A Comparison of Two Adjustment Inventories on the Eighth-Grade Level

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A COMPARISON OF TWO ADJUSTMENT INVENTORIES
ON THE EIGHTH-GRADE LEVEL

by

Elizabeth Jane Murphy

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts

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LIFE

Elizabeth Jane Murphy was born in Chicago, Illinois on August 22, 1923.

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CHAPTER I

INTRODUCTION

For several decades there have existed many well-known and widely accepted tests of intelligence, achievement, and aptitude, designed to measure the native mental capacity, academic performance, and special skills of children and young people.

However, although there were many valid and reliable standardized tests and scales related to the factors of the individual mentioned above, there were few, if any, psychometric instruments available to reveal the attitudes, feelings, and difficult problems of adjustment which young people experience today. These latter factors are beyond appraisal or diagnosis by means of ordinary tests of the above types. Measurements of intelligence, achievement, and aptitude, important as they are, obviously do not constitute a complete picture of a functioning personality.

Thus, it is evident that for a long time almost exclusive stress was being laid only on part of the individual, while far more important aspects of his personality remained largely inaccessible to psychometric study. Professional personnel concerned with helping the individual to secure a happy and success-

1
ful life did not possess special instruments or proven techniques to assist them in obtaining a clear and well-rounded picture. It is quite possible that the very complexity of the psychology of adjustment and personality was the chief factor that contributed to delaying the development of inventories and tests of this nature.

Recognizing the serious consequences of such a continued lack, professional workers concerned with the problem were attempting to devise serviceable means for counteracting this deficiency. As a result of their combined efforts, a large number of personality inventories has appeared in recent years. The present considerable emphasis on respect for the "wholeness" of the adjusting organism or guidance of the whole person represents a major and noteworthy contribution of the modern movement in education and psychology.

Many names are used to identify instruments which measure the highly important factors of personality. Some of the various titles ascribed to them are: inventory, problem check list, questionnaire, rating scale, or personality test. In general, the term personality test has become attached to instruments for identifying, revealing, and evaluating the status of the more intangible elements of total complex patterns of feeling, thinking, and acting.

Although instruments of this type are used for a multiplicity of purposes, in general all of them are mainly intended to
reveal a fairly accurate and adequate picture of the individual's over-all adjustment to himself and his environment. Psychologists, social workers, and educators employ them for a variety of reasons. To enumerate some of these reasons, a personality test may be used: (1) to determine general areas in which common problems exist for a group, (2) to discover individuals who deviate significantly from the average, (3) to obtain information on individuals, useful in guidance work, and/or (4) to serve as an opening wedge in establishing rapport for a counseling relationship.

In line with the increased importance and emphasis placed on these instruments, it was thought worthwhile to compare two of the more commonly employed juvenile adjustment inventories in order to discover to what degree, if any, they are in agreement in revealing similar results concerning the problems and adjustment of young people.

With this thought in mind, it was felt that two inventories, in particular, which would be interesting and presumably worthy of comparison were the Intermediate Form of the California Test of Personality and the equivalent Junior High School Form of the Mooney Problem Check List.

The present study adopted a two-fold purpose. The primary one has just been described above. The secondary one was to compare a population sample consisting of young boys and girls from different socio-economic areas in order to discover whether or not significant differences would be brought out by these instruments between groups from different strata.
CHAPTER II

RELATED LITERATURE

Research into the literature over a two-decade period disclosed few studies which involved a comparison between two personality adjustment inventories with a population similar in age to that investigated by this experimenter. Of the few which possessed some relationship, only one could appropriately be considered as bearing a close resemblance to the present project. It will be described later in this chapter.

Glenn M. Blair and Ronald W. Clark (3) reported a study in which both the Multiple Choice Rorschach Test and the California Test of Personality were administered to 382 ninth-grade pupils in Quincy, Illinois. The series of the California used was the Intermediate, Form A (grades seven to ten inclusive), the same employed by the writer in her study.

The purpose of their investigation was to see to what extent the Multiple Choice Rorschach measures factors which are purportedly measured by such an instrument as the California. Although a full description of the California Test of Personality will follow in the next chapter, for proper understanding at this point, it should be mentioned that it provides scores not only
for self adjustment, social adjustment, and total adjustment, but also scores for six aspects of self adjustment, and six aspects of social adjustment. For the remainder of the report concerning this one study, these two tests will be referred to as Rorschach and California.

A comparison was made between the number of poor answers on the Rorschach and undesirable answers on the California. The correlation (Pearson product moment) between the Rorschach and California total adjustment was .22 (P. E. .03), between the Rorschach and California self adjustment .20 (P. E. .03), and between the Rorschach and California social adjustment .19 (P. E. .03).

There were twenty-three pupils who underlined fifteen or more poor answers on the Rorschach. According to Harrower-Erickson, these were the individuals who should be suspected of being maladjusted and who should be screened out. These twenty-three pupils in this study made up a so-called Maladjusted Rorschach Group. Another comparison was made between the number of undesirable answers the latter group gave to the California and the number of undesirable answers given by the entire ninth-grade population. The Maladjusted Rorschach group, on the average made a higher number of undesirable responses to the California than did the total group tested. A comparison of the difference in scores of the two groups yielded critical ratios of 2.70 for self adjustment, 2.03 for social adjustment, and 2.48 for total adjustment. The average number of undesirable answers on each of the
twelve subdivisions of the California made respectively by the Maladjusted Rorschach Group and the total group were also computed. Biserial correlations were computed, showing a range from .10 to .37. These represented the relationships which existed between maladjustment as measured by the Rorschach and maladjustment as measured by each of the twelve components, the two main divisions, and the total adjustment on the California. The authors concluded (3:20):

Probably the most important observation to be made from the investigation is the fact that none of the relationships between scores on the Multiple Choice Rorschach Test and scores on the California test can be termed even reasonably high. The two tests evidently measure only to a very slight extent the same aspects of personality. Many pupils in school who would be rated maladjusted on one of the tests would obviously not be so rated on the other test.

