two groups near the close of school to determine the extent to which the students had gained in personality traits, (7) computing the data, and (8) comparing the scores of the two groups.

The data computed in this study, Chapter III, shows the following facts:

1. The scores for the first and second ratings of students and teachers were found in Chapter III, Table 1, page 33. The student ratings of each other, ratings of themselves, and teacher rating were low on the first rating. The second rating shows a gain on all variables rated by students and teachers.

2. The scores for the first test are found in Chapter III, Table 2, page 35, and show that the students were as nearly
equal as possible as to I.Q., chronological age, and mental age. There is a difference of .23 of a mean point in I.Q., a difference of .34 of a mean point in chronological age and a difference of .22 of a mean point in mental age. This is not enough difference to make any material difference in the groups.

3. The scores for Every-Day Life and The Guilford-Martin Personnel Inventory I were low. This was attributed to the fact that the Anglos as well as Latins did not read as well as they should. The questions in the California Test of Personality were more easily read and understood and the scores were higher.

4. There is a substantial gain by Group E on the second test on all variables except social standards and anti-social skills. This is probably due to lack of directions or due to the lack of personality training.

5. The control group shows a small gain on the second test on all variables except objectivity, withdrawing tendencies, and family relations. The gain is probably due to the fact that they are older, and that they had been associated with groups during the year. No explanation can be given for the lower scores made on the second test.

Personality may be influenced by the home environment. Some students indicated on their test that it was their belief that their parents did not think they would succeed to a very great extent. Other students indicated that they felt that they were mistreated at home. This was true of both Anglos
and Latins; however, whether or not children wholly reject or accept the interests, pursuits, or experiences of their parents is not known nor explored through this study.

It is concluded that personality traits can be measured scientifically with some degree of reliability and that personality can be improved through systematic training.

Recommendations

The conclusions listed above warrant the following recommendations:

1. That personality development using the discussion method be made a part of the school curriculum for the first grade through college.

2. Materials suited to the student's every-day needs should be used in personality training classes.

3. All students should be taught to comprehend what they read before they enter high school.

4. Teachers who have pleasing personalities should be in charge of the work in personality training.

5. Teacher should determine the degree in which each pupil is lacking in personality, and a program which will provide opportunities of developing personality traits should be initiated.
CHAPTER V

COURSE OF STUDY FOR PERSONALITY DEVELOPMENT

Objectives:

1. To understand what constitutes an attractive personality.

2. To be able to apply the rules of good grooming in order to improve outward appearance.

3. To build poise and self-assurance through confidence in one's personal appearance.

4. To study human behavior in order to be able to get along with people, and to assume responsibility toward society.

5. To develop habits to aid in developing personality traits.

6. To encourage the students to analyze their own weak and strong points in personality traits, and to develop a system whereby they may improve their weak points.

7. To assist the students in working toward the goal of developing these essential traits that have been proven necessary for individual advancement in business.
Outline of Course of Study for Personality Development

Class procedure was centered around the four fundamental steps as follows:

I. Realization of the need of training in personality development:
   1. Importance of personality training
   2. List of traits that employers seek in their employees
   3. List of traits that the students are to study for improvement
   4. Ratings by student and teachers
   5. I.Q. test
   6. Standardize tests

II. Motivation:
   Roy Newton gives a suggested outline as follows:
   1. Desire for self-improvement
   2. Desire for public approval
   3. Desire for security¹

III. Inventory of personality traits
   1. Analysis of student's weak and strong points
   2. Ratings by other people

IV. Systematic plan for improvement of personality traits
   1. Improvement of weak points, one area at a time
   2. Discussion of one variable each day
   3. Use of films
   4. Reports on books available to students

¹Roy Newton, How to Improve Your Personality, pp. 74-85.
5. Discussion of articles in current magazines

The outline of course of study was developed as follows:

I. Realization of the need of training in personality development:

1. Importance of personality training

In the study of personality from books and surveys the writer finds that personality is important and that it can be developed.

Myron G. Fisher and John A. Pendery say:

The personality, like character, is made up of single elements that are subject to improvement. Many times, without our being aware of changes in these elements, they do change; sometimes for the better and sometimes for the worse. Some of these elements lend themselves easily to examination, while others although clearly felt, are inexplicable and are difficult to analyze.2

Frances S. Miller and Helen Laitan in their study come to this conclusion:

Our personalities are influenced by our physical make-up, our inheritance, the way in which we satisfy our basic needs, and our environment. All these influences, excepting inheritance which is probably the least important are factors which we can to a great extent, control. Therefore, our personalities are not determined for us, but are largely a product of our own making. The important factor in personality development is not so much what happens to us as it is our response to situations.3

2 Myron G. Fisher and John A. Pendery, Secretarial Practice for Colleges, p. 11.

3 Frances S. Miller and Helen Laitan, Personal Problems of The High School Girl, p. 10.
The writer felt that it was her responsibility to know which personality traits businessmen considered as being the most important. The personality traits listed on this page are quoted from outstanding authorities.

Paul W. Chapman gives his opinion concerning the personality traits that employers seek in their employees. These were taken from a survey of several thousand employers coming from all parts of the United States and including all kinds of business enterprises, and all types of occupations. These are as follows:

- Appearance
- Agreeableness
- Manners
- Interest
- Temperament
- Expression
- Intelligence
- Self-Confidence
- Dependability
- Loyalty

A "Business Personality Survey," made by Bothilda Mahler, with 80 business men and women of Des Moines, Iowa, shows the character and personality traits that they considered most important in obtaining and holding a job. The findings were compiled from fifty questionnaires filled out at the time of the interviews. Sixty different traits were mentioned, and sixteen were repeated often enough to be considered as most important. These are listed below:

- Appearance
- Personality
- Capability
- Initiative
- Loyalty
- Shorthand
- Typing and Accuracy
- Co-operation
- Transcription
- Health
- Experience
- Education
- Neatness
- Honesty
- Dependability
- Punctuality

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3. List of traits that the students are to study for improvement

As a part of the experiment being conducted, a composite list was made of all the personality variables given in the above studies and the class chose fourteen as the most applicable to the study at hand. They are:

1. Appearance 8. Honesty
3. Initiative 10. Self-Confidence
5. Interest 12. Dependability
7. Accuracy 14. Tact

4. Ratings by student and teachers

A mimeographed page of these traits was given to the students, and they rated each other, then rated themselves, and then had five teachers rate them as described in Chapter III, page 32.

5. I.Q. test

An I.Q. test was given to equate the groups. This is described in Chapter II, pages 23 and 24.

6. Standardized tests

Three standardized tests were given to measure personality traits. These are described in Chapter II, pages 25 and 26. With the exception of the I. Q. test all other tests were given again near the close of school.

II. Motivation

1. Desire for self-improvement

The desire for self-improvement was discussed at the first meeting.
Myron C. Fisher and John A. Pendery say:

A person can always improve his personality. The way personality is improved depends upon the determination of the individual and his ability to analyze the good and the bad qualities of his personality. Each one should learn to recognize the desirable and undesirable characteristics in himself as well as in other people.6

2. Desire for public approval

The way in which a student responds to situations usually wins the likes or dislikes of his associates.

Frances S. Miller and Helen Laitan say:

The person who has a wholesome personality will not only be able to react as a unit but will be sincere, honest, unselfish, and openminded.7

3. Desire for security

A person must have the ability to get a job and keep it if he wants security.

Quoting from Paul W. Chapman, Your Personality and Your Job: "The Carnegie Foundation found that technical training counts 15 per cent in the success of an individual while personal qualities count for 85 per cent."8

G. A. Prosser issues the ensuing statement: "In a recent survey of about 4,000 discharged office and clerical

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6Myron C. Fisher and John A. Pendery, Secretarial Practice for Colleges, p. 2.

7Frances S. Miller and Helen Laitan, Personal Problems of The High School Girl, p. 3.

8Paul W. Chapman, Your Personality and Your Job, p. 8.
employees of 76 organizations, only 10 per cent lost out because of lack of specific skills, while 90 per cent lost their jobs because of undesirable character traits.9

Paul W. Chapman gives evidence that he believes that personality pays more than intelligence for he says:

A psychologist at Purdue University found evidence of this in the careers of graduate engineers who had been employed for five years. The group which rated highest in personality was earning an average income of $3,000 a year. The group of lowest personality rating was earning only $2,058 a year. Personality was paying the former group about $1,000 more a year. Those highest in intelligence were earning $2,628 a year, while those lowest in intelligence were earning $2,478 a year. Superior intelligence paid each $150 a year—while a superior personality paid more than six times as much.10

III. Inventory of personality traits

1. Analysis of students' weak and strong points

The students were to make an analysis of their weak and strong points taken from previous ratings and standardized tests.

Maude Williamson and Mary Stewart Lyle say:

After such a self-analysis, you may or may not desire to change in personality. No one can develop in character or personality under compulsion, but if a strong purpose is present you can do pretty much as you wish within certain limits. If you are a timid girl, you cannot become brave over night; neither will poise and self-confidence consistently, and continually grow like mushrooms unless a plan of procedure is carefully followed. In formulating this plan you will need


to remember that personal traits are evidenced in daily conduct. They are habits of action and are developed as all other habits are developed.\textsuperscript{11}

2. Ratings by other people

The students were also to make a list of other peoples' ratings of the individual student.

IV. Systematic plan for improvement

1. Improvement of weak points, one area at a time whereby weak points were to be improved one area at a time.

Maude Williamson and Mary Stewart Lyle say: "Personal traits are ideals, emotions, and drives carried into habit of conduct, and, like other habits, they cannot be developed by talking about them or just thinking about them."\textsuperscript{12}

Maude Williamson and Mary Stewart Lyle also say:

Your plan should include very definite things to do not merely idealistic conceptions of generalizations for, though the abstract ideal is essential to any intelligent self-development, it is futile until it actually influences the concrete details of daily conduct. For example, a certain girl had the reputation of looking cross and unhappy. She decided that she wished to be known as a bright, cheerful, happy person; so she planned to smile at people to whom she spoke. Every time that she met an acquaintance or friend, she smiled a cheerful, pleasant greeting. She soon had a different reputation. Her plan read: 'Always smile when speaking to people,' not 'try to be pleasant,' or 'develop cheerfulness.' It is frequently helpful to write down the various things which will aid in the desired development.\textsuperscript{13}

\textsuperscript{11} Maude Williamson and Mary Stewart Lyle, Homemaking Education in The High School, p. 33.

\textsuperscript{12} Ibid., p. 32.

\textsuperscript{13} Ibid., p. 33.
2. Discussion of one variable each day

A few minutes of time was spent each day in the discussion of one of the fourteen personality variables listed in this chapter, page 57. This was continued until the list was completed.

In this study appearance is at the beginning of the list of personality traits probably because the first impressions are formed by what is seen. The competent secretary realizes how large a part is played in his physical qualities, and he gives the utmost attention to the little details of personal appearance which do much to create a favorable impression. The importance of personal grooming cannot be stressed too much.

In trying to improve appearance, the writer used the good grooming chart by Bristol-Myers Publishing Company, "How the Well Dressed Man or Woman Should Look." A personality chart published by The Gregg Writer was also used.

Agreeableness: If a person wishes to be agreeable he must regard the other fellow's rights and ideals rather than his own. He should look for ways to be agreeable with other people. To have the ability to get along with other people,

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14 Bristol-Myers Company, 630 Fifth Avenue, New York 20, New York.

15 Transcription Supervisors' Associations, A "Personality" Chart, The Gregg Writer, XLVI (December, 1943), 201.
a person must be cheerful, agreeable, tactful, have poise, dignity, a sense of humor, and practice self-control.

**Initiative:** It is worthwhile to note what Myron C. Fisher and John A. Pendery say:

Initiative is a quality that should be well developed by the time a person finished his regular schooling. It is that quality which causes one to go ahead and do any work that needs to be done without being told to do it.16

Charles G. Reigner gives this information:

Initiative plays a large part in the equipment of the successful secretary. A person who has initiative starts things—and gets them done. He does not sit idly by and wait for somebody else to find work for him to do. On the contrary, he is always on the alert to find things to do—to arrive at new and better ways of getting work done.17

**Courtesy** is essential in the business world.

Paul S. Lomax, Helen Reynolds, and Margaret H. Ely say:

"With this trait, as with the others discussed, an appreciation of the meaning of courtesy and the reasons behind the conventionally courteous acts is essential to establish a desire for the trait."18

Paul S. Lomax, Helen Reynolds, and Margaret H. Ely also make this statement. "Courtesy results from a desire to make the other person comfortable in your presence."19


17 Charles G. Reigner, *College Secretarial Practice*, p. 147.


19 Ibid., p. 50.
Interest: Show an interest in people. Read the daily newspaper, and one or two current magazines. Read one good book a week. Be well versed on daily topics.

Loyalty: This trait is on all personality lists. It is important that business people understand the true value of loyalty.

Velma L. Harvey gives the following information on loyalty: According to the view point of the employers, "Five personnel directors of large companies recently claimed at a meeting that loyalty is the most outstanding trait desired in an employee."²⁰

Charles G. Reignier makes this statement:

Loyalty is the watchword of every successful secretary. An ounce of loyalty is worth a pound of cleverness. The secretary's work is of a highly confidential nature. Many matters pass through his hands that are not intended for the eyes or ears of other people—even other employees in the same office. He is always on the alert not to betray, by a slip of the tongue or by idle talk, confidential matters that have been entrusted to his care. He is dependable and trustworthy because he is loyal in every fibre of his being. If you are resolved to become a successful secretary, you must learn to keep things to yourself—to stay loyal through thick and thin.²¹

There are many ways to show loyalty. For instance, be loyal to the school, to school organizations by upholding their ideals, and by doing things that will help in attaining the goal set by the organization. One must certainly be loyal to his employer.

²⁰Velma L. Harvey, The Gregg Writer, L (June, 1948), 508.

²¹Charles G. Reignier, College Secretarial Practice, p. 146.
Howard M. Doutt gives this information: "Loyalty to one's employer is so important that no one who cannot feel loyal to his superior should stay in a position any longer than it takes to find another one."

**Accuracy:** Anything that is worth doing at all is worth doing well.

Howard M. Doutt says: "Accuracy is vital in all phases of secretarial work."

**Honesty:** This is another important personality trait. For instance, the person who leaves the office early, or reads a magazine on the employer's time, or stays at home for no good reason is not being honest.

Myron C. Fisher and John A. Pendery give the following quotation:

Honesty is developed through building up resistance to temptations that are thrust before us. Being honest with yourself is just as important as being honest with others.

**Cooperation:** To be a cooperative person one must smother petty jealousy and avoid gossip.

Myron C. Fisher and John A. Pendery say:

Confidence is an outgrowth of competence; if you can do a thing well and have demonstrated this ability until you, yourself, no longer doubt that you can do it, self-confidence is born in the process.

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Maude Williamson and Mary Stewart Lyle offer the following suggestions for developing self-confidence:

1. Each evening, think back over the day and tell yourself what you did well that day. Then determine what you are going to do well the next day.

2. Accept every offer of responsibility which is within your power to carry. Do not let yourself say "no" without careful thought.

3. Study the things which others do successfully. You probably can do as well if you just think so.

4. When you are inclined to worry about small mistakes think to yourself, 'after all, a little mistake is not a vital matter. The world and I will wag on anyway.'

5. Select those things which you do well and concentrate on them.

6. Decide on one or two things which you do not do well and also concentrate on them until you improve.

7. Arrange with some friend to tell you when you have done well. It develops self-confidence.

8. Study your dress and personal appearance. The sense of being well dressed and well groomed is a strong support to self-confidence. Always care for your personal appearance during working hours as well as when preparing for a party.\textsuperscript{26}

\textbf{Neatness}: A person's clothes should be clean, his fingernails should be well kept and his shoes should be polished. Cleanliness is of utmost importance in the business world.

\textbf{Dependability} is the one trait that cannot be overrated. A person must be dependable.

Myron C. Fisher and John A. Pendery say:

Dependability cannot be taught like shorthand or typewriting, or accounting—it takes real "homework" to develop dependability as an integral part of your personality. No matter how valuable you may prove

\textsuperscript{26}
Maude Williamson and Mary Stewart Lyle, \textit{Homemaking Education in The High School}, p. 33.
yourself in the application of certain skills, you will never succeed in business if you lack dependability.27

Maude Williamson and Mary Stewart Lyle give the following plan for developing dependability:

1. Develop your memory. If necessary have a memorandum pad or some system to aid in remembering.
2. Consider what the effect will be on others if you fail to carry out a promise of responsibility.
3. Plan ahead carefully so that you can perform successfully.28

**Punctuality:** Consider all promises and responsibilities carefully before assuming them to make sure that they can be carried out. Fulfill all obligations a little ahead of time if possible.

**Tact:** If a person is not tactful he will be handicapped. A person should be tactful in dealing with other people.
Accept all responsibility for any personal mistakes made.
A person may develop personality by improving his voice.
The competent secretary speaks clearly and distinctly.

Howard N. Doutt says:

If the first impression which one makes on others depends upon one's appearance it follows that the second impression usually depends on the voice. Sometimes the latter precedes. Few people realize how important the voice is in business and the extent to which a pleasant voice can be cultivated.29

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28 Maude Williamson and Mary Stewart Lyle, *Homemaking Education in The High School*, p. 34.
3. Use of films

"Changing the Voice of Mr. X,"30 a film issued by Southwestern Bell Telephone Company was used in this study. This film demonstrated how to use the telephone, the importance of answering the telephone promptly, and also shows how important it is that a person speak pleasantly over the telephone.

"Good Grooming,"31 was used in this study when the class discussed appearance. This film shows the general appearance of how girls should look.

After these traits were introduced and discussed in class they were not forgotten. For instance, there were numerous opportunities during the year when something could be said that would help in developing personality.

There were days when the students were excited about a ball game or a dance the following night. They would enter the classroom talking in a loud voice, bumping into each other and dropping books. This was the time to remind them that their voices should be modulated, that they were forgetting to be courteous, and that they lacked poise in a situation of that sort.

30 "Changing the Voice of Mr. X," Issued by Southwestern Bell Telephone Company.

31 "Good Grooming," Issued by Mary Stuyvesant, Castle Film Company.
When the class started a new assignment, two of the students had a habit of asking just how to do the assignment. Here was a golden opportunity to help improve the traits of self-confidence and responsibility.

Initiative was shown in many ways. On days when the class had timed writings in typewriting one student was held responsible for passing out the tests and collecting the papers.

Before the first semester was over students would clean their typewriters without being told. They would remove notices from the bulletin board that did not need to be there any longer.

At the beginning of school all students did not bring paper and erasers to class. After discussing dependability and responsibility this situation seldom occurred.

4. Reports on books available to students

The following books are in the Edinburg High School library. These books were selected and placed on the reserve shelf and the students were to read any or all of them and to make a report to the class on any topic in which they were interested.

Brockman, Mary, What is She Like?
Carnegie, Dale, How to Win Friends and Influence People.
Marsh, Hattie Marie, Building Your Personality.
Miller, Frances and Laitan, Helen, Personal Problems of The High School Girl.
Newton, Roy, How to Improve Your Personality.
Shellow, Sadie Myers, How to Develop Your Personality.
5. Discussion of articles in current magazines

All copies of The Gregg Writer since 1943 are filed in the Business Department of the Edinburg High School. A mimeographed copy of articles pertaining to personality development was given to each student. They could read these at any time and make a report if they wanted to. A copy of this list follows:

Algers, Alice, "Dictation," The Gregg Writer, XLV (May, 1943), 453.


Compton, Martha, "A Good Stenographer Should Be--", The Gregg Writer, XLIX (September, 1946), 14.


Duyn, Julie Van, "Are You A 'Last Mile' Girl?" The Gregg Writer, XLVII (September, 1946), 8.

Eldridge, Irene, "Pointers on How to Apply for a Job," The Gregg Writer, XLV (May, 1943), 463, 479.

Fike, Dorothy M., "How to Camouflage Errors," The Gregg Writer, XLV (June, 1943), 514, 550.

Foley, Louis, "That Little Word--'and'", The Gregg Writer, XLV (April, 1943), 405.

Fry, Guy S., "Valedictorian," The Gregg Writer, L (April, 1948), 393-394.

Gaddy, Sue, "To 'Business' Graduates," The Gregg Writer, XLVII (January, 1946), 233.

Gathergood, Clive, "Do It Yourself," The Gregg Writer, XLVI (March, 1944), 339.

Gregg, Janet Kinley, "As You Begin Shorthand," The Gregg Writer, XLII (September, 1946), 9.

Harvey, Velma, "How Strong is Your Sense of Loyalty?" The Gregg Writer, XL (March, 1948), 339.


Kelson, Nellie, "When Applying for a Job," The Gregg Writer, XLVI (June, 1944), 473.


Lowell, Amber, "Importance of Personality Training," The Balance Sheet, XXVII (January, 1946), 197.


Ryan, Calvin T., "If You Wish to Succeed in Learning to Spell," The Gregg Writer, XLV (May, 1943), 454, 456.

Smith, Mary, "Cooperation," The Gregg Writer, XLVII (May, 1945), 469.


APPENDIX

The Appendix includes the four tests and their respective manuals which were used in securing the data in this study. The tests include the following: California Test of Mental Maturity--Advanced Series, Grades 9-Adult, Stott's Every-Day Life, The Guilford-Martin Inventory I, and the California Test of Personality--Secondary Form A.
CALIFORNIA TEST OF MENTAL MATURITY—ADVANCED SERIES
Devised by Elizabeth T. Sullivan, Willis W. Clark, and Ernest W. Tegs

Name: 
Occupation or Grade: 

Date: 
Age: 
Last Birthday: 
Sex: M-F 
Teacher or Examiner: 
School or Organization: 

<table>
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<tr>
<th>TEST FACTOR</th>
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Total: 120 132 144 156 168 180 192 204 216 228 240 300 360

SUMMARY OF DATA

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<th>C. A.*</th>
<th>I. Q.</th>
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<td>F. Language Factors</td>
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<tr>
<td>G. Non-Language Factors</td>
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</tbody>
</table>

*Age 16 and older, divide by 192 months.
Directions: In each group of letters and numbers, put a circle around the letters and numbers in the second row that are the same as those in the first row of the group.

A.

\[
\begin{array}{ccc}
D & E & L & 3 \\
V & D & O & L & C & 3 & R & E & N \\
& Z & X & O & 4 \\
1. & Z & A & N & H & X & O & S & 4 & R \\
& C & D & T & 6 \\
2. & R & 6 & N & J & C & T & H & D & U \\
& P & 5 & D & S \\
3. & G & D & 5 & S & X & B & R & P & V \\
& A & G & R & 7 \\
4. & E & O & R & 7 & A & C & S & F & G \\
& D & E & F & 3 \\
5. & H & F & 3 & C & B & E & X & D & T \\
& K & O & A & 8 \\
6. & P & Q & 8 & V & K & H & A & O & E \\
& H & B & L & R \\
7. & S & E & L & R & J & H & 7 & M & 9 \\
& S & B & T & R & V & D & 6 & X & 8 \\
8. & V & Y & 5 & O & Q & C & P & X & 3 \\
& R & 6 & B & D \\
9. & T & M & W & N & K & 4 & L & Z & E \\
\end{array}
\]
TEST 2.

Directions: In each row, put an X on the line under the object that is named. Then write the number of the object you mark on the line to the right.
Directions: Start at the first arrow at A and draw a line to each number when called. Try to keep within the black lines. Do B in the same way.
Directions: Listen to the pairs of words that will be read to you. The first word of each pair will be repeated and you are to remember what went with it. Find the object. Put an X on the line under it and put the number of the object you mark on the line to the right.
Directions: Put a circle around the letter R in all rights. Put a circle around the letter L in all lefts.
Directions: In each row find a drawing that is either the same drawing or different views of the first drawing. Put an X on the line under this drawing and put the number of the drawing you mark on the line to the right.
Directions: Begin at the arrow in drawing A. Draw a line to show the path you would take through all the drawing so as to finish at the arrow in drawing 10.
Directions: In each row there is one object that represents the opposite of the first object. Put an X on the line under it and put the number of the object you mark on the line to the right.

Test 9. Score (number right)..........................
Directions: The first three objects in each row are alike in some way. Find another object in the same row that belongs with them. Put an X on the line under it and put the number of the object you mark on the line to the right.
Directions: In each row the first object is related to the second. Find an object that goes with the third object in the same way. Put an X on the line under it and put the number of the object you mark on the line to the right.

