AN EVALUATION OF THE CALIFORNIA TEST OF PERSONALITY

A Thesis

Presented to

the Faculty of the Department of Psychology

University of Houston

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

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by

Harley W. Mowry, III

August 1950

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The need for diagnosis of personality maladjustment appears obvious when it is realized that personality problems are probably the most common causes of discharge from employment, and are probably the most common causes of failure in school. Sophistication is not necessary for appreciation of the meaning of failure in education and/or occupation and its ramifying losses to the individual and society. Because of the importance of the diagnosis of personality maladjustment, it is felt that every opportunity in that direction is worthy of serious study.

The purpose of this study was to determine partially how close the California Test of Personality comes to the ideal, i.e., an instrument that will reliably reveal personality defects, can be group administered and scored in a short time, and requires relatively little training to administer, score, and interpret.

It was decided that the relationships among the subtest scores would have to be found and the relationships between the subtests and the section totals would also need to be known to determine to what degree the tests are mutually exclusive.

A comparison of scores on the California Test of Personality with scores of similar factors of the Guilford-Martin tests of personality and the determination of the

relationships between the California Test of Personality and measures of intelligence were also considered to be of value to the study.

Subtest scores of the California Test of Personality were compared with total Self Adjustment and total Social Adjustment and intercorrelated with each other. Total Self Adjustment and Total Social Adjustment were also compared.

The Doolittle technique was used to compute multiple correlations and Thurstone's technique was used to compute the tetrachoric r.

Multiple correlations between each of the section totals and several Guilford-Martin tests were calculated by the Doolittle technique. Single relationships were determined between section totals and Guilford-Martin subtests, and between California Test of Personality subtests and Guilford-Martin tests. Section totals were also compared to the Otis Mental Ability Test and the Texas Social Insight Test.

Subtest correlations with totals were all sufficiently high, with two exceptions. The correlation between Self Adjustment and Social Adjustment (.80) seems to indicate too much overlapping of measurement despite the fact that personality traits, as we now know them, are not mutually exclusive and cannot be measured as such.

Comparison of California Test of Personality subtests with some of the Guilford-Martin subtests indicates that,

despite the similarity of attempts to measure the same thing, correlations are often low and distributions dissimilar. The distribution of California Test of Personality scores showed a definite skew to the left in contrast to the normally distributed Guilford-Martin scores.

Intelligence, as measured by the Otis test, correlated low with both Self Adjustment and Social Adjustment section totals of the California Test of Personality. Social Adjustment correlated .54 with the Texas Social Insight Test, indicating, perhaps, that persons with a higher degree of insight are better adjusted socially.

Because scores can be easily distorted, the use of the California Test of Personality should be restricted to situations in which the subjects are likely to answer truthfully. Other studies appear to show that in schools and colleges, the California Test of Personality can be used to screen individuals for more intensive study and to measure group trends with a fair degree of accuracy. Other measures surpass it for clinical use, and ease of distortion precludes its use in employment situations.

ACKNOWLEDGMENTS

The cooperation and encouragement of the members of my thesis committee, Professor Jonas, Dr. Stovall, and Dr. Zaccaria, is sincerely appreciated. Especial indebtedness is acknowledged Dr. Zaccaria, whose supervision of this study proved invaluable.

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CHAPTER I

INTRODUCTION

The literature on personality abounds with theory and speculation, but is, unfortunately, relatively scant on statistical data resulting from scientific experiments on the subject. It is perhaps, as Cattell[1] says, because the rewards are so attractive, that those in the field have rushed ahead to pick the plums without stopping to do the spade work. Perhaps this was due, in part, to the neglect of the subject by psychologists until psychoanalysts and psychiatrists, using uncontrolled techniques, had built up a confused body of knowledge. Then, unfortunately, too often the subject was attacked by psychologists well versed in scientific methods but lacking the necessary amount of clinical orientation.

It seems fairly well agreed among many psychologists attempting to measure personality, that it is a "pattern of traits or way of reacting to external stimuli."[2] This definition recognizes traits and wholeness without the Gestaltist denial of measurement. This seems to be the approach of most

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[1] Raymond B. Cattell, Description and Measurement of Personality (New York: World Book Company, 1946), pp. 1-5.

[2] Donald E. Super, Appraising Vocational Fitness (New York: Harper & Bros., 1949), p. 482.

of the designers of personality inventories, which are usually devised to measure traits separately and give some indication of the degree of their integration.

Prior to the middle 1930's, only rating scales and inventories were widely used in the United States to measure personality and temperament traits.[3] Both of these first saw wide use during World War I and gradually lost favor with the more exacting test users. However, they still maintained popularity in many places.[4]

Many users recognize their limitations but continue to use them because nothing better is available. The need for diagnosis of personality maladjustment appears obvious when it is realized that "personality problems are the most common causes of discharge from employment,"[5] and are probably the most common causes of failure in school. One does not need to be sophisticated to appreciate the meaning of failure in education and/or occupation and its ramifying losses to the individual and to society.

The results of measurement of degrees of adjustment may be used to screen those unsuited for certain types of

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[3] Percival M. Symonds, Diagnosing Personality and Conduct (New York: The Century Company, 1931), pp. 174-214.

[4] Donald E. Super, Op. cit., pp. 39, 94-125.

[5] H. C. Hunt, "Why People Lose Their Jobs or Aren't Promoted," Personnel Journal, 14:227, 1936.

training or occupations and, more positively, to initiate steps toward adjustment and to choose new goals on the basis of the existing personality.

