AN ANALYSIS OF PEER ACCEPTANCE AND PERCEIVED PROBLEMS OF GIFTED JUNIOR HIGH SCHOOL STUDENTS

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ABSTRACT

AN ANALYSIS OF PEER ACCEPTANCE AND PERCEIVED
PROBLEMS OF GIFTED JUNIOR
HIGH SCHOOL STUDENTS

by Donald Wayne Wood

The purpose of the first of these interrelated research studies was to evaluate the peer acceptance of the gifted in comparison to the nongifted in the junior high school. The purposes of the second study were: (1) to identify those perceived problems of personal and social adjustment held in common by all isolates as well as those peculiar to each subgroup, nongifted isolates and gifted isolates; and, (2) to identify those perceived problems held in common by all gifted students as well as those peculiar to each subgroup, isolate gifted and non-isolate gifted.

Participating in the first study were 2,733 students (1389 boys and 1344 girls) in grades seven and eight of five junior high schools. Included in the second study were 118 of these same students (67 boys and 51 girls) as eighth and ninth graders. These students all resided in Livonia, Michigan, a large residential suburb of Detroit with higher than average mean educational attainment and socio-economic level.

The California Test of Mental Maturity was administered, and the 2,733 students were classified by their resulting total IQs into six psychometric categories, ranging from highly gifted through educable retarded. A sociometric device was administered employing three acceptance-oriented questions, each calling for three choices. The students were classifed by the total number of choices received into six sociometric categories ranging from star through isolate.

The psychometric and sociometric taxonomies were used to create a grid to compart the total group into thirty-six subgroups for comparison of their relative sizes proportionate to the total group. To facilitate the second study, the students were then divided into four research categories: gifted isolate, nongifted isolate, gifted nonisolate, and nongifted nonisolate.

In the second study, in order to show the full effect of acceptance versus nonacceptance, the members of each of the nonisolate groups were ranked by total number of choices received, assigned random numbers, and random selection began with those who received greatest acceptance and included only high status students. Regarding the selection of the two isolate research groups, all available gifted isolates were used since there were only thirteen, but the members of the nongifted isolate group were assigned random numbers and a random selection was made.

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Three inventories, Vineland Social Maturity Scale, Mooney Problem Check List, and Rohde Sentence Completion Method, were administered to the four research groups: gifted isolate, nongifted isolate, gifted nonisolate, and nongifted nonisolate, to identify those perceived problems held in common by all isolates, as well as those peculiar to each isolate subgroup; and, to identify those perceived problems held in common by all gifted, as well as those peculiar to each gifted subgroup.

The major results indicate that, although the gifted did not receive greater acceptance as a group than did the rapid learners, gifted students of this age group are well accepted by their peers; those students with high sociometric status are more often those of above-average intelligence; gifted did not choose primarily from within their own group but did choose those with above-average ability as friends; students with above-average ability are involved in both a greater scope and depth of mutual choice interaction with their peers; isolates have more perceived problems than nonisolates; nongifted have more perceived problems than gifted; and there is a set of problems commonly perceived by both gifted and nongifted junior high school social isolates.

AN ANALYSIS OF PEER ACCEPTANCE AND PERCEIVED PROBLEMS OF GIFTED JUNIOR HIGH SCHOOL STUDENTS

by

Donald Wayne Wood

A THESIS

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Thesis:
An Analysis of Peer Acceptance and Perceived Problems of Gifted Junior High School Students

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CHAPTER I

INTRODUCTION

Some gifted individuals do not attain social acceptance, and an error of judgment may then be made that their giftedness will be responsible for a continuing lack of acceptance. When a student is the only gifted member of a class, he may be jealously envied in terms of comparative success. Thus, some gifted students, indeed, may suffer temporary localized lack of acceptance because of their level of intelligence.

Other gifted students, like some of their intellectually normal peers, may suffer lack of acceptance because of prejudices or intollerances held by their peer group that have nothing to do with the level of intelligence.

It should be recognized that still other gifted students, along with many of their intellectually normal classmates, suffer lack of social acceptance because of the faulty way in which they perceive themselves or others, and the resultant manner in which they present themselves.

It is necessary, therefore, that we try to determine the kind of errors of perception and/or real problems which these students perceive.

Purposes of the Study

The purposes of this investigation are to evaluate the peer acceptance of gifted students and to compare the perceived problems of isolate and nonisolate gifted and nongifted students in the junior high school.

Justification of the Study

This study can provide teachers and counselors with many clues concerning the personal and social adjustments of those students with either high or low sociometric status. A better understanding of acceptance and non-acceptance factors will enable them to aid the high status student in his bid for leadership and the low status student in his struggle for social acceptance.

The results can contribute to leadership training programs by early identification of gifted students with leadership potential, and by spot-lighting those who have already begun to emerge as leaders. By pointing out those individual students with leadership potential who have not yet emerged as leaders, the study will underscore the fertile source of additional leadership personnel so greatly needed today.

Such results will also be found useful in studying the special needs of students who are having difficulty in adjusting to the regular school program. Some of these students may have leadership potential. The inadequate

social relationships of some students indicate the importance of using sociometric procedures and adjustment inventories in evaluating the extent to which the school program is meeting the social-emotional needs of each student. The low sociometric status of school drop-outs, truants, and students who are discipline problems, points out some of the effects of faulty social adjustment upon the personality development of the individual.

When those individuals with leadership potential who are making a faulty social adjustment are identified by this type of study, and teachers and counselors become convinced of the resulting ego damaging effects, they may be moved to assist these individuals in their effort to attain acceptance. Upon attaining social acceptance, these students may, thereby, acquire the success feeling that will cause them to make the necessary effort needed for academic success and eventual recognition by their peers as potential leaders.

Limitations

1. The first phase of this study is limited to the 2,733 seventh and eighth grade students of the five junior high schools in Livonia, Michigan during the 1962-63 school year. The second phase is limited to 118 of the same students as eighth and ninth graders during the 1963-64 school year.

2. This study is also limited to the extent that Livonia, Michigan is a well-to-do, residential, suburban community within the periphery of the Detroit Metropolitan area and does not contain the diversity of socio-economic groups of a typical city of 87,000 population.

3. The study employed a group test of mental ability, rather than an individual test, to determine which students were placed in each psychometric category.

4. Negative criteria were not used in the sociometric test for the sake of not evoking or promulgating an idea that a given student was rejected by one or more of his classmates. This limits the study in that the reader cannot differentiate between a true rejectee and an isolate. The latter may become relatively well accepted by classmates after more opportunity for interaction.

Definitions of Terms

Sociometric Terms

The following terms were coined by J. L. Moreno (1934), the founder of sociometry, and are unique to sociometric measurement.

Sociometric test.--This is a method of evaluating the feelings of the group members toward each other with respect to a common criterion. It requires individuals to choose a given number of associates for some group activity or situation.

Sociometric status.--This term, sometimes spoken of as group status, refers to the number of choices that each individual receives on a sociometric test.

Star.--The term star refers to an individual who receives a large number of choices on a sociometric test. In his original use of the sociometric test, Moreno reported that some of the pupils "attracted so many choices that they captured the center of the stage like stars."

Neglectee.--This term is used to identify the individual who receives relatively few choices on the sociometric test. Although he receives some choices, he tends to be neglected by the majority of the group members. Neglectees are also referred to as "fringers," since they are located on the fringe of the group. The term neglectee is preferred since it is more definitive.

Isolate.--The isolate is an individual who receives no choices, either positive or negative, on a sociometric test. On occasions, he may be referred to as an "outsider" or a "social island," although these designations are not as common as the term isolate. Most of the individuals receiving no choices are truly isolates; others might be rejectees if the sociometric test contained the possibility of negative choices; still other individuals may have had little or no opportunity for interaction with a group, and thus they go virtually unnoticed. Given the

opportunity for such interaction, these individuals may receive a measure of acceptance.

Rejectee.--The rejectee is an individual who receives negative choices on a sociometric test. Thus, he attracts attention from some group members, but the attention is of a rejective nature.

Mutual choice.--This term indicates that two individuals have chosen each other on the same sociometric criterion. This is also called a reciprocated choice or a pair. The important aspect of the definition is that the choice must be reciprocated on the same criterion, thus indicating a mutual desire to associate with one another in the same group activity.

These sociometric terms employed in the study are operationally defined in Chapter III, page 43.

Psychometric Terms

The terms used to describe students with high intelligence have been defined by J. M. Dunlap (1958, p. 149).

Superior.--The term superior or rapid learner refers to children who are markedly above average in intelligence and have the potential ability to complete college and as adults to assume substantial positions in their communities.

Gifted.--The term gifted is applied to the top fraction of the superior group who have good intelligence and

show potential promise of making contributions of a high order to their generation.

Highly gifted.--The term highly gifted or extremely gifted is used in reference to a small fraction of the gifted group who have an exceedingly high level of ability and whose potential powers should enable them to make original and significant contributions to the welfare of their own and succeeding generations.

The terms used to describe students with low intelligence have been defined by S. A. Kirk (1962, p. 85).

Slow learner.--The slow learner is capable of achieving a moderate degree of academic success though at a slower rate than the average child. He is educated in the regular classes without special provisions except an adaptation of the regular class program to fit his slower learning ability. At the adult level he is usually self-supporting, independent, and socially adjusted.

Educable retarded.--The educable mentally retarded child is one who, because of slow mental development, is unable to profit to any great degree from the programs of the regular schools, but who has these potentialities for development: minimum educability in reading, writing, spelling, arithmetic, and so forth; capacity for social adjustment to a point where he can get along independently in the community; and minimum occupational adequacy such that he can later support himself partially or totally at a marginal level.

Self-concept.--This term is defined as a person's view of himself--what he perceives himself to be and what he conceives that others consider him to be, contrasted with what he would like to be.

These psychometric terms employed in the study are operationally defined in Chapter III, page 40.

The Thesis in Perspective

This dissertation is divided into five chapters as follows:

Chapter I has included the nature of the problem, purposes of the study, justification of the study, limitations, and definitions of terms.

Chapter II is a review of related research.

Chapter III explains the research procedures and techniques of analysis used in this study. This includes the hypotheses tested, population and samples used, methods of gathering the data, and methods of collating and recording the data.

Chapter IV comprises tha analysis of the data. This includes the sociometric and psychometric categorization of the data, distribution and patterning of mutual choices, and findings of the adjustment inventories.

Chapter V summarizes the entire study, records the conclusions the writer has drawn from the data reported, lists the implications which appear valid, and suggests further research.

CHAPTER II

REVIEW OF RELATED RESEARCH

This chapter presents summaries of related research studies found in the professional literature of psychology, sociology, and education of the past twenty years. The studies included here have contributed either in whole or in part to the development of the measurement of peer acceptance as it relates to intellectual ability and personal and social adjustment.

Intelligence and Sociometric Results

Few studies have been concerned specifically with the relationship between intelligence and sociometric results of peer acceptance. These studies, for the most part, took place in the elementary schools, and only one study summarized herein relates to junior and senior high school students.