Test 11. Score (number right)
Directions: In each row of numbers below, there is one that is wrong. Find this wrong number and draw a line under it. Then write it on the line to the right.

Sample:  

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</table>

Go right on with the following until told to stop. In each row of numbers below, the numbers increase or decrease in accordance with a definite series of whole numbers. Supply the missing numbers and also write them on the line to the right.

Sample:  

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L. 17 19 .... .... 23 .... 26 28 29
M. 27 29 .... 28 .... 27 24 .... 23
N. 60 .... 55 51 49 .... .... 40 37
O. 48 .... 44 41 .... 36 34 .... 28

Test 12. Score (number right)...........................

TEST 13.

Directions: In each problem you are to find a certain number of coins to make a certain amount of money. Put the number of coins required under the name of the coin.

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<th>nickel</th>
<th>dime</th>
<th>quarter</th>
<th>half-dollar</th>
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<td>2 coins—10 cents</td>
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<tr>
<td>7 coins—25 cents</td>
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</table>

Test

A. 6 coins—10 cents
B. 7 coins—15 cents
C. 3 coins—35 cents
D. 4 coins—86 cents
E. 4 coins—45 cents
F. 4 coins—95 cents
G. 3 coins—70 cents
H. 5 coins—42 cents
I. 5 coins—67 cents
J. 5 coins—46 cents
K. 7 coins—93 cents
L. 6 coins—56 cents
M. 6 coins—$1.17
N. 5 coins—$1.36
O. 15 coins—$5.51
Directions: Work these problems on a blank sheet of paper. Write the letter of the answer on the line to the right. The correct answer for the first problem (A) is b.

A. If a man earned $25.00 and spent $10.00, how much money did he have left?
   Ans.: a $5  b $15  c $20  d $10  b  

1. How many picture post cards can you buy for 15 cents at the rate of 3 for 5 cents?
   Ans.: a 9  b 3  c 15  d 34  

2. How many feet of railroad track can be laid with 750 ties if 25 ties are needed for each 50 feet?
   Ans.: a 1250  b 1500  c 325  d 30  

3. What number if multiplied by 3, is 2 times 9?
   Ans.: a 3  b 9  c 18  d 6  

4. A sample rug is 12 inches long and 9 inches wide. How long will a larger rug of the same proportions be if it is 36 inches wide?
   Ans.: a 108 in.  b 48 in.  c 15 in.  d 36 in.  

5. What is the number which if divided by 4, is 1/5 of 72?
   Ans.: a 12  b 18  c 48  d 3  

6. A high school student borrowed $75.00 for one year at 6% to start a chicken ranch. How many little chickens must he sell at 10 cents each to pay back the money he borrowed with interest?
   Ans.: a 45  b 450  c 750  d 795  

7. A dealer allowed an old customer a discount of 10% on the marked price of book cases. What is the marked price of a book case for which this customer paid him $36.00?
   Ans.: a $40  b $32.40  c $3.60  d $39.60  

8. A circular flower bed 7 feet in diameter is to be bordered by plants set one foot apart. What will be the cost of the plants at the rate of 2 for 15 cents? (Circumference of a circle is about 3 1/4 times the diameter.)
   Ans.: a 52  b $1.65  c 70  d $1.57  

9. A man placed four stepping stones one foot square in a row in a section of his garden so that there were equal spaces on all four sides of each of the stones. If the section was 3 feet wide, how long was it?
   Ans.: a 12 ft.  b 3 ft.  c 9 ft.  d 8 ft.  

10. Ben lives 1.5 miles east of the library. James lives 2.5 miles directly west of the library. On a scale of 1/2 inch = 1 quarter mile, how many inches will represent the distance between the boys' houses?
    Ans.: a 8 in.  b 16 in.  c 6 in.  d 2 in.  

11. What is the number which if added to 5 is 3 less than 1/3 of 3/5 of 60?
    Ans.: a 1/2  b 9  c 4  d 12  

12. A gallon of water weighs 8.4 pounds. A gallon of gasoline weighs 68 per cent as much as a gallon of water. A pilot flying the air mail carried 50 gallons. How many pounds did this gasoline weigh?
    Ans.: a 285  b 285.6  c 278.6  d 380  

13. A coffee shop buys a blend of coffee composed of 2/3 of Grade A at 60 cents a pound and 1/3 of Grade B at 30 cents a pound. If they change the mixture, using 1/4 of Grade A and 2/5 of Grade B, how much will they save on every 10 pounds of coffee?
    Ans.: a 3  b 10  c 30  d $1.00  

14. A man's will provides that his estate of $15,000.00 should be divided as follows: 2/5 to his wife and 1/6 each to three children, except that in the event any of the children were deceased, their share should be divided equally between the remaining children and the wife. Two children were killed in an automobile accident. How much did the remaining child receive from the estate?
    Ans.: a 1/5  b $6000.00  c $4500  d $5000  

15. If a set of tires for one automobile costs one-half of what a set costs for another automobile; and if three sets of the cheaper tires last only as long as two sets of the more expensive kind, the total cost of the cheaper tires during a given period will average what fraction or per cent of the cost of the more expensive kind?
    Ans.: a 1/8 or 33 1/3%  b 1/2 or 50%  c 3/4 or 75%  d 1 1/2%
Directions: Read each group of statements and draw a line under the correct logical answer. Write the number of this answer on the line to the right.

0. All four-footed creatures are animals. All horses are four-footed. Therefore
   1. Creatures other than horses can walk
   2. All horses can walk
   3. All horses are animals

1. Elm Street is parallel to Oak Street. Oak Street is parallel to Palm Avenue. Therefore
   1. Elm Street crosses Palm Avenue
   2. Palm Avenue is longer than Elm Street
   3. Elm Street is parallel to Palm Avenue

2. George Washington was a skillful general. George Washington was President of the United States. Therefore
   1. Skillful generals make good presidents
   2. A President of the United States was a skillful general
   3. Good presidents make skillful generals

3. If he steers toward the land he will be wrecked; and if he steers toward the open sea he will be wrecked; but, he must steer either toward the land or toward the open sea. Therefore
   1. He should head for the open sea
   2. The coast is dangerous for ships
   3. He will be wrecked

4. If the wind changes it will either grow warmer or it will storm. The wind does not change. Therefore
   1. It will probably grow warmer
   2. The conclusion is uncertain
   3. It will not grow warmer nor will it storm

5. X is younger than Y. Y is younger than Z. Therefore
   1. Y is younger than X
   2. X is younger than Z
   3. Y has lived longer than Z

6. All circles are round figures. The figure is not round. Therefore
   1. It is oval
   2. It is either a square or a triangle
   3. It is not a circle

7. A is situated to the east of B. B is situated to the east of C. Therefore
   1. C is situated close to A
   2. A is situated to the east of C
   3. C is nearer to A than to B

8. If he is to complete his high school course, he must avoid wasting his energy and his money. But he will not avoid wasting his energy, or he will not avoid wasting his money. Therefore
   1. He will not complete his high school course
   2. He will be sorry some day
   3. He should be criticized for not doing better

9. If the students are in error, your refusal to listen to their side is unreasonable. If they are not in error, your refusal is unjust. But, the students are in error or they are not. Therefore
   1. Your refusal is justifiable
   2. Your refusal is either unreasonable or it is unjust
   3. Your refusal may be reconsidered later

10. Three boys are up on a ladder. Tom is farther up the ladder than Paul. Jim is farther up than Tom. Which boy is in the middle position on the ladder?
   1. Tom
   2. Paul
   3. Jim

11. A is either B or C or D. A is not B. Therefore
   1. A is C
   2. A is either C or D
   3. The conclusion is uncertain

12. If he were loyal he would not speak unkindly of his family in earnest. If he were wise he would not speak unkindly of them in jest. Either he speaks unkindly in earnest or in jest. Therefore
   1. He is either not loyal or not wise
   2. He is unkind
   3. The conclusion is uncertain

13. If A is B, E is F, if C is D, G is H. Either A is B or C is D. Therefore
   1. A is F or C is H
   2. Either E is F or G is H
   3. The conclusion is uncertain

14. A is between B and C. B is between C and D. Therefore
   1. A is not between C and D
   2. A is between B and D
   3. A is nearer to B than to D

15. Five cities (P, Q, R, S, and T) are in the same state. S is between P and Q. T is between P and S. R is the same distance from P and T and S is the same distance from P and Q. Therefore
   1. Q is nearer to T than to S
   2. R is nearer to Q than to P
   3. T is nearer to P than to Q
### Directions: Draw a line under the word which means the same or about the same as the first word. Write the number of this word on the line to the right, as:

Directions: Read the following and draw a line under the correct answer. Put the number of this answer on the line to the right.

0. The report read to you a little while ago was about the
   1 Apaches    2 Sioux
   3 Hurons    4 Chippewas
   3 0

1. The report dealt chiefly with customs concerning
   1 war    2 hunting    3 fishing    4 dreams
   1

2. The tribe lived in
   1 Western United States    2 Southern France
   3 Mexico    4 Northeastern North America
   0

3. The Huron village was
   1 In the wilderness    2 Near the ocean
   3 On the plains    4 Near the gulf
   3

4. The centuries with which this report dealt were
   1 14th and 15th    2 17th and 18th
   3 19th and 20th    4 15th and 16th
   4

5. Their Manitou was a
   1 Chieftain    2 Medicine man
   3 Guiding spirit    4 The oldest man
   5

6. The wishes of their Manitou were carried out
   1 Occasionally    2 Frequently
   3 Always    4 Seldom
   6

7. The wishes of their Manitou were satisfied by
   1 Relating the dream to the captains
   2 Giving a feast in his honor    3 Fasting
   4 Consulting the medicine men
   7

8. If what they dreamed of was not obtainable for the feast they
   1 Used a substitute    2 Had games instead
   3 Raided the French post
   4 Delayed the feast
   8

9. If a sick man dreamed that he wished to refurbish his cabin
   1 He did so when he got well
   2 Others asked him for his old things
   3 Men of the village took charge of the refurbishing
   4 He bargained for furnishings
   9

10. The furnishings given in response to a dream were obtained from
    1 Cabins in the village    2 Dutch traders
    3 Central supply house    4 The French
    10

11. A dream in which an enemy was taken captive was followed by
    1 Peace and quiet    2 War with the enemy
    3 Sending an envoy to the enemy
    4 Feasting in honor of the dreamer
   11

12. If an Indian dreamed that he was taken captive by the enemy he was
    1 Guarded    2 Given to the enemy
    3 Tortured    4 Feasted
   12

13. The Indian who dreamed that he saw 10 men plunging into a river
    1 Warned them
    2 Reported them to the captains
    3 Said nothing about his dream
    4 Invited these men to a diving contest
   13

14. The owner of an object dreamed of by another Indian
    1 Often refused to give it up
    2 Gave it up without protest    3 Usually hid it
    4 Traded it for something the dreamer had
   14

15. The “Game of Dish” was played with
    1 Seeds    2 Shells    3 Beads    4 Stones
   15

16. Neighboring tribes took part in the Game of Dish
    1 On stated occasions    2 When formally invited
    3 In the early spring
    4 When the men were hunting
   16

17. The place of meeting for the Game of Dish was decided by
    1 The dreamer    2 The captains
    3 Drawing lots    4 The invited tribe
   17

18. The Game of Dish was entered into by
    1 Old men principally
    2 Young children and women for the most part
    3 Young men only
    4 Young and old alike
   18

19. The institution of the feast gave the Indians
    1 Little advantage    2 Power over the enemy
    3 Opportunity to satisfy the wishes of their Manitou
    4 Mainly hard work in preparation
   19

20. The custom of the feast tended principally to
    1 Reduce war
    2 Reclaim the covetous and revengeful
    3 Relieve the monotony of primitive life
    4 Increase the general wealth of the tribe
   20
MANUAL OF DIRECTIONS
CALIFORNIA TEST OF MENTAL MATUREITY—ADVANCED SERIES

Devised by Elizabeth T. Sullivan, Willis W. Clark, and Ernest W. Tiegs

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I. Purpose of the Test

This is a diagnostic test of mental maturity, devised for use with students in senior high school and college, and with adults. It contains material of sufficient range and diversity to indicate the degree of maturity in relation to the major factors involved in intellectual capacity, as well as a general measurement of mental maturity. Some of the significant features of this test are as follows:

1. Its primary purpose is to make for each person a diagnostic evaluation of those mental abilities which are related to, or determine, his success in various types of school activity, in order that the teacher may utilize this information directly in aiding students who have learning difficulties. It is similarly useful in personnel work.

2. It provides a diagnostic profile designed to show graphically the relative extent to which each person possesses these abilities, thus enabling the user to see at a glance the probable sources of difficulty or success and to provide to the maximum the guidance which such a profile may suggest.

3. It is based upon the philosophy, researches, and important inferences of outstanding leaders in the mental measurement field, as well as the work of the authors. The analytical comparison of the various sections of the test indicates a definite central factor, yet the same analysis reveals a specificity for each sub-test which is sufficient to justify its inclusion as a measure of a more or less unique factor.

4. Although primarily diagnostic and analytical, this test of mental maturity also yields not one, but three mental ages (M.A.'s) and intelligence quotients (I.Q.'s)—a non-language M. A. and I. Q., a language M.A. and I.Q., and the M.A. and I. Q. characteristic of the familiar intelligence test. The latter M.A. and I.Q. may be used for comparisons with the results of other intelligence tests.

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II. Nature of the Test

This series of tests is unique in that each battery is preceded by tests of visual acuity, auditory acuity, and motor coordination, the purpose of which is to detect students with defects sufficiently serious to prevent obtaining a valid diagnosis of mental maturity with the remainder of the test.

In general, this test samples the maturity of memory (immediate and delayed); of apperceptive processes; of spatial relationships; and of the logical and mathematical aspects of reasoning. Certain tests are presented in verbal and others in non-language form in order to obtain a separate evaluation of each of these aspects of mental maturity.

Each battery is thus built upon a plan which (1) takes into account recognized mental processes or functions, and (2) corresponds with present knowledge of the nature of mental growth and development.

III. Reliability

Needless to say, the number and variety of test situations assures a high reliability. The test data for 400 pupils in grades 9 to 12 and 450 college students and adults have been analyzed and reliability coefficients have been computed by the split-halves method and corrected by the Spearman-Brown formula. The reliabilities of the Total Mental Factors score and the major test sections are as follows:

<table>
<thead>
<tr>
<th>Grades</th>
<th>Total Mental Factors</th>
<th>Language Factors</th>
<th>Non-Language Factors</th>
<th>Test A. Memory</th>
<th>Test B. Spatial Rel.</th>
<th>Test C. Logical Reasoning</th>
<th>Test D. Numerical Reasoning</th>
<th>Test E. Vocabulary</th>
<th>No. of Cases</th>
<th>S.D. (M. A. in Mo.)</th>
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<td>250</td>
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The probable error of estimate for an individual score varies from three months of mental age when the reliabilities for single grade are .95 and above to five months when the reliabilities are .87 to .89.

IV. Validity

The validity of any mental test is difficult to establish; there are no purely objective criteria or standards which correspond to the factors or abilities in terms of which conceptions of mentality are currently described.

The authors of these tests believe that the multiple factor theory of intelligence comes nearer to explaining observable phenomena than does the strong central-factor theory alone. They recognize the importance of philosophical contributions, but they believe that progress in determining the nature of mentality and the value of tests of mental maturity is dependent largely upon further studies in factor analysis which employ analytical and statistical techniques.* This series of tests recognizes contributions already made by including samplings of memory, verbal and mathematical abilities, spatial relations, and logic. The existence of all of these as relatively independent and distinct factors is gaining acceptance. The traditional method of correlating the results of this battery with the averages of several other intelligence tests (protecting results by observing the usual cautions regarding sampling and other statistical safeguards) reveals that the general or Total Mental Factors I.Q.'s obtained with this test may be used for comparative purposes with other intelligence tests. (The correlation of data obtained by use of California Test of Mental Maturity with individual Stanford-Binet M.A.'s and I.Q.'s [r = .88] is about as high as retests by use of the individual scale.) However, the practice of dealing only with mental ages and intelligence quotients obscures and ignores the separate important factors which constitute mentality; and it is in terms of these factors that the abilities of individuals should be diagnosed. This battery attempts such a diagnosis on the basis of present knowledge; further evidence of validity must await further knowledge of the nature of mental maturity.

V. Standards

Norms appear on the last pages of this Manual. These norms are comparable to those regularly obtained by use of individual psychological examinations and well-standardized group tests and are based on over 25,000 cases. The standard deviation of I.Q.'s for the normal or typical population is 16. (See also page 19.)

The profile on the front page of each test booklet provides for a graphic representation of the responses in relation to a Mental Age scale. The Summary of Data provides ready reference to the customary mental ages and intelligence quotients.

In addition, percentile norms are provided for ages 12, 13, 14, 15, and 16 (incl. Adults). These percentile norms are given on pages 17 and 18 of this Manual.

Thurstone, L. L.: The Theory of Multiple Factors, and A Simplified Multiple Factor Theory, University of Chicago Book Store, 1925; also The Vectors of Mind, University of Chicago Press, 1935.
VI. DESCRIPTION OF THE PRE-TESTS

Test 1. Visual Acuity.

The purpose of this test is to discover whether examinees can see well enough to take the remaining tests with fairness to themselves. The simple method of testing vision offered here is applicable to group testing under ordinary school room, office, or factory conditions. It is not a visual examination in any sense of the word; it is merely a quick, efficient manner of detecting persons with gross defects which would prevent a fair measurement of mental maturity.

Any person who can read lines 7 or 8 without error, or with errors probably due to pure chance, should have no visual difficulty with the remainder of the test. Those who cannot read lines 7 and 8 should be referred to a nurse or medical examiner for further visual examination. Where a low score on the total test is apparently due to visual difficulty, the test should be repeated as an individual examination with the examiner assisting the student or worker by clarifying the tasks.

The examiner should watch the posture and attitudes of the persons taking the test to see whether any are frowning, squinting, or holding their heads too close to their papers. An individual may be suffering from eye strain due to particular eye defects, and yet make a good score on this test.

Teachers or medical examiners can apply individual visual tests if equipment is available, thus supplementing the rougher measure offered in the above group test. Individuals with defective vision may thus be discovered and favored, students in the location of their seats with reference to the blackboard, and both students and workers with respect to the distance from windows where brighter illumination is usually an advantage to them. For further informal measurement Snellen's Vision Chart, and Bausch and Lomb Optical Company's Test Chart are widely used. Some schools are utilizing such devices as Betts Ready-to-Read Tests and the American Optical Company's Ophthalmograph.

Test 2. Auditory Acuity.

The purpose of this test is to discover whether individuals hear well enough what is said to them in an ordinary tone of voice and under ordinary school-room, office, or factory conditions to take the remaining tests without disadvantage to themselves.

This is not a measure of how well persons hear in general; it is rather a measure of whether these particular individuals can hear directions under the conditions which prevail in the given situation.

For this purpose, the authors use simple facts of every day experience, and thereby produce a situation in which differences in ability to hear constitute the major variable. Individuals with a language difficulty, those whose readiest language is other than English, obviously are under an additional handicap in taking this test. The correct marking of a familiar picture is an indication that the directions were correctly heard. In the case of words very similar in sound, correct marking indicates that minor differences also are distinguished. Where individuals obtain scores of less than ten on this pre-test (except an occasional case due to pure chance), and the scores on the test proper give evidence of confusion due to lack of hearing ability, the test should be repeated as an individual examination.

Inadequacies in hearing are difficult to detect even with the aid of special equipment. Because of the number of factors which enter into the testing of hearing, it is important to have the opinion of a skilled examiner working under normal conditions for any student who gives definite evidence of hearing difficulty. Generally speaking, persons who tend to be inattentive, who take listening attitudes, or who have imperfections in speech should be suspected of having impaired hearing. All such individuals should be given an individual test of hearing at frequent intervals with the aid of such devices as a McCallie or a Western Electric audiometer.

Test 3. Motor Coordination.

The purpose of this test is to determine the degree of motor coordination which the student or worker possesses. The movement is continuous, alternating from right to left along horizontal, vertical, and oblique paths, involving movement toward the body and away from it. The time is controlled by counting. Under these conditions, individual performance is significant and revealing. Low scores may be due to poor vision (compare with results of Test 1), immaturity, inadequate spatial orientation (compare with results of Tests 6, 7, and 8), speed unfavorable for the individual, or unsteadiness produced by emotional strain.

An analytical study of the results of this test will provide evidence concerning the relative physical development and the nervous control of the individual. Those persons who show emotional "blocking" and inadequate motor control should be tested individually on the remainder of the test, making allowances for these disabilities.

If the individual does well on the remainder of the test in spite of a low score on motor coordination, he will probably need special assistance in
writing, drawing, and similar activities in business and industry where some degree of muscular control is involved. Those who score high on this test should be expected to do well in writing, drawing, and similar activities.

VII. Description of Mental Maturity Tests

Test 4. Memory (Immediate Recall).

This is a test of auditory verbal memory. Short series of words arranged in pairs, logically or illogically associated, are pronounced, preceded by the information that the memory for this material is to be tested. It is, therefore, a test of ability which is basic to learning. As the series increases in number the length of the immediate memory span for auditory verbal impressions is revealed. The response is non-verbal in type, the response word being represented pictorially in a multiple-choice situation. No part of the test is dependent on the ability to read.

Test 5. Memory (Delayed Recall) (given after Test 13).

This is a test of auditory verbal memory of the intentional learning type. Examinees listen to a story read to them just preceding Test 14 with the knowledge that they will be examined later. After an interval of about 30 minutes, they are given the opportunity to respond to a series of multiple choice test situations.

Those who make low scores on Test 5, whether or not they score high on Test 4, will be likely to experience serious difficulties in several areas, unless such low scores can be accounted for by defective vision or hearing, or both. Such persons frequently have a reading disability; memory is basic, not only in the reading act itself, but in using the results of reading. Such persons may also prove to be poor spellers; they may find music difficult because they cannot recall the meanings of notation, signatures, and tempo; they may dislike to participate in plays and dramatization because they cannot learn or retain their lines; and they may do poor work in the social studies, and in business and industry, where the recall of names, dates, places, and events is involved in the understanding of cause and effect relationships.

On the other hand, where vision, hearing, and memory scores are satisfactory or high, these types of difficulties should not appear. Individuals with good memory ability usually do well in the traditional subject-matter centered school; but they usually have difficulty in such schools if they score low on Tests 4 and 5. In general, individuals who score low on memory tests must rely on notes, textbooks, and other sources to provide the facts and information which they need, but cannot recall, in the pursuit of other types of educational or business and industrial activities.

Ability to remember does not necessarily carry with it ability to make inferences, to generalize, or to reach valid conclusions. These are higher mental processes which will be discussed later.

Tests 6, 7, and 8. Spatial Relationships.

These three tests are designed to measure the status of certain aspects of thinking which involve orientation in space and the use of spatial relationships.

Test 6 reveals the individual’s ability to orient himself in many complex situations involving the discrimination between right and left; Test 7 detects ability to use spatial imagery in manipulating spatial patterns in many different forms and positions; and Test 8 identifies foresight in dealing with problems involving other complicated spatial situations.

In addition to their use in critical thinking, space concepts and relationships are used in simpler form in many of the daily educational and work activities of individuals.

Global geography introduces new spatial concepts in addition to those previously required in dealing with maps, charts, and graphs. Writing, spelling, and drawing all involve space orientation. Plays and dramatizations involve space orientation with respect to the audience as well as to other players. Typewriting involves orientation of hands and fingers with respect to the keyboard. Playing an organ involves the simultaneous space orientation and unified functioning of both hands and both feet. Even relatively simple tasks in the home economics kitchen often involve simultaneous space orientation to a number of factors, including the shape and size of the room, the equipment, the materials, and the operations.

A high score in these tests indicates ability to do well in the activities described above as well as to solve problems involving somewhat more intricate spatial relationships. Such persons should be able to give as well as follow directions; and they should do well in planning, layout, design, and construction.

A low score in these tests may be due to poor perception or memory, or both; if these two factors are unsatisfactory, the individual will need assistance in tasks involving space orientation and relationships. However, if the unsatisfactory status is due to lack of opportunity rather than ability, it may be improved through such assistance. The teacher (or foreman) must be particularly careful in giving directions to such persons because they often find
it difficult both to understand and to follow the many directions involving spatial relationships.