Ruth S. Cavan (4) reported a study entitled: "The Murray Psychoneurotic Inventory and the White House Conference Inventory." The Murray Psychoneurotic Inventory was used with five groups as follows: (1) all eighth-grade girls in three Chicago grade schools, (2) all eighth-grade girls in four other Chicago grade schools, (3) all eighth-grade boys in three Chicago grade schools, (4) all eighth-grade boys in four other Chicago grade schools, and (5) ninety-two boys from a special school to which are sent boys who cannot adjust to the regime of the regular public schools.

The total number of cases and median score for each of the five groups on the Murray were: (1) Girls--Group 1, total
cases 163, median 5.7, (2) Girls--Group 2, total cases 277, me-
dian 6.8, (3) Boys--Group 1, total cases 148, median 5.1,
(4) Boys--Group 2, total cases 266, median 7.2, and (5) Boys--
Group 3, total cases 92, median 11.2. For seventy-five boys
(twenty-five selected at random from each of three schools) the
reliability coefficient on split halves, corrected by the Spear-
man Brown formula, was .85. For a similar group of girls, the
coefficient was .75. In using the inventory with girls, the words
were changed where necessary. The author stated it seemed proba-
ble that with a small amount of work a revised inventory could be
made which would make the Murray as reliable for girls as it is
for boys.

Before the Murray Psychoneurotic Inventory appeared, a
short scale of twenty-four psychoneurotic questions was tried out
in connection with one of the studies of the White House Confer-
ence on Child Health and Protection. The questions were chosen
from those found to differentiate most sharply between delinquent
and non-delinquent boys by Cady, Mathews, and Slawson. Of 420
cases of junior high school boys and girls, the correlation on
paired halves of the White House Conference Scale corrected by
the Spearman Brown formula was .70. For Chicago, the scores of
7,371 eighth, ninth, and tenth-grade children were studied accord-
ing to the communities in which the children lived. For twenty-
six communities, the mean scores for girls ranged from 5.6 to 7.9,
with an average of 6.1. For the boys the mean scores by communi-
ties ranged from 5.3 to 7.6, with an average of 6.5.

For 277 girls the scores on the White House Conference Scale and the Murray Psychoneurotic Inventory showed a correlation of .68, for 266 boys the corresponding correlation was .60.

The published study which bears the closest resemblance to the present project was reported by Elmer F. Pflieger (10). It was based on the scores made on the California Test of Personality, Secondary Series, and the Mooney Problem Check List, Junior High School Form. Both tests were administered to 128 eighth-grade students in two schools in the city of Detroit. There were forty-five pupils in school A and eighty-three in school B; fifty of the group were boys and seventy-eight were girls.

The study was undertaken for the purpose of seeking answers to several questions (10:266):

1. What is the relationship between number of problems marked on the Mooney Check List and degree of adjustment as measured by the California Test?
2. What is the relationship between the parts and the total for each of these instruments?
3. To what extent may these instruments be used to supplement each other for guidance purposes?
4. In which areas do students register a need for help and guidance?
5. In which areas are students relatively free from disturbing problems?

The statistical results of this related study will not be discussed in this chapter, but in the fifth chapter, where a comparison will be made with the findings obtained by the writer in her current investigation.
Pflieger ended his study with a number of conclusions (10:277, 278):

1. The correlations between Self and Social Adjustment and Total Adjustment on the California Test of Personality are high, which indicates that either part may be used to check students’ adjustment. On the other hand, the correlation between Self Adjustment and Social Adjustment is sufficiently low to make it desirable to study the student from both standpoints.

2. There is some negative correlation between the California Test of Personality and the Mooney Problem Check List which indicates that the student who is poorly adjusted as measured by the California Test, will tend to have many problems checked on the Mooney Check List, and that the one who is well adjusted as measured by the California Test will tend to check fewer problems on the Mooney.

3. The correlation between the two tests is low enough, so that both instruments may be used to supplement each other to uncover areas of poor adjustment in which students need help and guidance.

4. The area in which students indicate the greatest number of problems is in their adjustment to school. They reveal fewer problems in the area of Home and Family than they do in other areas. . . . The small number of problems in this area may not be a complete picture of students’ actual problems, but it may be due to their protection of home and family, though such protection may not be consciously given.

5. A number of problems are marked by at least one out of every five students. These deal mainly with health, school, earning own money, and success in life, and they seem to be general enough so that they could well be used in group guidance.

The Detroit study by Pflieger differs from the present experimental investigation in four respects:

(1) Although the primary purpose of the writer’s present project, which is a comparison between the two inventories, corre-
sponds to the main purpose of the study reported by Pflieger, the writer's is more limited in scope. Though Pflieger compared each area with every other area of the two instruments, it was considered worthwhile by the writer to compare only those measures where there was a suspicion of a significant relationship.

(2) Although a similar population sample of eighth-grade pupils was employed, a different series of the California was used. This writer administered the Intermediate Series, since its norms were derived from test data for students in grades seven to ten inclusive. However, Pflieger's study, while based on eighth-grade pupils, used the Secondary Series, in which the norms were derived from data gathered from a more mature population (grades nine to fourteen inclusive). His results, accordingly should be accepted and interpreted with some caution.