Highly Gifted

A study of the peer acceptance of children at the high end of the intelligence scale was conducted by Gallagher and Crowder (1957, p. 306). They investigated the sociometric status of 35 highly gifted pupils in grades two through five in the regular classroom. All pupils had obtained a Stanford Binet IQ of 150 or higher. It

was found that 80 per cent of these highly gifted children had above average sociometric status, and the remaining 20 per cent had below average sociometric status. Whereas 53 per cent of these highly gifted pupils fell in the top quartile of their classroom groups in peer acceptance, only 7 per cent of them were in the bottom quartile.

Gallagher (1958a, pp. 465-470) investigated the degree of peer acceptance of 54 highly gifted elementary pupils with Stanford Binet IQ's of 150 or higher. He found these children to be significantly more often accepted as "best friends" in regular classroom situations. This significance was not appreciably affected by sex or grade level. Conversely, the highly gifted group were found to have selected their friends from the entire intellectual range.

Examining the relationship of peer acceptance to such variables as intelligence, social perceptiveness, and grade level, Gallagher (1958b, pp. 225-231) asked 54 highly gifted elementary pupils to select five friends on a sociometric questionnaire. The results indicated that popularity was positively related to intellectual status; the highly gifted children were frequently recognized as leaders in classroom activities; the superior children were more successful in predicting those who would select them as friends; and that propinquity was a factor in choice of friends, especially among the older group.

Another sociometric study of the classroom roles of a group of highly gifted pupils was done by Kerstetter (1952).

She studied 25 children with IQs from 160 to 202 in grades two through seven in New York City and found these highly gifted pupils to be well adjusted and accepted by their peers.

Gifted

A study by Mann (1957, pp. 199-201) illustrates the use of the sociometric test in the evaluation of the effect of part-time special class placement on the peer acceptance of gifted pupils. This study involved 281 fourth, fifth, and sixth-grade children of which 67 were found to have a Stanford Binet IQ of 130 or higher. The 67 gifted pupils spent half of their school day in special classes for the gifted and the other half day in their regular classes. It was assumed that such a school program might enable the gifted pupils to maintain normal peer relations while obtaining the benefits of special classes.

On the sociometric test, both the gifted and the typical pupils gave the majority of their sociometric choices to the members of their own group. This sociometric cleavage between gifted and typical children appeared at all grade levels, indicating that the program of partial segregation did not contribute to the wide range of peer relations that was hoped for; however, one must remember the opportunity for peer relations and depth of interaction to be found in the special class setting.

Parents reported that members of the gifted group associated with each other outside school rather than with intellectually average peers. Mann concluded that the school setting helps to produce and reinforce friendships of gifted pupils in and out of school but does not measurably increase substantial relationships between gifted and typical children who are together only part-time in class.

Wood (1961) made a study of 90 pupils in the fourth, fifth, and sixth-grades of a university laboratory school. Sixteen children were considered gifted with California Test of Mental Maturity IQs of 130 through 164. Sociometric test scores produced the following results: the gifted pupils were chosen by classmates of all levels of ability; most gifted children showed a preference for individuals with ability comparable to their own; those with higher intellectual ability received greater acceptance; and the gifted pupils were involved in both a greater depth and scope of interaction with their peers.

In a study using a large group of gifted students with IQs over 140, Martyn (1957) found that at the elementary school level, gifted students had significantly higher Cunningham mean-accetance scores than did their nongifted classmates. In junior and senior high school, the differences were not significant; however,

acceptance of gifted students was as high as, or higher than, that of their nongifted classmates.

Grace and Booth (1958, pp. 195-196) studied 294 heterogeneously grouped pupils in grades one through six. They found that 8 of the most popular children were also the most gifted; pupils do not become social isolates within the elementary school, as the most gifted children were still among the best liked in the sixth-grade as they had been in the first grade; and the gifted child was not a social isolate within the first six grades of that urban school.

A study to determine whether significant differences exist between mentally superior, typical, and retarded pupils in regular upper elementary classes with regard to peer acceptance was done by Miller (1956, pp. 114-119). His study included 120 pupils, 20 in each IQ group of superior, typical, and retarded, in the fourth and sixth-grades. He found that the superior pupils were most wanted as friends by their classmates while the retarded were least wanted, and no group was rejected as a whole; the superior pupils were significantly more accurate than the typical or the retarded in predicting their own popularity and that of their classmates; and the superior chose other superior pupils as friends more frequently than they chose the typical or retarded.

Miller concluded that up to certain limits on the intellectual continuum, sociometric status increases with intelligence; high peer acceptance is conferred upon the superior, not only because of their intelligence, but because of socially desirable traits of personality which they seem to acquire with greater ease than do other people; and the ability to judge one's own and others' sociometric status is largely an intellectual task.

Grossman and Wrighter (1948, pp. 346-355) studied the relationship between intelligence and sociometric status among sixth-grade pupils and reported that intelligence and sociometric status were related, but that high intelligence did not always assure high sociometric status.

Bonney and Powell (1953, pp. 481-495) compared the IQs of first-grade pupils with high and low sociometric status. The high status pupils had a median IQ of 113 and the low status pupils had a median IQ of 97. Another study by Bonney (1955, pp. 481-495) produced essentially the same results among second-grade pupils. In this study, children with high sociometric status had a range in IQ from 111 to 135, whereas low status children had a range from 89 to 129. Thus, it may be noted that in this study, the high status group were all above the mean in intelligence.

Mutual Choices

Intelligence also enters into mutual relationships among school children. Those children who choose each other on a sociometric test tend to be more alike in intelligence than the children who do not choose each other.

Bonney, Potashin, and Wood (1946, pp. 21-47; 1946, pp. 48-70; 1961) all reported this tendency, based on studies of mutual choices among elementary school pupils. These studies show that the extent to which intelligence influences sociometric choices depends upon the level of intelligence of the chooser as well as that of the chosen. This is brought out clearly in a study by Barbe (1954, pp. 60-62) who analyzed the choice process of 244 elementary school children with IQs ranging from 65 to 140. His results indicated that, although there was a general tendency to choose children of higher intelligence as friends, the slow-learning children tended to choose pupils of below average intelligence, whereas the "bright" pupils tended to choose pupils of above average intelligence. Approximately 62 per cent of the slow-learning children chose mutual friends from the below average group. In contrast, 80 per cent of the "bright" children chose mutual friends with above average intelligence.

Personal-Social Adjustment and Sociometric Results

The sociometric test is used as a direct measure of social adjustment. An individual who is highly chosen

on a sociometric test is considered to be well accepted by his peers and, therefore, to have good social adjustment. In contrast, an individual who receives few or no choices on a sociometric test is considered to have low acceptance among his peers and, therefore, to have poor social adjustment.

Since individuals with high sociometric status are generally better adjusted socially than those with low sociometric status, they also might logically be expected to have better personal adjustment. Their high status should provide more opportunity for satisfying their psychological needs for security, social approval, and self-respect, resulting in greater personal satisfaction and freedom from tension.

The extent to which the sociometric test provides a more general indication of peer acceptance or nonacceptance, can be evaluated in terms of the relationship between sociometric results and other measures of social and personal adjustment. These measures can be divided into two groups: (1) those showing how an individual is perceived by others; and (2) those showing how an individual perceives himself.

How An Individual is Perceived by Others

Peer evaluation.--This can be determined by a "guess who" test which requires individuals to identify those group members who best fit each of a series of behavior

descriptions. The number of mentions an individual receives on each of the behavior descriptions serves as a measure of his acceptance among his peers. Variations in specific characteristics make it impossible to equate the results from one grade level to another, but some similarity in descriptive characteristics will be noted in the following studies.

Bonney (1943, pp. 449-472) reported significant differences between fourth-grade pupils with high and low sociometric status on a number of behavior characteristics. Pupils with high sociometric status were found to be significantly superior on both personal and social behavior descriptions. They were characterized most frequently by their peers as being tidy, good-looking, happy, friendly, and cheerful. In their social relations they were described as being enthusiastic daring, active in recitations, at ease with adults, welcomed by other class members, and as exhibiting leadership in groups. Thus, the pupils who were highly chosen on the sociometric test were perceived by their classmates as possessing socially admired qualities which contribute to effective social interaction.

Kuhlen and Lee (1943, pp. 321-340) conducted a study, similar to Bonney's, at the sixth, ninth, and twelfth-grade levels and reported similar results. Although there was some change in characteristics from one grade level to another, those pupils with high sociometric status were

characterized more frequently as being good-looking, popular, happy, friendly, cheerful, and enthusiastic. In addition, they were noted to enjoy jokes and to initiate games and other activities more frequently than pupils with low sociometric status. Using twenty-one classrooms at the sixth and seventh-grade levels, Laughlin (1954) correlated sociometric results with the behavior descriptions of peers and found the same behavior characteristics related to high sociometric status.

Gronlund and Anderson (1957, pp. 329-338) compared the characteristics of socially accepted, socially rejected, and socially neglected pupils in a junior high school population. There were 20 pupils in each category, out of a total population of 158. When these three groups were compared, on the basis of responses to a "guess who" form, important differences were noted. The accepted pupils were generally characterized as possessing socially desirable behavior characteristics similar to those reported in the above studies. Specific characteristics such as good looks, tidiness, friendliness, likeableness, enthusiasm, cheerfulness, initiative, and sense of humor stood high on the list. In contrast, the socially rejected pupils were not only overlooked on these positive characteristics, but they were also frequently described as possessing the opposite attributes. They were characterized by their peers as being <u>not</u> good-looking, untidy, <u>not</u> likeable, restless,

and talkative. The socially neglected pupils tended to be overlooked, on the "guess who" form, receiving relatively few mentions on either positive or negative characteristics. The few mentions they did receive indicated that they were quiet and not talkative. Apparently they were truly socially neglected by their peers.

Adult ratings.---Studies using ratings of social adjustment by adults are difficult to equate, since different procedures were used in different studies and the aspects of social adjustment rated were not uniform from one study to another. In general, however, the studies are in substantial agreement concerning the relationship between the sociometric status of individuals' and adults' ratings of their peer acceptance.

Olson (1949) compared students from 10 elementary school classrooms by their sociometric standings and descriptions of their behavior written by their teachers. Those children receiving the largest number of choices were described most frequently as being dependable, well adjusted, friendly, quiet, and good natured; while those receiving the fewest choices were described as being shy, bossy, sulky, conduct problems, ill, or new to class. Although there was some overlapping in the descriptions of pupils in the two groups, the characterizations of pupils with high and low sociometric status clearly indicated a difference in social adjustment.

In an intensive study of five pupils with high sociometric status and five pupils with low sociometric status, at the elementary school level, Bonney (1947) obtained results somewhat similar to those reported by Olson. In general, the highly chosen pupils were characterized by greater conformity and group identification, greater emotional stability and control, more social aggressiveness greater dependability, and more frequent behavior indicating attitudes of friendliness, cooperativeness, and good will toward others.