Tests 9, 10, 11, and 15. Logical Reasoning.
The four tests in this group represent some of the higher forms of intellectual activity which are usually designated as thinking or reasoning. Ability to think depends for effectiveness upon perception and memory functioning in both spatial and non-spatial situations, as well as upon the abilities involved in sensing differences, likenesses, and analogies, and in making inferences.

Tests 9, 10, and 11 are presented in graphic or non-language form; Test 15, inference or judgment, is presented in language form.
The simpler elements of logical reasoning are involved in most educational as well as other activities. The mere identification of likenesses and differences in the meaning or appearance of words in reading and spelling; reading, obtaining meaning from the printed page, or the understanding of speech; or the tryout and evaluation of a new color combination in elementary painting are examples. In general, no matter how simple the situation, wherever a problem requiring a decision or a choice of responses presents itself, the simpler aspects of logical reasoning function.

However, ability in logical reasoning develops from these simple beginnings through relatively simple and more complex problems of daily living to the critical thinking or reasoning involved in finding cures for insidious diseases, inventing radar, and perfecting instruments for defense or transportation.

As the individual matures, his school activities should provide problems and situations which develop his powers of logical reasoning. He should become increasingly able to detect and use finer shades of meaning in reading and speech, to distinguish outward appearances from actualities in political and social problems, and to make more valid analyses and inferences in situations or problems involving cause and effect relationships in social studies, science, and everyday living.

Those who obtain high scores on Tests 9, 10, and 11, and low scores on Test 15 may lack reading or memory ability. Tests 5 and 16 should be checked in this connection.

When inability to reason logically is due to a remediable cause such as a very unfavorable environment over a period of years, the individual can be aided in improving his reasoning ability. However, where the environment has been favorable and he has had the commonly available opportunities, a low score usually indicates an actual lack of capacity.

Such a person can neither perceive the fine distinctions of subtle and complex cause and effect relationships, nor can he plan or execute attacks on problems which require careful observation, discriminating analysis, the making of inferences, the projection of possible answers or solutions, and the ability to reach valid conclusions. Such individuals must be content to live on a relatively low intellectual plane; lacking facility in inference and generalization, they must be given principles and generalizations as facts, rather than attaining them as end products of logical reasoning; they must live in a concrete rather than an ideational world. However, this does not prevent them from becoming very skillful in such fields as music or the graphic arts. They should be tested for specific aptitudes and interests.

On the other hand, an individual whose score reveals high logical reasoning ability should be expected to grow in the functional elements outlined above. He should be expected to recognize the nature and implications of problems; to distinguish between evidence and propaganda; to project and test possible solutions; and to reach valid conclusions.

Many factors analysis studies have yielded a more or less independent factor of intelligence variously called number factor, number facility, or numerical reasoning.

This ability involves the recognition and use of likenesses, differences, and analogies, and the making of inferences with special respect to quantitative or number situations and problems.

Individuals who score high on these tests should do good thinking in arithmetic, the mathematical phases of shop work, the numerical phases of home economics having to do with recipes, proportions, and patterns, and the arithmetical problems of everyday life, involving expenses, income, bookkeeping, making change, and the like.

If individuals who make low scores have not been denied the usual opportunities for developing this ability, such low scores suggest a deficiency in this factor of intelligence. They need special help in developing number concepts and in using the fundamental arithmetical processes involved in solving numerical problems. They frequently lack an appreciation of the significance or value of money; they must frequently be assisted in relating income to prices and expenses; much that is quantitative in their environment escapes them; and they lack definiteness and preciseness in their relations with others.

On the other hand, they may think well in the qualitative and emotional aspects of literature, music, and art, and do well in creative work which requires little or no numerical reasoning.
Test 16. Vocabulary.

Because of the lack of a better designation which is at the same time widely understood, Test 16 is called Vocabulary. However, this term signifies much more than mere connections between symbols and the realities for which they stand.

Ideas and meanings begin as perceptions which enter consciousness through the senses; if they are remembered, they may function in many relationships, spatial or non-spatial in nature, and they may be enriched and refined through use in logical and numerical situations. They finally emerge as concepts which are useful in thinking.

This verbal factor, called Vocabulary, is recognized as an important and relatively independent functional element of mental maturity.

Individuals who score high in this test possess the capacity to understand and profit from their experiences. They should do well in reading, literature, and drama which involve the understanding of symbols and the interpretation and projection of meanings through spoken and written language. They possess some of the basic abilities involved in understanding others and making others understand them. They should do well in managerial and executive positions.

However, a low or average score on this test is not proof of lack of capacity in the verbal factor; such a score may be due to lack of a favoring environment or training in the skills associated with this ability. Further study of the results of previous tests in this series is indicated. Individuals who score low on this test will profit less by reading, at least temporarily, than from other non-verbal types of educational activities.

VIII. Using the Test Results
General Considerations

The proper interpretation of test scores of an instrument such as the California Test of Mental Maturity requires the use of norms or standards. Thus, scores are interpreted as Mental Ages, so that the person may be said to have the mental ability equal to that of a typical person of a given age. The Intelligence Quotient (I.Q.) is the ratio of mental age to actual age and indicates the extent to which a given individual has mental ability above or below the average for his age.

Mental Ages are used as criteria of the level of ability at a given time. In both industrial relations and educational situations, the mental age requirements of given occupations or assignments are often known. Thus, it is possible to relate the ability of an individual to duties or assignments which are appropriate to his mental abilities.

Intelligence Quotient (I.Q.), being a ratio, and fairly constant, indicates the degree of ability that the individual has in comparison with others of his age. It is a convenient measure for use in considering the relative ability of a person in relation to the average (indicated by I.Q. 100). In the case of children under the age 16 it also provides a convenient means for determining the probable mental age at any given time. The actual, or chronological, age of any person (using 16 years in the case of those over 16) may be multiplied by the I.Q. to determine the estimated mental age at any time. I.Q.'s are ordinarily interpreted as follows:

<table>
<thead>
<tr>
<th>I.Q.</th>
<th>Descriptive Classification</th>
<th>Per Cent of Typical Population Included</th>
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</thead>
<tbody>
<tr>
<td>130 &amp; above</td>
<td>Very superior</td>
<td>3%</td>
</tr>
<tr>
<td>115-129</td>
<td>Superior</td>
<td>12%</td>
</tr>
<tr>
<td>100-114</td>
<td>High average</td>
<td>35%</td>
</tr>
<tr>
<td>85-99</td>
<td>Low average</td>
<td>35%</td>
</tr>
<tr>
<td>70-84</td>
<td>Inferior</td>
<td>12%</td>
</tr>
<tr>
<td>Below 70</td>
<td>Very inferior</td>
<td>3%</td>
</tr>
</tbody>
</table>

In general, the higher the score, mental age, or intelligence quotient, the more complex, abstract, and difficult the task or problem which an individual can handle. Mental ability is one of the most significant factors which must be given attention in education and in occupational adjustment. Frequently, the degree of intelligence is the controlling factor in success.

However, measures of capacity or intelligence should never be used alone, but should be considered in relation to other factors. One should not attempt to predict individual achievement from mental test data alone any more than one would attempt to judge an automobile on the basis of a single measure, such as height, weight, or length.

Language and Non-Language Data

As previously stated, one of the significant features of the California Test of Mental Maturity is that it provides Language M. A.'s and I.Q.'s and Non-Language M.A.'s and I.Q.'s as well as the customary total M.A.'s and I.Q.'s.

The language test data are particularly useful in indicating how well the individual understands relationships expressed in words, such as instructions, conference discussions, statements of logical principles or courses of action, and the like.

The non-language test data indicates how well the individual understands relationships among things or objects when language is not involved, such as physical or mechanical relationships.
There are significant differences in individuals between these two kinds of mental ability. It is not unusual for a person to have a language I.Q. of 70 or 80 and to have a non-language I.Q. above 100. Similarly, the reverse is frequently the case. Thus, the provision of both language and non-language measures affords greater insight into the mental processes of a given individual than is provided by the typical intelligence test. The significance of these additional data for guidance, selection, and placement is obvious in that they will make possible a more appropriate consideration of the real abilities of a person.

Mental Factors Data

A detailed description of the nature, purpose, and significance of mental tests included in the California Test of Mental Maturity is given in Sec. VII of this Manual. The tests are classified as Memory, Spatial Relationships, Logical Reasoning, Numerical Reasoning, and Vocabulary. Many specific suggestions regarding their interpretation are included in these descriptive statements, and it is recommended that the Section be carefully read by those who desire to obtain the maximum diagnostic value from the test data.

The percentile norms provided on pages 17 and 18 of this Manual are useful in educational diagnosis, vocational guidance, and employee selection and placement. These norms indicate for each individual his relative rank in comparison with others of his age group in the various mental factors.

Other Educational Uses

The use of measures of mental capacity is accepted in most school systems as an essential element in the counseling and guidance program, and as information basic to fitting instruction to the needs of each student. The Mental Ages obtained by use of the California Test of Mental Maturity are comparable to those obtained by most other intelligence tests. In addition, the (1) language mental ages and I.Q.’s and the (2) non-language mental ages and I.Q.’s provide diagnostic information which shows the extent to which the individual can think clearly when dealing with (1) word symbols, or (2) non-verbal situations. The separate factors data, as indicated above and in Section VII, are further aids in diagnosis.

The following are suggestions for use of M.A.’s and I.Q.’s in individual guidance:

1. To evaluate or predict the achievement of an individual in academic subjects: Compare the mental age (or Intelligence Grade Placement) and the educational age (or subject grade placement). Achievement should tend to approximate the mental age of the individual.

2. To obtain data fundamental to vocational guidance: Reference should be made to suggestions given regarding personnel selection on page 8 of this Manual.

Comparison of Intelligence and Achievement

Test Medians

Intelligence quotients and intelligence grade placements are very useful in the following connections:

1. To determine if a class (or school) has made satisfactory progress in basic skills.

The following table is based upon 100 school surveys and 48,000 individual measurements. This table is presented to show the range of median intelligence quotients, median intelligence grade placements (mental ages in terms of school grades—see next to last column of Norms on the last page of this Manual), and median achievements in the essential skills as determined by these surveys.

<table>
<thead>
<tr>
<th>I.Q.’s AND RELATED DATA AS SHOWN BY SCHOOL SURVEYS</th>
<th>Fraction of School Year above or below norm</th>
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</thead>
<tbody>
<tr>
<td>Class and School Medians</td>
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<tr>
<td>Per-</td>
<td>Intelligence</td>
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<td>centile</td>
<td>Grade Quotient</td>
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<td>Rank</td>
<td>Placement</td>
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<td>99</td>
<td>114</td>
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<td>88</td>
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<td>1</td>
<td>75</td>
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<td>1.18</td>
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</tbody>
</table>

The data are given in percentiles and show the fractions of a school year above (+) or below (−) test norms for the subjects reported.

Thus, if the median I.Q. for a class (or school) is 105, such class (or school) is at the 80 percentile in intelligence when compared with the sampling of 48,000 cases measured. Such a class (or school) should normally be expected to have a median reading vocabulary score which is .30 of a year above normal, a median arithmetic fundamentals score which is .43 of a year above normal, etc. On the other hand, if the median I.Q. is below 100, the scores in basic skills will usually drop below the normal grade placement scores for average I.Q.’s. Thus, if the median I.Q. for a class (or school) is 94, reading comprehension scores .40 below normal grade placement scores for that class (or school) would be considered satisfactory.

2. To set a suitable standard of achievement for a class (or school): Determine the median I.Q. and add (or subtract) the appropriate grade placement fraction to (or from) the grade placement of the class (or school) tested. These data, however, should indicate the need for differentiated standards in directing the educational program and in evaluating the accomplishment of the schools and classroom groups.

In using mental age or the intelligence quotient in
a given age or grade group, the following considerations should be kept in mind: The correlation or relationship between measurements of intelligence and academic success is far from perfect; in some subjects it is only 25 or 30 per cent better than chance. Although students with higher I.Q.'s will, in general, do better than those with lower I.Q.'s, if they are about the same age, the teacher should always remember that other factors such as health, previously learned study habits, opportunity, persistence, encouragement, and the like, play a large part in achievement.

It is particularly important in directing the learning of those having difficulty that teachers inspect the records for previous academic success in both language and non-language work, and obtain as many other types of pertinent information as possible in order that it may be used, together with the intelligence test data, and the diagnostic analysis of mental factors, in improving learning.¹

Business and Industrial Uses.

Employment managers are concerned with both pre-service and in-service personnel. The California Test of Mental Maturity contributes significant information related to employee selection, employee placement, and employee adjustment.

When intelligence test data are used in employee selection and management, it is frequently more important to know the minimum intelligence requirements for a given job than to know the average ability of those engaged in it. In other words, it is often easier to predict failures than successes by use of intelligence test data. It is desirable to establish a critical score, M.A., I.Q., or classification which will permit the inclusion of the greatest possible percentage of satisfactory applicants and the elimination of the greatest possible percentage of unsatisfactory applicants.

In addition to the establishment of "critical" low scores, much attention is now being given to determining the range of mental ability which appears to be appropriate to various job classifications.

1. EMPLOYEE SELECTION. In general, the more difficult the task, the higher the capacity required. As previously implied, routine tasks or types of work are better done by employees of lower I.Q.'s because more intelligent employees are apt to become discontented. Since such instruments as the California Test of Mental Maturity have been in use in vocational guidance and employment manangement, it has been found that successful functioning in typical positions requires minimum mental capacity (see classification on page 6) about as follows:


b. Superior Ability. In general, superior ability is required in those persons who must exercise excellent judgment and arrive at logical conclusions regarding courses of action in fairly complicated and involved situations, such as: Accountant, auditor, advertising expert who plans copy, banking official, stockbroker, dentist, machinery designer, druggist, employment manager, electrical engineer, geologist, inventor of commercial appliances, typical lawyer, manager or superintendent of an average size factory, wholesale merchant, army officer, ship officer, insurance company official, clergyman, newspaper reporter, private secretary to business or professional man, social work supervisor, teacher, veterinary doctor, and author of magazine articles.

c. High Average Ability. In general, high average ability is required in those persons dealing with technical supervision, abstract classifications and details, and the carrying out of previously arranged plans such as: Shop foreman, illustrator, express agent, apraiser, aviator, bank teller, bookkeeper, building contractor, department store buyer, caterer, railroad clerk, shipping clerk, census compiler, railroad conductor, designer, detective, draftsman, locomotive engineer, marine engineer, minor executive, small factory foreman, hotel keeper, inspector, insurance agent, interior decorator, institution manager, librarian, smaller manufacturer, master mechanic, nurse, minor government official and inspector, photo engraver, photographer, printer, probation officer, retail dealer in such business as clothing, drugs, hardware, and the like, automobile salesman, stock and bond salesman, traveling salesman, social worker, statistical clerk, stenographer, art teacher, elementary teacher, telegraph operator, undertaker, and Y.M.C.A. secretary.

d. Low Average Ability. In general, low average ability is adequate for those persons dealing with specific processes in which definitions and directions are relatively simple and the making of decisions as to policy or plans is not involved to any significant extent, but requiring good judgment and some discretion in operations, such as: Ticket agent, annealer or temper of tools, bookbinder, cabinet maker, carpenter, retail cashier, chauffeur, chef, filing clerk,
stack clerk, collector, compositor, street car conductor, dressmaker, dry cleaner, electrician, engraver, floor walker in store, landscape gardener, glassblower, tinsmith, harness maker, rivet worker, telephone lineman, machinist, auto mechanic, miller, milliner, motorman, moving picture operator, ornamental iron worker, general painter, metal pattern maker, plasterer, plumber and steam fitter, policeman, repairman, sales clerk, shop mechanic, sign painter, station agent, steeplejack, stock clerk, stonemason, tailor, telephone operator, tool maker, typist, upholsterer, vulcanizer, wheelwright, and woodcarver.

e. Inferior Ability. In general, inferior mental ability is adequate for those persons whose duties require that they follow simple and specific directions with little necessity for making significant plans or decisions, such as: Auto assembler, bell boy, blacksmith, boilermaker, brakeman, bricklayer, butcher, cobbler, concrete worker, cook, dairy hand, deliveryman, drayman, farm hand, finisher of metals, fireman, fisherman, foundry worker, hospital attendant, janitor, packer, wrapper, counter, late-hand, laundry worker, mail carrier, messenger boy, miller, miner, motorcycleist, motorman, munition worker, oilwell driller, semi-skilled machine operator, paper hanger, policeman, porter, newsdealer, roofer, saw mill worker, butler; sheet metal worker, shiprigger, smelter worker, soldier, stagehand, stonecutter, structural steel worker, switchman and flagman, textile worker, theatre usher, truck driver, and waiter in restaurant.

f. Very Inferior Ability. In general, very inferior mental ability is adequate for persons whose assignments require practically no judgment and who follow simple and specific directions usually under close supervision, such as: Day laborer, railroad section hand, boot-black, chamber maid, scrub woman, ditch digger, elevator operator, farm laborer, garbage collector, guard or watchman, hostler, junk man, street sweeper, and track layer.²

The list is intended to be suggestive of the minimum ability requirements which have been found to apply to typical positions. In instances where the duties of a given job are specialized, its classification might be changed. Job specifications, based on an analysis of the specific duties and operations required for given jobs, provide the basic data in determining the mental ability requirements, as well as other requirements for given positions. Civil service departments and employment managers are making such analysis for the purpose of preparing these specifications so that the selective criteria will be fitted to their particular needs.

It should always be remembered that in addition to mental ability, there are other important factors involved in occupational efficiency and adjustment.³

2. Employee Placement. Most businesses and industries have a sufficient variety of occupations so that a considerable range of mental ability is required in the various departments, and there are also significant differences within the departments themselves. Employment departments which accumulate data regarding the mental levels required for success in the jobs of the various departments, will be able to establish critical mental ability scores so that they may select candidates who will have the mental capacity necessary for success. When the average I.Q.’s and the “critical” range of abilities which are found among the successful employees have been determined, more satisfactory placements will be obtained. Also, in the problem of up-grading employees, the knowledge of the level of ability of given persons is absolutely essential as a factor in determining their probable success.

Where a personnel department desires to do its work scientifically, it is recommended that all employees be tested and the average I.Q.’s and the variation of I.Q.’s of various departments be determined. These measures should be studied in relation to the service ratings and a range of scores or I.Q. groupings which give the highest probability of success should be established. New employees, or employees to be given the opportunity of promotion, can be selected from the standpoint of capacity so that they will have the optimum qualifications for meeting the intellectual requirements of the position. It is found that individual applicants will often be equally eligible to work in several different departments on the basis of I.Q. In this event, previous experience, interest, health, and personality data may be taken into consideration in making the most appropriate placement.

3. Employee Adjustments. It is frequently necessary to make adjustments and re-assignments of personnel. Since it has cost considerable to select, employ, and place an individual in the given business or industry, it is usually more profitable to try to re-adjust misplaced employees who are not succeeding in their given assignments. This is true, not only because of the cost of employment, placement, and training, but also because other considerations frequently require that they be given the opportunity for further adjustment.

The first step is to determine if the failure is due to lack of capacity; if so, replacement should be made into a simpler type of work. As previously indicated,

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¹For similar additional information see Vokum and Yerkes: The Army Mental Tests; Bingham: Aptitudes and Aptitude Testing; Vitelles: Industrial Psychology; Stead, Shartle and Associates: Occupational Counseling Techniques.

²Attention is called to the fact that certain personality factors, such as capacity for loyalty to the organization, self-reliance, ability to get along with others, and the like, are as essential as ability to do certain types of work. To provide an easily interpreted inventory of information as to personal and social adjustment, the California Test of Personality is recommended.
IX. DIRECTIONS FOR GIVING

The tests in this series are primarily analytical and diagnostic even though they furnish the customary M.A.'s and I.Q.'s. The intention is to secure as accurate an indication as possible of each person's status in the factors tested.

It is desirable that each person shall understand clearly the manner in which he is expected to indicate his responses. However, the examiner must keep in mind that a test rather than a teaching situation is desired and that he should in no way indicate the correct response, except in practice exercises and as instructed. Each person should have a blank sheet of paper. Directions to be given examinees are in blackface type.

When machine scoring answer sheets are to be used, it is necessary to use the special edition of the test and the directions prepared for that purpose.

TIME LIMITS

This is a power rather than a speed test. However, Test 8 requires exact time limits, and the examiner should have available a watch with a second hand. The limits indicated for the other tests are suggested rather than obligatory, but should be followed in most circumstances.

The test should be given in two periods requiring approximately 45 to 50 minutes each. Pages 1-12 should be given during the first period; and after a recess, noon hour, or a day intervenes, the remainder of the test should be administered.

INSTRUCTIONS TO EXAMINEES:

Each examinee should fill in the identifying data on the front cover-page of the test booklet. Then the examiner will state: This booklet contains a number of exercises which I want you to try. After I give you the directions for each test, you will begin when I say "Ready, begin." You are to work as rapidly as you can without making mistakes.

When you have completed a test or have done as much of it as you can, wait for further directions.

Now, open your booklet and fold back the page like this. (Demonstrate and be sure the examinees have the same test.)

TEST 1

Furnish each examinee with a sheet of paper to be used to separate the groups of letters if it appears necessary. It is to be used, also, in Test 4.

Look at the top line of Group A. You see the letters D, E, and L and the number 3. The directions are: In each group of letters and numbers, put a circle around the letters and numbers in the second row that are the same as those in the first row of the group. D, L, 3, and E have rings around them to show that they are the same as the letters and the number in the first row. Do all the other groups in the same way. Ready, begin.

Suggested time limit, 3 minutes.

Now turn your booklet over to Test 2.

TEST 2

The directions are: In each row, put an X on the line under the object that is named. Then write the number of the object you mark on the line to the right. Look at Row A. Cuff. Put an X on the line under the picture of the cuff and put 2 on the line to the right. I shall pronounce the word just once. Ready. Row 1. Pronounce words in a normal manner, once only, and allow reasonable time before pronouncing the next word.


Turn the page over to Test 3 and fold it back like this. (Demonstrate.)

TEST 3

In this test you are to draw a line between the black lines. The directions are: Start at the first arrow at A and draw a line to each number when called. Try to keep within the black lines. Do not start until I say, "Ready, begin." Put your pencils on the arrow under the letter A. When I call each number you are to draw a line to that number. Try to keep from touching the lines. Do not lift your pencil from the paper. (Be sure pencils are on arrow at A.)

Ready, begin. 1. Draw a line to number 1. (Allow about 2 seconds between each number, counting very slowly, avoiding suggestion of haste) 2, etc., to 12. Pause to permit any slow examinees to finish drawing A. Do B in the same way. Put your pencils on the arrow at B. Ready, begin. 1, etc., to 8. (Allow about 2 seconds between each
number called as in A. Allow examinees to finish drawing B even though they did not keep up with the count.)

Now turn your booklet over to Test 4.

Test 4

In this test you will use the sheet of paper furnished you. Place it below Row C. Listen to the pairs of words that will be read to you. The first word of each pair will be repeated and you are to remember what went with it. Find the object. Put an X on the line under it and put the number of the object you mark on the line to the right. Ready. Open—door; empty—basket; fly—bird. Look at Row A. What went with open? (Let examinees answer.) Yes, door, so put an X on the line under the second object and put a 2 on the line to the right.

Row B. What went with empty? Yes, basket, so put an X on the line under the first object in the row, a basket, and put a 1 on the line to the right.

Row C. What went with fly? Yes, bird, so put an X on the line under the third object in the row and put a 3 on the line to the right.

Do you understand? The first word of each pair will be repeated and you are to remember what went with it. Find the object, put an X on the line under it and put the number of the object you mark on the line to the right. Pencils up. Do not move your paper down until I tell you. Ready. Listen carefully. Sweet—grapes; (pause) wet—sail; (pause) anchor—anvil; (pause) protecting—battleship; (pause) shadow—airplane. Move your paper down to Row 1. Put an X under what was said with sweet. Move your paper down to Row 2, with wet (pause).

(Examinees are to move paper down one row as the row is called.)

Row 3, with anchor. Row 4, with protecting. Row 5, with shadow. In each row be sure to put the number of the object you mark on the line to the right.

Pencils up. Listen carefully. The next pairs of words are: distant—monument; record—watch; control—parachute; turning—well; 19—R; leaping—kangaroo; idle—chair. Move your paper down so that you can see Row 6. Put an X under what went with distant. Row 7, with record. Row 8, with control. Row 9, with turning. Row 10, with 19. Row 11, with leaping. Row 12, with idle.