(3) Pflieger's study did not present identifying information nor consider any findings from the particular standpoint of the socio-economic background of the subjects. Whereas, as previously indicated in the Introduction, the secondary purpose of the current investigation was to discover whether or not significant differences would be brought out by the California Test of Personality and the Mooney Problem Check List for young people from different socio-economic areas.

(4) In order to make a clear comparison between the scores on the two inventories, the Mooney Problem Check List scores must first go through a process of inversion. The necess-
ity for this inversion should be clear from the explanation which follows. On the California Test of Personality, raw scores are converted into percentile ranks; while on the Mooney Problem Check List, a mere count of the problems underlined represents the subject's score. Thus, for example, if a subject received a high percentile rank on the California Test of Personality by marking only a few unfavorable answers, and also checked few problems on the Mooney Problem Check List, his performance on both inventories is represented by a high score on one and a low score on the other. If these raw scores are used as the basis for calculation, corresponding performance will yield a negative correlation. This in fact was Pflieger's procedure, and his coefficients of correlation were reported almost exclusively as negative ones.

In studying his experiment, one gains the impression that the inversion described above did not appear to him to be necessary. However, he correctly interprets the meaning of his findings by the following statement (10:273):

With a few exceptions, the correlations are negative. This means that good adjustment, as measured by the California Test of Personality, and a large number of problems, as measured by the Mooney Problem Check List, do not go together. The youngster who is well adjusted will have fewer problems, and the one who is poorly adjusted will have more problems.

It seemed to the present writer far simpler to invert the Mooney Problem Check List scores, so that the two measures would correspond in meaning. Accordingly, in what follows, the
latter scores are consistently inverted, so that scores on one scale are directly comparable to similar scores on the other scale. The method of inversion is described in Chapter IV.
CHAPTER III

THE TWO INSTRUMENTS

This chapter will include a description and explanation of the two instruments used to compile the data for this study. These were the California Test of Personality--Intermediate Series, Form A (for grades seven to ten inclusive) and the Mooney Problem Check List--Junior High School, Form J, 1950 Revision. Hereafter, these two personality adjustment inventories will be referred to by the briefer titles of California and Mooney.

The report of the purpose, nature, construction, and uses of these two inventories, was secured mainly from their respective manuals. The reader's attention is called to the fact that, since these two instruments are primarily intended for use in a school situation, the manuals are written largely in the terminology of education. The California will be considered first.

The California yields a profile of personal and social adjustment. It was devised by Willis W. Clark, Ernest W. Tiegs, and Louis P. Thorpe (12). Its major purpose is to reveal the extent to which all students, not merely extreme or problem cases, are adjusting to the problems and conditions which confront them and are developing normal, happy, and socially effective person-
abilities. The profile of the test is divided into two sections, each section containing six sub-scores on fifteen items each, or a grand total of 180 items. For a clear and adequate understanding, the structural organization of the California is presented below (12:3):

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

LIFE ADJUSTMENT:

1. Self Adjustment:  
A. Social Standards  
B. Social Skills  
C. Freedom from Anti-social Tendencies  
D. Feeling of Belonging  
E. Freedom from Withdrawing Tendencies  
F. Freedom from Nervous Symptoms

2. Social Adjustment:  
A. Social Standards  
B. Social Skills  
C. Freedom from Anti-social Tendencies  
D. Family Relations  
E. School Relations  
F. Community Relations

These twelve components are not personality traits as this term has been used in the literature of the field. They represent rather, names for groupings of trends or tendencies to feel, think, or act, either in a general or a particular area. They show whether or not the pupil's basic drives, urges, or desires are being met in an atmosphere of security and whether or not he is developing a balanced sense of self-realization and social acceptance (12).

The responses of each pupil are interpreted with respect to norms which yield a percentile score. These norms were derived from test data for students in grades seven to ten inclusive, in different schools in and near Los Angeles, California. The
profile reveals at a glance how each individual subject compares with a large unselected group in total or life adjustment, self adjustment, social adjustment, and in each of the twelve groupings or areas of personality. Data from thousands of cases indicate that few pupils are free from adjustment problems which teachers may aid them in solving. A problem or adjustment difficulty is indicated for a class or for an individual when percentile scores are low (11).

The development of test items proceeded from a study of over one thousand specific adjustment patterns or modes of responses to situations which confront students of these ages. Many of these situations had previously been explored by other workers.

The items finally included in the two sections of the test, the authors report, were selected on the basis of: (1) judgments of educators regarding their validity and significance, (2) opinions of students, regarding the extent to which they felt capable and willing to elicit correct responses, (3) a comparative study of the degree to which student responses and teacher appraisals agreed, and (4) a study of the significance of items, so far as internal consistency was concerned, by means of bi-serial correlation.

The authors recognized the tendency of some students to paint self-portraits which are better than the originals. They aimed to neutralize the effects of these tendencies in two ways: (1) by disguising certain items which might conflict with the
student's tendency to protect himself, and (2) by providing a number of checking devices. They suggest for instance that teachers who know the student be requested to answer the items in question, or that a few students be invited to complete profiles for each other, including the student under inquiry. They offer the additional possibilities that parents be asked to check the items which appear suspicious, or that the student be retested at another time, or that the classroom teacher maintain a record of systematic observation over a long period of time to obtain a representative sampling of the student's characteristic behavior (12).