Northway (1944, pp. 10-25) made an intensive clinical study of the behavior of 20 fifth and sixth-grade children who were least often chosen on a sociometric test. On the basis of their behavior patterns, she classified them into three distinct groups. One group was described as being listless, with no inner drive or interest in their environment. They appeared to merely exist and exerted little or no effort toward social adjustment. Another group was portrayed as being quiet and retiring. They had individual interests but showed little or no interest in social interaction. The third group was depicted as being noisy, boastful, arrogant, rebellious, and delinquent in classroom activities. They appeared to be aggressively striving for acceptance by peers, but they used socially ineffective means for attaining it.

How An Individual Perceives Himself

Self-report techniques.--Evidence concerning personal and social adjustment has frequently been obtained from the pupils themselves, through the use of adjustment questionnaires, problem check lists, and self-ratings. These self-report techniques reflect how the pupil feels about himself and the problems of adjustment he faces. The relationship between sociometric results and the results of self-report techniques provides an indication of how a pupil's feelings toward himself compare with the feelings of others toward him.

Grossman and Wrighter (1948, pp. 346-355) reported that sixth-grade pupils who were highly chosen on a sociometric test had significantly higher adjustment scores on the California Test of Personality than those pupils who were rejected on the sociometric test.

Using the same adjustment questionnaire, Scandrette (1953, pp. 291-296) reported that eighth-grade pupils with high sociometric status had better personal adjustment than pupils with low sociometric status. In a more detailed analysis of the results, Scandrette (1952, pp. 35-37) noted that pupils with low sociometric status tended to feel insecure in their school relations. They also felt that both teachers and other pupils had little personal interest in them and treated them in an unfair and unkind manner.

Two rather extensive investigations compared the mental health characteristics of pupils with high and low sociometric status. In both studies the mental health characteristics were determined by the pupils' responses to Thorpe, Clark, and Tiegs' adjustment questionnaire, entitled Mental Health Analysis. Bedoian (1953, pp. 366-371) reported that pupils with high sociometric status had significantly higher mental health scores than pupils with low sociometric status, in 21 of the 22 sixth-grade classrooms included in the study. Similar findings were reported by Baron (1949, pp. 306-310; 1951, pp. 32-42), for pupils in eleven fifth and sixth-grade classrooms. He noted that the high status pupils tended to feel more self-confident, more physically adequate, more secure in their school relationships, and gave indications of greater emotional stability than low status pupils.

Kuhlen and Bretsch (1947, pp. 122-132) compared the personal problems felt by pupils with high and low sociometric status. They requested approximately 700 ninth-grade pupils to check the items of the Mooney Problem Check List which bothered them never, sometimes, or often. Although there was little difference between the total number of problems checked by the high and low status pupils, those pupils with low sociometric status checked more personal problems "often" than the pupils with high sociometric status. Those personal problems checked "often" by the

low status pupils revealed concern with social skills, unhappiness, lack of status, family problems, and dislike of school.

In a study of 696 ninth-grade pupils, Bretsch (1952, pp. 449-504) compared the self-ratings of pupils with high and low sociometric status on eight different social skills. High status pupils rated themselves higher on the social skills than did the low status pupils. This finding seems to indicate that high status pupils are more confident of their ability to perform social skills.

Projective techniques.--Projective techniques have been commonly used to measure adjustment. The unique feature of projective techniques is that they present unstructured and ambiguous situations to the individual, and he is permitted to respond in terms of his own perception of the situations. Since the situations are ambiguous, he projects his own feelings and interpretations in his responses. There are relatively few studies comparing sociometric results with these measures of adjustment.

Northway and Wigdor (1947, pp. 186-199) compared Rorschach Inkblot patterns of eighth-grade pupils with high, average, and low sociometric status. The high status pupils were characterized by greater sensitivity to their social environment. The low status pupils revealed less ability to control their emotions and tended to be more ego-centric, moody, and impulsive. Mill (1953, pp.

151-167) reported similar results among college students. A comparison of the sociometrically high and sociometrically low students, on the basis of their responses to the Rorschach and the Thematic Apperception Test, indicated that students with low status showed trends toward greater anxiety and deviate patterns of adjustment.

Summary

These studies show that intelligence is an important factor in sociometric choosing. The prestige factor of high intelligence seems to attract attention of peers and thus places the gifted individual in a favorable position to be chosen on a sociometric test. The results indicate that, as a group, gifted students are distinctly superior in terms of social acceptance by their peers; high intelligence is closely related to high sociometric status, although some gifted pupils are not well accepted by their peers; and students tend to choose as mutual companions those who are similar to themselves in intelligence.

Sociometric results have shown substantial agreement with other measures of social and personal adjustment. Both peer evaluations and adults' ratings indicate more satisfactory adjustment on the part of pupils with high sociometric status. Clinical and follow-up studies have indicated that pupils with low sociometric status make

less satisfactory adjustments to their peers and to their school environment than do pupils with high sociometric status.

High and low status pupils tend to view themselves quite differently on projective and nonprojective techniques. Pupils in the low status group tend to feel insecure, discriminated against, inadequate physically and socially, and show signs of emotional instability. They also compare themselves unfavorably with others. In contrast, the responses of high status pupils generally reflect feelings of security, self-confidence, and other evidences of good personal and social adjustment.

CHAPTER III

RESEARCH PROCEDURES AND TECHNIQUES OF ANALYSIS

This study was designed and directed toward securing information as to peer acceptance of gifted students and their perceived problems of personal and social adjustment at the junior high school level.

After analyzing the problems to be studied and reviewing the related research, attention was directed as to what research procedures should be used.

It was necessary to formulate the hypotheses to be tested for such a study at the junior high school level, secure information about the parent population involved, select the sample population to be used, determine the type of instrumentation for gathering the data, and decide upon the particular methodology and procedures to be used in collating and recording the data.

Hypotheses Tested

The first hypothesis of this study concerns the relationship of the intellectual ability continuum to the social acceptance continuum. There is evidence that the prestige factor of intelligence seems to attract attention of peers and thus places the gifted individual in a favorable position to be chosen on a sociometric test.

> The greater the junior high school student's intellectual capacity, the more likely he is to be socially accepted by his peer group.

A second hypothesis concerns itself with the vertical direction of students' social preferences. There is evidence that intelligence enters into mutual relationships among school children. Those students who choose each other on a sociometric test tend to be more alike in intelligence than the students who do not choose each other.

> Those junior high school students involved in mutual choices, show greatest social preference for individuals with mental ability equal to or higher than their own.

In formulating the third hypothesis, it was realized that the sociometric status scores of individuals can be interpreted most accurately when both the social and the personal factors perceived to be in operation by the individuals involved are identified.

> There is a set of problems commonly perceived by both gifted and nongifted junior high school social isolates.

Population

Parent Population

The parent population in this study consisted of all 2,733 seventh and eighth-grade students of the five junior high schools of Livonia, Michigan during the 1962-63 school year.

This total of 2,733 students included 1,414 seventh-graders (704 boys and 710 girls) in 47 classes and 1,319

eighth graders (685 boys and 634 girls) in 45 classes at the five schools. The classes averaged 30 students. A class list was obtained from each homeroom teacher for each of the 92 classes involved.

All 2,733 students were given the California Test of Mental Maturity and the sociometric test.

The Livonia public school system has no policy concerning grouping by ability at the junior high school level. Grouping procedures differ from one building to the next, and thus gifted children are scattered erratically throughout the parent population.

Sample Population

The 2,733 students participating in the first phase of this study were divided into four groups by the scores they received on the sociometric and psychometric tests. According to selective criteria used in this study, 14 students were categorized as gifted isolates, 216 as nongifted isolates, 177 as gifted nonisolates, and 2,326 as nongifted nonisolates.

Less than a week before the testing for the second phase of the study was to take place, it was decided by Livonia school's central office that permission should be obtained in writing from the parents of each child who was to participate. Therefore, the parents were asked if their children might participate in a research study evaluating

social adjustment of junior high school students. Dates had already been scheduled by the principal of each building for the administration of the adjustment inventories.

In preparing for the testing involved, it was found that one of the 14 gifted isolates located had moved out of district since the first phase of the study was completed. Since the gifted isolate group now numbered only 13 students, the parents of each student were phoned as a follow-up to permission slips being sent home, saying only that their child was one of only 13 students of one of the subgroups of the study, and that it would be greatly appreciated if 100 per cent of the students in this group could participate in order to not distort the results of the study. One hundred per cent approval was received for this group, thus insuring a complete cross section of the gifted isolates' perceived problems.

In selecting both nonisolate groups, it seemed imperative that, in order to show the full effect of acceptance versus nonacceptance, the comparison be between isolate or low status and high status students. "Shifts in sociometric status are relatively rare at the extreme sociometric status positions. This would tend to indicate that the high and low sociometric status positions are more stable than those in the average sociometric categories and thus can be used with greater confidence" (Gronlund, 1959, p. 131).

There were 65 high status students included in the 177 gifted nonisolates located in the first phase of the study. Permission slips were sent to the parents of those high status students still residing in the district. By the testing days scheduled by the principals, 28 of these had been returned, thus establishing the gifted nonisolate group to be tested.

There were 688 high status students included in the 2,326 nongifted nonisolates. Sixty-eight high status students were randomly selected (every tenth student). Permission slips were sent to the parents of those high status students still residing in the district. By the testing days scheduled, 31 had been returned, thus establishing the nongifted nonisolate group to be tested.

Seventy-two of the 216 nongifted isolates located were randomly selected (every third student), and permission slips were sent to the parents of those students still residing in the district. By the testing days scheduled, 46 had been returned, thus establishing the nongifted isolate group to be tested.

In summary, the sample population to be tested totaled 118 students: gifted isolate, 13; nongifted isolate, 46; gifted nonisolate, 28; and nongifted nonisolate, 31. All these students were given the three adjustment inventories.

Methods of Gathering the Data

The instruments used to gather the data for this study were the California Test of Mental Maturity, Vineland Social Maturity Scale, Mooney Problem Check List, Rohde Sentence Completion Test, and a sociometric test. The first four are standardized tests where validity and reliability have been established. The sociometric test used is not standardized but is of the type previously validated in similar situations.

California Test of Mental Maturity

The California Test of Mental Maturity was selected as the group screening instrument to locate the gifted students for this study because of its rather high correlation with accepted individual tests of mental ability.

The test was administered by the counseling staff in each of the five junior high schools. The fact that these counselors were already familiar with this test and had administered it repeatedly, insured the necessary reliability of administration. The answer sheets were collected and sent to the publisher for machine scoring, thus insuring scoring accuracy. The scores were returned to the writer on class section lists for district-wide tabulation.

The chief features of this test are "its analysis into language and nonlanguage abilities and into five factors: memory, spatial relationships, logical reasoning,

numerical reasoning, and vocabulary. Reliabilities, in one-grade ranges, vary from .89 to .97 for whole forms. There is a correlation of .88 with the Stanford Binet Test" (Sullivan, Clark, & Tiegs, 1947, p. 156).