Now turn the page over to Test 6 and fold it back.

Test 6

Look at all these pictures of hands and feet and other objects. Under each picture is a letter R, meaning right, and a letter L, meaning left. The directions are: Put a circle around the letter R in all rights. Put a circle around the letter L in all lefts. The first two are correctly marked. Ready, begin.

Allow 3 minutes.

Now turn your booklet over to Test 7.

Test 7

Look at the first drawing in Row A. Now look at all the other drawings in Row A. (Examiner points to the drawings in Row A.) The first drawing is among the other drawings in this row. Which one is it? (Let the group respond.) Yes. It is number 2. So put an X on the line under the second drawing and put a 2 on the line to the right. The directions are: In each row, find a drawing that is either the same or different views of the first drawing. Put an X on the line under this drawing and put the number of the drawing you mark on the line to the right. Do not give too much time to any one item. You will have just eight minutes. Ready, begin.

Allow 8 minutes.

Now turn the page over to Test 8 and fold it back.

Test 8

Look at all these drawings. Notice they are all joined so that you can go from drawing A to drawing 10 without going outside any of the drawings. Pencils up. The directions are: Begin at the arrow in drawing A. Draw a line to show the path you would take through all the drawings so as to finish drawing 10. Go as quickly as you can. Ready, begin.

Allow exactly 2 minutes.

Now turn your booklet over to Test 9.
Look at the first object in Row A. (Examiner points to Row A.) A piece of cake. It is sweet. Now look at all the other objects in the same row. One is the opposite of the first object. (Let the class respond.) Yes, the second picture is a lemon. It is sour. Put an X on the line under it and put a 2 on the line to the right. Do it now. (Pause.) The directions are: In each row there is one object that represents the opposite of the first object. Put an X on the line under it, and put the number of the object you mark on the line to the right. Do not give too much time to any one item. You will have just five minutes. Ready, begin.

Allow 5 minutes.

Now turn the page over and fold it back.

Look at the pictures in Row A. (Examiner points to the pictures in Row A.) The first three objects are alike in some way. What way? (Let the group respond.) Yes, they are all cleaning brushes. Now look along Row A to the right and find something else like them. Which is it? (Let the group respond.) Yes, the tooth brush is right. It belongs with the first three in this row. So put an X on the line under it and put a 3 on the line to the right. Do it now. (Pause.) The directions are: The first three objects in each row are alike in some way. Find another object in the same row that belongs with them. Put an X on the line under it, and put the number of the object you mark on the line to the right. Do not give too much time to any one item. You will have just five minutes. Ready, begin.

Allow 5 minutes.

Now turn your booklet over to Test 11.

Look at the objects in Row A. A speedometer, an automobile, a thermometer, a rose, the sun, a turnip, and an airplane. The first object is related to the second in some way. What way? (Get responses from the group.) Yes, the sun. The speedometer measures how fast the automobile is traveling. Now look at the third object, a thermometer. Look at the other objects in this row and find one to which the thermometer is related in the same way that the speedometer is related to the automobile. (Get responses from the group.) Yes, the sun. Put an X on the line under it and put a 2 on the line to the right. Do it now. The speedometer measures speed and the thermometer measures how hot or cold it is—that is, temperature. (Pause.) The directions are: In each row the first object is related to the second. Find an object that goes with the third object in the same way. Put an X under it and put the number of the object you mark on the line to the right. You will have just five minutes. Ready, begin.

Allow 5 minutes.

Now turn the page over and fold it back.

Look at the first row of numbers in the samples on this page: 2, 4, 6, 8, 9, 10. You see that the numbers count up by twos, but there is one wrong number. Which is it? (Pause) Yes, 9. The numbers should be 2, 4, 6, 8, 10, so a line is drawn under the 9, and 9 is put on the line to the right. Now look at the second row of numbers: 11, 9, 8, 7, 5, 3, 1. Which number is wrong here? (Pause) Yes, 8. These numbers count down by twos and should be 11, 9, 7, 5, 3, 1. Thus the 8 is underlined and 8 is put on the line to the right. The directions are: In each row of numbers below, there is one that is wrong. Find this wrong number and draw a line under it. Then write it on the line to the right.

Also do K, L, M, N, and O. You will have just 5 minutes to do all the problems on this page.

Ready, begin.

Allow 5 minutes.

Look at the five columns headed: cent; nickel; dime; quarter; half-dollar. (Examiner points to these columns in the test held up before the group.) These are some problems for you to work. (Examiner points to the problems at the left of the page.) Look at the first problem. It asks what two coins make 10 cents. Since we can use only two coins, our choice must be two nickels, and we put a 2 on the line under the five cents or nickel column. The next problem asks what 7 coins make 25 cents. The only 7 coins that make 25 cents are 5 one cent pieces and 2 dimes, so we place a 5 in the cent column, and a 2 in the dime column. The directions are: In each problem you are to find a certain number of coins to make a certain amount of money. Put the number of coins required under the name of the coin.

Allow 5 minutes.

There should be a recess at this time.

Put your pencils down. Sit back in your seats. I am going to read you a short report. You must listen carefully so that you will remember everything it says. The name of the report I am going to read is “The Place of the Dream Among the Huron Indians.” (Examiner reads the following account in a clear steady tone of voice usual for reading or making reports. Repeat the title.)
THE PLACE OF THE DREAM AMONG THE HURON INDIANS

Researches into the customs of the Huron Indians living in Northeastern North America in the seventeenth and eighteenth centuries show that these Indians attached great importance to their dreams. These dreamers in the wilderness believed that their dreams were the direct reflection of the wish of their Manitou, a great spirit who controlled their destiny. Every wish of the Manitou had to be satisfied by giving a feast or a festival of some sort in his honor.

In the recorded dreams of these Indians food of various kinds was mentioned very frequently, always in easy and ready connection with feasts, in the preparing and eating of which the entire village entered with hearty accord. The dream demanded full and detailed satisfaction. However, if an article originally required by the dream were not obtainable, some other article must be found to substitute for it. Gull's eggs not in season might be replaced at the feast by small loaves of bread, the baking of which kept the women of the village busy for hours. If the season were unfavorable for elk hunting, elk meat might be replaced by fish, beaver, or even by large loaves of bread obtainable from the French.

Articles of clothing, furnishings, ornaments, and property of all kinds entered abundantly into the dreams of the Hurons. An Indian, especially one who was sick, had but to dream that he wished to refurbish his cabin and announce his dream. Promptly the men of the village collected in loose organization and invaded unresisted all the cabins, carrying away any object they fancied to the cabin of the lucky dreamer.

Other dreams were concerned with defense. The report of a dream in which an enemy was taken captive was followed by general feasting and bestowing of public honors on the dreamer. In contrast, he who dreamed of being captured by the enemy received publicly all the tortures that would have been meted out to an actual captive, as a stimulus to courage.

Revenge was often the motive for a dream. An Indian dreamed that he saw ten men plunge into the frozen river, entering by one hole in the ice and coming out by another. On awaking, he invited ten of his friends to such a diving contest in the river which was then frozen over. Among the ten was one against whom he held a grudge. This swimmer was lacking in skill and perished under the ice.

Other dreams were clearly concerned with ordinary social affairs. These dreams gave rise to occasions for getting together for social enjoyment and for competition among themselves and with a neighboring tribe. Conspicuous among their games was the “Game of Dish,” entered into in response to a dream. Participation of a neighboring tribe called for a formal message by an envoy inviting the neighboring tribe to a game of dish. The place of meeting was determined by drawing lots. The festival lasted for days. In the game, the contesting tribes sat on the ground facing each other, each with a bowl containing seeds of the white plum. These seeds were black on one side and white on the other. The game consisted in tossing the seeds in the bowl until the color agreed upon was on top in all the seeds. The contest over, the invited tribe left for home thus bringing to an end a sort of field-meet in which young and old entered heartily.

The Indian dreamed of things he desired and things he feared. Through the institution of the feast or festival in response to the dream, he was given a certain advantage. The carrying out of this custom tended to lessen the dulling effect of an otherwise unrelieved monotony in primitive life during times of peace, as well as to justify the revengeful and satisfy the covetous.

Now turn your booklet over to Test 14.

Test 14

The directions are: Work these problems on a blank sheet of paper. Write the letter of the answer on the line to the right. The correct answer for the first problem (A) is b. You will have ten minutes. Ready, begin.

Allow 10 minutes.

Now turn the page over to Test 15 and fold it back.

Test 15

Read aloud the directions at the top of the page and the complete sample. The correct answer is the third one: All horses are animals. A line is drawn under it and a 3 is put on the line to the right. Do all the others on the page. You will have ten minutes. Ready, begin.

Allow 10 minutes.

Now turn your booklet over to Test 16.

Test 16

Read aloud the directions and the sample. The third word, flower, has a line drawn under it because it is the same as blossom. A 3 is written on the line to the right. Do the others on the page in the same way. You will have ten minutes. Ready, begin.

Allow 10 minutes.

Now turn to the last page.

Test 5 (Page 16)

On this page are some questions about the story read to you a little while ago. The directions are:
Read the following and draw a line under the correct answer. Put the number of this answer on the line to the right. (Read the sample aloud.) The answer is "The Hurons," so a line is drawn under it and number 3 is put on the line to the right. Do the others on the page in the same way. Ready, begin.

Allow examinees to finish as much as they can, but 10 minutes should be sufficient. Then say:

STOP.

Turn your booklet over,—front cover-page up.

X. DIRECTIONS FOR SCORING

The examiner should use the key which is furnished with the tests as an aid in scoring. It is advisable that the examiner take the test, or carefully examine the responses made by an examinee, in order to become acquainted with the test situations.

General Instructions:

1. In scoring the tests, each item is considered right or wrong. No partial credits are given.
2. Mark each correct item with a "C." If two or more answers are given count as wrong, unless the person has attempted to erase, cross out, or otherwise indicate his intention.
3. Examinees are not penalized if they fail to record the number of the test item, as this is simply an aid in scoring. Consider the person's intention if that can be determined. If doubtful, count as "wrong."
4. The score for each test is the number right.
5. Record the number right at the bottom of each test.
6. Transfer the scores to the front page of the test booklet. Note particularly the location of Test 5 and Test 15 scores.

XI. INSTRUCTIONS FOR FRONT COVER PAGE OF THE BOOKLET

Purpose

The front cover page of the test booklet is designed to furnish a record of test results which may be torn from the test booklet and kept as a permanent record. It provides for a Summary of the essential information and for a Diagnostic Profile as an aid in interpreting test data.

Method

1. Record the Examinee's Score for each of Tests 1 to 15 on the light-face rule immediately to the right of the Possible Score in each case. Note that Test 15 is located after Test 11 on the profile. The score for Test 16 is entered directly on the heavy-face rule.
2. Add Scores on Tests 4 and 5 and write this sum on the heavy-face rule to the right of Possible Score 53; this is the Total Score for Memory. Add the Scores for Tests 6, 7, and 8, and write this sum on the heavy-face rule to the right of Possible Score 45; this is the Total Score for Spatial Relationships. Add the Scores on Tests 9, 10, 11, and 15. Write this sum on the heavy-face rule to the right of Possible Score 60; this is the Total Score for Logical Reasoning. Add the Scores on Tests 12, 13, and 14. Write this sum on the heavy-face rule to the right of Possible Score 45; this is the Score for Numerical Reasoning.
3. Add these totals for Memory (A), Spatial Relationships (B), Logical Reasoning (C), Numerical Reasoning (D), and Vocabulary (E), to obtain Total Mental Factors score. Record this sum on the heavy rule to the right of Possible Score 253.
4. The tests requiring a significant use of the verbal or language factor are 5, 15, 14, and 16. These four scores are added to obtain the Language Factors score which is designated as F and recorded on the heavy rule to the right of Possible Score 100.
5. The tests which are primarily non-verbal are indicated by a star (*) and are 4, 6, 7, 8, 9, 10, 11, 12, and 13. The Non-Language Factors score (G) is most easily obtained by subtracting the Language Factors score (F) from the Total Mental Factors score. Record this difference on the heavy rule to the right of Possible Score 153.
6. Chronological Age is the actual life age of the individual in months. It is essential that this age be correct for purpose of calculating the I.Q. 's of persons under 16 years of age. (In all cases where the individual is 16 years of age or older, 192 months is used as the divisor in obtaining I.Q.'s. However, each examinee's correct age is recorded on the line to the right of Chronological Age.) The age should be determined from a teacher's register, examinee's birth certificate, or other sources, if these are doubtful.

*7. Actual Grade Placement is the grade in which a student is actually working at the time he takes the test, expressed as a fraction of the school year. It is determined by adding the decimal fraction of the school year to the grade assignment, as follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Low (Grade)</th>
<th>High (Grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>0.0</td>
<td>0.5</td>
</tr>
<tr>
<td>October</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>November</td>
<td>0.2</td>
<td>0.7</td>
</tr>
<tr>
<td>December</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>January</td>
<td>0.4</td>
<td>0.9</td>
</tr>
<tr>
<td>February</td>
<td>0.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

In the illustration on the opposite page, the student was a Low 10 (L10) in January, or 10.4.

8. The Summary of Data is secured by transferring the Total, and F and G scores, to the space provided at the bottom of the page under Score. The Mental Ages are then found by using the norms on the last page of this Manual of Directions in the following manner: To find Mental Age for Total Score ______.
Mental Factors, locate the third from the left column and follow it until you reach the Total Mental Factors score which was obtained by the examinee; the corresponding Mental Age in months is found directly to the left in the first column. Mental Ages in Language and Non-Language factors are found similarly by locating the Scores in F and G (4th and 5th columns from the left) and reading the corresponding Mental Ages in months in the first column. Chronological Age (C.A.) in months is written to the right of each Mental Age in months except that for all individuals 16 years of age and older, 192 mo. is used as the divisor. The divisions are performed in order to obtain the three I.Q.’s.

Note: These divisions are already prepared on “Age and I.Q. Calculator.” Published by California Test Bureau, $1.00.

9. The Diagnostic Profile presents graphically evidence of the maturity of development of each person in many specific types of mental activity. It is easily completed by locating Scores and other data on the light and heavy rule scales to the right of the Scores, as illustrated on page 14. For example, the examinee in this case obtained a score of 22 in Spatial Relationships. This score is next located on the heavy rule to the right. The Mental Age (in months or years and months) to which this score corresponds may then be read directly above or below on the heavy rules. In the illustration the Mental Age is about 162 months.

The Mental Age equivalents of each major division and each sub-test may be obtained in the same manner.

10. The Percentile Ranks at the extreme right of the profile are obtained by use of the tables for each age group appearing on pages 17 and 18, entitled “Percentile Norms for Scores of Various Mental Factors.” Care must be taken to use the correct age table.

Interpretation of the Profile

The authors of the California Test of Mental Maturity believe that these test data and the methods of their presentation on the cover-page provide several significant features. The profile furnishes the following advantages:

1. It visualizes the significant elements of the individual’s responses.

2. It analyzes and summarizes the various factors which are measured by the test situations.

3. As a professional device, it reduces the “mystery” which has surrounded the meaning of Mental and Intelligence Quotient. The examiner may readily note strengths and weaknesses of responses in the various situations which together provide a measure of mental capacity.

In the interpretation of responses for individuals on the various tests, the examiner is referred to the detailed descriptions of the tests which appear as Sections VI and VII on pages 3-6 of this Manual.

C. T. M. M. Advanced Series Norms

(Continued from Page 20)
## PERCENTILE NORMS FOR SCORES OF VARIOUS MENTAL FACTORS

FOR USE WITH

CALIFORNIA TEST OF MENTAL MATURITY—Advanced Series

### TABLE FOR AGE 12-0 to 12-11

<table>
<thead>
<tr>
<th>MENTAL FACTORS</th>
<th>1</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>30</th>
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<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>95</th>
<th>99</th>
</tr>
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<tbody>
<tr>
<td>B. Spatial Relationships (Tests 6, 7, and 6)</td>
<td>0-6</td>
<td>7-8</td>
<td>9-11</td>
<td>12-14</td>
<td>15-16</td>
<td>17-18</td>
<td>19-20</td>
<td>21</td>
<td>22-23</td>
<td>24</td>
<td>25-26</td>
<td>27-28</td>
<td>29+</td>
</tr>
<tr>
<td>E. Vocabulary (Test 16)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10-11</td>
<td>12-13</td>
<td>14-15</td>
</tr>
<tr>
<td>TOTAL MENTAL FACTORS</td>
<td>0-20</td>
<td>31-37</td>
<td>38-47</td>
<td>48-59</td>
<td>50-69</td>
<td>69-79</td>
<td>79-87</td>
<td>87-95</td>
<td>95-96</td>
<td>96-97</td>
<td>100-103</td>
<td>112-113</td>
<td>122-139</td>
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### TABLE FOR AGE 13-0 to 13-11

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<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>95</th>
<th>99</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Spatial Relationships (Tests 6, 7, and 6)</td>
<td>0-7</td>
<td>8-9</td>
<td>10-12</td>
<td>13-16</td>
<td>17-19</td>
<td>20-21</td>
<td>22</td>
<td>23</td>
<td>24-25</td>
<td>26</td>
<td>27</td>
<td>28-29</td>
<td>30+</td>
</tr>
<tr>
<td>E. Vocabulary (Test 16)</td>
<td>0-1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10-11</td>
<td>12-13</td>
<td>14-15</td>
<td>16-19</td>
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<tr>
<td>TOTAL MENTAL FACTORS</td>
<td>0-35</td>
<td>36-48</td>
<td>49-63</td>
<td>64-74</td>
<td>75-84</td>
<td>85-92</td>
<td>93-95</td>
<td>96-97</td>
<td>100</td>
<td>108</td>
<td>117</td>
<td>126</td>
<td>135</td>
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### TABLE FOR AGE 14-0 to 14-11

<table>
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<tr>
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<th>5</th>
<th>10</th>
<th>20</th>
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<th>40</th>
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<th>70</th>
<th>80</th>
<th>90</th>
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<th>99</th>
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<tbody>
<tr>
<td>A. Memory (Tests 4 and 5)</td>
<td>0-15</td>
<td>16-21</td>
<td>22-26</td>
<td>27-31</td>
<td>32-35</td>
<td>36-39</td>
<td>40-41</td>
<td>42</td>
<td>43-44</td>
<td>45</td>
<td>46</td>
<td>47-48</td>
<td>49+</td>
</tr>
<tr>
<td>B. Spatial Relationships (Tests 6, 7, and 6)</td>
<td>0-10</td>
<td>11-13</td>
<td>14-17</td>
<td>18-19</td>
<td>20-21</td>
<td>22-23</td>
<td>24</td>
<td>25</td>
<td>26-27</td>
<td>28</td>
<td>29</td>
<td>30-31</td>
<td>32+</td>
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<tr>
<td>E. Vocabulary (Test 16)</td>
<td>0-6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>7</td>
<td>8</td>
<td>9-10</td>
<td>11</td>
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<td>13-14</td>
</tr>
<tr>
<td>TOTAL MENTAL FACTORS</td>
<td>0-40</td>
<td>41-61</td>
<td>62-74</td>
<td>75-86</td>
<td>87-95</td>
<td>96-105</td>
<td>114</td>
<td>122</td>
<td>131</td>
<td>139</td>
<td>150</td>
<td>162</td>
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--- 17 ---
### TABLE FOR AGE 15-0 to 15-11

<table>
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<th>Percentile Norms</th>
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<tr>
<td>A. Memory (Tests 4 and 5)</td>
<td>0-17</td>
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<tr>
<td>B. Spatial Relationships (Tests 6, 7, and 8)</td>
<td>0-11</td>
</tr>
<tr>
<td>E. Vocabulary (Test 16)</td>
<td>0-1</td>
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<tr>
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<td>0-44</td>
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<td></td>
<td>108</td>
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<tr>
<td>G. Non-Language Factors (Tests 4, 6, 7, 8, 9, 10, 11, 12, 13)</td>
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<table>
<thead>
<tr>
<th>MENTAL FACTORS</th>
<th>Percentile Norms</th>
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</tr>
<tr>
<td>A. Memory (Tests 4 and 5)</td>
<td>0-18</td>
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<tr>
<td>B. Spatial Relationships (Tests 6, 7, and 8)</td>
<td>0-12</td>
</tr>
<tr>
<td>E. Vocabulary (Test 16)</td>
<td>0-1</td>
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<tr>
<td>TOTAL MENTAL FACTORS</td>
<td>0-48</td>
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### TABLE FOR AGE 16 YEARS (192 MONTHS) AND OLDER (Inc. Adults)

<table>
<thead>
<tr>
<th>MENTAL FACTORS</th>
<th>Percentile Norms</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>A. Memory (Tests 4 and 5)</td>
<td>0-18</td>
</tr>
<tr>
<td>B. Spatial Relationships (Tests 6, 7, and 8)</td>
<td>0-12</td>
</tr>
<tr>
<td>E. Vocabulary (Test 16)</td>
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<td>0-48</td>
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<td></td>
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---
### PERCENTILE RANK OF I. Q.'s FOR VARIOUS POPULATIONS

(For use with Language, Non-Language, and Total Score Data)

<table>
<thead>
<tr>
<th>Percentiles</th>
<th>1</th>
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<th>10</th>
<th>20</th>
<th>25</th>
<th>30</th>
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<th>70</th>
<th>75</th>
<th>80</th>
<th>90</th>
<th>95</th>
<th>99</th>
<th>Median</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N=100,000)</td>
<td>76</td>
<td>82</td>
<td>86</td>
<td>88</td>
<td>92</td>
<td>97</td>
<td>102</td>
<td>107</td>
<td>111</td>
<td>113</td>
<td>117</td>
<td>123</td>
<td>135</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(N=25,000)</td>
<td>77</td>
<td>88</td>
<td>91</td>
<td>93</td>
<td>95</td>
<td>98</td>
<td>103</td>
<td>108</td>
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<td>114</td>
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<td>123</td>
<td>135</td>
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<td></td>
</tr>
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<td>Tenth Grade I.Q.'s..</td>
<td>67-</td>
<td>79-</td>
<td>88-</td>
<td>91-</td>
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<td>120-</td>
<td>125-</td>
<td>137+</td>
<td>103.0</td>
<td>15.5</td>
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<tr>
<td>(N=25,000)</td>
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<td>90</td>
<td>92</td>
<td>94</td>
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**NOTE:** If the user desires to eliminate the 25 and 75 percentiles in his distributions, assign the lower I.Q. of each to the 20 or 70 percentile interval, and assign the higher I.Q. of each to the 30 or 80 percentile interval. For example, in the Normal Population I.Q. group, the I.Q.'s of the 20%ile would become 83-87, and those of the 30%ile would become 88-92.

### I. Q. DECILES for the CALIFORNIA TEST OF MENTAL MATURITY

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**NOTE:** Decile ratings for the "normal population" group are recommended for use in all cases, except where a rating is to be made for comparison with pupils of a given educational level.
### C. T. M. M. ADVANCED SERIES NORMS

(These revisions affect only Language and Non-Language Norms for the Mental Ages 17.0 and above)

(For scores lower than these, see page 16)

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(For scores higher than these, see page 16)
THE GUILFORD-MARTIN PERSONNEL INVENTORY I.

Name. ............................................................................................................. Date. ..................................................

Sex ........................................... Nearest age (encircle): 15 20 25 30 35 40 45 50 55 60

Raw Scores: O ........... Ag .......... Co .................

C-Scores: .............. .............. ..............

DIRECTIONS: Below you will find some questions which are to be answered by encircling either “Yes,” “?,” or “No.” Read each question in turn, think what your opinion or your behavior has usually been, and draw a circle around the answer that best describes your behavior or opinion. Encircle the “?” only when you are unable to decide between the “Yes” and “No.” BE SURE TO ANSWER EVERY QUESTION. There is no right answer to any of these questions except the answer that tells how you think or feel about it.