In regard to reliability, the authors of the California state that it does not suffer by comparison with many widely used tests of ability and achievement. They quote the following correlations obtained with 792 cases by the split-halves method corrected by the Spearman-Brown formula (12:4):

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<th></th>
<th>S.D. dist.</th>
<th>P.E. est.</th>
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<tr>
<td>Total Adjustment</td>
<td>.932</td>
<td>20.9</td>
</tr>
<tr>
<td>Sec. 1. Self Adjustment</td>
<td>.898</td>
<td>11.8</td>
</tr>
<tr>
<td>Sec. 2. Social Adjustment</td>
<td>.873</td>
<td>10.7</td>
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In regard to these results, they comment (12:4):

The correlation between Section 1 and Section 2, .74, is sufficiently low to emphasize the desirability of studying the student from the standpoint of both self and social adjustment. The reliabilities of the component tests are sufficiently high that they provide an aid in locating more restricted areas of personality difficulty.

In a concluding statement concerning their instrument, they remark (11:108):
The California Test of Personality is essentially an attempt to adapt clinical procedures to group testing and reeducation. The authors believe that their component determination, objectified through validated specific situations and supplemented by the related materials on improvement activities does furnish for teachers a practical and helpful basis for diagnosis and guidance.

A large section of the California manual, which proves quite helpful and informative, is intended to aid teachers in differentiating and analyzing cases needing special assistance. It also suggests desirable guidance activities and contains several practical suggestions for utilizing the profile and the supplementary material of the test in a constructive way in a variety of situations.

The Mooney was developed originally in 1941 to help students in the expression of their personal problems. The 1950 Revision by Ross L. Mooney and Leonard V. Gordon (14) is the result of considerable research and analyses based on large surveys.

The authors of the Mooney state frankly that it is not a test. They point out that its significance is limited by the student's awareness of his problems and his willingness to reveal them. Norms are not provided, since it is believed that local norms are the most valuable.

The Junior High School Form of the Mooney is composed of seven areas, containing thirty items in each area, or a grand total of 210 items. The seven areas are (14:4):
I. Health and Physical Development (HPD)
II. School (S)
III. Home and Family (HF)
IV. Money, Work, the Future (MWF)
V. Boy and Girl Relations (BG)
VI. Relations to People in General (PG)
VII. Self-centered Concerns (SC)

The functions of the Mooney fall into five broad classes (14:3):

I. To facilitate counseling interviews.
II. To make group surveys leading to plans for individualized action.
III. As a basis for homeroom, group guidance and orientation programs.
IV. To increase teacher understanding in regular classroom teaching.
V. To conduct research on the problems of youth.

In an article published in 1943, Ross L. Mooney (8:220, 221) develops more fully its serviceability for purposes of research:

Such research can be of general significance in getting a better understanding of the place and functioning of problems in human behavior. Most of our knowledge, to date, on the evolution and interrelationships of problems had been based upon case study which does not lend itself easily to comparison of results among numbers of individuals and numbers of groups. The check lists now afford a technique for comparison of individuals and groups on a wide scale, and thereby re-open some old questions for fresh study and introduce some new questions which have not heretofore been considered feasible for study because of the lack of systematic techniques.

The early editions of the Mooney were constructed from a compilation of more than 5,000 items gathered from a variety of sources, such as case records, counseling interviews, personal problem essays written by 4,000 high school students, intensive analyses of expressed problems of 250 students in grades seven...
through twelve, personal-educational needs expressed by 950 pupils in grades six, nine, and twelve, review of the literature on student problems, experiences of the authors, and other miscellaneous sources.

In the development of the Mooney, 225 items were first tried out on 684 pupils in four junior high schools in a large Ohio city. In addition, a modified form of 124 items was tried out with 650 fifth and sixth grade pupils in three school systems. On the basis of these studies a third edition of 210 items was prepared, and after conferences with teachers and use in a school, more revisions were made so that a fourth edition was published in 1942. For the current 1950 Revision, the original data from 1942 were supplemented by the results of several other comprehensive studies.

In discussing validity, the authors insist again that the Mooney is not a test and consequently is not validated after the usual manner of tests. Instead they point out the assumptions upon which it was constructed, stating that when it was devised, it was assumed that (14:7):

1. The great majority of students would be responsive to the items;
2. They would accept the task with a constructive attitude;
3. They would find that the check lists covered reasonably well the range of personal problems with which they were concerned;
4. School administrators, teachers and counselors would find the results usable;
5. Research workers would find the check lists useful in various lines of inquiry.
In view of the quantity of research which has been published since the first form of the Mooney has appeared, experience seems to have justified these assumptions.

As with validity, so with reliability, the authors reject traditional statistical approaches and offer cogent reasons against standardizing the Mooney by devices serviceable to a standardized test. However, they do cite two instances in which correlation based on test-retest procedure yielded coefficients above .90. After reporting these results, they summarized the discussion of the reliability of the Mooney thus (14:9):

It can therefore be concluded that, while the Problem Check Lists must be, and are, so designed as to reflect changing situations and experiences in the individual case, they nevertheless exhibit sufficient stability to warrant general program planning on the basis of survey results.
CHAPTER IV

PROCEDURE AND METHODS

This chapter will concern an explanation of two different aspects of the present project, namely: (1) the particular details of procedure involved both previous to and during the administration, and (2) the methods of scoring for treating the data of both inventories and for computing the results.

As previously mentioned in the Introduction, the present study adopted a two-fold purpose. The primary one was to compare two of the more commonly employed juvenile adjustment inventories to discover to what degree, if any, they are in agreement in revealing similar results concerning the problems and adjustment of young people. The secondary one was to employ a population sample of young boys and girls from different socio-economic areas, to discover whether or not significant differences would be brought out by the two inventories for groups from different socio-economic strata.