An instrument that will reliably reveal personality defects, can be group administered and scored in a short time, and requires relatively little training to administer, score, and interpret, is one answer to the problem. To perfect such an instrument is certainly a worth-while goal, and every effort in that direction is worthy of serious study.

It was the purpose of this study to determine partially how close the California Test of Personality comes to the ideal. To attack this problem, it was decided that the relationships among the subtest scores would have to be found, and the relationships between the subtests and the section totals would also need to be known to determine to what degree the tests are mutually exclusive.

Other data that were thought might help answer the question were comparisons of scores on the California Test of Personality with scores of similar factors of another known personality inventory.

It was also decided that determination of the relationships between this test and measures of intelligence would contribute valuably to the study.

CHAPTER II

REVIEW OF THE LITERATURE

According to Symonds,[1] "a form of questionnaire for measuring psychoneurotic tendencies . . . had its inception in 1917." It was designed to diagnose adjustment ability of military prospects. This questionnaire was devised by Woodworth and later became his Psychoneurotic Inventory for which he reported a reliability of .90. Woodworth[2] states that in a group of psychoneurotic patients, the average score was 36, while the average score for normal individuals was 10.

Bernreuter,[3] whose personality inventory is typical of many, decided on six traits to analyze personality and reports the following intercorrelations:

		SS	I	D	C	S
Neurotic tendency	N	-.37	.95	-.80	.95	.32
Self sufficiency	SS		-.31	.47	-.54	.60
Introversion-extraversion	I			.69	.90	.39
Dominance-submission	D				-.88	-.07
Confidence	C					.11
Sociability						

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[1] Percival M. Symonds, Diagnosing Personality and Conduct (New York: The Century Company, 1931), p. 174.

[2] Loc. cit.

[3] Robert G. Bernreuter, Manual for the Personality Inventory (Palo Alto, California: Stanford University Press, 1935), p. 3.

In a similar attempt, Allport[4] and Vernon developed their Study of Values, which was based on Spranger's six types of man arrived at in a purely a priori manner.

R. B. Brotemarkle[5] states that "the complex structure of personality is not to be measured by any such brief series of trait measures (13) as is found in the Guilford-Martin series or any other series at present." Cattell[6] later (1946) states, just as positively, that as a result of his own comprehensive psychometric study of the subject (including factor analysis) extending over a period of several years, evidence shows that there are twelve personality traits.

Tiegs, et al,[7] decided in 1941 that neither the exact nature nor the number of factors necessary to describe the personality is known. Three years later, after further research, Tiegs[8] still concluded that no real traits exist; therefore, he assumed it would be more helpful and meaningful

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[4] Gordon W. Allport, Personality, A Psychological Interpretation (New York: Henry Holt & Company, 1937), p. 228.

[5] O. K. Buros, Third Mental Measurements Yearbook (New Brunswick, N.J.: Rutgers University Press, 1949), p. 45.

[6] Raymond B. Cattell, Description and Measurement of Personality (New York: World Book Company, 1946), p. 311.

[7] Ernest W. Tiegs, Willis W. Clark, and Louis P. Thorp, "The California Test of Personality," Journal of Educational Research, 35:102-8, October, 1941.

[8] Ernest W. Tiegs, "Measuring Personality Status and Social Adjustment," Education Journal, 63:631-5, June, 1943.

if measurement concepts were defined in terms of their significance for adjustment; that is, as feelings of belonging, sense of personal worth, anti-social tendencies. This is what Tiegs did in the California Test of Personality.

Another aspect of the validity of the test is the willingness of the subjects to cooperate and reveal true attitudes.[9] Several investigations have been made in which students have answered the questions the way they think they are and again according to the way they would like to be, the way they think a well-adjusted person would respond, or the way they think a good employee would respond. The results show that responses can be slanted to give desired answers. However, the results also indicated that "students do not, under ordinary procedures of administration," answer so as to present the best possible picture of themselves.[10]

Kimber,[11] in a study to determine the insight of college students taking the California Test of Personality, gave four hundred students at the University of Southern California

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[9] O. K. Buros, Op. cit., p. 26.

[10] Constance Lovell, "A Study of the Factor Structure of Thirteen Personality Variables," Educational and Psychological Measurement, 5:335-50, Winter, 1945.

[11] Morris Kimber, "Insight of College Students into the Items of a Personality Test," Psychological Bulletin, 42:540, October, 1945.

the test twice. The first time the test was administered, the students were instructed to answer the questions as they believed a happy and well-adjusted student at Southern California would answer them. The second time, they were instructed to answer for themselves. The Army Alpha Examination was later administered to the same group.

The amount of difference between the mean total scores on the first test and the second test seems to indicate that the students had a high degree of insight into the items on the test. Correlations between scores on the second test with scores on the Army Alpha Examination were low. This supports previous studies which have shown little relationship between personality adjustment and intelligence. Added credence is given this conclusion by the fact that the men taking the test showed superior in intelligence and inferior in insight.

In one of the very few reports on the direct validity of this test, Rosenwald[12] found, after giving it to schizophrenic and manic depressive patients and to a control group, that the test failed to differentiate the psychotic groups, or to show significant differences between the experimental and the control groups.

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12 Alan Rosenwald, "The California Personality Scale as a Diagnostic Instrument," Psychological Bulletin, 39:599, October, 1942.