1. Do you believe that each person is better fitted to succeed in one kind of job than he is in most other jobs? ................................................................. Yes ? No 1
2. Do you believe it is more important for a person to like his work than it is for him to make a lot of money at it? ................................. Yes ? No 2
3. Is a person likely to rise to the top in his kind of work if he is not suited to it? ......................................................... Yes ? No 3
4. Do you believe that almost any kind of person can succeed in almost any kind of job if he tries hard enough? ........................................... Yes ? No 4
5. Are most people you know well suited to the jobs they hold? ............................. Yes ? No 5
6. Do you prefer a supervisor who tells you clearly what to do rather than one who expects you to decide what to do next? ........................................... Yes ? No 6
7. Does it seem to you that human beings hardly ever learn to avoid making the same mistakes twice? ......................................................... Yes ? No 7
8. Do you feel that there are too many useless laws which hamper an individual’s personal freedom? ................................. Yes ? No 8
9. Do you lack patience with the “shrinker type” of man? ................................. Yes ? No 9
10. Are you inclined to be thinking about yourself much of the time? ................. Yes ? No 10
11. Do you think that most people who help others secretly dislike going to the trouble to do so? ................................................................. Yes ? No 11
12. Do you feel disgusted when someone escapes paying the full penalty of the law through some technicality? ................................. Yes ? No 12
13. Do you frequently seek the advice of other people? ...................................... Yes ? No 13
14. When you are criticized does it disturb you badly? ...................................... Yes ? No 14
15. Do you despise a “yes” man? .................................................................. Yes ? No 15
16. Do you find that very few workmen nowadays do a job as it should be done? Yes ? No 16
17. Does it bother you a lot to see someone else bungling a job that you know perfectly well how to manage? ................................................. Yes ? No 17
18. Have you found that, in general, people higher up tend to dodge the dirty work, leaving it for others to do? ......................................................... Yes ? No 18
19. Are you annoyed when people tell you how you should do a thing? .......... Yes ? No 19
20. Do you get upset rather easily? .............................................................. Yes ? No 20
21. Are you ever bothered by the idea that someone is reading your thoughts? Yes ? No 21
22. Do you have days in which it seems that everything goes wrong? ............... Yes ? No 22
23. Generally speaking, do you think the head of a firm should have risen through the ranks, that is, having worked his way up in the business? Yes ? No 23

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25. Do you think that the kind of person who would “turn the other cheek” deserves to get slapped?.................................................................Yes ? No 25
26. Have you ever had fears about other people that you later found to be without foundation?.................................................................Yes ? No 26
27. Do you think that large business corporations should be prohibited?.................................................................Yes ? No 27
28. Do other people often try to take the credit for things you yourself have accomplished? Yes ? No 28
29. At a movie or a play do you often feel that one of the main characters is a bit like you? Yes ? No 29
30. When a person has gone out of his way to be nice to you, do you try to see what his real reasons are?.................................................................Yes ? No 30
31. Do you usually feel that in group undertakings your own plans are best?.................................................................Yes ? No 31
32. Do you think that in most places the traffic regulations are seriously in need of improvement?.................................................................Yes ? No 32
33. Is money necessary for complete happiness?.................................................................Yes ? No 33
34. Do you think that all secret societies should be done away with?.................................................................Yes ? No 34
35. Do many men deserve higher pay than their bosses?.................................................................Yes ? No 35
36. Have you ever been severely punished for something you didn’t do?.................................................................Yes ? No 36
37. Does your conversation tend to center around your own interests and hobbies rather than those of other people?.................................................................Yes ? No 37
38. Do you sometimes feel sorry for a person who is convicted of a crime even though you realize he is guilty?.................................................................Yes ? No 38
39. Are you often getting into scrapes which you did not seek to stir up?.................................................................Yes ? No 39
40. Have certain people talked about you and yet you were unable to prove it?.................................................................Yes ? No 40
41. Do you sometimes think that most people are stupid?.................................................................Yes ? No 41
42. Do you frequently unburden your troubles to others?.................................................................Yes ? No 42
43. Do you know of any people at present who are intentionally trying to avoid you?.................................................................Yes ? No 43
44. Do some people become so rude that you feel the urge to “sit on them” or to “tell them off”?.................................................................Yes ? No 44
45. Do you think that most people live far beyond their income?.................................................................Yes ? No 45
46. Do you believe in the parole system for prisoners?.................................................................Yes ? No 46
47. Do people sometimes offend you without knowing it because you hide your feelings from them?.................................................................Yes ? No 47
48. Have you ever felt that someone was hypnotizing you and forcing you to do things you did not want to do?.................................................................Yes ? No 48
49. Are you inclined to let other people have their own way even when it disturbs your peace and comfort?.................................................................Yes ? No 49
50. Do other people deliberately say or do things to annoy you?.................................................................Yes ? No 50
51. When you enter a new group (business or social) do you like to be tipped off as to who are the important people to line up with?.................................................................Yes ? No 51
52. Do you enjoy taking part in a good fight?.................................................................Yes ? No 52
53. Do you believe that only people with money can be sure of getting a square deal in courts of law?.................................................................Yes ? No 53
54. Do you believe that most people will tell a lie now and then in order to get ahead?.................................................................Yes ? No 54
55. Are there some things about yourself concerning which you are rather touchy?.................................................................Yes ? No 55
56. Do other people often watch you on the sly?.................................................................Yes ? No 56
57. On the whole, are your own ideas of how things should be done superior to the plans suggested by others?.................................................................Yes ? No 57
58. Do you think that an unusually bright person is likely to be physically weak?.................................................................Yes ? No 58
59. Do you often feel very badly about other people’s troubles?.................................................................Yes ? No 59
60. Were you ever ignored or given a “raw deal” through spite?.................................................................Yes ? No 60
61. Do most groups of people behave like a bunch of sheep, that is, blindly follow a leader?.................................................................Yes ? No 61
62. Do you suspect that most people who do you a good turn are really expecting something in return for it?.........................................................................................................................................................................................................................................................................................................................................................................................................................................................Yes ? No 62
63. Do you often feel that a lecturer is talking about you personally?.................................................................Yes ? No 63
64. If a person is not playing fair, do you like to see someone beat him at his own game?.................................................................Yes ? No 64
65. Do you believe that most people shirk their duties whenever they can without appearing to do so?.................................................................Yes ? No 65
66. Do you hate to lose an argument even when the issue is of little importance?.................................................................Yes ? No 66
67. Does it seem to you that other people generally “have all the luck”?.................................................................Yes ? No 67
68. Does it distress you considerably to see another person in pain?.................................................................Yes ? No 68
69. Do you feel that many young people get ahead today because they have "pull"? Yes | No 69
70. Are most people thoughtless of the rights of others? Yes | No 70
71. Are you continually comparing yourself with other people? Yes | No 71
72. Do a lot of people you have known tend to form "cliques" or closed groups? Yes | No 72
73. Generally speaking, do you believe that the boy who has not learned to defend himself deserves to "take a beating"? Yes | No 73
74. Do you find that generally if you want a thing done right you must do it yourself? Yes | No 74
75. Can a person get ahead by his own efforts if he does not look out for himself at every turn? Yes | No 75
76. Do you consider yourself a rather nervous person? Yes | No 76
77. Do you think your generation has as many opportunities for success as your parents' generation had? Yes | No 77
78. Do other people pay more attention to your comings and goings than they should? Yes | No 78
79. When things become dull do you feel the urge to stir up some excitement? Yes | No 79
80. Do you think the educational system in this country is seriously wrong in many respects? Yes | No 80
81. Do you usually receive criticism of yourself without resenting it? Yes | No 81
82. Have you ever found out that a person who was supposed to be an expert did not know as much as you did about something? Yes | No 82
83. Is there anyone you know personally whom you would like to see behind prison bars? Yes | No 83
84. Are there important changes you would make immediately in your manner of living if you could have a substantial increase in income? Yes | No 84
85. Do you think that most people are overpaid for what they really contribute to society? Yes | No 85
86. In most situations is it all right to conceal the truth when by doing so you give aid to a friend? Yes | No 86
87. Have you very much resented having friends or members of your family give you orders? Yes | No 87
88. Are you as quick as other people to pay compliments when they are deserved? Yes | No 88
89. Do people frequently talk about you behind your back? Yes | No 89
90. Is it almost unbearable for you to see a close friend or relative suffering intense pain? Yes | No 90
91. Is it true that people will generally have contempt for a person who does not assert himself once in a while? Yes | No 91
92. Have you known many "two-faced" individuals personally? Yes | No 92
93. Can most people be trusted completely? Yes | No 93
94. Do you derive considerable satisfaction from making other people do as you want them to? Yes | No 94
95. Do you believe that all public office holders sooner or later look out for their own interests first? Yes | No 95
96. Should the government take over more and more the management of private business? Yes | No 96
97. Are your feelings rather easily hurt? Yes | No 97
98. Generally speaking, do you believe that people use a veneer of politeness to cover up what is usually "cutthroat" competition? Yes | No 98
99. Do you usually get more than your share of the blame when things go wrong? Yes | No 99
100. Are there many kinds of work that you would not consider doing because they are beneath you? Yes | No 100
101. Do you think that a lot of people exaggerate their hard luck in order to gain sympathy from others? Yes | No 101
102. Do people ever accuse you of being selfish, and with some reason? Yes | No 102
103. Have you often felt that certain persons are secretly trying to get the better of you? Yes | No 103
104. Would you prefer a hard job that is very interesting to an easy one that is uninteresting? Yes | No 104
105. Have you frequently wished for enough money or power to impress people who regard you as an inferior? Yes | No 105
106. Have you frequently become involved in conflicts in defense of your friends or members of your family? Yes | No 106
107. Is it difficult for you not to bear a grudge against someone who has injured you? Yes | No 107
108. If you could have your way about it would you change a lot of things about human nature? Yes | No 108
109. Are many of your supposed friends really insincere? .............................................. Yes ? No 109
110. Do many people think you are “hard-boiled”? .......................................................... Yes ? No 110
111. Does everything that happens seem to have a relationship to your own life or experience? ................................................................. Yes ? No 111
112. Do some people become so bossy or domineering that you want to do the opposite of everything they tell you to do? ......................................................... Yes ? No 112
113. Do other people often deliberately make things hard for you? ................................. Yes ? No 113
114. Are there times when it seems that everyone is against you? .................................. Yes ? No 114
115. When criminals make a daring escape from prison do you sometimes secretly hope that they will avoid capture? ......................................................... Yes ? No 115
116. Do you sometimes feel contempt for the opinions of others? .................................. Yes ? No 116
117. Does it bother you to have other people tell you what you should do? ....................... Yes ? No 117
118. Do you often feel that you are left out of things, perhaps unintentionally, in group activities? ................................................................................. Yes ? No 118
119. Is it difficult for anyone to impose upon you for the reason that you are usually wise to their intentions? ......................................................... Yes ? No 119
120. Does the United States Government owe every one of its citizens a decent living? ... Yes ? No 120
121. Is the person who carelessly leaves valuable property lying around as much to blame as the person who appropriates it for his own use? ................................. Yes ? No 121
122. Have some people criticized you unjustly to others? ................................................ Yes ? No 122
123. Will most people in business bear close watching when you are dealing with them? Yes ? No 123
124. Are you desirous of things far better than is your present lot? ................................ Yes ? No 124
125. Do you think no one would keep to the “straight and narrow path” were it not for the fear of being caught? ......................................................... Yes ? No 125
126. When you lose something do you often begin to suspect someone of either having taken it or having misplaced it? ......................................................... Yes ? No 126
127. Do you think that most people who allow themselves to come under the rule of a dictator are to blame for their plight? ......................................................... Yes ? No 127
128. Is there any subject on which you would like to hold a public indignation meeting for the purpose of organizing a mass protest? ......................................................... Yes ? No 128
129. Were you ever seriously double-crossed? ................................................................ Yes ? No 129
130. Do you believe the parole system works more to the advantage of the prisoner than to the advantage of society? ......................................................... Yes ? No 130
131. Do you tend to let people run over you more than you should for your own good? ... Yes ? No 131
132. Have you frequently felt like telling “noisy” people to mind their own business? ...... Yes ? No 132
133. Have you often found it necessary to stand up for what you believe to be right? ....... Yes ? No 133
134. Do you usually seek to become an officer in any organization to which you belong? .... Yes ? No 134
135. Were you ever so deeply in debt that you did not know where the money was coming from to pay what you owed? ......................................................... Yes ? No 135
136. In group undertakings do you usually manage to have your own plans put into effect? Yes ? No 136
137. Do other people often blame you for things unfairly? ............................................... Yes ? No 137
138. In most cases is it important to get what you want even if you have to come into conflict with other people in order to get it? ......................................................... Yes ? No 138
139. Have other people been too ready to accept credit which rightfully belongs to you? Yes ? No 139
140. Do you sometimes feel sorry for all the people in the world? .................................... Yes ? No 140
141. Have you had more than your share of hard luck? ..................................................... Yes ? No 141
142. Do other people often try to put things over on you when you are not watching? ... Yes ? No 142
143. Is there any person whom you would particularly like to “put in his (or her) place”? Yes ? No 143
144. Do you believe that most people require someone to tell them what to do? ............... Yes ? No 144
145. Is there any piece of music that usually makes you weep when you hear it? .............. Yes ? No 145
146. Are people in general out to get more than they give? ............................................... Yes ? No 146
147. Do you often find it necessary to return merchandise to a store because it turns out to be not as represented? ......................................................... Yes ? No 147
148. Do people near you sometimes whisper or look knowingly at one another when they think you are not noticing them? ......................................................... Yes ? No 148
149. If someone rudely crowds ahead of you in line, do you tell him where he belongs?  Yes ? No 149
150. Have you marked an answer (“Yes,” “f,” or “No”) for every one of the above questions? Yes ? No 150
THE GUILFORD-MARTIN PERSONNEL INVENTORY

Manual of Directions and Norms

Purpose of the Test.—This instrument was designed with two primary purposes in mind. It was first of all designed as a means of assisting supervisors of workers in business and industry to single out and to diagnose those individuals who are personally maladjusted in their jobs, particularly those who are discontented and likely to become troublemakers—hence the name, "Personnel Inventory." The locating of potential troublemakers in advance of their being hired, or if already employed, in advance of their overt difficulties, is undeniably a worth while goal. As a second motive, the test was designed to extend the list of temperamental traits already assessed by Guilford's "Inventory of Factors S T D C R." The temperamental area covered by the new inventory may be roughly designated by the term "paranoid," though only the extreme symptoms deserve that epithet borrowed from psychopathology. The new Inventory, therefore, has general clinical applications which extend beyond the industrial situation.

The Traits.—Factor analysis studies and clinical experience show that there are several aspects to the paranoid disposition, though it seems probable that these aspects are interrelated. These aspects may be described as (1) objectivity (taking things personally; ideas of reference; touchiness), (2) belligerence (dominating disposition and an overreadiness to fight over trifles), (3) suspiciousness (tendency to take things personally), (4) faultfinding or hypercriticalness. In setting up the list of items diagnostic of these traits it was found that the last two could not be scored with sufficient independence to justify separate scores. The list of traits measured by the Inventory therefore reduces to three. Using the names of the more favorable end of the scale in each instance, they are:

O—objectivity (as opposed to personal reference or a tendency to take things personally)

Ag—agreeableness (as opposed to belligerence or a dominating disposition and an overreadiness to fight over trifles)

Co—cooperativeness (as opposed to faultfinding or overcriticalness of people and things)

Selection of the Items.—More than 200 items were constructed with the supposition that they would be diagnostic of one or more of the four aspects listed above. This list, stated in question form to be answered by either "Yes," "?," or "No," was administered to 250 men and 250 women workers who were or had been employed by a number of California industrial concerns, business offices, and civil service units. The age range was from 20 to 45. A minimum requirement of sixth-grade literacy insured adequate reading ability for all subjects. An effort was made to make the sample of 500 individuals truly representative of a diverse employed population. Preliminary scoring keys were prepared on the basis of the best statistical and clinical evidence at hand. Four hundred papers were scored with these keys and after the test of internal consistency was applied to every item, approximately 150 items remained as significantly diagnostic as evidenced by their correlation with highest and lowest quarters of the sample.

Reliability of the Scores.—Scoring weights were assigned to responses of the items in accordance with a method devised by Guilford. The reliability of the three scoring keys was checked by applying them to the 100 papers not used in deriving the weights, including 50 men and 50 women. The split-half method was employed, dividing the scored items into two random halves. Pearsonian coefficients of correlation were computed and reliabilities were estimated by means of the Spearman-Brown formula. These coefficients were .83 for trait O, .80 for trait Ag, and .91 for trait Co. Such reliabilities are sufficiently high for vocational and clinical purposes.

Intercorrelations of the Trait Scores.—As is usually true of inventories of this type, there are intercorrelations among the trait scores. Previous experience has shown that scorings may be intercorrelated even when the traits themselves are probably independent, due to the fact that items are not pure indicators of traits. Very few items were scored for more than one trait. The intercorrelations in the sample of 100 were: O and Ag, .64; O and Co, .55; and Ag and Co, .62. These intercorrelations are low enough to make separate scores useful.

Validity of the Scores.—It was possible to make a brief study with the new Inventory which throws some light on its validity in an industrial situation. A Southern California industry administered the test to 51 employees among whom were a large number whom the personnel executives regarded as troublemakers or malcontents. The remaining employees in the group were regarded by the same judges as being satisfactory from the same point of view. The scores for traits O, Ag, and Co yielded very flat distributions of the 51 cases, tending distinctly toward bimodality. Having no knowledge of the proportion of satisfactory and unsatisfactory workers in the group, and having no knowledge of which individuals belonged in each category, it was decided, in view of the form of the distributions, to accept the medians as the critical scores. Any individual who was below the median on two or more traits was predicted to be in the unsatisfactory group. Of the 22 workers judged unsatisfactory by management, 73% were detected as unsatisfactory in terms of the critical scores adopted for the purpose. Of the 29 judged as satisfactory by management, only 34% were mistakenly placed in the unsatisfactory category by the test. It is possible that the individuals had not all been correctly judged by the personnel observers. It is likely that critical scores derived empirically would have given better predictions. At any rate, a test which makes more than twice as many correct predictions as errors can be said to offer definite usefulness. It is strongly urged that
similar experiments be conducted in any particular industrial situation before the Inventory is put to the use of making this kind of discriminations. Critical scores based upon experience are best for each situation. In this way the maximal usefulness of the test can be assured, and its validity for the purpose intended can be demonstrated. The Test Division of the Sheridan Supply Co. is prepared to render advisory service on technical matters in connection with such validation studies.

Administration of the Inventory.—Best results will be obtained if the test is administered to subjects individually or in small groups under supervision. An appeal for full cooperation is desirable. Ideally, any implication that the individual's future status will hinge on the outcome should be avoided. The instructions as printed on the test booklet should not be altered by additions or amendments. Every person should be given sufficient time to complete the test. All can usually finish within 30 minutes.

Scoring the Inventory.—See page 1 of transparent scoring keys for directions for scoring. The score in each factor is the total number of points from the four pages for that factor. Record these three totals at the top of page 1 of the test booklet at the right of "Raw Scores." The raw scores may now be converted into scaled scores (C-scores) by reference to the table below:

<table>
<thead>
<tr>
<th>C-Score</th>
<th>Raw Scores</th>
<th>C-Score</th>
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<tbody>
<tr>
<td>O</td>
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<tr>
<td>10</td>
<td>71+</td>
<td>97+</td>
</tr>
<tr>
<td>9</td>
<td>68-70</td>
<td>89-96</td>
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<tr>
<td>8</td>
<td>62-67</td>
<td>81-88</td>
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<tr>
<td>7</td>
<td>55-61</td>
<td>72-80</td>
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<tr>
<td>6</td>
<td>49-54</td>
<td>65-71</td>
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<tr>
<td>5</td>
<td>42-48</td>
<td>54-64</td>
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<tr>
<td>4</td>
<td>36-41</td>
<td>45-53</td>
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<tr>
<td>3</td>
<td>28-35</td>
<td>35-44</td>
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<td>2</td>
<td>20-27</td>
<td>27-34</td>
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<tr>
<td>1</td>
<td>13-19</td>
<td>20-26</td>
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<tr>
<td>0</td>
<td>0-12</td>
<td>0-19</td>
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Interpretation of the Scores.—Scores have meaning only when referred to certain landmarks, such as averages, highest scores and lowest scores. More definite ideas can be obtained from a set of norms such as those in the above table. This table of norms was derived from the 500 papers upon which the item selections and reliabilities were also based. A standard C-scale of 11 points is used for all three traits. Each person's raw score can be readily converted into the common C-scale in the following manner. Note that corresponding to each C-score the highest and lowest raw score is given for each trait. Thus, all raw scores from 54 through 64 in trait O correspond to a C-score of 10. A person with raw scores of 28, 13 and 70 for traits O, A and Co, respectively, would have C-scores of 5, 1 and 6 in these same traits. From these C-scores it can readily be seen that the person is rather low in objectivity, in the lowest four percent of the group in agreeableness, and just slightly above average in cooperation (6 is always average). High scores here also mean favorable characteristics and low scores mean unfavorable characteristics. The C-scores have the distinct advantage of pointing an individual with respect to the distribution of a large sample. It must be remembered, however, that the sample on which the norms were based was not seeking employment or promotion in groups under other circumstances scores may not be at a comparable. The norms as given apply where rather full cooperation and honesty of the individual may be taken for granted.

**EVERY-DAY LIFE**

By Leland H. Stott, Ph. D., University of Nebraska

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Grade</th>
<th>Sex</th>
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</thead>
</table>

**Town or city and State** | **School** | **Date** |
|---------------------------|-----------|---------|

**Directions:** The following questions are about yourself—the things you do, how you feel and what happens to you in every-day life. Please answer every question by making a circle around YES, Yes, ?, No or NO.

YES means "yes, always," "entirely," "very much," etc.
Yes means "yes, usually," "rather often," etc.
? means "about as often as not," "average amount," "can't decide," etc.
No means "usually not," "not often," "seldom," etc.
NO means "no, never," "not at all," "none whatever," etc.

Be sure to answer every question. There are no "right" or "wrong" answers to them. Just select the answer to each one that describes you best. See how well you know yourself.