To accomplish this objective, the Intermediate Series of the California and the equivalent Junior High School Form of the Mooney were administered to 110 eighth-grade boys and girls in three parish schools. The first school, described hereafter
as School A, was located in a fairly wealthy residential suburb, the second (School B) in a predominantly middle-class apartment-dwelling area, and the third (School C) in a rather poor neighborhood, including a crowded housing project.

A brief introductory talk, uniform and prepared in advance, prefaced the work with each group of students. Their attention and motivation were enlisted by explaining to them the considerable advantages of research, the unique importance of the study of personal problems, and the value of their contribution to such a study. For the possible interest and information of the reader, an exact copy of the "Introductory Talk to Students" is contained in the Appendix.

Realizing that anonymity might insure fuller cooperation and interest, the students were requested not to affix any personal identification to the test booklets. Unknown to them, the writer employed a system of code numbers, constructed through a simple process of identical distribution and collection of the test booklets. As a partial check against the responses elicited on the inventories and a further assurance of accuracy, a personal data sheet was secured from each student following the completion of both tests.

The California was administered first, followed by the Mooney. The recommended instructions for administration presented by the authors of the two inventories in their respective manuals were carried out in explicit detail. While these instructions
are so clearly presented in each booklet that either test can be self-administered, in the present instance the directions were slowly and carefully read aloud to insure adequate control in the experimental situation. Before being directed to begin, the students were first asked if they had any further questions.

No time limit is prescribed for either test. The authors of both instruments caution that although the responses can ordinarily be given in one class period of forty-five minutes, that individuals who are much slower should be given an opportunity to complete the tests, as they might be just the ones most deeply involved in their problems. In respect to the three groups studied here, all the students finished both inventories within the aforementioned period. However, one very interesting observation was that, in general, most of the students required a longer time, definitely reacted more conscientiously, and obviously indicated more responses, in the case of the California, where a forced choice is necessary on each item, than on the Mooney, where they are given the freedom of marking only those items about which they feel some concern.

The directions for scoring as presented in the manuals were also followed throughout. In the case of the California, an answer key is furnished with the test to determine desirable responses in each section of the test. There are fifteen items in each of the twelve sub-sections and the score for each section is the number of student responses which conform with the answer
key. If erasures or changes are made, the examiner is informed to consider the intent of the pupil. In a few cases where this was needed, it was determined by the student's answers to the majority of similar items. If both yes and no are marked, or if the answer is omitted, no credit is to be given. The raw scores for total adjustment, self adjustment, social adjustment, and for each of the twelve sub-tests were then converted into percentile ranks, according to the norms provided in the manual. As mentioned beforehand, these were derived from test data for students in grades seven to ten inclusive in different schools in and near Los Angeles, California.

In the case of the Mooney, the checked problems were counted very easily because of the format of the check lists and the arrangement of items. The sheet was opened so the three center pages containing the test questions were visible. The underlined items were then counted for each of the seven problem areas, which consist of six blocks of five items each, or a grand total of 210 items. Lastly, the counts for all the areas were totalled together.

Following the scoring of the two inventories, those tests were eliminated in which there was a failure to comply with instructions. This necessitated ten rejections. The remaining population consisted of one hundred subjects, forty-five boys and fifty-five girls. This sample included nineteen boys and twenty-one girls from School A, thirteen boys and seventeen girls from
School B, and again thirteen boys and seventeen girls from School C.

Next in line was the comparison between the scores on the two inventories. Before this could be attempted, however, the scores on the Mooney first had to be "inverted," as mentioned in Chapter II, so that a favorable score on the California would correspond with a favorable score on the Mooney, and vice versa.

For greater simplicity of statistical treatment, step intervals were employed. Since on the California, the raw scores are converted into percentile ranks on a scale with five-point step intervals, the latter was considered to be the most serviceable interval. The scores on the California, ranging from five to ninety-five, were broken down into nineteen five-point step intervals, with the score of ninety-five which represents the most favorable score being converted into the highest rank of nineteen. The scores on the Mooney, ranging from two to eighty-three, were broken down into seventeen five-point step intervals, with the score of two, which represents the most favorable score, being "inverted" into the highest rank of seventeen, in order to correspond with the highest rank on the California.
CHAPTER V

RESULTS OF STUDY

This chapter will present the statistical results and interpret points of interest uncovered by the writer in her study. The mean percentile, standard deviation, and range of scores obtained by the different groups of subjects on the California are presented below in Table I.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>Number of cases</td>
<td>Mean %ile</td>
<td>St. Dev.</td>
<td>Range of scores</td>
</tr>
<tr>
<td>Whole</td>
<td>100</td>
<td>45</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Boys</td>
<td>45</td>
<td>40</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Girls</td>
<td>55</td>
<td>45</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>School A</td>
<td>40</td>
<td>55</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Boys</td>
<td>19</td>
<td>55</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Girls</td>
<td>21</td>
<td>55</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>School B</td>
<td>30</td>
<td>35</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Boys</td>
<td>13</td>
<td>40</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>Girls</td>
<td>17</td>
<td>30</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>School C</td>
<td>30</td>
<td>40</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td>Boys</td>
<td>13</td>
<td>35</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>Girls</td>
<td>17</td>
<td>45</td>
<td>29</td>
<td>5</td>
</tr>
</tbody>
</table>

26
As explained earlier, raw scores on the California are converted into percentile ranks. So the numbers in the last column "Range of scores" should be interpreted accordingly.

For the Mooney, the mean number of problems, standard deviation, and range obtained by the different groups of subjects are presented in Table II.