Blair and Clark[13] gave a form of the Intermediate Series of the California Test of Personality (grades 7-10) and the Multiple Choice Rorschach Test to ninth grade pupils. The relationship between the scores on the two tests was found to be not even reasonably high. The conclusion was that the two tests evidently measure only to a very slight degree the same thing and, further, that "perhaps one of the tests possesses a high degree of validity and the other does not, or perhaps neither does."

Personality factors in dental school success were studied by Thompson,[14] who found that California Test of Personality scores showed some relationship to criteria of success, but the correlations were not of sufficient magnitude to be useful in individual prediction when selecting applicants for admission to the College of Dentistry.

Another vocational application of the California Test of Personality was its administration to 115 Bible Institute

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[13] Glen Myers Blair and Ronald W. Clark, "Personality Adjustments of Ninth Grade Pupils as Measured by the Multiple Choice Rorschach Test and The California Test of Personality," The Journal of Educational Psychology, 37:13-20, January, 1946.

[14] Edward Claude Thompson, "Personality and Interest Factors in Dental School Success," Educational and Psychological Measurement, 4:299-306, Winter, 1944.

students in southern California.[15] All scores were found to be below the 50th percentile on all subscales except Sense of Personal Worth and Social Standards. Both men and women had scores which placed them at the 60th percentile for Sense of Personal Worth and at the 60th percentile for Social Standards.

Comparison of Scores of Bible Institute and University of Southern California undergraduates on the California Test of Personality (men and women), was as follows:

	N	MEAN	S.D.
Bible Institute	115	122.55	21.44
U.S.C.	155	131.94	18.62

Social adjustment measures and measures of areas closely related may be divided into three types, according to Thorndike and Stein.[16] One of these is tests involving attitudes and reactions toward institutionalized phases of society such as politics, education, economics, moral issues, and the like. Another one of the three types of social adjustment measures is that which measures information, such as knowledge in

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[15] Morris Kimber, "Interests and Personality Traits of Bible Institute Students," Journal of Social Psychology, 26:225-233, 1947.

[16] R. L. Thorndike and S. Stein, "An Evaluation of the Attempts to Measure Social Intelligence," Psychological Bulletin, 38:275-285, 1937.

personal relationships, manners, and etiquette; knowledge of sports, government, and custom. The third type of test named by Thorndike deals with questions concerning social interest and adjustment. This includes personality inventories, social adjustment tests, and introversion-extraversion scales.

The George Washington Social Intelligence Test[17] is apparently the most widely used and seems to be the most thoroughly studied test of social intelligence.

It consists of five subtests:

(1) Judgment in Social Situations. This is a multiple choice problem solving test of social relationships.

(2) Recognition of the Mental State of the Speaker. This test requires the subject to match short quotations with the kinds of emotions involved in each statement.

(3) Observation of Human Behavior. This is a true and false test involving generalizations in the observation of human behavior.

(4) Memory for Names and Faces. Names and faces are studied for four minutes and then later presented for identification from a larger group of names and faces.

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[17] Ellis Weitzman, Inventory of Social Behavior (Beverly Hills, California: Sheridan Supply Company, 1941), p. 30.

(5) Sense of Humor. This is a multiple choice test requiring the selection of an ending which will make the best joke.

The main criticism of this test seems to be that the test shows a high correlation (median of .57) with tests of abstract intelligence and is, therefore, probably measuring the same ability.

Hunt[18] found the George Washington Social Intelligence Test correlated .64 with the George Washington Alertness Test; .57 with the O'Rourke College Entrance Test; and .56 with the Brown University Test.

Pintner and Upshall[19] reported a correlation of .63 between the Thorndike Intelligence Test for College Students and the George Washington Social Intelligence Test.

Thorndike,[20] as a result of a factor analysis of the subtests of the George Washington Social Intelligence Test with the George Washington Mental Alertness Test, reported that these two tests are measuring the same general traits. He concluded further that it was doubtful as to whether there

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18 F. Hunt, "The Measurement of Social Intelligence," Journal of Applied Psychology, 12:317-334, 1928.

19 R. Pintner and C. Upshall, "Some Results of Social Intelligence," School and Society, 27:369-370, 1928.

20 R. L. Thorndike, "Factor Analysis of Social and Abstract Intelligence," Journal of Educational Psychology, 27:231-233, 1936.

is any particular trait that corresponds to social intelligence and that, if there is, it cannot be measured satisfactorily by a test which is predominantly verbal.

It was because of the high correlations between tests of intelligence and tests of social intelligence that the Texas Social Insight Test[21] was constructed. This test was found to correlate .35 with the A.C.E., .13 with the Ohio, and .09 with the Miller.

Research on the California Test of Personality began with sixteen components, some of which had been at least partially validated by others. Three of these components were eventually combined into a single component which left twelve in all. The fact that exactly six subtests appear in each of the two sections of the test, is not, as might appear, an arbitrary classification. However, the use of fifteen questions in each component is partially arbitrary, inasmuch as it resulted from the decision to develop an instrument that would not require too much time to administer and, more specifically, could be given in a class period. 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

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21 Lucy Zaccaria, "An Investigation of Social Insight," (unpublished Master's thesis, The University of Texas, Austin, 1948), p. 5.

omitted responses received in the experimental tryout.[22]

Tryouts of the test convinced the authors that it would be wise to retain the familiar terminology applying to components based on logical analysis, experience, the judgments of workers in this field, and statistical studies.[23]

Factor analysis and other statistical techniques are being used with the hope of a better instrument when the nature of personality factors becomes better known.[24]

According to Thorpe,[25] one of the authors of this test, proper selection of test items is generally the best guarantee of the validity of any testing instrument. The twelve components of the California Test of Personality represent functionally-related groups of specific evidences of personal or social adjustment; they are named to correspond to some of the most important current personality adjustment concepts.