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>Yes</th>
<th>?</th>
<th>No</th>
<th>NO</th>
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<tbody>
<tr>
<td>1. Do you mind being late for appointments?</td>
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<td>2. Are you asked to help plan special parties and programs at school?</td>
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<td>3. Does it bore you to have to spend an occasional evening by yourself?</td>
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<td>4. Can you rely upon yourself to do the proper thing in an emergency?</td>
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<td>5. Are you late for school or work on mornings when you must get up without having someone call you?</td>
<td>YES</td>
<td></td>
<td>?</td>
<td>No</td>
<td>NO</td>
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<td>6. Would you dislike finding your own way about in a strange city?</td>
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<td>7. Do you like to work out new ways of doing your every-day tasks?</td>
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<td>8. Would you want to rely upon your own judgment in the use of your money?</td>
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<td>9. Is it hard to find something really interesting to do during your spare time?</td>
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<td>10. When buying an article of clothing do you want to decide for yourself which particular color or style to choose?</td>
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<td>11. Do you go ahead with other work besides what you have been told to do?</td>
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<td>12. Do you feel lost or bored when you have &quot;nothing to do&quot; for the evening?</td>
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<td>13. Do you have a stock of jokes and riddles which you use to spice conversation when it becomes dull?</td>
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<td>14. Are you able to keep up a conversation when you are on a date?</td>
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<td>15. Do you allow someone to call you more than once when it is time to get up in the morning?</td>
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<td>16. Do you leave the public picnic ground without cleaning it up after your picnic?</td>
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<td>17. When you tell your parents (or those with whom you live) you will be home from a party at a certain time, are you careful to keep your promise?</td>
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<td>18. Do you find yourself in class without the necessary book, pencil or notebook?</td>
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<td>19. Do you observe traffic rules?</td>
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<td>20. When you are on a committee do you fail to attend some of the meetings?</td>
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<td>21. When taking part in a program, can you perform with apparent ease (even though frightened)?</td>
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<td>22. If you were eating out on a &quot;date,&quot; would you know the customary ordering procedure?</td>
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<td>23. When you are going out for the evening, do you plan your chores and school work so as to have them done before you go?</td>
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<td>24. If your parents have made a decision regarding you that is not to your liking, do you try to &quot;argue them out of it&quot;?</td>
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<td>25. Are you glad to have time by yourself to work on your hobbies?</td>
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<td>26. If you became lost in a large city, would you know what to do?</td>
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<td>27. Are your suggestions and ideas made use of in class meetings and committee meetings?</td>
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<td>28. Do you find it easy to &quot;make up your mind&quot;?</td>
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<td>29. Do you mind missing a class period?</td>
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<td>30. Do you become quite upset at examination time because you have put off studying until the last minute?</td>
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<td>31. If, without meaning to do so, you got into difficulty with the law, would you handle the matter the best you could by yourself?</td>
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</table>
32. Would you rather wait to be invited to go on a hike or party than to plan one
yourself?  ................................................................. YES Yes ? No NO
33. When working on a committee are you easily convinced that your idea is not
good if someone else does not agree with you? .......................... YES Yes ? No NO
34. Do you accept the consequences of whatever you do without blaming anyone
else? ................................................................. YES Yes ? No NO
35. Do you like to have someone else help you to remember your agreements? ...... YES Yes ? No NO
36. Do you face your own personal troubles alone without seeking help? .............. YES Yes ? No NO
37. If present when a child is injured in a playground accident would you be the
first to decide what should be done and to take charge of the situation? ............ YES Yes ? No NO
38. Would you dislike planning work for yourself and others? ..................... YES Yes ? No NO
39. Do you prefer to let someone else arrange your schedule of study, work and
recreation? ................................................................. YES Yes ? No NO
40. If a difficult problem were assigned in class for next day, would you go for help
in working it out? ......................................................... YES Yes ? No NO
41. Do you have practical ideas for making money? ........................................ YES Yes ? No NO
42. Do you like to solve complicated puzzles by yourself? ............................. YES Yes ? No NO
43. If you were traveling would you prefer to make all your own plans and arrange-
ments? ................................................................. YES Yes ? No NO
44. Do you take the blame for your own failures? ........................................ YES Yes ? No NO
45. Are you asked to serve on committees at school? .................................... YES Yes ? No NO
46. Do you work out your own problems as best you can by yourself? ................. YES Yes ? No NO
47. Would you dislike visiting strange foreign countries alone? ...................... YES Yes ? No NO
48. Can you be easily “talked into” doing something against your better judgment?
................................................................. YES Yes ? No NO
49. Do you find it difficult or uninteresting to meet and converse with elderly
persons? ................................................................. YES Yes ? No NO
50. Do you mind breaking the rules of conduct during study period? ..................... YES Yes ? No NO
51. Are you called upon for suggestions or help in planning the activities of a group?
................................................................. YES Yes ? No NO
52. Would you willingly take a minor role in the class play even though you had
hoped for a more important part? ...................................... YES Yes ? No NO
53. If it were against the rules to shake ink from your fountain pen on the floor,
would you remember not to do it? ....................................... YES Yes ? No NO
54. If your committee were decorating for a party, would you prefer to let the others
plan the decorations? ................................................................. YES Yes ? No NO
55. If your friend were accused unjustly, would you take his part even though it
were “none of your business”? ............................................. YES Yes ? No NO
56. If your “crowd” was blamed for something it didn’t do, would you “just let it
blow over”? ................................................................. YES Yes ? No NO
57. If your actions are criticised by your associates, do you attempt to defend them?
................................................................. YES Yes ? No NO
58. If you are given a letter to mail, do you remember to mail it when you should?
................................................................. YES Yes ? No NO
59. Do you slight, or leave until the last, the school subject that is most difficult for
you? ................................................................. YES Yes ? No NO
60. Do you take care to introduce your friends to your parents when they meet? ...... YES Yes ? No NO
61. When your school books are called in at the end of the year, do you like to leave
your personal marks on them? ........................................... YES Yes ? No NO
62. If the arrangement of your room at home does not satisfy you, if you had a
chance, would you rearrange it to suit yourself? ............................ YES Yes ? No NO
63. Do you have to be reminded to eat the foods that are good for you? .............. YES Yes ? No NO
64. If you were in a strange town and could not get home, would you find it difficult
or unpleasant to make the necessary arrangements for taking care of yourself?
................................................................. YES Yes ? No NO
65. Do you neglect to count the change that is given back to you after a purchase?
................................................................. YES Yes ? No NO
66. After you are given directions for doing something new, do you proceed by
doing it your own way? ................................................................. YES Yes ? No NO
67. If you had disagreed with a friend, and discover later that you are wrong, would
you let the matter pass and say no more about it? ............................ YES Yes ? No NO
68. If you were eating in a restaurant where you had never eaten before, could you
order what you wanted at the price you wished to pay? ...................... YES Yes ? No NO
69. If you, and a group of your friends were staying at a hotel, would you be among
those who take souvenirs from their rooms or the dining room? .............. YES Yes ? No NO
70. Can you prepare and serve light refreshments to your friends if they happen to "drop in"?  
71. Do you prefer to purchase your own school supplies, as pencils, paper, etc.?  
72. Do you leave your personal belongings anywhere you happen to drop them?  
73. If you were the one to discover a fire which had broken out at school or at home, would you be able to act immediately?  
74. Do you need to be with "the crowd" in order to enjoy yourself?  
75. Do you give someone else the responsibility of getting you up at the right time in the morning?  
76. Do you like to have help in making important decisions?  
77. Do you find it difficult to think of practical suggestions to make when working with a group on some problem or job?  
78. Do you have difficulty finding anything that seems worth doing on evenings at home?  
79. Do you like to get someone to help you with your "tough" assignments?  
80. Do you do your work in the same routine manner every day?  
81. Do you have to "cram" at examination time?  
82. When some special event at school must be planned and put over, do you get the job?  
83. Is leisure time the proper time to catch up on odd jobs?  
84. Can you rely on yourself to get up in time for your early morning classes?  
85. Do you take a leading part in the discussions in class and in student meetings?  
86. Do you forget to keep your appointments?  
87. When you get an unsatisfactory grade do you go to the instructor about it?  
88. Are you always able to find a way to make a little spending money?  
89. Do unexpected quizzes catch you unprepared?  
90. When shopping is it hard for you to decide which particular article of clothing to choose?  
91. Do you like to help plan group picnics?  
92. Would you rather spend more time and effort yourself than to ask for help in a subject in which you have made a low grade?  
93. When you find yourself in a "tight spot" do you depend upon others to get you out?  
94. Does leisure time bore you?  
95. Does breaking a "date" bother you?  
96. If a classmate and you were required to use the same textbook, would you be sure to get it to him when your time is up?  
97. If you were allowed to use the family car, would you be likely to leave it with the gas tank empty?  
98. Do you think you should be expected to keep your own room tidy?  
99. If you were asked by phone to give a message to a person who is out, would you remember the message and give it accurately?  
100. If you were given a small allowance for spending money, would you be able to keep your spending within that amount?  
101. If you carried lunch to school, would you be able to put it up yourself?  
102. Do you think you should be expected to look after your own clothes?  
103. Are you good at figuring out ways to make money for your organization or club?  
104. Are you chosen to be chairman of groups?  
105. If you are getting behind in a class, do you wait for the teacher to call you in for extra help?  
106. Do you attend to habits of cleanliness, as bathing, washing your neck and ears and brushing your teeth, without being reminded?  
107. If a sign says "Keep off the grass," do you walk on the lawn?  
108. In a class discussion, are you one to make contributions which receive consideration?  
109. Do you bring to class pictures or clippings that have bearing on the topic which your class is studying?  
110. If you are changing desks or lockers, do you leave in them the things you no longer want?
111. If you are to have an examination in a difficult subject, do you wait until the last night to study for it?  
112. Would you be likely to observe the custom of quiet and reverence in church?  
113. Does treating your “date” with the proper social courtesies in the presence of others embarrass you?  
114. Do you prefer to have someone else attend to small repairs of your clothing (as sewing on buttons, shining shoes, pressing)?  
115. Do you make use of the dictionary when you need information about a word?  
116. Do you carve your initials, or write on walls, desks, or buildings?  
117. Is it difficult for you to ask for, or accept a date?  
118. Do you have to be reminded to clean the mud from your shoes or to remove your overshoes?  
119. Do you go to school unprepared the morning after you have been out?  
120. Do you lose personal articles?  
121. Do you keep watch of the condition of your teeth?  
122. If a storm comes at night, and the rain blows in your bedroom window, do you wait for someone else to shut it?  
123. Do you prefer to have your mother (or someone else) select your clean clothes and lay them out for you?  
124. Are you often sleepy at school?  
125. If your parents are away when guests drop in, is it difficult for you to extend hospitality to them?  
126. Can you be relied upon to make small purchases, such as groceries, for lunch?  
127. If you borrow school or church property, do you make sure that nothing is lost or broken?  
128. Do you have difficulty remembering what your assignments are?  
129. If you were given a six-week period to read a book and write a book report, would you be likely to wait until the last week before doing it?  
130. Would you prefer to decide for yourself when it is time to change your clothing for clean ones?  
131. If the last period of the day were your study period, would you spend it in studying?  
132. Does it bother you to be late for class?  
133. Are you able to see your way out of difficulty better by facing it alone than by talking the matter over with others?  
134. When you are given a familiar task to perform, do you like to be told just how to do it?  
135. In the stress of a dangerous moment are you unable to decide what to do until the time for action is past?  
136. Are you interested in puzzles?  
137. When the one under whom you are working is satisfied with a particular piece of your work, are you willing to leave it as finished before you yourself are satisfied with the results?  
138. Do you dislike planning social functions?  
139. Do you on your own responsibility keep up with the assignments in your studies?  
140. If unexpectedly asked to take charge of a program at school, would you be able quickly to decide what to do and how to do it?  
141. Do you like to look out for yourself when away from home?  
142. Do you try to avoid assuming the responsibility for your own mistakes?  
143. Do you prefer to have someone else plan your course of study for you?  
144. Would you be a good person to depend upon in the excitement of an emergency?  
145. Do you do extra work or unassigned reading in your courses?  
146. Would you like to take a trip around the world all by yourself?  
147. When you are given a new piece of work to do, do you like to be told just how to do it?  
148. Do you like to work out new stunts and games?  
149. Is it easy for you to make a definite choice between two things which seem equally desirable to you (e.g., going on an interesting trip vs. taking an odd job to earn money for the purchase of an object which you much desire)?  
150. Does it discourage you to have others disagree with you?
STOTT'S INVENTORY
EVERY-DAY LIFE
A Scale for the Measurement of Three Varieties of Self-Reliance

Manual of Directions and Norms

Development of the Scale.—This instrument is the result of several years of analytical study of the nature of self-reliance in adolescents and of work on the problem of its measurement. The first step was to make a factor analysis1 of a preliminary form containing sixty items which were judged by a group of psychologists and others as descriptive of self-reliant or non-self-reliant behavior of adolescents in a variety of every-day-life situations. This analysis revealed that what is commonly called "self-reliance" consists of a number of fairly distinct "traits" or varieties of self-reliance. It also indicated that each variety might be developed in an individual independently of the others. The development of any one variety apparently depends upon experience and training in a particular type of life situation. The three most clearly defined of these varieties were called "independence of decision in meeting personal problems and difficulties," "resourcefulness in group situations," and "personal responsibility." They were subsequently verified in four separate analyses involving different items and using samples of subjects from farm, small town, as well as city populations. Altogether, more than 4000 high-school students were used in the analyses and other phases of the development of the scale.

In selecting the items of the present form, the phi coefficient was used as the index of validity.2 The criterion score for each of the three variables was determined from items which had very high factor loadings in the analysis. Every selected item passed the phi test of validity as "very significantly valid" for at least one of the variables to be measured. Strong's method3 was used in determining scoring weights for the different responses to these valid items. In order to provide for machine scoring, however, all scoring weights were reduced to 1. Investigation showed that the scores based upon these unit weights were correlated with those obtained with the Strong weights to the extent of .97. The reliabilities were also found not to be materially affected by resorting to unitary weights.

Nature of the Variables.—The three varieties of "self-reliance" as measured by this inventory may be described as follows:

I. Independence in personal matters.—An individual scoring high in this variable indicates that he prefers to make his own decisions and to rely upon his own judgment, particularly in regard to matters of a personal nature. He is inclined to meet and solve his own problems and difficulties in his own way.

II. Resourcefulness in group situations.—High scores indicate resourcefulness, together with dependability and willingness to work and lead out in the group situation. They indicate the tendency to participate actively in group discussions and to make contributions and suggestions which are acted upon by the group.

III. Personal responsibility.—A high score in this variable is made by the dependable and responsible sort of individual—one who is especially conscientious in keeping his agreements, meeting his obligations and doing his share generally in his relationships with others.

Reliability.—Several estimates of the reliability of the scores of the Every-Day Life scale have been made. These estimates indicate reliabilities equal to those of the better personality scales in current use. The following reliability coefficients were obtained by the split-halves method corrected for the whole scale by means of the Spearman-Brown formula. Each set of coefficients is based upon a separate sample of 100 subjects.

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<th>II. Resourcefulness</th>
<th>III. Personal Responsibility</th>
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2J. P. Guilford. The phi coefficient and chi square as indexes of item validity. Psychometrika, 1941, 6, 11-19.
CALIFORNIA TEST OF PERSONALITY—SECONDARY, FORM A
A PROFILE OF PERSONAL AND SOCIAL ADJUSTMENT
Devised by Ernest W. Tiegs, Willis W. Clark, and Louis P. Thorpe

Name. Grade. Sex: Male—Female

School. Age. Birthday

Teacher. Date

<table>
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<tr>
<th>COMPONENTS</th>
<th>Possible Score</th>
<th>Student's Score</th>
<th>Percentile Rank</th>
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<td>E. Wd. Td.</td>
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<tr>
<td>F. Ne. S.</td>
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</tbody>
</table>

| 2. SOC. ADJ. | 90             |                 | 1 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 99 |
| A. Soc. St. | 15             |                 |  | | | | | | | |
| B. Soc. Sk. | 15             |                 |  | | | | | | | |
| C. A-s. Td. | 15             |                 |  | | | | | | | (Freedom from) |
| D. Fm. Rel. | 15             |                 |  | | | | | | | |
| E. Sc. Rel. | 15             |                 |  | | | | | | | |
| F. Cm. Rel. | 15             |                 |  | | | | | | | |

TOTAL ADJ. | 180             |                 | | | | | | | |

PERCENTILE

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Published by California Test Bureau
5916 Hollywood Boulevard, Los Angeles 28, California
INTERESTS AND ACTIVITIES

INSTRUCTIONS TO STUDENTS

After each of the following questions, make a circle around the YES or NO.

For example, if you have a dog at home make a circle around YES. Do the other two the same way.

A. Do you have a dog at home? YES NO
B. Can you drive a car? YES NO
C. Did you go to school last Friday? YES NO

On the next pages are more questions.

The answers are not right or wrong, but show what you think, how you feel, or what you do about things.

Go right on from one page to another until you have finished all of them.
## SECTION 1 A

1. Do you usually do something about it if someone steps in front of you in line? **YES NO**

2. Is it easy for you to introduce or be introduced to people? **YES NO**

3. Do you find it hard to keep from being bossed by people? **YES NO**

4. Is it hard for you to continue with your work when it becomes difficult? **YES NO**

5. Do you give considerable thought to your future work or career? **YES NO**

6. Do you usually get upset when things go wrong? **YES NO**

7. Is it hard for you to go on with your work if you do not get enough encouragement? **YES NO**

8. Do you usually do things that are good for you even if you do not like them? **YES NO**

9. Is it hard for you to admit it when you are in the wrong? **YES NO**

10. Is it easier to do things that your friends propose than to make your own plans? **YES NO**

11. Do you feel uncomfortable when you are alone with important people? **YES NO**

12. Do you prefer to keep your feelings to yourself when things go wrong? **YES NO**

13. Do you usually feel uneasy when you are around people you do not know? **YES NO**

14. Do you usually get discouraged when other people disagree with you? **YES NO**

15. Is it natural for you to feel like crying or pitying yourself whenever you get hurt? **YES NO**

---

## SECTION 1 B

16. Are you usually considered brave or courageous? **YES NO**

17. Do you feel that you are not very good at handling money? **YES NO**

18. Do people seem to think that you are dependable? **YES NO**

19. Do you feel that people often treat you rather badly? **YES NO**

20. Are you often invited to mixed social parties? **YES NO**

21. Do most of your friends and classmates do nice things for you? **YES NO**

22. Do your folks seem to think that you are going to amount to something? **YES NO**

23. Do people seem to think well of your family’s social standing? **YES NO**

24. Do your friends seem to think you have likeable traits? **YES NO**

25. Do members of the opposite sex seem to like you? **YES NO**

26. Do people usually seem interested in the things you are doing? **YES NO**

27. Do your friends seem to think that your ideas are usually poor? **YES NO**

28. Do you feel that people recognize your social standing as they should? **YES NO**

29. Are you usually given credit for the good judgment you show? **YES NO**

30. Are you considered a failure in many of the things you do? **YES NO**
SECTION 1 C

31. Do you have enough time for play or recreation?  YES NO
32. Do you have to do what other people tell you to do most of the time?  YES NO
33. Do you work to earn part or all of your spending money?  YES NO
34. Do your folks give you a reasonable amount of spending money?  YES NO
35. Are you scolded for many little things that do not amount to much?  YES NO
36. Do you feel that you are given enough liberty in doing what you want to do?  YES NO
37. Do you sometimes go out with members of the opposite sex?  YES NO
38. Are you allowed to say what you believe about things?  YES NO
39. Do your folks often try to stop you from going around with your friends?  YES NO
40. Do your parents cause you embarrassment when you associate with the opposite sex?  YES NO
41. Do you feel that you are bossed around too much by your folks?  YES NO
42. Are you usually allowed freedom to attend the socials or shows that you like?  YES NO
43. Are you usually allowed to bring your friends to your home when you wish?  YES NO
44. Are you encouraged to help plan your future vocation or career?  YES NO
45. Are you free to go to interesting places during your spare time?  YES NO

SECTION 1 D

46. Do you feel that you are an important part of your school?  YES NO
47. Do your teachers seem to want you in their classes?  YES NO
48. Do you feel that your relatives are as attractive and successful as those of your friends?  YES NO
49. Do your friends and acquaintances seem to have a better time at home than you do?  YES NO
50. Do the people at home make you feel that you are an important part of the family?  YES NO
51. Are you regarded as being as healthy and strong as most of your friends and classmates?  YES NO
52. Have you often wished that you had different parents than you have?  YES NO
53. If you are a young man, are you liked by the young women? If you are a young woman, do the young men like you?  YES NO
54. Have you found it difficult to make as many friends as you wish?  YES NO
55. Are you well enough liked at home so that you feel happy there?  YES NO
56. Are you invited to groups in which both young men and women are present?  YES NO
57. Do you have enough friends to make you feel good?  YES NO
58. Do you feel that you fit well into the community in which you live?  YES NO
59. Do you feel that your classmates are glad to have you as a member of their school?  YES NO
60. Do you feel that people usually think well of you?  YES NO

Score Section 1 C

Score Section 1 D

--- 4 ---
SECTION 1 E

61. Are certain people so unreasonable that you can’t help but hate them? YES NO

62. Do you find it more pleasant to think about desired successes than to work for them? YES NO

63. Do you find that many people seem perfectly willing to take advantage of you? YES NO

64. Do you have many problems that cause you a great deal of worry? YES NO

65. Do you find it hard to meet people at social affairs? YES NO

66. Are your responsibilities and problems often such that you cannot help but get discouraged? YES NO

67. Do you often feel lonesome even when you are with people? YES NO

68. Do you think that most people are out to cheat or “put it over” their associates? YES NO

69. Do you find many people inclined to say and do things that hurt your feelings? YES NO

70. Are you sorry that you are continually growing older? YES NO

71. Do you find it difficult to overcome the feeling that you are inferior to others? YES NO

72. Do you find it difficult to associate with the opposite sex? YES NO

73. Does it seem to you that younger persons have an easier and more enjoyable life than you do? YES NO

74. Do you often feel that people do not appreciate you or treat you as they should? YES NO

75. Are people frequently so unkind or unfair to you that you feel like crying? YES NO

Score Section 1 E... Score Section 1 F...

76. Are you likely to stutter when you get worried or excited? YES NO

77. Do your muscles twitch some of the time? YES NO

78. Do you have the habit of biting your fingernails often? YES NO

79. Do you sometimes have nightmares? YES NO

80. Do you sometimes walk or talk in your sleep? YES NO

81. Do you suffer often from annoying eyestrain? YES NO

82. Is it hard for you to sit still? YES NO

83. Are you more restless than most people? YES NO

84. Are you inclined to drum restlessly with your fingers on tables, desks, and chairs? YES NO

85. Do people frequently speak so indistinctly that you have to ask them to repeat their questions? YES NO

86. Do you frequently find that you read several sentences without realizing what they are about? YES NO

87. Do you find that you are tired a great deal of the time? YES NO

88. Do you often have considerable difficulty in going to sleep? YES NO

89. Do you have frequent headaches for which there seems to be no cause? YES NO

90. Are you bothered by periodic dizzy spells? YES NO

Score Section 1 E... Score Section 1 F...
91. Is it right to create a scene in order to get your own way?  
   YES NO

92. Is it all right to avoid responsibility or work if you are not required to do it?  
   YES NO

93. Is it necessary to be especially friendly to new students?  
   YES NO

94. If they look funny enough, is it all right to laugh at people who are in trouble?  
   YES NO

95. Should students follow their parents' instructions even though their friends advise differently?  
   YES NO

96. Is it always necessary to express appreciation for help or favors?  
   YES NO

97. Does finding an article give a person the right to keep or sell it?  
   YES NO

98. Is it all right to ignore teachers' requests if they appear to be unfair?  
   YES NO

99. If you need something badly enough and cannot buy it, are there times when it is all right to take it?  
   YES NO

100. Is it all right to cheat in a game when you will not get caught?  
   YES NO

101. Do rich people deserve better treatment than poor ones?  
   YES NO

102. Should a person be courteous to disagreeable people?  
   YES NO

103. Are the beliefs of some people so absurd that it is all right to make fun of them?  
   YES NO

104. Do older or elderly people deserve any special help not given others?  
   YES NO

105. Is it necessary to obey "No Trespassing" signs?  
   YES NO

Score Section 2 A

106. Do you often introduce people to each other?  
   YES NO

107. Is it hard for you to lead in enlivening a dull party?  
   YES NO

108. Is it easy for you to talk with people as soon as you meet them?  
   YES NO

109. Is it difficult for you to compliment people when they do something well?  
   YES NO

110. Do you often assist in planning parties?  
   YES NO

111. Do you usually remember the names of people you meet?  
   YES NO

112. Do you keep from letting people know when they irritate you?  
   YES NO

113. Do you frequently find it necessary to interrupt a conversation?  
   YES NO

114. Do you find that it causes you trouble when you help others?  
   YES NO

115. Do you attempt new games at parties even when you haven't played them before?  
   YES NO

116. Do you have many friends rather than just a few?  
   YES NO

117. Do you find that members of the opposite sex appear at ease when chatting with you?  
   YES NO

118. Do you like to have parties at your home?  
   YES NO

119. Do you find it hard to help others have a good time at parties?  
   YES NO

120. Do you find that many people are easily offended by you?  
   YES NO

Score Section 2 B
SECTION 2 C

21. Are you justified in taking things that are denied you by unreasonable people?  
   YES  NO

22. Do you have to stand up for your rights?  
   YES  NO

23. Are you often forced to show some temper in order to get what is coming to you?  
   YES  NO

24. Do you often have to make your classmates do things that they don’t want to do?  
   YES  NO

25. Are people often so stubborn that you have to call them bad names?  
   YES  NO

26. Do you find it easy to get out of troubles by telling “white fibs”?  
   YES  NO

27. Do you sometimes think that it serves the school right if you break a few of their things?  
   YES  NO

28. Do you have to talk about yourself and your abilities in order to get recognition?  
   YES  NO

29. Are things frequently so bad at school that you just naturally stay away?  
   YES  NO

30. Are teachers and other people often so unfair that you do not obey them?  
   YES  NO

31. Do you often have to fight or quarrel in order to get your rights?  
   YES  NO

32. Are people often so thoughtless of you that you have a right to be spiteful to them?  
   YES  NO

33. Do little “kids” often get in your way so that you have to push or frighten them?  
   YES  NO

34. Are people at home or at school always bothering you so that you just have to quarrel?  
   YES  NO

35. Have things been so bad at home that you have had to run away?  
   YES  NO

Score Section 2 C

---

SECTION 2 D

136. Are you troubled because your parents are not congenial?  
   YES  NO

137. Do the members of your family frequently have good times together?  
   YES  NO

138. Do your folks seem to believe that you are not thoughtful of them?  
   YES  NO

139. Are there things about one or both of your folks that annoy you?  
   YES  NO

140. Are things difficult for you because your folks are usually short of money?  
   YES  NO

141. Are you troubled because your folks differ from you regarding the things you like?  
   YES  NO

142. Do your folks appear to doubt whether you will be successful?  
   YES  NO

143. Does someone at your home quarrel with you too much of the time?  
   YES  NO

144. Do you like your parents about equally?  
   YES  NO

145. Do the members of your family seem to criticize you a lot?  
   YES  NO

146. Do you usually like to be somewhere else than at home?  
   YES  NO

147. Do you avoid inviting others to your home because it is not as nice as theirs?  
   YES  NO

148. Do some of those at home seem to think they are better than you?  
   YES  NO

149. Are your folks reasonable to you when they demand obedience?  
   YES  NO

150. Do you sometimes feel like leaving your home for good?  
   YES  NO

Score Section 2 D

---
SECTION 2 E

151. Are some of your subjects so difficult that you may be in danger of failing? YES NO

152. Do you find that you can confide in at least one of your teachers? YES NO

153. Would you like to be chosen more often to take part in games and other activities? YES NO

154. If it were right would you stay away from school as often as possible? YES NO

155. Would you and your classmates like school better if teachers were not so strict? YES NO

156. Would you be happier if your classmates liked you better? YES NO

157. Does it seem to you that many of your teachers are nervous? YES NO

158. Do many of the teachers seem to be unfair or unreasonable to their students? YES NO

159. Do you like to go to school affairs with members of the opposite sex? YES NO

160. Do you find that classmates of the opposite sex are as nice as those of your own sex? YES NO

161. Do you enjoy being alone more than being with your classmates? YES NO

162. Are your classmates usually friendly to you? YES NO

163. Do your classmates seem to approve of the way you treat them? YES NO

164. Are many of your classmates so unkind or unfriendly that you avoid them? YES NO

165. Does your school discourage young men and women from enjoying each other’s company? YES NO

SECTION 2 F

166. Do you dislike to take responsibility for the welfare or safety of children or old persons? YES NO

167. Do you like to take care of your own or some neighbor’s pets? YES NO

168. Are there any attractive members of the opposite sex in your neighborhood? YES NO

169. Do you know people who are so annoying that you would like to molest them? YES NO

170. Do you often play games with friends in your neighborhood? YES NO

171. Does it make you happy to know that your neighbors are getting along well? YES NO

172. Are there people of certain races that one should not be expected to tolerate? YES NO

173. Do you live in a rather uninteresting neighborhood? YES NO

174. Are the police officers of such a character that you would like to help them? YES NO

175. Do you visit with several young men and women in your neighborhood? YES NO

176. Do you sometimes go to neighborhood affairs with members of the opposite sex? YES NO

177. Do you ever do anything to improve the appearance of your home surroundings? YES NO

178. Are many of your neighbors the kind of people you dislike? YES NO

179. Do you usually speak to both young men and young women in your neighborhood? YES NO

180. Are most of the people in your community the kind you refrain from visiting? YES NO

Score Section 2 E

Score Section 2 F
MANUAL OF DIRECTIONS
CALIFORNIA TEST OF PERSONALITY—SECONDARY SERIES
A Profile of Personal and Social Adjustment
Devised by Ernest W. Tiegs, Willis W. Clark, and Louis P. Thorpe

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Part I. Purpose of the Test

The California Test of Personality has been designed to identify and reveal the status of certain highly important factors in personality and social adjustment usually designated as intangibles. These are the factors that defy appraisal or diagnosis by means of ordinary ability and achievement tests. Measurements of capacity, skill, and achievement, important as they are, do not constitute a complete picture of a functioning personality. When the teacher has, in addition to the above, evidences of a student's characteristic modes of response in a variety of situations which vitally affect him as an individual or as a member of a group, he can use this more complete picture to guide him to better personal and social adjustment.