Altus (1955, pp. 143-144) drew the comparison that the California Test of Mental Maturity has the desirable feature of offering both language and nonlanguage IQ scores similar to the verbal and performance IQ scores on the Wechsler Intelligence Scale for Children. In her article comparing the CTMM and WISC, she gives the following evaluation:

WISC - Full Scale - Mean 84.5, SD 17.4
CTMM - Total - Mean 84.8, SD 17.4

She found "an intercorrelation of .77 between the WISC full scale IQs and the CTMM total IQs," and concluded that "the WISC and CTMM are markedly comparable as to group assessment and roughly comparable as to individual scores and major breakdown into verbal and nonverbal abilities."

Sociometric Test

A sociometric test of the type originated by Moreno (1934) was administered to all seventh and eighth-grade classes by their homeroom teachers. The test consisted of three criteria with three choices each. An allowance of three to five choices is usually sufficient to reveal the relative position of an individual in the group. As

summarized by Jennings (1950, p. 19), "the individuals who attract the greater portion of the choices on the basis of a small choice allowance, continue still to profit disproportionately under the larger choice allowance, and the number of individuals unchosen under the first condition is not substantially reduced under the second condition."

The writer attempted to select criteria referring to different kinds of social situations occurring in the junior high school which offer opportunity for interaction in groups of various sizes. Care was taken that the choices would be made on a friendship basis rather than a working companion basis so that the popularity of the gifted could be evaluated apart from the possibility of their being cultivated as potential academic helpers.

Directions were printed at the head of the sociometric test and read aloud by the teacher as the students read them silently. The class packets of completed test forms were then returned to the writer for tabulation. A copy of the sociometric test form used in this study may be seen in Appendix A.

"The sociometric test, itself, is not a test in the sense that the term is commonly used, but rather a technique" (Gronlund, 1959, p. 1). "Sociometric nominations have generally proved to be one of the most dependable of rating techniques. When checked against a variety of practical criteria dependent upon interpersonal relations,

such ratings have been found to have good predictive validity" (Lindzey & Borgatta, 1954).

Gronlund (1959, p. 129) compared the results of sociometric studies made among adolescents and found that sociometric status scores are fairly stable, even over a period of almost two years.

"These findings are understandable when we consider some of the features of sociometry. First, the number of raters is large, including all group members. Second, an individual's peers are often in a particularly favorable position to observe his typical behavior. They may thus be better judges of certain interpersonal traits than teachers, supervisors, and other outside observers. Third, and probably most important, is the fact that the opinions of group members, right or wrong, influence their actions and hence partly determine the nature of the individual's subsequent interactions with the group. Other comparable groups may be expected to react toward the individual in a similar fashion. Sociometric ratings may thus be said to have content validity in the same sense as worksamples" (Anastasi, 1961, p. 622).

Adjustment Inventories

A battery of adjustment inventories was selected to yield the broadest possible picture of an individual's perceived life problems. From this battery, the writer has

attempted to determine how the members of the gifted and nongifted, isolate and nonisolate groups perceive their environment, their positions in it, and the role they see important people, such as parents and teachers, playing in their lives. In order to draw comparisons and contrasts of the groups being studied, it was necessary for all instruments included to yield quantitative results.

This battery of adjustment inventories was administered, by the writer, to 59 members of the isolate group (13 gifted and 46 nongifted students) and to 59 members of the nonisolate group (28 gifted and 31 nongifted students) with the assistance of several counselors as proctors.

Adjustment-testing instruments may be grouped into two major categories. One, the inventories and rating scales, presents to the subject, or to an informant, a broad, structured stimulus situation, e.g., questions to be answered, problem check lists, or trait names to be rated, and the responses are quantitative. Ratings on this type of instrument can be made by the individual for his own traits, or they may be rated by other people who know him. Two of the inventories used in this battery, the Vineland Social Maturity Scale and the Mooney Problem Check List, fall into this first category.

In tests in the second category, the subject is presented with an informal, ambiguous, nonstructured stimulus, the responses to which will be influenced, if not entirely

controlled, by his personality dynamics. The third inventory used in this battery, the Rohde Sentence Completion Test, falls into this second category.

The three adjustment inventories used in this study and the procedures for administering and scoring them are described below.

Vineland Social Maturity Scale.--The Vineland Social Maturity Scale, designed by E. A. Doll (1947, pp. 1-2), "provides a definite outline of detailed performances in respect to which students show a progressive capacity for looking after themselves and for participating in those activities which lead toward ultimate independence as adults. The items of the Scale are arranged in order of increasing average difficulty, and represent progressive maturation in self-help, self-direction, locomotion, occupation, communication and social relations."

Only items 75 through 101 were used. It seemed important to not include those early items indicating a degree of dependence as to insult the adolescent personality and yet to begin early enough in the sequence of items to insure identification of the most socially immature members of the group. Items beyond 101 pertain to individuals who are fulltime employed.

"Under favorable conditions the Scale may be administered with the subject of the examination acting as his own informant. Results obtained in this way tend to be

slightly higher on the average, but are in some cases lower, than those obtained from independent informants. Often the subject is a better informant than someone else" (Doll, 1947, p. 11). In this study each student acted as his own informant. The counselors for each junior high school who assisted as proctors also served as judges of the authenticity of the responses made by students from that building.

An individual may be ranked in one of five ways on each item on the Vineland Scale, yielding 0, .5, or 1 point of raw score. The categories are as follows: items done regularly with neither artificial incentive nor undue urging (1); items done occasionally, in transitional or emergent state (.5); items not done at all or only rarely or under extreme pressure (0); items which could be done if subject were allowed (1); items the subject has no opportunity to do, (1) if within range of continuous point scores, (0) if within range of continuous zero scores, and (.5) if within intermediate range. Two half-credits were counted as one full point of score.

Mooney Problem Check List.--Mooney (1950, p. 4) developed the Problem Check Lists to help students express their personal problems in areas known to be important in the adjustment of adolescents. The Problem Check List used in this study was "the junior high school form containing seven problem areas: health and physical development; school;

home and family; money, work, the future; boy and girl relations; relations with people in general; and self-centered concerns."

"The procedure of administration is simple. All directions needed are on the cover page. Students read through the list and mark the problems which are of concern to them" (Mooney, 1950, p. 3).

The problems marked on each list were counted for each problem area and totaled.

Rohde Sentence Completion Test.--In the Sentence Completion Test developed by Rohde (1957, pp. 46-47), only the opening words are provided, the subject being required to write the ending. "Included in this test are 18 objects: mother, father, friends, God, religion, opposite sex, same sex, home, work, teachers, laws, et cetera, around which emotional and social adjustment and adaptation revolve and with which foci of conflict are associated." A study of "cathections," or the acceptance or rejection of these objects, was used in this study.

"In the administration of this test, directions at the top of the page are read aloud. It is suggested to the group that whatever responses the individual cares to make will be entirely acceptable, and the examinees write their responses" (Rohde, 1957, p. 62). The entire 65 item folder was administered since the 18 cathected objects were scattered randomly throughout the 65 items. This helped

to secure responses on all cathected objects and to insure a greater depth of projectivity in the responses on these objects.

Those objects which were accepted, or for which an attachment was expressed, were classified and scored under the heading of positive cathection. Objects for which dislike or revulsion was expressed, were classified and scored under negative cathections. If neither acceptance nor rejection was indicated, it was classified and scored as neutral.

Methods of Collating and Recording the Data

Several aspects of this research study made it either impossible or impractical to utilize electronic data processing equipment. It therefore became logical to utilize a number of tables in a step by step collation of the data. These tables were not only the most simplified manner of collating the data, but samples of them in the appendices should serve to show the reader the logic involved in the methods of analysis. The particular methodology and procedures used to collate and record the data are described in the following paragraphs.

Psychometric Data

The IQs used in this study were all total IQs obtained from results of the California Test of Mental Maturity. The names on each of the 92 class lists were put in alphabetical

order (girls, followed by boys), and the CTMM total score was entered beside each name.

Psychometric categories.--The mental ability groups are defined in Chapter I, page 6 and are operationally defined here as follows: highly gifted, IQs of 150 and up; gifted, IQs of 130 through 149; rapid learner, IQs of 115 through 129; average mental ability, IQs of 85 through 114; slow learner, IQs of 70 through 84; and educable retarded, IQs of 50 through 69.

These psychometric groupings or categories have been created by educators through the years for the purpose of homogeneous grouping by ability in an effort to improve instruction through individualization. The IQ limits placed on these categories are arbitrarily set by this writer and draw their antecedents from research related to psychometric instruments and special education programs.

The scores of 85 and 115 are the breaking points of validity of the group paper and pencil tests of mental ability. The scores of 50 and 150 are the breaking points of validity of the Stanford Revision of the Binet. The score of 130 was set by educators of gifted children when they suggested that a child have a mental age of 1.3 times his chronological age in order to be considered a gifted child. The score of 70 was set by educators of the mentally retarded as the standard below which social maladjustments

and emotional disturbances resulting from frustration and lack of acceptance would off-balance the academic gains were the child placed in the regular classroom.

Sociometric Data

When a sociometric test has been administered to a classroom group, the resulting data will include the list of choices each pupil has made on each sociometric criterion.

The 92 class packets of completed sociometric tests were returned to the writer from the homeroom teachers. The tests from each class were put in alphabetical order (girls, followed by boys) and checked with the original class lists to make certain each student in the room returned the sociometric test.

The completed test packets were filed according to their class number and as to which junior high school the students attended. These packets were set aside until the matrix tables were constructed and the data could be recorded on them.

Matrix tables.--A modified version of the matrix table or graphic plotting, originally constructed by Jennings (1950) in her study of leadership, was used to meet the specific needs of this study. A separate matrix table was constructed for each of the 92 classes on each of the three criterion used in the sociometric test, for a total of 276 tables. The three matrix tables for one class are in Appendix B.

Each class packet of the sociometric tests was considered separately, and each criterion was on a separate table, making three tables for each class. The girls' names (first name and last initial) were written down the left of the table in alphabetical order, followed by the boys' names. The students were numbered consecutively from top to bottom and across the top margin of the table.

The heavy line drawn both vertically and horizontally between the list of girls and the list of boys divided the matrix table into four parts and made it easier to record choices. The diagonal line drawn from the upper left-hand corner to the lower right-hand corner served as a guide in identifying mutual choices.

At the left of the names, vertical columns were used for summarizing choices given, and at the bottom of the matrix table the rows were used for summarizing information on choices received.

The sociometric test results were recorded by placing the choices made by each individual in the proper column opposite the chooser's name. The columns were then totaled and the number of choices received by each student was recorded.

The sociometric test results were recorded by placing the choices made by each individual in the proper column opposite the chooser's name. The columns

were then totaled and the number of choices received by each student was recorded.

The mutual choices were identified by starting at the diagonal line in the upper left-hand corner and going down column one to determine if any of the students whom person number one chose also chose him, et cetera. The mutual choices were circled on each matrix table and totaled for each individual. The complete tabulation of the sociometric test data was recorded in the matrix tables.