The obtained correlations among components emphasize the "wholeness" of normal individuals, and are, consequently, not mutually exclusive.

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[22] Louis P. Thorpe, Willis W. Clark and Ernest W. Tiegs, Manual of Directions, California Test of Personality, (Los Angeles, California: California Test Bureau, 1942), p. 2.

[23] Loc. cit.

[24] Loc. cit.

[25] Louis P. Thorpe, Willis W. Clark and Ernest W. Tiegs, "Appraising Personality and Social Adjustment," Educational Bulletin No. 11, 11:1, 1945.

On validity, the authors presented this evidence:

The California Test of Personality is based upon a study of ways in which adults respond when confronted with situations which test their self-reliance, sense of personal worth, knowledge of the right things to do, skill in using this knowledge in new situations, and other situations which test their personality characteristics. Many of these situations had previously been developed by other workers and patterns of response had been determined. Before including a situation in the test, it was evaluated in the following manner:[26]

> (1) Judgments of teachers, principals, test experts, personnel directors, and employers as to whether or not it was an indicator of adjustment and employability.
>
> (2) The reactions of employed adults as to whether or not they judged it to be an essential characteristic of a successful employee.
>
> (3) The extent to which the results of the test agreed with the known characteristics of particular adults.
>
> (4) The extent to which each item was consistent with the score on the test as a whole (Bi-serial r).

Unfortunately, no statistical data are offered.

The reliability of the California Test of Personality compares well with many well-known tests of mental ability and

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[26] Thorpe, Clark, and Tiegs, Op. cit., p. 4.

achievement. The following correlations were obtained with 250 cases by the split-halves method corrected by the Spearman-Brown formula:

		S.D. Dist. Score	P.E. Est. Score
Total Adjustment	.918	21.1	5.6
Self Adjustment	.888	12.0	3.7
Social Adjustment	.898	12.1	3.6

A correlation of .78 between Self Adjustment and Social Adjustment was found and considered to be low enough to emphasize the desirability of studying the individual from the standpoint of both self adjustment and social adjustment. Reliabilities of the component tests, the authors found, averaged about .75 and were considered high enough to "locate more restricted areas of personality difficulty.[27]

The test items were constructed in relation to three types of problems:

(1) Those dealing with business relationships.

(2) Those involving relationships between two individuals.

(3) Those involving reactions in larger group relationships.

Rather than testing good reasoning powers, the attempt was made to get specific reactions to social situations.

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[27] Thorpe, Clark and Tiegs, Op. cit., p. 4.

situations which could not be adequately described or defined were not included. The social situations included both commonplace situations and those which happen rarely or are unlikely to happen at all. These latter situations were included to indicate what degree of effectiveness an individual could cope with unforeseen or unlikely situations. Social standards, in part, determine the comprehension and judgment involved in deciding upon the correct solution to a social problem. The solutions will also depend upon the degree of friendship or acquaintance involved in the relationship. For that reason, the items were devised to cover situations dealing with various degrees of relationship which were defined to preclude assumptions by the subject.

The correct answers were based on the idea that the solution that most benefitted the individual confronted with the situation and the others involved was the correct solution.

Those correct responses that did not agree with the largest percentage of the total population were turned over to a "board of experts" for final decision.

After the papers were scored, the 100 highest scoring papers and the 100 lowest scoring papers were selected so that the diagnostic power (r), equivalent to the Pearson r, of each item could be computed. Items which did not meet the

criterion of the one per cent level of confidence were eliminated because of low discriminatory power.

A reliability coefficient of .87 was reported calculated by the split-halves method corrected by the Spearman-Brown prophecy formula with 359 cases.

The validity of this test was studied by comparing scores with those made on tests of sociability and on tests of abstract intelligence.

CHAPTER III

MATERIALS

The California Test of Personality is designed to measure twelve facets of personality, six of them relating primarily to self adjustment and six relating primarily to social adjustment. The fifteen questions comprising each subtest (180 questions in all) are designed to elicit yes or no answers which are purported to measure: self reliance, sense of personal worth, sense of personal freedom, feeling of belonging, freedom from withdrawing tendencies, freedom from nervous symptoms, social standards, social skills, freedom from anti-social tendencies, family relations, occupation relations, and community relations.

The Guilford-Martin Temperament Profile consists of three groups of tests measuring thirteen temperament traits. The first of these is Guilford's Inventory of Factors STDCR measuring Social Introversion-Extraversion, Thinking Introversion-Extraversion, Depression, Cycloid Disposition, and Rhathymia. The second grouping is entitled Guilford-Martin Inventory of Factors GAMIN and measures General Activity Ascendance-Submission, Masculinity-Femininity, Inferiority Feelings, and Nervousness. The third of these test groups is the Guilford-Martin Personnel Inventory I, which measures

Objectivity, Cooperativeness, and Agreeableness. The manual definitions of these traits can be found in the Appendix.