**TABLE II**

**MEAN, STANDARD DEVIATION, AND RANGE FOR THE DIFFERENT GROUPS ON THE MOONEY PROBLEM CHECK LIST**

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of cases</th>
<th>Mean number of problems</th>
<th>St. Dev.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Whole</td>
<td>100</td>
<td>60</td>
<td>20</td>
<td>83</td>
</tr>
<tr>
<td>Boys</td>
<td>45</td>
<td>65</td>
<td>22</td>
<td>83</td>
</tr>
<tr>
<td>Girls</td>
<td>55</td>
<td>60</td>
<td>19</td>
<td>82</td>
</tr>
<tr>
<td>School A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>19</td>
<td>75</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>Girls</td>
<td>21</td>
<td>65</td>
<td>17</td>
<td>69</td>
</tr>
<tr>
<td>School B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>13</td>
<td>55</td>
<td>24</td>
<td>83</td>
</tr>
<tr>
<td>Girls</td>
<td>17</td>
<td>55</td>
<td>15</td>
<td>76</td>
</tr>
<tr>
<td>School C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>13</td>
<td>55</td>
<td>22</td>
<td>82</td>
</tr>
<tr>
<td>Girls</td>
<td>17</td>
<td>55</td>
<td>22</td>
<td>73</td>
</tr>
</tbody>
</table>

As mentioned previously, the "scores" on the Mooney represent merely a count of the problems marked. So in regard to
this test, a small number in the "Range" column indicates a few
problems or a high rating, while a large number represents many
problems or a low rating.

In the treatment of the foregoing data, two statistical
procedures were employed. To compare the performance of the whole
group or any one sub-group on the two scales, a coefficient of
correlation had to be secured. On the other hand, to compare
various sub-groups with each other on either scale, the signifi-
cance of the difference between groups was calculated by the t
 technique.

To obtain the coefficient of correlation, where the size
of the population justified product-moment calculation, this pro-
cedure was employed. For the smaller sub-groups, rank-difference
coefficients were calculated.

Table III reports the coefficients of correlation
between the total scores of the two inventories for the entire
population and also for all the boys and all the girls considered
separately.

The correlation between the total scores of both scales
for the entire population constitutes one of the most important
elements in the whole study. The rather high positive correlation
of .61 indicates that the two scales do cover the same ground to
a fairly marked degree. This coefficient of .61 is definitely
higher than that of .45 found on 128 subjects by Elmer F. Pflieger
in his Detroit study.
TABLE III

PRODUCT-MOMENT CORRELATIONS BETWEEN TOTAL SCORES OF THE CALIFORNIA TEST OF PERSONALITY AND THE MOONEY PROBLEM CHECK LIST FOR THE ENTIRE POPULATION AND FOR EACH SEX

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of cases</th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire Population</td>
<td>100</td>
<td>.61</td>
<td>.001</td>
</tr>
<tr>
<td>All Boys</td>
<td>45</td>
<td>.74</td>
<td>.001</td>
</tr>
<tr>
<td>All Girls</td>
<td>55</td>
<td>.49</td>
<td>.001</td>
</tr>
</tbody>
</table>

It is noteworthy to observe that when a coefficient is calculated for each sex separately, the correlation is much higher for the boys than for the girls. The reasons for this difference are certainly not clearly evident. The writer can offer only conjecture or speculation.

It will be remembered that the groups were approached with a plea to cooperate in a research project. Conceivably this motivation might have had more of an appeal and might have sustained the interest of the boys more than that of the girls throughout the two parts of the test procedure. This conjecture is based upon the opinion that scientific research possesses a greater appeal for boys than it does for girls. Another possibility lies in the reticence and sense of privacy which is an attendant of adolescence. Since girls generally reach puberty
earlier than boys, it seems probable that they might be less inclined to expose their problems with the Mooney, where personal matters are less masked than they are in the California. Finally it is interesting to note that, if one judges by the ratio of boys to girls handled by guidance agencies, it would appear that boys are apparently more prone than girls to express outwardly their tensions, problems, and disturbed states.

The correlations between the partial scores of the two inventories for the entire population are presented in Table IV.

**TABLE IV**

PRODUCT-MOMENT CORRELATIONS BETWEEN PARTIAL SCORES OF THE CALIFORNIA TEST OF PERSONALITY AND THE MOONEY PROBLEM CHECK LIST FOR THE ENTIRE POPULATION

<table>
<thead>
<tr>
<th>Measures</th>
<th>Number of cases</th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self(^a) and Social Adjustment(^a)</td>
<td>100</td>
<td>.73</td>
<td>.001</td>
</tr>
<tr>
<td>Self Adjustment(^a) and Mooney Total(^b)</td>
<td>100</td>
<td>.58</td>
<td>.001</td>
</tr>
<tr>
<td>Social Adjustment(^a) and Mooney Total(^b)</td>
<td>100</td>
<td>.50</td>
<td>.001</td>
</tr>
<tr>
<td>Family Relations(^a) and Home and Family(^b)</td>
<td>100</td>
<td>.47</td>
<td>.001</td>
</tr>
<tr>
<td>Freedom from Nervous Symptoms(^a) and Health and Physical Development(^b)</td>
<td>100</td>
<td>.42</td>
<td>.001</td>
</tr>
<tr>
<td>School Relations(^a) and School(^b)</td>
<td>100</td>
<td>.36</td>
<td>.001</td>
</tr>
</tbody>
</table>

\(^a\) Indicates measure on the California.

\(^b\) Indicates measure on the Mooney.
The correlation of .73 found by the writer between self and social adjustment on the California was significantly higher than that of .46 found by Pflieger. Still the findings in the present study would scarcely be construed to minimize the serviceability of using both parts of the California. If one were to find low scores on self-reliance, sense of personal freedom, or some other sub-scale in the self adjustment part of the California, one would still be interested to know whether these feelings were more closely related to the home environment or to the school situation, areas of which are covered in the social adjustment part of the scale.