Sociometric categories.--The sociometric categories used in this study are defined in Chapter I, page 5 and are operationally defined here as follows: star, 15 choices and up; above average, 12 through 14 choices; average, 7 through 11 choices; below average, 4 through 6 choices; neglectee, 1 through 3 choices; and isolate, 0 choices received.

The method of classifying the students into the sociometric categories given here is based on Bronfenbrenner's (1945) fixed frame of reference. "This reference indicates the critical sociometric status scores for varying numbers of choices and sociometric criteria. The upper and lower limits presented in this reference are actually limits of statistical significance at the .02 and .03 level. Receiving as few choices as the value indicated in the lower limit, or as many choices as the values indicated in the

upper limit, would be expected less than two, or three, times out of a hundred by chance alone.

The teacher can be fairly confident that pupils classified as neglectees and isolates (lower limit) and stars (upper limit) have been placed in the proper sociometric category. The values for the lower and upper limits may be applied to any group which contains no fewer than ten persons and no more than fifty persons.

Thus, the frame of reference remains fixed for groups of varying size, and the number of students in different groups can be compared directly even though the size of the groups is different. However, the criteria used and the number of choices allotted must remain the same for all classroom groups, and the classroom groups must contain between ten and fifty pupils" (Bronfenbrenner, 1945).

Psychometric and Sociometric Categorization of Data

Inasmuch as the basic hypothesis of this study was the comparison of the intellectual ability continuum and the social acceptance continuum, it seemed most logical to establish grids, compartmentalizing the various sets of data into the psychometric and sociometric categories in as many ways as possible. The summary tables, the mutual choice tables, and the frequency tables convert the raw data into collated categories from which the comparative grids have been constructed.

Summary tables.--Summary tables were compiled, one for each of the 92 classes. Each table lists the students as they appeared on the matrix tables, their IQs with the resulting psychometric categories, the number of choices received on each sociometric criterion, and total number of choices with the resulting sociometric categories. The summary table for one class is in Appendix C. The comparative data on each student as shown on the summary tables made it possible to construct two frequency tables to be described later.

Mutual choice tables.--Along the base of each matrix table is a column of totals of mutual choices. Mutual choice tables were constructed, one for each of the 92 classes, and students involved in mutual choices were listed by their matrix table numbers. The mutual choices were counted and recorded on the mutual choice tables along with both students' matrix table numbers, IQs, psychometric category assignment, total choices received, and sociometric category assignment. A mutual choice table for one class is shown in Appendix D.

Frequency tables.--By using the data from the summary tables, it was possible to count the number of students who fell at each IQ score into each particular sociometric category. A frequency distribution of this data is recorded in Appendix E.

It was also possible to count the number of students who fell at each sociometric choice number and into each particular psychometric category. A frequency distribution of this data is recorded in Appendix F.

Adjustment Inventory Data

The three completed adjustment inventory forms for each of the 118 students were scored. The scored forms were divided in the following three ways for comparative item analyses.

For the first consideration the forms were divided into two groups, isolate versus nonisolate. For a comparison all forms were then separated into two groups, gifted versus nongifted. Finally, all forms were sorted into four groups; gifted isolate, nongifted isolate, gifted nonisolate, and nongifted nonisolate.

Since all three inventories yielded quantitative results, the results could be tabulated and recorded for each defined group. The frequency with which individuals responded on various items facilitated the compilation of lists of commonly perceived problems for each of the defined groups.

Data Analysis

The analysis of data in Chapter IV shall consist of a narrative presentation interspersed with tables to provide as many views of the data as possible. The narration

enumerates the more descriptive statistics from the tables to add clarity and emphasis.

In the analysis of the data from the second phase of the study, under adjustment inventories, the formula for computing the standard error of the difference between two sample percentages was applied to the comparative percentages for the subgroups and only those items showing a greater difference than might be expected to occur by sampling error have been mentioned.

$$\sigma_{p_1-p_2} = \sqrt{\frac{p_1q_1}{N_1} + \frac{p_2q_2}{N_2}}$$

The critical ratio, t, was also calculated for these items, and where there was sufficient difference between the respective percentages to be significant at the .01 level, the items were listed as showing a significant difference between the subgroups.

$$t = \frac{p_1-p_2}{\sigma_{p_1-p_2}}$$

These formulas were applied as recommended by Smith (1958, pp. 61-63).

CHAPTER IV

ANALYSIS OF DATA

The data gathered in this study have been presented in comparative tables designed to give the reader alternate views of the data, tabulated under both psychometric and sociometric categories. These tables are accompanied by a narrative presentation to focus attention on the more significant descriptive statistics that are the bases of the conclusions and implications presented in Chapter V.

For the broadest possible view of the psychometric and sociometric data yielded by the first phase of this study, it is necessary to refer to Appendices E and F which include the initial frequency distributions under both psychometric and sociometric categories.

Psychometric Data

The psychometric data compiled in the frequency table in Appendix F have been summarized in Table 1 to show the number and per cent of the total group which fell in each psychometric category.

It may be noted that 56.6 per cent of the total group tested were included in the average IQ range, and that 31.5 per cent scored in the rapid learner group as

compared to 4.5 per cent in the slow learner group. There were .4 per cent in the educable mentally retarded range as contrasted to 7 per cent in the gifted range.

TABLE 1.--Number and per cent of students in each psychometric category.

Psychometric Category	CTMM IQ	Number of Students	Per Cent of Students
Highly Gifted	150 - Up	1	.04
Gifted	130 - 149	190	6.95
Rapid Learner	115 - 129	862	31.54
Average	85 - 114	1547	56.61
Slow Learner	70 - 84	122	4.46
Educable	50 - 69	11	.40
Totals		2733	100.00

Sociometric Data

The sociometric data compiled in the frequency table in Appendix E have been summarized in Table 2 to show the number and per cent of the total group which fell in each sociometric category.

It may be seen here that 29 per cent of the total group are included in the average sociometric range, and that 11 per cent ranked in the above-average category as contrasted to 19 per cent in the below-average category. There were 16 per cent in the neglectee category and 8 per

cent in the isolate group as compared to 16 per cent in the star category.

TABLE 2.--Number and per cent of students in each sociometric category.

Sociometric Category	Number Choices Received	Number of Students	Per Cent of Students
Star	15 - Up	447	16.40
Above Average	12 - 14	306	11.20
Average	7 - 11	796	29.12
Below Average	4 - 6	513	18.77
Neglectee	1 - 3	441	16.12
Isolate	0	230	8.39
Totals		2733	100.00

Psychometric and Sociometric Categorization of Data

The comparison of the intellectual ability continuum and the social acceptance continuum is enhanced by tables showing alternate views of the data, first under psychometric categories, then under sociometric categories. These tables have been summarized in as many ways as possible to lend added emphasis.

Decile Distributions

In order to give a definitive view of the resulting distribution of cases along the intellectual ability

continuum, the rank order of the 2,733 students shown in the frequency table in Appendix E was divided into deciles, and a mean number of choices was computed for each decile. This decile distribution is shown in Table 3.

The apparent overlap of the categories within Table 3 and Table 4 resulted from the fixed ten per cent in each decile category. There are, therefore, individuals with the same scores placed in different deciles.

TABLE 3.--Psychometric decile distribution with mean number of choices.

Decile	CTMM IQ Range	Mean Number Choices
First	127-153	9
Second	122-127	9
Third	118-122	10
Fourth	114-118	9
Fifth	110-114	8
Sixth	107-110	8
Seventh	102-107	9
Eighth	98-102	8
Ninth	91- 98	7
Tenth	60- 91	7

It may be noted that the fifth and six deciles each have a mean number of 8 choices, and that the fourth and seventh deciles each have a mean number of 9 choices. However, the third decile has a mean number of 10 choices as contrasted to a mean number of 8 choices for the eighth decile. The first and second deciles have means of 9 choices contrasted to means of 7 choices for the ninth and tenth deciles.

To give a more definitive view of the resulting distribution of cases along the social acceptance continuum, the rank order of the 2,733 students shown in the frequency table in Appendix F was divided into deciles and a mean IQ was computed for each decile. This decile distribution is shown in Table 4.

TABLE 4.--Sociometric decile distribution with mean IQs.

Decile	Range in Number of Choices	Mean IQ
First	17-41	112
Second	13-17	111
Third	11-13	112
Fourth	9-11	110
Fifth	8- 9	110
Sixth	6- 8	109
Seventh	4- 6	108
Eighth	3- 4	110
Ninth	1- 3	108
Tenth	0- 1	105

The mean IQs for all ten deciles fall in the upper half of the average range of mentality with seven IQ points difference between the mean IQ for the first decile and the mean IQ for the tenth decile. Except for the mean IQs of

the third and eighth deciles, there is an upward progression in mean IQs from the tenth to the first decile.

Comparting the Data

To give a more detailed picture of the data, two tables, with comparable compartments, were compiled to more precisely compare the psychometric and sociometric data. Table 5 shows the number and the per cent of students of each psychometric category as they ranked under the sociometric categories.

Of the average IQ group, 15.1 per cent ranked as stars whereas 18.4 per cent of the gifted and 19.5 per cent of the rapid learners ranked as stars. Of the average IQ group 11.0 per cent fell in the above average sociometric category whereas 10.7 per cent of the rapid learners and 15.8 per cent of the gifted group fell into this category.

Looking at the below average IQ groups, it will be noted that 15.6 per cent of the slow learners and 54.5 per cent of the retarded group rank as isolates as compared with 9.2 per cent of the average IQ group, 5.5 per cent of the rapid learners, and 7.4 per cent of the gifted.

Table 6 shows the number and the per cent of students of each sociometric category as they ranked under the psychometric categories.

Of the star group, 7.9 per cent of the stars were gifted; whereas, 5.9 per cent of the average sociometric group and 6.0 per cent of the isolate group were gifted.

TABLE 5.--Organization of psychometric data under sociometric categories.

Psychometric Categories	Sociometric Categories: Star 15-Up	Above Average 12,13,14	Average 7,8.9, 10,11	Below Average 4,5,6	Neglectee 1,2,3	Isolate 0	Totals
Highly Gifted 150-Up	0 0%	0 0%	1 100%	0 0%	0 0%	0 0%	1 100%
Gifted 130-149	35 18.4%	30 15.8%	47 24.7%	31 16.3%	33 17.4%	14 7.4%	190 100%
Rapid Learner 115-129	168 19.5%	92 10.7%	280 32.5%	150 17.4%	124 14.4%	48 5.5%	862 100%
Average 85-114	233 15.1%	170 11.0%	437 28.2%	298 19.3%	266 17.2%	143 9.2%	1547 100%
Slow Learner 70-84	10 8.1%	13 10.7%	29 23.8%	33 27.0%	18 14.8%	19 15.6%	122 100%
Educable Retarded 50-69	1 9.1%	1 9.1%	2 18.2%	1 9.1%	0 0%	6 54.5%	11 100%
Totals	477	306	796	513	441	230	2733

TABLE 6.--Organization of sociometric data under psychometric categories.