The Texas Social Insight Scale is an untimed pencil and paper test composed of 90 descriptions of specific social situations with multiple choice alternatives from which the subjects were asked to select the best course of action in the solution of each problem or situation.

The Otis Quick Scoring Mental Ability Test, Gamma: Form C is too well known to need outlining here. It was used because it seemed representative of tests of abstract intelligence and was quick to administer and easy to score.

Sample. The group used as a sample consisted of 254 students in four junior-level psychology classes at the University of Houston. The sample was fairly homogeneous regarding age and amount of formal education. All of the 254 students took the California Test of Personality, Adult Form B. Of this group, 137 took the Guilford-Martin Personality Inventory; 105 of the same group took the Otis Quick-Scoring Mental Ability Test, Gamma Test: Form C; 97 students of the same group took the Texas Social Insight Test.

CHAPTER IV

PROCEDURES

All the tests used in this study were administered within a six-week period during the Spring of 1950. All tests were administered by the professor regularly in charge of the class with two exceptions, when a professor was ill and a doctorate psychology student gave the tests. In all cases, the tests were administered and scored according to the manual for each respective test.

Raw scores were used in all correlations except those involving intelligence as measured by the Otis scale. Scores obtained by this measure were converted into intelligence quotients in accordance with the Otis Manual, and the resultant I.Q.'s were used for comparison.

Because subtests should correlate higher with section totals than with each other, the subtest scores of the California Test of Personality were compared with section totals and intercorrelated with each other. Section totals were also compared.

Multiple correlations between each of the section totals and several Guilford-Martin tests were calculated by the Doolittle technique. Single relationships were also determined between section totals and Guilford-Martin tests and between California Test of Personality subtests and

Guilford-Martin tests.

Because section totals should correlate higher with measures of adjustment rather than with measures of abstract intelligence, the section totals of the California Test of Personality were compared with the Otis Mental Ability Test to determine the relationship with abstract intelligence, and with the Texas Social Insight Test to ascertain the relationship with social intelligence.

In computing correlations, Thurstone's technique for computing the tetrachoric r was used. In regard to this device, McNemar[1] says that the tetrachoric r is particularly useful in estimating the degree of correlation between variables for which we have only dichotomized information, but it can also be used instead of the product moment r, since situations, for which this method applied, can be converted into fourfold tables by simply dichotomizing the graduated variables. The advantage of estimating correlations in this manner is that tetrachoric r is much easier to determine, if the computing diagrams are used, than is calculating the product moment r. The Doolittle technique was used to compute multiple r.

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[1] Quinn McNemar, Psychological Statistics (New York: John Wiley & Sons, 1949), p. 177.

Probable errors of the coefficient of correlation were obtained for all correlations in this study from Garrett's table.[2]

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[2] Henry E. Garrett, Statistics in Psychology and Education (New York: Longmans, Green and Company, 1945), p. 280.

CHAPTER V

FINDINGS

Self Adjustment. Self Adjustment was found to correlate .80 with Social Adjustment, the other section total. As Table I shows, scores of both these totals showed distributions skewed toward the left with a Self Adjustment mean of .75, with the range of possible scores from 0 to 90. This proximity of scores to the ceiling exists throughout the test, as Table II, page 25, indicates.

Within the Self Adjustment section, subtest Self Reliance was found to correlate .66 with total Self Adjustment. (See Table III, page 26.) This is the lowest correlation found between a subtest and Self Adjustment, but it seems high enough to show that it contributes sufficiently to the total Self Adjustment score to warrant retention, especially when its correlation with subtests is considered. The correlations between scores on Self Reliance and other subtest scores were as follows: Sense of Personal Worth .38; Sense of Personal Freedom .30; Feeling of Belonging .29; Freedom from Withdrawing Tendencies .60; and Freedom from Nervous Symptoms .29. All these intercorrelations seem low with the exception of the .60 relationship found with Freedom from Withdrawing Tendencies, which is only .06 lower than the correlation of Self Reliance with total Self Adjustment.

TABLE I

MEAN, STANDARD DEVIATION, AND FREQUENCY DISTRIBUTIONS OF TOTAL CALIFORNIA TEST OF PERSONALITY SCORES

SCORE	SELF ADJUSTMENT	SOCIAL ADJUSTMENT	SCORE	TOTAL ADJUSTMENT
90-94	0	1	170-179	13
85-89	22	46	160-169	70
80-84	47	74	150-159	53
75-79	50	61	140-149	46
70-74	49	29	130-139	27
65-69	32	20	120-129	18
60-64	19	10	110-119	13
55-59	13	9	100-109	3
50-54	8	3	90- 99	1
45-49	9	1	80- 89	1
40-44	3	0	70- 79	1
35-39	0	0	60- 69	0
30-34	2	0		
MEAN	75.33	80.33		154.16
STANDARD DEVIATION	10.90	8.10		17.90

TABLE II

MEAN, STANDARD DEVIATION, AND FREQUENCY DISTRIBUTIONS OF CALIFORNIA TEST OF PERSONALITY SELF ADJUSTMENT SUBTEST SCORES

Score	Self Rel.	Sense P.W.	Sense P.F.	Feel. Belong.	Withdraw. Tend.	Nerv. Sym.
15	16	57	13	57	22	63
14	30	53	44	52	52	58
13	40	46	42	51	22	38
12	56	34	40	31	31	33
11	31	28	30	22	29	21
10	32	10	28	15	38	14
9	18	8	13	11	15	11
8	14	3	19	7	11	8
7	10	4	13	1	12	3
6	5	6	2	5	5	2
5	1	4	7	0	1	1
4	1	1	2	0	6	0
3	0	0	1	2	2	2
2	0	0	0	0	1	2
1	0	0	0	0	0	0
MEAN	11.64	12.58	11.23	12.65	11.42	12.63
STD DEVIATION	2.26	2.39	2.59	2.23	2.63	2.45