From one standpoint, use of the term personality is unfortunate. Personality is not something separate and apart from ability or achievement but includes them; it refers rather to the manner and effectiveness with which the whole individual meets his personal and social problems, and indirectly the manner in which he impresses his fellows. The individual's ability and past achievements are always an inevitable part of his current attempts to deal with his problems intelligently. Since tests of ability and achievement are already available, the term personality test (measure, inventory, or profile) has become attached to instruments for identifying and evaluating the more intangible elements of total complex patterns of feeling, thinking, and acting.

Insistence on respect for the "wholeness" of the adjusting organism, or guidance of the whole student, represents a major contribution of the modern movement in education. This personality test is an implement or tool through which the teacher can more easily and effectively approach this desirable goal.

Some of the distinctive features of the California Test of Personality may be stated as follows:

1. The major purpose of the test is to reveal the extent to which the student is adjusting to the problems and conditions which confront him and is developing a normal, happy, and socially effective personality.

2. The test is divided into two sections. The

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1 The authors take pleasure in acknowledging their indebtedness to Dr. Elizabeth T. Sullivan and Dr. Welly Lefever for suggestions made during the development of this Manual of Directions for teachers.
purpose of Section 1 is to indicate how the student feels and thinks about himself, his self-reliance, his estimate of his own worth, his sense of personal freedom, and his feeling of belonging. In this section the student also reveals certain withdrawing and nervous tendencies which he may possess. Section 2 consists of social adjustment components. Its purpose is to show how the student functions as a social being, his knowledge of social standards, his social skills, his freedom from antisocial tendencies, and his family, school, and community relationships.

An evaluation of these components discloses whether or not the student's basic needs are being met in an atmosphere of security and whether he is developing a balanced sense of self-realization and social acceptance.

3. The diagnostic profile is so devised that it is possible to compare and contrast the adjustment patterns and habits of each student with the characteristic modes of response of large representative groups of similar students. The profile thus reveals graphically the points at which a particular student differs from presumably desirable patterns of adjustment and which constitute the point of departure for guidance. No computations are necessary on the part of the teacher in completing the profile.

4. This test is based upon a study of over 1000 specific adjustment patterns or modes of response to specific situations which confront students of these ages. Many of these items had previously been validated by other workers. The items finally included in the two sections of the test were selected on the basis of:
   a. Judgments of teachers and principals regarding their relative validity and significance.
   b. The reactions of students, expressing the extent to which they felt competent and willing to give correct responses.
   c. A study of the extent to which student responses and teacher appraisals agreed.
   d. A study of the relative significance of items by means of the bi-serial r technique.

5. In harmony with the generally recognized importance of a well balanced personality, the profile is so devised as to reveal graphically when adjustment in various situations is satisfactory, when it departs significantly, and when characteristic patterns deviate so far from typical adjustment that they indicate possible or actual danger.

Part II. Nature of the Test

The California Test of Personality is a teaching-learning or developmental instrument primarily. Its purpose is to provide the data for aiding students to maintain or develop a sane balance between self and social adjustment. Student reactions to items are obtained, not primarily for the usefulness of total or section scores, but to detect the areas and specific types of tendencies to think, feel, and act which reveal undesirable individual adjustments. Each group of related unsatisfactory responses becomes in a sense, therefore, a major objective of student guidance. Part IX of this Manual presents methods of classifying and treating such adjustment difficulties. This is a unique feature of the test.

The fact that exactly six sub-tests appear in each of the two sections of the test may erroneously suggest a purely arbitrary classification. Research began with sixteen components, some of which had been at least partially validated by other workers. Three of these components subsequently disappeared while two others were thrown together and treated as a single component, leaving twelve in all. The use of exactly fifteen items in each component is partially arbitrary and resulted from the decision to develop a one-period instrument. However, the final selection of items in each component was based upon the relative sizes of their bi-serial r's and the relative number of yes, no, and omitted responses which they received in the experimental tryout.

Although factor analysis studies of the data secured through the use of this test have been in progress for many months, the factors extracted represent a grouping of tendencies to act which vary considerably from the concepts which abound in the literature on personality and with which teachers are familiar.

From a practical operational standpoint arrived at through experimental tryouts of the test, it has seemed wise to retain familiar terminology in an organization of components based on logical analysis, experience, the judgments of workers in this field, and a considerable number of statistical studies.

Factor analysis and other statistical studies are continuing in the hope that as the nature of these personality factors becomes better known to investigators and teachers alike, their component designations and profile organization may increasingly approach the realities which they seek to represent.

The differentiation of personality and social adjustment into twelve more or less well defined compo-

(Continued on page four)
ORGANIZATION OF THE CALIFORNIA TEST OF PERSONALITY

LIFE ADJUSTMENT:
A balance between self and social adjustment

1. Self Adjustment: Based on feelings of personal security
   A. Self-reliance
   B. Sense of Personal Worth
   C. Sense of Personal Freedom
   D. Feeling of Belonging
   E. Freedom from Withdrawing Tendencies
   F. Freedom from Nervous Symptoms

2. Social Adjustment: Based on feelings of social security
   A. Social Standards
   B. Social Skills
   C. Freedom from Anti-social Tendencies
   D. Family Relations
   E. School Relations
   F. Community Relations

BRIEF DEFINITIONS OF THE VARIOUS COMPONENTS

1A. Self-reliance—A student may be said to be self-reliant when his actual actions indicate that he can do things independently of others, depend upon himself in various situations, and direct his own activities. The self-reliant boy or girl is also characteristically stable emotionally, and responsible in his behavior.

1B. Sense of Personal Worth—A student possesses a sense of being worthy when he feels he is well regarded by others, when he feels that others have faith in his future success, and when he believes that he has average or better than average ability. To feel worthy means to feel capable and reasonably attractive.

1C. Sense of Personal Freedom—A student enjoys a sense of freedom when he is permitted to have a reasonable share in the determination of his conduct and in setting the general policies that shall govern his life. Desirable freedom includes permission to choose one’s own friends and to have at least a little spending money.

1D. Feeling of Belonging—A student feels that he belongs when he enjoys the love of his family, the well-wishes of good friends, and a cordial relationship with people in general. Such a student will as a rule get along well with his teachers and usually feels proud of his school.

1E. Withdrawing Tendencies—The student who is said to withdraw is the one who substitutes the joys of a fantasy world for actual successes in real life. Such a person is characteristically sensitive, lonely, and given to self-concern. Normal adjustment is characterized by reasonable freedom from these tendencies.

1F. Nervous Symptoms—The student who is classified as having nervous symptoms is the one who suffers from one or more of a variety of physical symptoms such as loss of appetite, frequent eye strain, inability to sleep, or a tendency to be chronically tired. Persons of this kind may be exhibiting physical expressions of emotional conflicts.

2A. Social Standards—The student who recognizes desirable social standards is the one who has come to understand the rights of others and who appreciates the necessity of subordinating certain desires to the needs of the group. Such a person understands what is regarded as being right or wrong.

2B. Social Skills—A student may be said to be socially skillful or effective when he shows a liking for people, when he inconveniences himself to be of assistance to them, and when he is diplomatic in his dealings with both friends and strangers. The socially skillful student subordinates his egoistic tendencies in favor of interest in the problems and activities of his associates.

2C. Anti-social Tendencies—A student would normally be regarded as anti-social when he is given to bullying, frequent quarreling, disobedience, and destructiveness to property. The anti-social person is the one who endeavors to get his satisfactions in ways that are damaging and unfair to others. Normal adjustment is characterized by reasonable freedom from these tendencies.

2D. Family Relations—The student who exhibits desirable family relationships is the one who feels that he is loved and well-treated at home, and who has a sense of security and self-respect in connection with the various members of his family. Superior family relations also include parental control that is neither too strict nor too lenient.

2E. School Relations—The student who is satisfactorily adjusted to his school is the one who feels that his teachers like him, who enjoys other students, and who finds the school work adapted to his level of interest and maturity. Good school relations involve the feeling on the part of the individual that he counts for something in the life of the institution.

2F. Community Relations—The student who may be said to be making good adjustments in his community is the one who mingle happily with his neighbors, who takes pride in community improvements, and who is tolerant in dealing with both strangers and foreigners. Satisfactory community relations include as well the disposition to be respectful of laws and of regulations pertaining to the general welfare.

The reader’s attention is called to the fact that these components are not names for so-called general traits. They are, rather, names for groupings of more or less specific tendencies to feel, think, and act.
ments as a basis for diagnosis and guidance represents, in itself, a wide departure as well as a significant challenge for teachers. Such a treatment should result in an increasingly sympathetic and intelligent handling of adjustment problems.

Part III. Reliability

Certain outcomes such as knowledges, understandings, and skills, once attained, remain relatively stable and tests designed to reveal their presence may possess relatively high statistical reliability. The normal student, on the other hand, is a growing organism whose integration must be preserved while his feelings, convictions, and modes of behavior are changing in accordance with his experiences. Some of the items of this test touch relatively sensitive personal and social areas, and such student attitudes may change in a relatively short time. For these and other reasons, the statistical reliability of instruments of this type will sometimes appear to be somewhat lower than that of good tests of ability and achievement.

However, the reliability of the California Test of Personality does not suffer by comparison with many widely used tests of mental ability and school achievement. The following correlations were obtained with 558 cases by the split-halves method corrected by the Spearman-Brown formula:

<table>
<thead>
<tr>
<th></th>
<th>S.D. dist.</th>
<th>P.E. est.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>score</td>
<td>score</td>
</tr>
<tr>
<td>Total Adjustment</td>
<td>19.9</td>
<td>3.5</td>
</tr>
<tr>
<td>Sec. 1. Self Adj.</td>
<td>11.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Sec. 2. Social Adj.</td>
<td>10.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

The correlation between Section 1 and Section 2, .54, is sufficiently low to emphasize the desirability of studying the student from the standpoint of both self adjustment and social adjustment. The reliabilities of the component tests vary from .60 to .87 and are thus sufficiently high to locate more restricted areas of personality difficulty. After these areas have been located, the teacher may proceed to identify specific adjustment difficulties as indicated in Part IX.

Part IV. Validity

The validity of any instrument is dependent not only upon its intrinsic nature but also upon the manner in which it is to be used. The latter point is an important consideration in the validation of instruments in the personality field. Among the factors of importance that are related to the validity of the present test are the following:

A. Selection of Items
B. The Personality Components
C. Test Item Disguise
D. Limitations

Each of these factors will receive brief consideration.

A. Selection of Items

Adequate selection of test items is, in general, the best guarantee of the validity of any testing instrument. Attention has already been called to the manner in which reactions of students, teachers, and principals, other tests, and statistical techniques were utilized in the process of validation of the California Test of Personality.

B. The Personality Components

The twelve components mentioned in Part I and presented in Part II of this Manual represent functionally related groups of crucial, specific evidences of personal or social adjustment; their names correspond to some of the most important present-day personality adjustment concepts which are vital to normal growth and development. The items of each component represent fundamental action patterns. The obtained correlations among components emphasize the unity or "wholeness" of normal individuals; as would be expected, these personality components are not mutually exclusive.

C. Test Item Disguise

The authors have been sensitive to the tendency of some students to paint self-portraits which are better than the originals. They have attempted to nullify the effects of these tendencies in two ways; namely, by disguising as many items as possible which might conflict with the student's tendency to protect himself, and by providing outside checking devices as indicated in Part X.

The authors do not ask, "Do you play truant?" but rather, "Are things frequently so bad at school that you just naturally stay away?" They do not ask, "Do you quarrel or are you quarrelsome?" but, "Does someone at your home quarrel with you too much of the time?" Such disguised items do not tempt the student to detect their purpose by asking, "Are you too sensitive?" but instead ask, "Do you find many people inclined to say and do things that hurt your feelings?"

In many such instances the facts about a student's adjustment are not as important as the way he feels and what he believes concerning them, since such beliefs and feelings are frequently the keys to his intimate personality status, as well as to his possible improvement.

D. Limitations

Practical considerations have limited the test to one hundred and eighty items. Many others might have been used to obtain a more complete sampling. However, it is possible that a careful selection of items has produced a relatively short instrument which is as reliable and useful as one of greater length.

Language difficulties may affect the usefulness of tests and personality profiles. In spite of the safeguards used, the present test probably has not escaped the influence of this shortcoming. The differing points of view and attitudes of those who read the test items...
will, no doubt, result in interpretations somewhat at variance from those intended. The varying language abilities of students may also produce discrepancies in understanding and response. Changing attitudes and a lack of self-knowledge are other problems which must be faced. However, the authors have evaluated the language of these tests by means of the Lewerenz Vocabulary Grade Placement Formula, teacher reactions, and student responses, and have, in general, kept the language difficulties at or below the seventh grade level of difficulty.

Part V. The Integrated Personality

The authors wish to re-emphasize the desirability of interpreting and aiding the student in terms of an essential unity of function and adjustment. For this reason, interpretations of profile data should be made, and plans for personality improvement should be projected, not only in terms of the testimony of the test itself, but also in terms of the factors that are operating to defeat adequate adjustment.

Mental deficiency or mental immaturity may be productive of many types of difficulties. Inability to read or to succeed in some other type of school activity may create conflicts which encourage the development of various kinds of defense mechanisms. These difficulties frequently come to the attention of the teacher in such forms of misbehavior as negativism, day-dreaming, ego-centrism, or other unsatisfactory detours around the problems of a too complex educational environment. Many of the apparently physical difficulties of students have no observable physical basis whatsoever but may result from unsatisfactory efforts to solve conflicts which arise because school activities are not in harmony with their interests, needs, and capacities.

It is desirable, therefore, that after the test has revealed specific evidences of difficulty, the teacher view the whole individual in his total environment, as far as possible, before selecting and using the types of remedial activities described in Part IX of this Manual.

Part VI. Directions for Administering

The student responses secured in this test are designed to furnish diagnostic information regarding various elements of personality and social adjustment. It will be noted that, beginning on page 3, there are twelve sections with a total of 180 questions. A list of interests and activities is presented on page 2 of the booklet. Students are to indicate the things they like and the things they do after completing the test questions.

There is no time limit for the responses and students should be permitted to answer all items. Ordinarily the responses may be given in one class period of 45 minutes.

Students should have lead pencils and a test booklet. Directions to be given students are in black type.

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After identifying data are recorded on the front page, state: Open your booklet and fold back the page to page 2. (Ignore Interests and Activities for the present. Demonstrate and be sure that students have found page 2.)

Now look at the bottom where it says: “Instructions to Students.” After each of the following questions, put a circle around the YES or NO. (Illustrate circle on blackboard if necessary.) Do you have a dog at home? Put a circle around the YES or the NO. Now answer the other questions by putting a circle around the YES or NO.

On the next pages are more questions. The answers are not right or wrong, but show what you think, how you feel, or what you do about things.

Go right on from one page to another until you have finished them all.

An Interests and Activities questionnaire is provided on page 2. This may be given immediately following completion of the test or at a later time, if desired. The instructions are: The examiner is to read the directions aloud and explain that students are to draw a circle around “L” for things they like or would like to do. They are to draw a circle around “D” for the things they really do.

For use of the Interests and Activities questionnaire, see Part XI of this Manual.

Instructions for giving the Test when the Special Machine Scoring Answer Sheet is to be used. Read the instructions given on this answer sheet. Do not read the instructions on page 2 of the test booklet.

Part VII. Directions for Scoring

Use the answer key which is furnished with the test to determine desirable responses in each section of the test. There are fifteen items in each sub-section and the score for each column is the number of student responses which conform with the answer key. Indicate desirable responses with a C.

If erasures or changes are made, consider the intent of the student.

If both YES and NO are marked, or if the answer is omitted, no credit is given.

Needless to say, the scorer should be careful to use the correct column of the answer key for each test column.

Count the desirable student responses (number of C's) and record the number on the dotted line at the bottom of each column.
Part VIII. Directions for Recording and Charting Scores and Percentiles

The steps in recording and summarizing data on the front page of the booklet are as follows:

1. Transfer the section scores of each of the twelve sections to the right of the 15's in the column headed "Student's Score."

2. Add the scores of Section I, A-F, to obtain the Self Adjustment Score.

3. Add the scores of Sections II, A-F, to obtain the Social Adjustment Score.

4. Add the Self Adjustment and the Social Adjustment Scores to obtain the Total Adjustment Score.

5. To determine percentile ranks for each section and for total adjustment refer to the table of percentile norms on the last page of this Manual. (See illustration on page 7).

6. To prepare the chart on the right half of the page, mark with an x the percentile rank for each section and connect these x's with lines in Sec. 1 and in Sec. 2. Also indicate with an x the percentile rank for total adjustment.

Directions for interpretation of these data and for student guidance are given in Part IX. Briefly, it may be stated that maladjustment in the various components is indicated when the student's score is among the lower percentiles, or when the percentile graph tends to the left.

In the event that the examiner believes there are serious divergencies in the profile from observed behavior, read the comments in Part X.

Part IX. Directions for Interpreting Profiles and Guiding Adjustment Activities

A. Student Adjustment a Problem for All Teachers

Examination of the completed profiles for the students of a class will usually reveal the fact that the need for assistance in improving personality and social adjustment is not restricted to a limited number of "problem" students; instead, the impact and interaction of environmental factors with individual needs and desires creates some adjustment problems for all.

These adjustment problems vary in complexity. The great majority of them are probably unfortunate habit patterns of feeling and action which must be changed. Others have their origin in physical difficulties which must be relieved or corrected before re-education is possible. Actual or virtual mental deficiency may account for others. An appreciable number of problems undoubtedly arise from deep-seated conflicts which must be detected and brought to light. These conflicts may result from such factors as feelings of insecurity, real or fancied injury to the individual or to others, and to lack of successful achievement either in or out of school. In some instances lack of adjustment may be evidence of actual or incipient mental disorders which teachers may learn to recognize even though they are not qualified to attempt to treat them.

In the past we have emphasized the achievement of such more or less academic outcomes as knowledges, appreciations, attitudes, and skills for all students in proportion to their capacities and needs. A better understanding of the nature of the student and his problems now leads us in a similar manner to recognize and to meet his needs for assistance in personality development and social adjustment. Just as the teacher periodically combines the results of informal observation and tests to evaluate academic achievement, she may now combine informal observation, the testimony of the profile, and other types of evidence to determine individual success or need for assistance in personality problems and social adjustment difficulties.

B. Studying the Profile

The profile (personality picture) has been divided into twelve aspects or components because these seem to represent the most important identifiable personality and social adjustment areas. An attempt has been made to give these components names which correspond in a general way to behavior concepts with which teachers are already familiar. Please note that components 1E, 1F, and 2C represent undesirable tendencies. The test is so devised, however, that a high score means a favorable score, and is to be interpreted as freedom from withdrawing tendencies, nervous symptoms, and anti-social tendencies.

Each component (self-reliance, for instance) is composed of fifteen personal questions yielding evidences of the presence or absence of an adjustment problem of its kind. From the profile the teacher first discovers the components, if any, in which a given student deviates seriously from young people in general. Such components may next be examined to discover specific answers which reveal lack of adjustment.

In general, study of the profile results may consist of the following steps:

1. Determining the number of students who deviate seriously in each component. This information will reveal what component areas constitute adjustment problems for the group as a whole.

2. Determining the specific items of each of the above components which are giving difficulty. These specific difficulties may then be treated as specific class adjustment problems.

3. Studying the individual profiles which deviate markedly from the general class problems and determining the specific difficulties of each such student.

4. Studying the students' records of interests and activities, both for possible causes of difficulty and for clues to appropriate remedial treatment.

C. General Principles of Method

In the past it has been a too common practice, in giving various personality inventories and interest blanks, to note total or partial scores and then to file these results for future action, which rarely materialized. It has been the purpose of the authors of the (Continued on page eight)
The above profile of Helen Smith reveals that she is located at the 25 percentile in self adjustment. This means that she surpasses about one-fourth and is surpassed by three-fourths of the students on whom the percentile norms of this test are based. Her social adjustment is slightly below average (40 percentile) but not necessarily at a desirable standard.

Helen appears to have an adequate knowledge of social standards and is reasonably well adjusted in family and community relationships. She is also relatively free from anti-social tendencies and from nervous symptoms which might have indicated emotional conflicts.

On the other hand, Helen is decidedly lacking in social skills and in adjustment in school relationships. An inspection of the particular situations in these components in which she reports feelings and actions of an unsatisfactory nature may provide clues to her difficulty. On the self-adjustment side, Helen is also very low in her sense of personal worth and feeling of belonging. These difficulties are accompanied by a serious tendency to withdraw from reality and to secure personal satisfactions through the substitution of fantasies for successes in real life.