Socio-metric Categories	Psychometric Categories						
	Highly Gifted 150-Up	Gifted 130-149	Rapid Learner 115-129	Average 85-114	Slow Learner 70-84	Educable Retarded 50-69	Totals
Star 15-Up	0 0%	35 7.9%	168 37.6%	233 52.1%	10 2.2%	1 .2%	447 100%
Above Average 12-14	0 0%	30 9.8%	92 30.1%	170 55.6%	13 4.3%	1 .2%	306 100%
Average 7-11	1 .1%	47 5.9%	280 35.2%	437 54.9%	29 3.6%	2 .3%	796 100%
Below Average 4-6	0 0%	31 6.0%	150 29.2%	298 58.1%	33 6.5%	1 .2%	513 100%
Neglectee 1-3	0 0%	33 7.5%	124 28.1%	266 60.3%	18 4.1%	0 0%	441 100%
Isolate 0	0 0%	14 6.0%	48 20.9%	143 62.2%	19 8.3%	6 2.6%	230 100%
Totals	1	190	862	1547	122	11	2733

Within the star group, 37.6 per cent were rapid learners compared to 35.2 per cent of the average sociometric group and 20.9 per cent of the isolate group.

Also in the star group, 52.1 per cent were of average IQ compared to 54.9 per cent of the average sociometric group and 62.2 per cent of the isolate group.

Of the star group, 2.2 per cent ranked as slow learners; whereas, 3.6 per cent of the average sociometric group and 8.3 per cent of the isolate group were slow learners.

Comparing Tables 5 and 6, it may be seen that while 18.4 per cent of the gifted are stars in Table 5, 7.9 per cent of the stars fall in the gifted category in Table 6. Furthermore, 54.5 per cent of the retarded are isolates in Table 5 and 2.6 per cent of the isolates in Table 6 are retarded.

Table 7 gives the most comprehensive view of the full scope of the data from phase one of the study. The sociometric and psychometric categories were placed in columns and rows, creating a grid to compart the data, and giving numbers and percentages of the total 2,733 cases. The columns and rows each show total cases and percentages relative to the grand total.

Psychometric and Sociometric Means

It seemed important that, in addition to the various comprehensive analyses of the data, there should be a

TABLE 7.--Compartmentalization of the psychometric and sociometric data.

Psychometric Categories	Sociometric Categories						
	Star 15-Up	Above Average 12,13,14	Average 7,8,9, 10,11	Below Average 4,5,6	Neglectee 1,2,3	Isolate 0	Totals
Highly Gifted 150-Up	0 0%	0 0%	1 .04%	0 0%	0 0%	0 0%	1 .04%
Gifted 130-149	35 1.28%	30 1.10%	47 1.72%	31 1.13%	33 1.21%	14 .51%	190 6.95%
Rapid Learner 115-129	168 6.18%	92 3.36%	280 10.24%	150 5.48%	124 4.53%	48 1.75%	862 31.54%
Average 85-114	233 8.53%	170 6.22%	437 15.99%	298 10.91%	266 9.73%	143 5.23%	1547 56.61%
Slow Learner 70-84	10 .37%	13 .48%	29 1.06%	33 1.21%	18 .65%	19 .69%	122 4.46%
Educable Retarded 50-69	1 .04%	1 .04%	2 .07%	1 .04%	0 0%	6 .21%	11 .40%
Totals	447 16.40%	306 11.20%	796 29.12%	513 18.77%	441 16.12%	230 8.39%	2733 100.00%

summarization of the data by the psychometric and sociometric categories. The most appropriate comparative figures seem to be mean IQs for the total group included under each sociometric category and a mean number of choices awarded for the total group under each psychometric category. These comparative means may be seen in Tables 8 and 9.

The mean CTMM scores of the students ranking in each of the sociometric categories were computed, and Table 8 was constructed comparing them to the mean CTMM score for the entire group of 2,733 students.

In Table 8 there is a progressively higher mean IQ for the sociometric categories, moving up the social acceptance continuum, with the exception of the neglectee category. It should be noted that the mean IQ for the neglectee group is the same as the mean IQ for the entire group; whereas, the mean IQ for the below average group is lower than the mean IQ for the neglectee group.

The mean number of choices awarded the students ranking in each of the psychometric categories was computed, and Table 9 was constructed comparing them to the mean number of choices for the entire group of 2,733 students.

In Table 9 there is a progressively higher mean number of choices for the psychometric categories, moving up the intellectual ability continuum from the educable retarded through the average IQ group, with the same mean number of choices for the average psychometric category as for the entire group.

TABLE 8.--Psychometric means for sociometric categories.

	Sociometric Categories					
	Star 15-Up	Above Average 12-14	Average 7-11	Below Average 4-6	Neglectee 1-3	Isolate 0
Psychometric Means	112 IQ	111 IQ	110 IQ	108 IQ	109 IQ	104 IQ
Total Mean IQ	2733 Students				109	

TABLE 9.--Sociometric means for psychometric categories.

	Psychometric Categories					
	Highly Gifted 150-Up	Gifted 130-149	Rapid Learner 115-129	Average 85-114	Slow Learner 70-84	Educable Retarded 50-69
Sociometric Means	9 Choices	9 Choices	9 Choices	8 Choices	6 Choices	4 Choices
Total Mean Choices	2733 Students				8	

For each of the three above-average IQ categories, the mean number of choices awarded is the same and is higher than both the mean number of choices awarded to the average IQ group and the mean number of choices for the entire group.

Mutual Choice Data

A mutual choice is indicated when two individuals choose each other on the same sociometric criterion. The pattern and scope of mutual choosing serve as an additional, more intensive, index of the extent to which each pupil is developing satisfying social relationships and with whom.

In order to provide for maximum comparison of the mutual choice data with earlier tabulation of total choices received, tables have been constructed compiling the data from the 92 mutual choice tables and alternating, first under psychometric and then under sociometric categories.

Distribution of Mutual Choices

In Table 10 the psychometric categories are used to form both the columns and the rows, creating a grid that comparts the choices according to the psychometric categories linked by the mutual choice pairs. Each compartment contains the total number of mutual choices resulting from the selections on all three criteria and the resulting percentage of the total 9,596 mutual choices.

TABLE 10.--Psychometric distribution of mutual choices.

Psychometric Categories	Highly Gifted	Gifted	Rapid Learner	Average	Slow Learner	Educable Retarded
Highly Gifted	0					
Gifted	4 .04%	128 1.34%				
Rapid Learner	0	718 7.48%	1568 16.34%			
Average	0	334 3.48%	2544 26.52%	3656 38.09%		
Slow Learner	0	6 .06%	16 .16%	530 5.52%	54 .57%	
Educable Retarded	0	0	0	34 .36%	4 .04%	0

The educable group, consisting of 11 students or .4 per cent of the entire 2,733 studied, received 19 mutual choices or .2 per cent of 9,596 mutual choices. The slow learners, made up of 122 students or 4.46 per cent of the total group studied, received 332 mutual choices or 3.46 per cent of all mutual choices.

The intellectually average group, including 1,547 students or 56.61 per cent of the total group studied, received 5,377 mutual choices or 56.03 per cent of all mutual choices. The rapid learners, consisting of 862 students or 31.54 per cent of the total population studied, received 3,207 mutual choices or 33.42 per cent of all mutual choices.

The gifted group, involving 190 students or 6.95 per cent of the total, received 659 mutual choices or 5.87 per cent of all mutual choices. The highly gifted student, making up .04 per cent of the total group studied, received 2 mutual choices or .02 per cent of all mutual choices.

Of all the mutual choices awarded by those with above-average mentality, 62.5 per cent were awarded to others with above-average mentality; 37.2 per cent were given to peers with average mental ability; and .3 per cent were given to individuals with below-average mental ability.

Of all the mutual choices awarded by those with below-average mentality, 21.4 per cent were awarded to other individuals with below-average mentality as compared to 78.6 per cent given to individuals with average or above-average mentality.

In Table 11 the sociometric categories are used to form both the columns and the rows, creating a grid that comparts the choices according to the sociometric categories linked by the mutual choice pairs.

Each compartment contains the total number of mutual choices resulting from the selections on all three criteria and the resulting percentage of the total 9,596 mutual choices.

The star group, including 447 students or 16.4 per cent of the entire 2,733 studied, received 2,740 mutual choices or 28.57 per cent of 9,596 mutual choices.

TABLE 11.--Sociometric distribution of mutual choices.

Sociometric Categories	Star	Above Average	Average	Below Average	Neglectee
Star	1140 11.88%				
Above Average	980 10.24%	402 4.19%			
Average	1684 17.54%	1114 11.60%	1344 14.00%		
Below Average	404 4.22%	374 3.90%	970 10.10%	334 3.48%	
Neglectee	132 1.38%	96 1.00%	296 3.08%	238 2.48%	88 .91%

The above-average sociometric group, consisting of 306 students or 11.20 per cent of the entire group, received 1,684 mutual choices or 17.56 per cent of all mutual choices.

The average sociometric group, including 796 students or 29.12 per cent of the total group, received 3,376 mutual choices or 35.16 per cent of all mutual choices.

The below-average group, consisting of 513 students or 18.77 per cent of the entire group, received 1,327 mutual choices or 13.83 per cent of all mutual choices.

The neglectees, consisting of 441 students or 16.12 per cent of the total group, received 469 mutual choices or 4.88 per cent of all mutual choices.

The isolate group, involving 230 students or 8.39 per cent of the group studied, by definition is the group that gave choices but received none, and thus they were not involved in mutual choices.

Of all the mutual choices awarded, 66 per cent were given to individuals of the above-average, average, and below-average sociometric groups; 29 per cent were awarded to members of the star group; and 5 per cent were given to members of the neglectee group.

Patterning of Mutual Choices

Table 12 was designed to show the vertical direction of choosing for each psychometric group. The analysis of this table is concerned with the within, above, and below-group division of choices.

This table shows that the two mutual choices awarded by the one highly gifted student were given to the gifted.

Of all the mutual choices awarded by the gifted, 19.4 per cent were within-group choices of other gifted students; .3 per cent were above-group choices given to the one highly gifted student; and 80.3 per cent were below-group choices, 54.5 per cent given to rapid learners, 25.3 per cent given to those with average ability, and .5 per cent given to slow learners.

Considering all mutual choices awarded by rapid learners, 48.9 per cent were within-group choices of other rapid learners; 11.2 per cent were above-group choices of

TABLE 12.--Psychometric patterning of mutual choices.