TABLE III

RELATIONSHIPS WITHIN THE SELF ADJUSTMENT SECTION
OF THE CALIFORNIA TEST OF PERSONALITY

	NERV. SYM.	WITH-DRAW.	FEEL. B'LONG.	SENSE P.F.	SENSE P.W.	SELF REL.
SELF ADJUSTMENT	.78±.02	.82±.01	.69±.02	.70±.02	.77±.02	.66±.02
Self Reliance	.29±.04	.60±.03	.29±.04	.30±.04	.35±.04	
Sense of Personal Worth	.60±.03	.05±.04	.30±.04	.44±.03		.35±.04
Sense of Personal Freedom	.35±.04	.42±.03	.30±.04		.44±.03	.30±.04
Feeling of Belonging	.31±.04	.27±.04		.30±.04	.30±.04	.29±.04
Withdrawing Tendencies	.65±.02		.27±.04	.42±.03	.05±.04	.60±.03
Freedom from Nervous Symptoms		.65±.02	.31±.04	.35±.04	.60±.03	.29±.04

Scores on Sense of Personal Worth showed a correlation of .77 with total Self Adjustment, leaving little doubt as to its contribution toward total Self Adjustment. With the other subtest scores, it correlated as follows: Self Reliance .35; Sense of Personal Freedom .44; Feeling of Belonging .30; Freedom from Withdrawing Tendencies .05, the lowest degree of relationship found between any of the Self Adjustment subtest scores; Freedom from Nervous Symptoms .60 was the high but the relationship with total Self Adjustment precludes the advisability of elimination at this stage of development.

Sense of Personal Freedom scores showed a correlation of .70 with total Self Adjustment scores and consistently low correlations with other subtest scores. These intercorrelations were as follows: Self Reliance .30; Sense of Personal Worth .44; Feeling of Belonging .30; Freedom from Withdrawing Tendencies .42; and Freedom from Nervous Symptoms .35. Statistically, this factor seems to prove its value by its .70 correlation with total Self Adjustment and subtest correlations of .44 and lower.

Feeling of Belonging scores correlated .69 with total Self Adjustment and showed lower than any other subtest. The highest correlation was with Freedom from Nervous Symptoms .31. The others were as follows: Self Reliance .29; Sense of Personal Worth .30; Sense of Personal Freedom .30; and Freedom from Withdrawing Tendencies .27. This factor too

seems statistically proven with its low subtest correlations and fairly high relationship (.69) with the total Self Adjustment.

Freedom from Withdrawing Tendencies scores show a .92 correlation with total Self Adjustment and relatively high subtest correlations of .60 with Self Reliance and .65 with Freedom from Nervous Symptoms. A factor common to these three subtests may be responsible for the high intercorrelations, but not necessarily so. The other subtest correlations were: .03 with Sense of Personal Worth; Sense of Personal Freedom .42; and Feeling of Belonging .27.

Freedom from Nervous Symptoms showed a relationship of .73 with the total Self Adjustment scores and relatively high correlations with Sense of Personal Worth .60 and Freedom from Withdrawing Symptoms .65. This too may be accounted for by a common factor, but not necessarily so. The other subtest correlations with Freedom from Nervous Symptoms were: Self Reliance .29; Sense of Personal Freedom .35; and Feeling of Belonging .31.

With the Self Adjustment section of the test, there were only three subtest scores that correlated higher than .44 with each other. They were: Sense of Personal Worth and Freedom from Nervous Symptoms .60; Self Reliance and Freedom from Withdrawing Tendencies .60; and lastly, Freedom from Nervous Symptoms and Freedom from Withdrawing Tendencies .65.

There seems to be more overlapping between Self Reliance and Freedom from Withdrawing Tendencies than is ideally desirable; however, further study would be needed to justify combining these components.

As Table II, page 25, shows, the distribution of Self Adjustment subtest scores was skewed to the left, with Sense of Personal Worth, Feeling of Belonging, and Freedom from Nervous Symptoms showing the uppermost class as the modal class.

Social Adjustment. As previously noted, Social Adjustment correlated .80 with Self Adjustment. The mean Social Adjustment score was.80 in a range of possible scores of 0 to 90. Mean subtest scores for this section can be found in Table IV. The intercorrelations of this section are given in Table V, page 31.

Community Relations scores proved to correlate .78 with total Social Adjustment scores and fairly low with subtest scores. The lowest correlation with a subtest was with Social Standards .04; the others were: Social Skills .43; Freedom from Anti-social Tendencies .50; Family Relations .40; Occupation Relations .50. This subtest seemed to contribute well to total Social Adjustment without too much overlapping.