The correlation between self adjustment on the California and the total Mooney score was .58, notably higher than the coefficient of .41 reported by Pflieger. The correlation between social adjustment on the California and the total Mooney score of .50 contrasted sharply with the coefficient of .07, which Pflieger reported.

Although all of the correlations were positive in those areas where there is a purported similarity, it was interesting to observe that none of them was especially high. This may well be explained by the fact that each of the sub-scales of the California comprises only fifteen items and that each sub-division of the Mooney contains only thirty items to which one may possibly respond. Contrasting this with the total sample of 180 items on the California and 210 items on the Mooney, one can see that a
minor deviation on any of the sub-scales will greatly affect the correlations of the several part scales to a far greater degree than it would the correlation of the whole scale.

On the three pairs of sub-scales presented at the end of Table IV, the difference between the findings of the present study and those of Pflieger are slight. On family problems Pflieger reports a coefficient of .46 as compared to the writer's .47. On each of the last two, Pflieger's correlation is lower by seven points.

It is quite interesting that all the coefficients of correlation reported in Table IV are at least equal to the corresponding ones in Pflieger's study, and that some of the differences are significantly larger. Since Pflieger failed to describe his population or report scatter of scores, it is impossible to compare the two populations. His sample might have been more homogeneous, which would tend to reduce the range of scores and consequently the correlation. A second explanation may lie in the fact that the series of the California test which he employed was designed for use with older adolescents and young adults.

In addition to the correlations reported above, rank-difference coefficients between the total scores of the two inventories were calculated for the several segments of the population divided by area and by sex. These findings are reported in Table V.
<table>
<thead>
<tr>
<th>Population</th>
<th>Number of cases</th>
<th>rho</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>19</td>
<td>.75</td>
<td>.01</td>
</tr>
<tr>
<td>Girls</td>
<td>21</td>
<td>.64</td>
<td>.01</td>
</tr>
<tr>
<td>School B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>13</td>
<td>.64</td>
<td>.05</td>
</tr>
<tr>
<td>Girls</td>
<td>17</td>
<td>.33</td>
<td>.05</td>
</tr>
<tr>
<td>School C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>13</td>
<td>.81</td>
<td>.01</td>
</tr>
<tr>
<td>Girls</td>
<td>17</td>
<td>.52</td>
<td>.05</td>
</tr>
</tbody>
</table>

The same unaccounted difference which appeared in the correlation for each sex taken separately in the whole population, appears again in the smaller sub-groups. It will be noted that the lowest correlation reported for a smaller group of boys is as high as the highest for any of the small groups of girls. It will also be noted that the lowest correlation for each sex occurred in School B. An unexpected development which will be reported later likewise concerns this same segment of the population. Since the size of the several samples represented in Table V is quite small, too much importance cannot be attached to the correlation coefficients obtained.
Still to be reported are the findings concerning the difference between the means of the several sub-groups on each of the scales which were administered. In this connection the results with each instrument are compared for each pair of schools: A with B, A with C, and B with C. These data with the confidence level calculated by the t technique are presented in Table VI.

### TABLE VI

**SIGNIFICANCE OF DIFFERENCE BETWEEN THE MEAN SCORES OF GROUPS FROM THREE SOCIO-ECONOMIC AREAS ON THE CALIFORNIA TEST OF PERSONALITY AND THE MOONEY PROBLEM CHECK LIST**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Group</th>
<th>Number of cases</th>
<th>Mean</th>
<th>St. Dev.</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>School A</td>
<td>40</td>
<td>55</td>
<td>22</td>
<td>3.78</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>School B</td>
<td>30</td>
<td>35</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>School A</td>
<td>40</td>
<td>70</td>
<td>14</td>
<td>4.72</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>School B</td>
<td>30</td>
<td>50</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mooney</td>
<td>School A</td>
<td>40</td>
<td>55</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>School C</td>
<td>30</td>
<td>40</td>
<td>27</td>
<td>2.50</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>School A</td>
<td>40</td>
<td>70</td>
<td>14</td>
<td>3.28</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>School C</td>
<td>30</td>
<td>55</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>School B</td>
<td>30</td>
<td>35</td>
<td>22</td>
<td>.79</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td>School C</td>
<td>30</td>
<td>40</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>School B</td>
<td>30</td>
<td>50</td>
<td>20</td>
<td>.93</td>
<td>.40</td>
</tr>
<tr>
<td>Mooney</td>
<td>School C</td>
<td>30</td>
<td>55</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
These results are interesting and in particular somewhat surprising. It was expected in advance that School A would yield a difference significant at a high level of confidence when compared to either of the other groups. However, the lack of significant difference between the B and C groups was not anticipated. Obviously the important difference is the difference between the several groups, especially that which separates School A from the other two. The fact that the difference of means remains the same on the two inventories for each of the three groups, regardless of the difference between the groups themselves, is probably a sheer coincidence. The further fact that the difference between the mean scores of the two inventories is consistently fifteen points for each of the three groups is also probably a mere coincidence.