Chooser	Chosen	Number	Per Cent
Highly Gifted	Highly Gifted	0	0
	Gifted	2	100
	Rapid Learner	0	0
	Average	0	0
	Slow Learner	0	0
	Educable	0	0
	TOTALS	2	100
Gifted	Highly Gifted	2	.3
	Gifted	128	19.4
	Rapid Learner	359	54.5
	Average	167	25.3
	Slow Learner	3	.5
	Educable	0	0
	TOTALS	659	100.0
Rapid Learner	Highly Gifted	0	0
	Gifted	359	11.2
	Rapid Learner	1568	48.9
	Average	1272	39.7
	Slow Learner	8	.2
	Educable	0	0
	TOTALS	3207	100.0
Average	Highly Gifted	0	0
	Gifted	167	3.1
	Rapid Learner	1272	23.7
	Average	3656	68.0
	Slow Learner	265	4.9
	Educable	17	.3
	TOTALS	5377	100.0
Slow Learner	Highly Gifted	0	0
	Gifted	3	.9
	Rapid Learner	8	2.4
	Average	265	79.8
	Slow Learner	54	16.3
	Educable	2	.6
	TOTALS	332	100.0
Educable	Highly Gifted	0	0
	Gifted	0	0
	Rapid Learner	0	0
	Average	17	89.5
	Slow Learner	2	10.5
	Educable	0	0
	TOTALS	19	100.0

the gifted; and 39.9 per cent were below-group choices, 39.7 per cent given to the average, and .2 per cent given to slow learners.

Among the mutual choices given by the intellectually average group, 68 per cent were within-group choices given to other average individuals. The average ability group made 26.8 per cent above-group choices, giving 23.7 per cent to rapid learners and 3.1 per cent to the gifted. Of the 5.2 per cent below-group choices made by the average group, 4.9 per cent were given to the slow learners and .3 per cent to the educable.

Of all mutual choices awarded by the slow learning group, 83.1 per cent were above-group choices. These included 79.8 per cent given to those of average mental ability, 2.4 per cent to the rapid learners, and .9 per cent to the gifted. Slow learners made 16.3 per cent within-group choices with other slow learners, and .6 per cent of their choices were below-group choices given to the educable.

All the mutual choices awarded by the educable retarded were given to members of the slow learning group or to those with average mental ability, showing 100 per cent above-group choosing for the educable.

Table 13 was designed to show the vertical direction of choosing for each sociometric group. The analysis of this table is concerned with the within, above, and below-group division of choices.

TABLE 13.--Sociometric patterning of mutual choices.

Chooser	Chosen	Number	Per Cent
Star	Star	1140	41.6
	Above Average	490	17.9
	Average	842	30.7
	Below Average	202	7.4
	Neglectee	66	2.4
	TOTALS	2740	100.0
Above Average	Star	490	29.1
	Above Average	402	23.8
	Average	557	33.1
	Below Average	187	11.1
	Neglectee	48	2.9
	TOTALS	1684	100.0
Average	Star	842	24.9
	Above Average	557	16.5
	Average	1344	39.8
	Below Average	485	14.4
	Neglectee	148	4.4
	TOTALS	3376	100.0
Below Average	Star	202	15.2
	Above Average	187	14.1
	Average	485	36.5
	Below Average	334	25.2
	Neglectee	119	9.0
	TOTALS	1327	100.0
Neglectee	Star	66	14.1
	Above Average	48	10.2
	Average	148	31.5
	Below Average	119	25.4
	Neglectee	88	18.8
	TOTALS	469	100.0

Of all the mutual choices awarded by stars, 41.6 per cent were within-group choices awarded to other stars; 58.4 per cent were below-group choices, 56 per cent awarded to the three average sociometric groups, and 2.4 per cent given to the neglectee group.

Considering all 6,387 choices awarded by the three average sociometric groups, 24 per cent were above-group choices awarded to members of the star group; 5 per cent were below-group choices awarded to the neglectee group; and 71 per cent may be considered as within-group choices given to other members of the three average sociometric groups.

Including all mutual choices awarded by the ngelectee group, 18.8 per cent were within-group choices with other neglectees; 81.2 per cent were above-group choices, 67.1 per cent awarded to the three average sociometric groups, and 14.1 per cent given to the star group.

Comparative Involvement in Mutual Choosing

Tables 14 and 15 summarize the extent to which the members of the various psychometric and sociometric groups were involved in social interaction in their homeroom groups.

The row of totals across the bottom of each table show that the entire 2,733 students had an opportunity for 24,597 mutual choices. The total of column three indicates

that 9,59[illegible] mutual choices were made, or 39 per cent of the possible total.

In Table 14, the per cent of involvement column at the right shows that the gifted and intellectually average groups achieved 39 per cent or average involvement in mutual choosing. The rapid learners, however, achieved 41 per cent involvement, showing somewhat above-average interaction. The slow learning group scored 30 per cent involvement or below-average interaction.

The highly gifted individual scored 22 per cent involvement, and the eleven members of the educable retarded group scored 19 per cent or considerably below-average interaction.

In Table 15, the per cent of involvement column at the right shows that the members of the star group achieved 68 per cent involvement in mutual choosing or an exceedingly high level of interaction.

The above-average sociometric group achieved 61 per cent involvement or a high level of interaction. The average sociometric group achieved 47 per cent involvement which is still a high level of interaction. The below-average sociometric group, however, achieved 29 per cent involvement as compared to the over-all average of 39 per cent or a low level of interaction.

The neglectee group achieved 12 per cent involvement in mutual choosing or an exceedingly low level of interaction.

TABLE 14.--Comparative involvement of the psychometric categories in mutual choosing.

Psychometric Categories	Number of Students	Total Possible Mutual Choices	Actual Number Mutual Choices	Per Cent of Involvement
Highly Gifted	1	9	2	22
Gifted	190	1,710	659	39
Rapid Learner	862	7,758	3,207	41
Average	1,547	13,923	5,377	39
Slow Learner	122	1,098	332	30
Educable Retarded	11	99	19	19
TOTALS	2,733	24,597	9,596	39

TABLE 15.--Comparative involvement of the sociometric categories in mutual choosing.

Sociometric Categories	Number of Students	Total Possible Mutual Choices	Actual Number Mutual Choices	Per Cent of Involvement
Star	447	4,023	2,740	68
Above Average	306	2,754	1,684	61
Average	796	7,164	3,376	47
Below Average	513	4,617	1,327	29
Neglectee	441	3,969	469	12
Isolate	230	2,070	0	0
TOTALS	2,733	24,597	9,596	39

The isolate group, those who received no choices, had no mutual choices and thus might be construed to have little or no interaction with their peers in their classroom groups.

Adjustment Inventory Data

The second phase of the study consisted of the administration of the three adjustment inventories to a total group of 118 students from the 2,733 students participating in the first phase of the study.

Three separate tabulations were made for each of the three adjustment inventories; first, for the isolate versus nonisolate groups; second, for the gifted versus nongifted groups; and finally for four groups: gifted isolates, nongifted isolates, gifted nonisolates, and nongifted nonisolates. These three separate tabulations were made in an effort to compile a set of problems commonly perceived by these groups.

The groups involved in each tabulation were compared by the percentage of involvement of the members of each group on each item of the three adjustment inventories.

Locating Perceived Problems of Isolates and Nonisolates

Separation of the 118 students into isolate and nonisolate groups yielded the following data:

The isolate group consisted of 34 boys and 25 girls with chronological ages from 13.7 through 16.5 and CTMM IQs of 60 through 141.

The non isolate group consisted of 33 boys and 26 girls with chronological ages from 13.7 through 15.9 and CTMM IQs of 92 through 149.

Vineland Social Maturity Scale.--In order to present the relative differences in social competence of isolates versus nonisolates as measured by the 27 Vineland items used, Table 16 was constructed showing item number, item, and per cent of greatest possible total for each of the 27 items.

The differences between the percentage ratings of the isolate group and the nonisolate group were not sufficiently different on any of the twenty-seven items to be of statistical significance. However, there was a greater difference than might be accounted for by sampling error on seven of the twenty-seven items. These items, therefore, are of value in testing the third hypothesis of this study.

These seven items are listed below according to the greatest difference between the percentage ratings of the isolate and nonisolate groups.

The greatest difference was shown on item 75, cares for self at table, which included the final table preparation of various food items for one's own consumption such as baked potato, boiled eggs, cutting meat, etc. The

TABLE 16.-- Differences between isolate and nonisolate groups on 27 items of the Vineland social maturity scale.

Number	Item	Per cent of Greatest Possible Total	
		59 Isolates	59 Nonisolates
75	Cares for self at table	78	61
76	Makes minor purchases	79	79
77	Goes about home town freely	76	74
78	Writes occasional short letters	57	54
79	Makes telephone calls	75	89
80	Does small remunerative work	79	75
81	Answers ad; purchases by mail	42	35
82	Does simple creative work	64	64
83	Is left to care for self or others	84	84
84	Enjoys books, newspapers, magazines	79	79
85	Plays difficult games	70	82
86	Exercises complete care of dress	86	91
87	Buys own clothing accessories	64	69
88	Engages in group activities	65	78
89	Performs responsible routine chores	88	81
90	Communicates by letter	35	35
91	Follows current events	61	65
92	Goes to nearby places alone	64	61
93	Goes out unsupervised daytime	68	68
94	Has own spending money	81	86
95	Buys all own clothing	44	58
96	Goes to distant points alone	41	54
97	Looks after own health	82	86
98	Has a job or continues schooling	100	100
99	Goes out nights unrestricted	47	53
100	Controls own major expenditures	59	75
101	Assumes personal responsibility	75	81

isolate group exceeded the nonisolate group by 78 to 61 per cent on this item.

Controls own major expenditures, item 100, included making major purchases from allowances or earnings with only general advice of what to buy. The nonisolate group surpassed the isolate group by 75 to 59 per cent on this item.

Makes telephone calls, item 79, involved looking up phone numbers and making local phone calls for practical purposes. The nonisolate group excelled by 89 to 75 per cent on this item.

Buys all own clothing, item 95, involved selection and purchase of all major clothing items, either with money earned, from an allowance, or on credit account. The nonisolate group surpassed the isolate group by 58 to 44 per cent on this item.

Engages in group activities, item 88, included participation in the following: athletic teams, clubs, social or literary organizations, dances, parties, trips, and outdoor sports. The nonisolate group excelled by 78 to 65 per cent on this item.

Goes to distant points alone, item 96, consisted of planning itinerary, making reservations, and meeting any emergencies that arise. The nonisolate group surpassed the isolate group by 54 to 41 per cent on this item.

Plays difficult games, item 85, included playing relatively complex or skilled games and sports such as baseball, basketball, tennis, pool, or card games, and understanding rules and methods of scoring. The nonisolate group excelled by 82 to 70 per cent on this item.

The nonisolate group achieved greater social competence on six of the seven items listed above. Of the six, two items, 95 and 100, were from the Self Sufficiency area of social competence; two items, 85 and 88, were from the Social Participation area; one item, 79, was from the Communication area; one item, 96, was from the Locomotion area.

The only one of the seven items which ranked isolates higher than nonisolates was item 75 from the Self Sufficiency area. On the twenty remaining items the differences between the percentage ratings of the isolate and nonisolate groups were so small as to be totally depreciated by the statistical allowance for sampling error.

Mooney Problem Check List.--In order to present the differences in perceived problems of the isolate and nonisolate groups as indicated by the Mooney Problem Check List, Table 17 has been constructed showing item number, item name under the seven problem areas, and the percentage of the isolate and nonisolate groups who identified themselves with each problem.

TABLE 17.--Differences between isolate and nonisolate groups on 41 items of the Mooney problem check list.