Occupation Relations correlated .74 with total Social Adjustment. Subtest correlations ranged from a low of .05 with Social Standards and a high of .52 with Family Relations. The other correlations were: .31 with Social Skills; .50 with

TABLE IV

MEAN, STANDARD DEVIATION, AND FREQUENCY DISTRIBUTIONS OF CALIFORNIA TEST OF PERSONALITY SOCIAL ADJUSTMENT SUBTEST SCORES

Score	Social Stds.	Social Skills	Fdm. Anti-Social Tend.	Family Rel.	Occ. Rel.	Community Rel.
15	32	23	107	86	49	91
14	68	54	57	48	65	63
13	68	51	25	40	48	30
12	46	54	20	31	27	20
11	25	29	13	19	24	22
10	12	10	7	8	14	6
9	2	9	9	6	13	8
8	0	4	9	4	6	9
7	1	2	1	6	1	2
6	0	1	2	1	3	0
5	0	2	1	1	3	2
4	0	1	0	2	0	0
3	0	0	1	1	1	1
2	0	0	2	1	0	0
1	0	0	0	0	0	0
MEAN	13.00	12.27	13.25	12.97	12.63	13.20
STD DEVIATION	1.42	1.68	2.59	2.41	2.34	2.13

TABLE V

RELATIONSHIPS WITHIN THE SOCIAL ADJUSTMENT SECTION OF THE CALIFORNIA TEST OF PERSONALITY

	COM. REL.	OCCU. REL.	FAM. REL.	ANTI-SOCIAL	SOCIAL SKILLS	SOCIAL STD.
SOCIAL ADJUSTMENT	.78±.02	.74±.02	.72±.02	.80±.02	.33±.04	.23±.04
Social Standards	.04±.04	.05±.04	.04±.04	.22±.04	.11±.04	
Social Skills	.46±.03	.31±.04	.30±.04	.60±.03		.11±.04
Anti-social Tendencies	.50±.03	.47±.03	.52±.03		.60±.03	.22±.04
Family Relations	.40±.04	.52±.03		.52±.03	.30±.04	.04±.04
Occupation Relations	.50±.03		.52±.03	.47±.03	.31±.04	.05±.04
Community Relations		.50±.03	.40±.04	.50±.03	.46±.03	.04±.04

Community Relations; and .47 with Freedom from Anti-social Tendencies. There seems little doubt that this subtest is making a satisfactory contribution to the total.

Family Relations showed a relationship of .72 with total Social Adjustment. With the subtests, the highest correlation was .52, which was found to exist with both Occupation Relations and Freedom from Anti-social Tendencies. The low was a .04 correlation with Social Standards, and the other correlations were .30 with Social Skills and .40 with Community Relations. This evidence seems to indicate that this subtest is contributing satisfactorily.

Freedom from Anti-social Tendencies correlated .80 with total Social Adjustment. This was the highest correlation of a subtest with the total Social Adjustment score. With subtests, this factor correlated highest with Social Skills .60 and lowest with Social Standards .22. Other subtest correlations were: .50 with Community Relations; .47 with Occupation Relations; and .52 with Family Relations. From one statistical standpoint, this is the most important test of the Social Adjustment battery; however, as Table IV, page 30, shows, over two-fifths of the scores were as high as possible.

Social Skills correlated .33 with total Social Adjustment and with subtests scores, as follows: a low of .11 with Social Standards and a high of .60 with Freedom from Anti-social Tendencies. With the other three subtests, the

correlations were .30 with Family Relations; .31 with Occupation Relations; .43 with Community Relations. The value of this test is doubtful. The high correlation with Freedom from Anti-social Tendencies is not compensated by a high correlation with the total.

Social Standards correlated the lowest of the subtests with total Social Adjustment .28. Its correlations with subtests were also low -- .04 with Social Standards and Family Relations; .08 with Occupation Relations; .11 with Social Skills; and a high of .22 with Freedom from Anti-social Tendencies. The low correlation .28 with total Social Adjustment and the slightly lower .22 correlation with a subtest seem to indicate little contribution to the battery.

Within the Social Adjustment section of the test, only one correlation higher than .52 was found; it was r .60 between Social Skills and Freedom from Anti-social Tendencies.

Relationships with Guilford-Martin Tests. Due to the construction of some of the Guilford-Martin tests, negative raw scores will result, but they are measuring positive degrees of adjustment. Therefore, negative Guilford-Martin scores used in this study should be considered as positive when compared with California Test of Personality scores.

A comparison between Tables VI and VII indicates the Guilford-Martin scores were more normally distributed than the left-skewed California Test of Personality scores.

The total Self Adjustment score of the California Test of Personality correlated -.53 with Social Introversion-Extraversion of the Guilford-Martin test, as Table VIII, page 37, indicates.

Depression correlated -.78 with Self Adjustment, which was higher than four of the California Test of Personality subtest correlations with Self Adjustment and equal to one.

Nervousness did not correlate as high (.57) with total Self Adjustment as Freedom from Nervous Symptoms of the California Test of Personality did (.78). Inferiority Feelings showed a .77 relationship with Self Adjustment, which is higher than it first appears, due to the optimum score being lower than extremely high scores which may reveal a superiority compensation for hidden inferiority feelings.

The multiple correlation (.88) of the four Guilford-Martin subtests with California Test of Personality total Self Adjustment seems to show that these four subtests are measuring to a large extent that which the six Self Adjustment subtests measure.