One further set of scores remains to be considered. The preceding table divided the total population into sub-groups by areas or schools. Table VII on the following page reports the differences between the mean scores when the entire sample is analyzed for sex differences. From the findings one may conclude that both the California and Mooney are equally sensitive for use with either sex, 'since the difference between the means is so small as to be insignificant and attributable to chance.'
## TABLE VII

SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES ON THE CALIFORNIA TEST OF PERSONALITY AND THE MOONEY PROBLEM CHECK LIST FOR EACH OF THE SEXES

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Group</th>
<th>Number of cases</th>
<th>Mean</th>
<th>St. Dev.</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Boys</td>
<td>45</td>
<td>40</td>
<td>25</td>
<td>.98</td>
<td>.40</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>55</td>
<td>45</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mooney</td>
<td>Boys</td>
<td>45</td>
<td>65</td>
<td>21</td>
<td>1.25</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>55</td>
<td>60</td>
<td>19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER VI

SUMMARY AND CONCLUSIONS

The primary purpose of the present study was to compare two of the more commonly used juvenile adjustment inventories to discover to what extent, if any, they agree in revealing similar results concerning the problems and adjustment of young people. The secondary one was to analyze results with a population sample consisting of boys and girls from different socio-economic areas to discover whether or not significant differences would be brought out by these instruments between groups from different socio-economic strata.

To accomplish this objective, the Intermediate Series of the California Test of Personality and the equivalent Junior High School Form of the Mooney Problem Check List, 1950 Revision, were administered to 110 eighth-grade boys and girls in three parish schools. In the scoring of the two inventories, ten subjects were eliminated for failure to comply with instructions. The remaining sample included forty subjects from the wealthy area, thirty from the middle-class area, and again thirty from the poor area. Thus the total population numbered one hundred subjects, consisting of forty-five boys and fifty-five girls.
On the California, raw scores are converted into percentile ranks, while on the Mooney a mere count of the problems checked represents the subject's score. For purposes of this particular study, the Mooney scores had to be "inverted," so that scores for the two inventories would be on a comparable basis.

In the treatment of the data, two statistical procedures were employed. To compare the performance of the whole group or any one sub-group on the two scales, a coefficient of correlation was secured. On the other hand, to compare various sub-groups with each other on either scale, the significance of the difference of mean scores between groups was calculated by the t technique.

The correlations found in this study were compared to those reported by Elmer F. Pflieger in a closely related Detroit study. All of the correlations of the present study were higher than Pflieger's, some of them significantly so.

A positive correlation of .61 was found between the total scores of both scales for the entire population, indicating that these two scales do cover the same ground to a rather marked degree. An interesting observation was that for the entire group and for the various sub-groups, the correlations for the boys were consistently higher than for the girls. The correlation of .73 found by the writer between self and social adjustment on the California was notably higher than that of .46 found by Pflieger; yet these findings would scarcely be construed to minimize the
serviceability of using both parts of the California. Although all of the correlations were positive in those areas where there is a purported similarity, none of them was especially high.

When the total group was broken down according to socio-economic areas, the performance of the students from the purportedly superior area showed a significantly different and higher level of adjustment than either of the other two groups. The results from the middle-class and poor areas did not reveal a significant difference. Furthermore no significant difference was found between the mean scores of the two sexes with either of the two inventories employed.

The present study pointed to the following conclusions:

1. From the analysis of the scores, Pflieger's third conclusion which stated (10:277): "The correlation between the two tests is low enough, so that both instruments may be used to supplement each other to uncover areas of poor adjustment in which students need help and guidance," was corroborated in that both instruments may well be employed. While the two correlated to a fairly high degree in the present study, either scale can still further supplement the points brought out by the other.

2. Since the correspondence between the two inventories was consistently lower in the case of the girls, the advantage of using both instruments with them is probably greater than for the boys.
3. Judging from the particular sample employed in this experimental investigation, neither instrument seems to indicate a significant difference between the adjustment level of pupils from a middle-class area and those from a lower socio-economic stratum.
BIBLIOGRAPHY

A. BOOKS


B. ARTICLES


C. MANUALS


D. UNPUBLISHED MATERIALS

APPENDIX I

INTRODUCTORY TALK TO STUDENTS

You may wonder what it is I'm here for. Well it's to ask each one of you boys and girls to do me a great favor, in which you will be helping countless other boys and girls. You've probably all heard of the words "scientific research" before. They mean, first of all, gathering many facts about a certain thing, secondly, sorting out and classifying those facts until they have a clear meaning, and lastly trying to figure out what we can do about those facts in order to help the particular thing we're concerned about.

Scientific research is responsible for much of the comfort and happiness we enjoy in our daily lives. After all, it is scientific research that made possible the airplane, telephone, radio, television, and many other modern conveniences and luxuries. But all these concern research about "things" only, don't they? Now you tell me this. What do you think is more important--research about things or research about "people"? You're right, it's research about people isn't it. It is in this type of scientific research that one can do the most good in the world. And it is here that each one of you can help me. Let me explain
Sometimes boys and girls by the time they get to eighth-grade kind of get the feeling that grownups don't understand them. Sometimes they have worries or problems which they'd like to talk to somebody about, but they just can't seem to put them into the right words, or don't know where or to whom to turn for help.

Now to find out how boys and girls feel about such things, we have to gather a great number of facts from normal and wholesome boys and girls like yourselves.

You will not have to sign your name on any of the forms I shall pass out to you. I promise you that whatever you write will be kept completely confidential and that no one who knows you will ever see what answers you put to the questions that will be asked of you. However, one very important thing I do request of you is this: that you answer fully, honestly, and frankly with the complete freedom of statement that you can have when you know that no one who knows you will see these records. When I get a hundred or more records from boys and girls like you, then I will be able to put the facts together; and perhaps, I sincerely hope, to help other boys and girls by helping their advisers, their teachers, and their parents. Will you please help me in this?
The thesis submitted by Elizabeth Jane Murphy has been read and approved by three members of the Department of Psychology.

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

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

June 12, 1954

[Signature]

Date

Signature of Adviser