The profile as a whole suggests decided lack of success in attaining security and favorable recognition, particularly in school situations. It would seem that special attention to the development of social skills and the provision of opportunity for success might readily remedy a situation which if not adequately met, may lead to more serious difficulties. An examination of the specific item answers, particularly in those areas in which the percentile rank is low, will reveal the responses which resulted in the unsatisfactory ratings secured. These responses should then be analyzed and interpreted in relation to the recommended plan of treatment given in Part IX of the Manual of Directions.
California Test of Personality to create an instrument which will implement the desire of teachers to direct learning and adjustment in harmony with the major objectives of modern education. In other words, the test represents a means by which teachers can more easily and effectively translate their desires to aid students into actual accomplishments.

The modern curriculum emphasizes the democratic ideal of learning and adjustment through freedom and direction. Since it is often the only part of the person's environment which may be specifically planned to meet his interests and needs in the light of capacities, the curriculum may well be regarded as a crucial factor in the development of symmetrical, effective, and well-balanced personalities.

In general, the improvement of personality and social adjustment consists of learning to substitute better responses for unsatisfactory or inadequate reactions in the concrete types of situations in which the student experiences adjustment difficulties. This means that the point of departure in aiding students to make better adjustments should be by way of an attack on the particular difficulties revealed by the test.

There are two major approaches, with their many variations, in the matter of student adjustment methodology. These contrasting approaches may, as a matter of convenience, be called the direct and the indirect. In the former the student is informed and understands the purpose of the activities in which he engages and may thus be led to cooperate voluntarily. By the latter method, the student is led to engage in or refrain from activities and to clarify errors of feeling or thinking which will improve his outlook without being made conscious of the process itself. This technique is somewhat analogous to that of obtaining correct expression in English by asking appropriate questions. Where the cause or contributing factor in maladjustment has been the teacher or a parent, care must be exercised in the use of the direct method. In such an instance, both the teacher and the parent should take a less evident part in remedial measures.

Teachers should exercise the greatest care in distinguishing between symptoms and causes of personality difficulty. In identifying types of maladjustment and planning remedial activity, the teacher must not lose sight of the danger of regarding symptoms as basic causes of personality disturbance and of attempting to remedy these difficulties by the mere elimination of symptoms. Causes of maladjustment frequently lie deeply imbedded in the emotional life of the student and can be identified only by careful and painstaking diagnostic study.

Remedial activity or treatment may for convenience be classified into six types, as follows:

1. Personality exercises and practice. This type of treatment is particularly useful for changing undesirable habit patterns. Examples of such patterns abound in the self-reliance and social skills components of the test.

2. Correcting erroneous beliefs and attitudes. Such attitudes occur in components dealing with knowledge of social standards, sense of worth, feeling of belonging, sense of freedom, and in many family, school, and community relationships.

3. Dealing with unfavorable environmental conditions. Frequently the student could adjust satisfactorily except for certain factors in his home, school, or community environment. A change in attitude or activity on the part of teachers, parents, or neighbors frequently aids in the solution of a difficult problem.

4. Modifying undesirable forms of attempted adjustment. The treatment in this form of disturbance constitutes a different type of procedure. The maladjustments in question are illustrated in the anti-social and withdrawing tendency components.

5. Elimination of physical and nervous difficulties. These difficulties are fairly objective and easily recognized. They are sampled in the nervous tendency component. They may require medical attention and treatment. Their elimination may, however, involve considerable mental hygiene work with the student afflicted.

6. The recognition and recording of apparent mental disorders. Many students, at one time or another, appear to be egotistic and conceited; often they give evidence of being unduly suspicious. But when these and other more or less common, yet undesirable, adjustment tendencies become habitual or extreme, they may lead to serious mental disorders.

It is apparent that no one component of the test should be treated as a completely independent unit in personality. Neither should re-education activities be planned without reference to all other components. In addition, such sources of information as school records of ability, interests, and achievement, as well as other facts regarding home, out-of-school activities, and the like, should be investigated in difficult cases.

There are two basic principles which must be observed regardless of what method of treatment is indicated.

1. The maladjusted student must often have something definite done for him before he can help himself. Often positive social adjustments cannot be made until self-confidence and feelings of personal security are restored. Thus it is important that teachers attempt to determine the underlying causes of observed difficulties.

2. Adjustment problems should be broken into their simpler elements in order that improvement activities may be chosen with due regard to the needs and progress of the student. When the student does not seem sufficiently challenged by the methods utilized, the teacher may safely suggest more stimulating activities; but if the student fails in his efforts it may be necessary for the teacher to retrace her steps and break down the problem into its simpler phases.

The teacher should show the student that learning to deal with one's self and with others in an intelligent, sympathetic, and many-sided manner is one of the most important ways to attain happiness and success in life.
Space will not permit a separate illustration for each component of the profile; instead, six illustrations of these six approaches to improvement will be given.¹

D. Illustrative Examples and Suggestions for Treatment

1. SITUATIONS, AIDED BY PRACTICE

Component IA: Developing Self-reliance.

Form A, Item 4: Is it hard for you to continue with your work when it becomes difficult?

A student is self-reliant if he performs many acts in a way that indicates an inner feeling of assurance and security. If he is unable to perform these acts in this manner he is said to lack self-reliance. The basic principle of improvement, therefore, consists of creating confidence and effecting improvement through sympathetic and intelligent planning of definite situations for practice purposes.

If the student deviates sufficiently in this component (as revealed by the profile) to warrant special attention, each evidence of difficulty should be noted.

In general, a successful attack consists of five steps:

1. The student must be sure of the teacher’s sympathy and respect.

2. The student must feel sure that the teacher understands his difficulty.

3. Consideration of the problem must develop a feeling of security and a desire to improve on the part of the student. The seriousness of difficulties should not be overemphasized.

4. In the light of available knowledge about the student and of the seriousness of his adjustment difficulties, the teacher must break down his problems into their appropriate elements.

5. The teacher must guide the student in a graduated series (from easy to more difficult) of adjustment activities which challenge but do not defeat him.

Assume for example that a student finds it difficult to talk in class. Some or all of the following steps may be used to aid him. The extent to which these need to be utilized depends on the seriousness of his disability.

a. Before the class hour begins, tell the student that he will be asked a question, the correct answer to which is “Yes.” Ask the question and have him answer it.

b. Repeat step a utilizing single word answers (or short answers) given him beforehand until he responds confidently and until the members of the class expect him to answer.

c. Tell the student before class what questions he will be asked. Be sure that the questions are simple, that they require little talking, and that he knows the answers.

d. Without previous arrangement, ask the student questions which it is certain he can answer.

e. Ask the student to make a simple report from notes.

f. Ask for a simple report without notes.

g. Continue to increase the complexity of the tasks until the student does as well as can be expected.

h. If the student fails at any point, ignore the failure, and repeat the previous step or steps until he appears ready to progress.

The following is another example: Assume that the student finds it very difficult to meet or introduce people. Among the steps which will aid him are the following procedures:

a. The teacher (or someone else) tells the student the name, as well as some interesting fact, about the person who is to be introduced. The teacher has him repeat the name and suggests a question or comment for him to make in starting the conversation. The student meets the stranger and starts the conversation.

b. The teacher emphasizes the desirability of giving attention to the other person’s name when being introduced. The student is told several things about a new person, but not his name. The student uses the name of the person when acknowledging the introduction and begins a conversation.

c. The teacher informs the student that he is to meet another teacher, student, banker, or some other person. She requests him to think of something interesting to say. When introduced, the student repeats the name of the other person and starts a conversation.

d. The teacher asks the student to make a list of things which different people might be interested in at various social functions. She asks such questions as, “If you met Mr. Black, editor of one of our local newspapers and parent of another student in this school, what would you talk about?”

e. Continue planning and practice until the student adjusts as well as appears possible.

2. ERRONEOUS BELIEFS AND ATTITUDES

Component ID: Feeling of Belonging

Form A, Item 60: Do you feel that people usually think well of you?

Assume that a student answered “No” to this question. The fact that he may be wrong as shown by
later investigation does not change the unfavorable influence of his belief or attitude. It is necessary in some way, through explanation or evidence actually to change the attitude of this student before the influence of the erroneous belief can be eliminated.

An approach characterized by sympathetic interest and understanding on the part of the teacher, and a knowledge on the part of the student that the teacher is not judging or accusing but simply explaining, will often eliminate the problem.

The general method of approach in handling these erroneous beliefs and attitudes which are responsible for another large proportion of adjustment difficulties may be stated as follows:

1. Determine whether or not the student is right in his beliefs or attitudes.

2. If it is found that he is mistaken, explain his difficulties and show him his errors.

3. If the student is not convinced ask him to keep a record of his specific “weaknesses and illnesses” (or other erroneous beliefs). The mere keeping of a record will often convince him of his error.

4. If the student keeps a record of actual instances of weaknesses and illnesses and they appear to uphold his belief, the teacher must often re-adjust his first judgment. If, however, she is still convinced that the student is wrong, it is advisable to gather similar evidence regarding the extent to which other students face and meet the same problem. In the present instance it would be a record of the extent to which other students exhibited the same weaknesses and illnesses. If this evidence shows that the status of the student in question is typical, he no longer has any justification for his attitude.

5. If the student still persists in his belief, it may be based on other factors. Search should be made for evidence of conflicts in other components, for excessive feelings of inferiority, for difficulties in his record of ability and achievement.

6. If investigation proves that the student was right to begin with and that the evidence he gathered seems to uphold his point of view, the handling of his problem requires the modification of his activities to suit his physical condition and may be carried on in accordance with the procedures outlined in our next remedial section (No. 3) dealing with unfavorable environmental conditions.

It is rarely necessary to go into such detail with single evidences of difficulty and then usually only when the student deviates markedly in the component in question from the general pattern of most persons as revealed by the profile. But if students are more important than subjects, equipment, and time schedules, the wise teacher will be willing to go into this detail in order that they may be properly oriented and assisted in their efforts to make successful adjustments.

The same approach with appropriate modifications may be used in other similar types of difficulty.

3. Dealing With Unfavorable Environmental Conditions

Component 2E: School Relations

Form A, Item 151: Are some of your subjects so difficult that you may be in danger of failing?

Component 2D: Family Relations

Form A, Item 145: Do the members of your family seem to criticize you a lot?

Assume that the student answers “Yes” to both of these and similar questions and that he is right in his beliefs. In both these instances something should be done. In the first case, the school has the major responsibility, and in the second, the problem is one for the home.

The school has long been aware of the first problem but only recently has it been possible to approach the solution for it with a rational and defensible plan. The mental age or intelligence quotient of a student reveals neither the cause nor the method of prevention of failure; neither does it reveal the worry and strain to which his personality is being subjected. The student should be shown an analysis of his learning difficulties, given some reduction in amount of work, and any other kind of treatment necessary to the development of a feeling of security. He must be put on a basis of equality with those who happen to be so constituted that they fit well into the program as it exists. In short, the school program should fit his maturity level. Sometimes this ideal requires a distinct change in teacher attitudes and procedures.

The second problem is more time consuming but just as important. It usually involves contact with individual parents and great tact is sometimes necessary to make them understand how they are defeating their own purposes and failing as parents when they destroy the feeling of security and the hope necessary for personal growth and adjustment on the part of their children.

After the problems for a schoolroom or for a whole school have been tabulated from the profile answers, the most general difficulties can be handled by principal and teachers in informal talks to students. These problems may also be made the subject of parent-teachers' and mothers’ club meetings. Frequently outside speakers can be used to advantage after they have been informed of the major adjustment problems which exist in a particular group.

In addition to this general approach, the following technique will be found useful in handling individual parents:

1. Meet parents casually and “size them up.” Try to determine what personality characteristics they exhibit.

2. If they appear to be intelligent, understanding, and cooperative, begin at once explaining the student's
difficulties and asking for their cooperation. Suggest definite things for them to do in changing the student’s attitude.

3. If the parents are unfriendly, indifferent, or conditions are otherwise unfavorable, they must be influenced through P. T. A. or other meetings and through personal contacts before the erroneous attitude is mentioned.

4. If the family is cooperative but unconvincing, attempt to have the parents keep a record for a short time of actual instances in which they exhibit the attitude which is so discouraging to the student.

5. It is not necessary that the parent admit his error, if he is in error, or that the student be made to admit his error in case the parent is right. Merely raising the question, dealing with it objectively so far as the facts of the case will permit, and discussing the difficulties and their implications is as far as the teacher can usually go. This procedure will, however, often improve the situation considerably, if not entirely eliminate the difficulty. Furthermore, the teacher frequently can compensate for the ill effects of the parents’ treatment by giving the student the feeling of self-respect and security which he so much needs.

The specific difficulties mentioned above are representative of a large class for which the same general type of remedial procedures may be used.

4. DEALING WITH ANTI-SOCIAL AND WITHDRAWING TENDENCIES

Component 2C: Anti-social Tendencies

Form A, Item 131: Do you often have to quarrel or fight in order to get your rights?

Component 1E: Withdrawing Tendencies

Form A, Item 69: Do you find many people inclined to say and do things to hurt your feelings?

For the most part, individuals tend to scare, push, bully, dominate, and otherwise mistreat younger or smaller boys and girls because of inner feelings of inferiority or lack of ego recognition. The sufferer tries to convince himself that he is not inferior to others. His bullying is an anti-social way of attempting to compensate for his feeling of weakness.

Students withdraw from their problems and are characteristically shy, timid, sensitive, suspicious, and given to day-dreaming about their troubles for much the same reasons. Such persons tend to give up the battle of life; their day-dreams are but substitute avenues to the goal of being considered successful and worthy. The withdrawing tendency is considered serious because it leads to a disinclination to adjust to real people and to society in general.

Some students will give a large number of “yes” answers. Such responses are indicative of the need for a deeper feeling of security.

In general, the following treatment is recommended:

1. Develop the best teacher-student relationship possible. Let the teacher lose no opportunity to convince the student of her sympathetic understanding.

2. Whenever possible, give the student ego-satisfying responsibilities such as policing school halls, acting as club or group leader, or assisting in other school responsibilities. Care must be observed to assign responsibilities which the maladjusted student can and will carry successfully and which will not be resented by other students.

3. Adjust regular school tasks and activities to the needs and capacities of the student. Make a complete and detailed analysis of his difficulties and work with him until he wins success, with its attendant satisfaction, within the limits of his possibilities.

4. The major objective in this instance is adjustment and success within the student’s own limitations, and not conformity to standards, some of which his limitations will prevent him from attaining. The teacher must find a sufficient number of activities in which the student can thus be successful if she is to provide the necessary feelings of security and relieve him of the necessity of maintaining his ego by anti-social or withdrawing behavior.

5. DEALING WITH NERVOUS SYMPTOMS

Component 1F: Nervous Symptoms

Form A, Item 78: Do you have the habit of biting your fingernails often?

Form A, Item 81: Do you suffer often from annoying eye strain?

Form A, Item 82: Is it hard for you to sit still?

Some of these symptoms, such as lack of appetite, eye strain, dizzy spells, headaches, and chronic fatigue may be due to physical disorders, and should thus be diagnosed and treated by an authorized physician. Many physical symptoms of this kind, however, are caused by feelings of insecurity and by emotional conflicts.

Students suffering from these nervous difficulties are usually unhappy in their homes, without good friends, lacking in social skills, and very much inclined to utilize their energy in self-concern and self-pity. Psychologically, the chief difficulty with such unfortunate boys and girls is that their attention is centered upon their own troubles rather than upon the interesting things that are going on around them. This is usually caused by the fact that these students have for years been frustrated in their efforts to secure the response and recognition from parents and others that provides the much coveted feeling of being wanted, of being considered worthy and successful. Thus these neurotic individuals are maladjusted in both the self and the social phases of life.
The following methods of handling difficulties of this kind are recommended:

1. Examine the student's health record in the nurse's or physician's file. If the record is old or otherwise unsatisfactory, or no record of a physical examination is available, such an examination should be requested.

2. If the examination record appears to reveal any evidence of a physical basis for nervous tendencies, the student should be referred to a physician for treatment.

3. If the physician reports no physical basis for adjustment difficulties, the most probable cause of these nervous symptoms is similar to the major cause of anti-social behavior and withdrawing tendencies; namely, the lack and need of a feeling of adequate personal security.

4. Provide the appreciation, approval, and ego satisfactions that the individual craves as recommended for the anti-social behavior and withdrawing tendencies, but with the following modification: endeavor to restore hope and confidence before attempting to delegate responsibilities. This may be done by setting up conditions which tend to guarantee recognized success in school and elsewhere.

5. Students exhibiting nervous symptoms are aided by physiological as well as psychological relaxation. Teachers should avoid putting them in tension-producing situations. Excessive self-concern must gradually be replaced by satisfying experiences with others if nervous tensions are to be relieved.

6. The Beta hypothesis (negative practice) technique, as developed by Dunlap, is good for nervous tics. In other words, actually practicing a periodic closing of the eyes, muscle tremor, or other nervous tics in gaining conscious control over it and thus assists in its elimination. Such practice should, however, be directed by a psychologist, or a teacher who has been specially trained.

6. Dealing With Mental Disorders

In general, mental disorders may be considered extreme and persistent deviations from normal adjustment. From the standpoint of the teacher there would be reason to suspect such a case when long and persistent treatment with one or more of the first five treatment types was unsuccessful. However, the lack of teacher success is not proof of mental disorder. Under no circumstances should teachers suggest the existence of such a disorder. They should first of all seek the cooperation of the parents. If the student is referred to a psychiatrist or a clinic the teacher should give as objectively as possible the data which she has gathered and the treatment which she has attempted, and then cooperate with the psychiatrist or agency which is taking over the treatment of the case.

It should be recognized, however, that some students display the early symptoms of what is in legal terms called "insanity" under the very eyes of the teacher. Many of these unhappy youths are no doubt disintegrating in their emotional life due to excessive frustration and the constant presence of hostility. Certainly an appreciable fraction of this group could be assisted to better adjustment if their difficulties were detected and treated in time.

At any rate, there is danger that teachers untrained in mental hygiene matters will overlook symptoms of grave significance in the behavior of their charges. As a prominent psychologist recently commented, it is a matter of no small import that some teachers, as well as parents, permit children to manifest symptoms of psychosis (insanity) that may later become decidedly serious, without doing anything about them until it is too late. As an example, the student who is conceited and egotistic, who displays a superficial attitude in his relations to other people, and who is markedly suspicious may be developing the form of insanity called paranoia (a psychosis characterized by attitudes of conceit and grandeur and by systematic delusions of persecution).

E. Conclusions on Student Adjustment

Finally, the teacher should realize that students do not group themselves into personality types and that patterns of maladjustment often include disturbances in several of the components that have been included in the profile. A student may, and probably usually will, need assistance in several of the areas of possible disturbance. A student who lacks self-reliance may have erroneous attitudes, may be out of harmony with school and home regulations, and may be decidedly inclined to be anti-social in his relations to others. Maladjustments are not confined to types; they present a variety of symptoms that may pervade many areas of both self-adjustment and social adjustment.

Because all aspects of personality are closely interlocked or integrated, remedial treatment that develops self-reliance may also eliminate anti-social behavior. And a change in environment that stimulates the withdrawing person to attack his problems may bring about a reduction in nervous symptoms as well. In short, sympathetic help that enables an unhappy student to find self-realization and to develop generous social attitudes will tend to help him achieve that balance of personality that makes for good life adjustment.

Part X. Directions for Checking Profiles Which Appear to Diverge from Observed Student Adjustment

If a student appeared ill or disturbed when responding to the questions of the test he should be given an opportunity to repeat the exercise at a more favorable time.

If lack of reading ability was a disturbing factor the teacher may give and interpret orally such parts of the test as appear to be in conflict with her observations.

If it appears that the student has consciously misrepresented himself, a number of checks are possible with most of the items:

1. Other teachers familiar with the student may be asked to respond to the items in question.
2. A few students may be asked to complete profiles for each other, including the student under examination.

3. After the parents have been appraised of the nature and objectives of the test, they may be asked to complete the items in question.

4. The student may be requested to repeat his performance at another time.

5. The teacher may keep a record of careful, systematic observation over a sufficiently extended period of time to obtain an adequate sampling of the student's characteristic behavior.

It should be remembered that not many such problem cases arise. The major purpose of the test is to detect the actual or incipient difficulties of normal young people in order to aid them in making better adjustments. But when apparent discrepancies arise between student responses and teacher observations it is important to determine the facts in order that remedial activities may be intelligently directed. The teacher should not trust her informal opinions too far, evidence from the test will usually be much more valid. Furthermore, it must be remembered that teachers sometimes stimulate unnecessary maladjustment by their unjustifiable unfavorable attitudes toward both individual students and whole classes.

Part XI. Interests and Activities

The Interests and Activities questionnaire (page 2 of test booklet) is not a part of the test proper and is not scored or charted on the first page. It consists of the twelve adjustment components. The teacher will find it profitable to study the responses in this Interests and Activities questionnaire for students whose percentile profiles are low or to the left in any of the twelve components, and for others about whom additional information is desired.

The questionnaire yields four types of information about different interests and activities: (1) The things the student likes, or would like very much to do, but does not do; (2) The things the student likes, or would like to do, and actually does; (3) The things which the student does not like, or does not wish to do, but actually does; (4) The things the student neither likes nor does.

The interest and activity items are divided into (a) those of a primarily individual nature (Items 1-46) and (b) those that are predominantly social (Items 47-74). Within each of these two groups the items are arranged in the general order of the amount of activity involved, beginning with the more passive or sedentary types and advancing to those involving more activity or social participation.

After the teacher has identified the component or components in which a student appears to be experiencing difficulties, and has reviewed such other data as she can obtain regarding such factors as health, attendance, ability, and achievement, she should examine the student's responses to the Interests and Activities questionnaire.

A study of the questionnaire will still further enlarge the teacher's understanding of a student's personality, lend additional assistance in determining the cause or causes of his difficulty, and provide clues for planning remedial work. Among other facts the teacher should endeavor to determine why the student fails to do things that he would enjoy doing but does not do, why he does not like some of the things he does do, and whether or not anything can be done to bring about a better adjustment in the interests and activities field.

In general, a wide range of interests and activities is evidence of good adjustment; a narrow range in this respect may be indicative of actual or potential maladjustment. Therefore, a basic principle in dealing with most adjustment difficulties of this type is that of stimulating individual and social interests, and encouraging the student to become more active in such interests and activities as may be suited to his degree of physical, social, and mental maturity.

Part XII. Administrative Uses

Although this test has been designed primarily to aid teachers in detecting and dealing with adjustment problems, its usefulness is not confined to the individual classroom.

The normative data, or scores on the various sections of the test, should be summarized on the blanks provided in order that they may supply administrative officers with information regarding the adequacy of personal and social adjustment in:

1. Single classes in a given school

2. Individual schools

3. The whole school system

If the majority of self adjustment scores for a school or school system are low, it may indicate that the educational procedures in vogue are too formal or traditional and that more informal activities should be undertaken. If scores on freedom from withdrawing tendencies, freedom from nervous symptoms, and freedom from anti-social tendencies are low, it may indicate that the course of study materials are too difficult for student capacities. Such a situation might well be investigated. Low scores on social standards or social skills suggest the desirability of more emphasis on aspects of social training, etiquette, and attitude building which, in some school systems, are not regarded as being a part of the regular curriculum. Low scores on the community relations section of the test may indicate too little stress on school-community relations and suggest more emphasis on interpreting the activities and needs of the community in terms that students can comprehend.

Unsatisfactory school and school district trends revealed by percentile summaries are to be regarded as the points of departure for investigating the need or
desirability of modification in the objectives, materials, and procedures of the curriculum.

Teachers, supervisors, and administrators should be alert to the opportunities which are provided in the school environment for setting up stimulating situations that may act as important factors in the processes of student adjustment. The school provides many normal situations in which there are opportunities for social interaction, wholesome conflicts and accommodations, applications of social controls, exercise of leadership, and acceptance of responsibilities. These facilities should be inventoried, utilized, and when necessary, modified to harmonize with such objectives and procedures as are requisite to the development of well-adjusted and effective personalities.

A careful analysis of the available opportunities for personality development and their constructive utilization in the problem of student adjustment is the privilege and opportunity of all who are engaged in conducting the Nation's educational program.

Part XIII. Percentile Norms

The percentile norms provided on the last page of this Manual were derived from test data for students in grades nine to fourteen inclusive in different schools in and near Los Angeles, California. A percentile may be described as a point on a 100 point scale which gives the per cent of scores which fall below that particular percentile. For example, a student whose score falls at the 35 percentile point exceeds 35 per cent of the students on whom the test was standardized; such a score may also be interpreted to mean that this student is lower than 65 per cent of the students in the standardization group.
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