A comparison (see Table IX, page 38) with the California Test of Personality subtest scores indicates that Freedom from Anti-social Tendencies of the California Test of Personality

TABLE VI

CALIFORNIA TEST OF PERSONALITY
UNIVERSITY OF HOUSTON MEAN SCORES
AS MANUAL PERCENTILES

	File
SELF ADJUSTMENT	80
Self Reliance	75
Sense of Personal Worth	90
Sense of Personal Freedom	35
Feeling of Belonging	55
Freedom from Withdrawing Tendencies	45
Freedom from Nervous Symptoms	70
SOCIAL ADJUSTMENT	90
Social Standards	85
Social Skills	80
Freedom from Anti-social Tendencies	65
Family Relations	65
Occupation Relations	85
Community Relations	85
TOTAL ADJUSTMENT	85

TABLE VII

GUILFORD-MARTIN UNIVERSITY OF HOUSTON MEAN SCORES AS MANUAL C-SCORES

	C-Score
Social Introversion-Extraversion	5
Depression	6
Inferiority Feelings	6
Nervousness	5
Agreeableness	5
Cooperativeness	5

TABLE VIII

RELATIONSHIPS BETWEEN SCORES ON THE SELF ADJUSTMENT SECTION OF THE CALIFORNIA TEST OF PERSONALITY AND GUILFORD-MARTIN PERSONALITY INVENTORY SCORES

California Test of Personality		Guilford-Martin Temperament Profile
Self Adjustment	$-.53 \pm .04$	Social Intro.-Extra.
Self Adjustment	$-.78 \pm .03$	Depression
Self Adjustment	$.57 \pm .04$	Nervousness
Self Adjustment	$.77 \pm .03$	Inferiority Feelings
Multiple r $.85 \pm .02$		

TABLE IX

RELATIONSHIPS BETWEEN SUPTEST SCORES ON CALIFORNIA TEST OF PERSONALITY AND GUILFORD-MARTIN PERSONALITY INVENTORY SCORES

Freedom from Anti-social T.	.95≮.01	Agreeableness
Freedom from Withdrawing T.	-.48≮.05	Social Int.-Ext.
Freedom from Nervous Sym.	.78≮.03	Nervousness
Sense of Personal Worth	.68≮.03	Inferiority Feelings

and Agreeableness of the Guilford-Martin are measuring the same thing (r.95). Freedom from Nervous Symptoms and Nervousness correlated .78, though the titles seem to suggest greater similarity. Freedom from Withdrawing Tendencies and Social Introversion-Extraversion appear to be measuring the same thing to an extent of -.43. Sense of Personal Worth and Inferiority Feelings which, by definition, measure like factors statistically relate .63.

As Table X indicates, a multiple correlation of .67 was found between Social Adjustment and the three Guilford-Martin traits: Agreeableness, Social Introversion-Extraversion, and Cooperativeness. Agreeableness seems to be measuring Social Adjustment to an extent of r .57. Social Introversion-Extraversion, which is directly comparable to Social Skills, correlates -.37 with Social Adjustment as compared to .33 for its California Test of Personality equivalent. The correlation of .70 between Cooperativeness and Social Adjustment seems to indicate that the Guilford-Martin subtest is measuring Social Adjustment to a considerable degree.

Relationships with intelligence and the Texas Social Insight Test. Intelligence as measured by the Otis Test was correlated .44$\pm$.05 with Self Adjustment; .10$\pm$.07 with Social Adjustment; and .08$\pm$.07 with the Texas Social Insight Test.

TABLE X

RELATIONSHIP BETWEEN SCORES ON THE SOCIAL ADJUSTMENT SECTION OF CALIFORNIA TEST OF PERSONALITY AND GUILFORD-MARTIN SCORES

Social Adjustment	.57±.04	Agreeableness
Social Adjustment	-.37±.05	Social Intro.-Extra.
Social Adjustment	.70±.03	Cooperativeness
Multiple r .67±.03		

CHAPTER VI

SUMMARY AND CONCLUSIONS

Subtest correlations with totals were all sufficiently high with two exceptions, .33 and .28, which seem too low, especially in view of the relatively high correlations of these subtests with some of the other subtests.

The correlation between Self Adjustment and Social Adjustment .80 seems to indicate that too much overlapping of measurement is present. Perhaps intercorrelations between the subtests of these two sections would point toward the reason for this; present data do not.

Eliminating or combining subtests on the evidence of this study alone is not advocated by this writer, but evidence seems to indicate that there are defects that should be remedied, although it is realized that personality traits, as we now know them, are not mutually exclusive and cannot be measured as such.

Comparison of California Test of Personality subtests with some of the Guilford-Martin subtests indicates that, despite manual definitions and apparent attempts to measure the same things, high correlations do not always result. Whether or not either or both tests are valid remains to be proved.

It does seem evident that scores on the Guilford-Martin tests tended to be more normalized than those of the California Test, which skewed markedly toward the ceiling.

With intelligence as measured by the Otis test, Self Adjustment and Social Adjustment correlated .10 and .44, respectively. With the Texas Social Insight Test, Social Adjustment correlated .54, showing perhaps that persons with a higher degree of insight are better adjusted socially, or merely, that persons with greater insight make higher Social Adjustment test scores.

It appears that in schools and colleges, the California Test of Personality can be used to screen individuals for more intensive study and to measure group trends with a fair degree of accuracy. It should not be used in employment situations because scores can be too easily distorted, and in the clinic it is far surpassed by more penetrating measures.

Although this test can be of some value, as just described, certainly, further study to determine validity and internal consistency of the California Test of Personality is needed.

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