Item Number	Item Under Problem Area	Per Cent Marking Problem: Isolate	Nonisolate
	Health, Physical Development		
2	Don't get enough sleep	36	49
3	Have trouble with my teeth	27	12
40	Not good-looking	31	19
73	Overweight	37	27
178	Not being as strong as some other kids	22	12
	School		
6	Getting low grades in school	29	15
7	Afraid of tests	34	15
9	Don't like to study	54	39
10	Not interested in books	17	29
41	Afraid of failing in school work	29	14
43	Trouble with spelling or grammar	25	15
78	Can't keep my mind on my studies	56	44
79	Worried about grades	41	31
115	Teachers not practicing what they preach	19	31
147	Trouble with oral reports	44	20
150	Afraid to speak up in class	37	22
	Home and Family		
15	Never having any fun with mother or dad	29	14
85	Wanting things my parents won't give me	25	7
	Money, Work, the Future		
53	Wanting to buy more of my own things	34	22
55	Too little spending money	34	24
124	Wanting to know more about college	29	46
192	Not knowing what I really want	9	24
195	Wondering what becomes of people when they die	19	29
	Boy, Girl, Relations		
92	So often not allowed to go out at night	34	24
196	Learning how to dance	25	12
27	Bashful	29	12
28	Being left out of things	34	20
29	Never chosen as a leader	37	7
61	Being teased	32	19
63	Feelings too easily hurt	31	17
98	Being picked on	25	7
100	People finding fault with me	31	17
166	Getting into arguments	17	32
	Self-Centered Concerns		
31	Being nervous	41	31
34	Being afraid of making mistakes	46	29
67	Trying to stop a bad habit	25	41
69	Giving in to temptations	15	31
105	Sometimes wishing I'd never been born	32	20
136	Being careless	12	25
171	Feeling ashamed of something I've done	17	31
172	Being punished for something I didn't do	25	12

Of the total 210 items on the check list, only 41 are involved here as the differences between the percentage ratings of these groups on 169 items were so small as to be totally depreciated by the statistical allowance for sampling error.

Two items showed a sufficient difference in percentage between the isolate and nonisolate groups to be of statistical significance. These were items 147, trouble with oral reports, under the problem area School and 29, never chosen as a leader, under the problem area Relations to People in General. Each item was mentioned more frequently by the isolates.

On thirty-nine items, there was a greater difference between the percentages of the isolate and nonisolate groups than might be accounted for by sampling error. On twenty-eight of these items, more of the isolates identified themselves with the problem; whereas, on eleven of the thirty-nine, more of the nonisolates identified themselves with the problem.

Under the first problem area, Health and Physical Development, there was a difference in percentage between the isolate and nonisolate groups on five items. The isolates marked four of the five more frequently: have trouble with my teeth, not good-looking, overweight, and not being as strong as some other kids. The nonisolates marked one more frequently: don't get enough sleep.

Within the second problem area, School, there was a difference in percentage between the two groups on ten items. The isolates marked eight of the ten more frequently: getting low grades in school, afraid of tests, don't like to study, afraid of failing in school work, trouble with spelling or grammar, can't keep my mind on my studies, worried about grades, and afraid to speak up in class. The nonisolates marked two of the ten more frequently: not interested in books and teachers not practicing what they preach.

In the third problem area, Home and Family, there was a difference in percentage between the two groups on two items. In both cases the isolates marked the item more frequently: never having any fun with mother or dad and wanting things my parents won't give me.

Under the fourth problem area, Money, Work and the Future, there was a difference in percentage on five items. The isolates marked two of the five items more frequently: wanting to buy more of my own things and too little spending money. The nonisolates marked: wanting to know more about college, not knowing what I really want, and wondering what becomes of people when they die.

Within the fifth problem area, Boy and Girl Relations, there was a difference in percentage between the two groups on two items. In both cases the isolates marked the items more frequently: learning how to dance and so often not allowed to go out at night.

In the sixth problem area, Relations to People in General, there was a difference in percentage on seven items. The isolates marked six of the items more frequently: bashful, being left out of things, being teased, feelings too easily hurt, being picked on, and people finding fault with me. The nonisolates marked one item more frequently: getting into arguments.

Under the seventh problem area, Self-Centered Concerns, there was a difference in percentage on eight items. The isolates marked four items more frequently: being nervous, being afraid of making mistakes, sometimes wishing I'd never been born, and being punished for something I didn't do. The nonisolates marked four items more frequently: trying to stop a bad habit, giving in to temptations, being careless, and feeling ashamed of something I've done.

Rohde Sentence Completion Method.--In order to present the material from both variables evaluated by the Rohde's method for the isolate and nonisolate groups, Table 18 has been constructed listing the 18 objects included, with three columns showing the percentages of each group giving positive, neutral, or negative cathection of each object.

The per cent of negative and positive responses for a given group will show, not only whether it is to be considered that members of such a group are likely to have

TABLE 18.--Cathections of junior high school isolates and nonisolates.

Object	Per cent Isolate			Per cent Nonisolate		
	Positive	Neutral	Negative	Positive	Neutral	Negative
Boys	39	37	24	46	37	17
Children	51	20	29	51	24	25
Family	44	44	12	66	31	3
Father	53	31	17	61	20	19
Fighting	36	10	54	32	0	68
Friends	75	9	17	81	9	10
Girls	32	31	37	32	36	32
God	81	19	0	83	14	3
Home	32	19	49	42	19	39
Laws	64	7	29	76	12	12
Money	54	14	32	54	7	39
Mother	63	25	12	63	20	17
People	39	36	25	53	34	14
Religion	75	19	7	73	19	9
Schoolwork	44	17	39	61	2	37
Suicide	19	24	58	10	14	76
Teachers	64	9	27	73	12	15
Work	61	7	32	58	0	42

problems relative to the object in question, but the disparity between the percentages will also indicate the extent of the problem.

Of the total 18 objects included there was no sufficient difference in the percentage of positive cathections between the isolate and nonisolate groups to be considered statistically significant. However, on five objects, there was a greater difference between the percentage of the positive cathections of the isolate and nonisolate groups than might be accounted for by sampling error. On all of these objects the isolate group showed less acceptance of the object than did the nonisolate group.

On the object, Family, the nonisolate group showed 66 per cent acceptance and 3 per cent rejection, as compared to 44 per cent of the isolate group showing acceptance and 12 per cent showing rejection.

For the object item, Home, the nonisolate group showed 42 per cent acceptance and 39 per cent rejection, as compared to 32 per cent of the isolate group showing acceptance and 49 per cent rejection.

Concerning the object relating to Laws, the nonisolate group showed 76 per cent acceptance and 12 per cent rejection, as compared to 64 per cent of the isolate group showing acceptance and 29 per cent rejection.

For the object, People, the nonisolate group showed 53 per cent acceptance and 14 per cent rejection, as com-

pared to 39 per cent of the isolate group showing acceptance and 25 per cent rejection.

On the object pertaining to Schoolwork, the nonisolate group showed 61 per cent acceptance and 37 per cent rejection, as compared to 44 per cent of the isolate group showing acceptance and 39 per cent rejection.

In addition, there were a total of seven objects for which there was a difference between the percentage of negative cathections for the isolate and nonisolate groups. Three of these, Home, Laws, and People, are listed above in the discussion of positive cathections. The others not given there are Fighting, Suicide, Teachers, and Work.

Regarding the object, Fighting, the nonisolate group showed 68 per cent rejection and 32 per cent acceptance, as compared to 54 per cent of the isolate group showing rejection and 36 per cent acceptance.

For the object relating to Suicide, the nonisolate group showed 76 per cent rejection and 10 per cent acceptance, as compared to 58 per cent of the isolate group showing rejection and 19 per cent acceptance.

Concerning the object, Teachers, the isolate group showed 27 per cent rejection and 64 per cent acceptance, as compared to 15 per cent of the nonisolate group showing rejection and 73 per cent acceptance.

In reference to the object, Work, the nonisolate group showed 42 per cent rejection and 58 per cent

acceptance, as compared to 32 per cent of the isolate group showing rejection and 61 per cent acceptance.

For five of the objects there was a difference between the percentages of neutral cathections for the isolate and nonisolate groups. On all five objects the isolate group showed the greatest percentage of neutrality. Included here are the objects: Family, Father, Fighting, Schoolwork, and Suicide.

The nonisolate group showed the greatest acceptance of the objects: Family, Home, Laws, People, and Schoolwork. This group showed greatest rejection of the objects: Fighting, Suicide, and Work.

The isolate group showed greatest rejection of the objects: Home, Laws, People, and Teachers.

Locating Perceived Problems of the Gifted and Nongifted

Separation of the 118 students into gifted and nongifted groups yielded the following data:

The gifted group consisted of 21 boys and 20 girls with chronological ages from 13.7 through 16.0 and CTMM IQs of 130 through 149.

The nongifted group consisted of 46 boys and 31 girls with chronological ages from 13.7 through 16.5 and CTMM IQs of 60 through 128.

Vineland Social Maturity Scale.--In order to present the relative differences in social competence of the gifted versus the nongifted as measured by the 27 Vineland items

used, Table 19 was constructed showing item number, item, and per cent of greatest possible total for each of the 27 items.

The differences between the percentage ratings of the gifted group and the nongifted group were not sufficiently different on any of the 27 items to be of statistical significance. However, there was a greater difference than might be accounted for by sampling error on twelve of the twenty-seven items. These items, therefore, are of value in testing the third hypothesis of this study.

These twelve items are listed below according to the greatest difference between the percentage ratings of the gifted and nongifted groups.

The greatest difference was shown on item 82, does simple creative work, which included making useful articles, doing repair work, cooking, baking, sewing, gardening, writing simple stories or poems, producing painting or drawings. The gifted group excelled by 74 to 58 per cent on this item.

Goes to distant points alone, item 96, consisted of planning itinerary, making reservations and meeting any emergencies which arise. The gifted group surpassed the nongifted group by 57 to 42 per cent on this item.

Goes out unsupervised daytime, item 93, involved going away from home without supervision, being responsible for movements, and revealing discreet behavior. The

TABLE 19.--Differences between gifted and nongifted groups on 27 items of the Vineland social maturity scale.

Number	Item	Per cent of Greatest Possible Total	
		41 Gifted	77 Nongifted
75	Cares for self at table	71	69
76	Makes minor purchases	82	75
77	Goes about home town freely	79	73
78	Writes occasional short letters	51	58
79	Makes telephone calls	84	81
80	Does small remunerative work	81	75
81	Answers ads; purchases by mail	45	34
82	Does simple creative work	74	58
83	Is left to care for self or others	85	83
84	Enjoys books, newspapers, magazines	87	76
85	Plays difficult games	76	77
86	Exercises complete care of dress	90	87
87	Buys own clothing accessories	70	65
88	Engages in group activities	76	70
89	Performs responsible routine chores	85	84
90	Communicates by letter	34	35
91	Follows current events	72	59
92	Goes to nearby places alone	71	58
93	Goes out unsupervised daytime	77	63
94	Has own spending money	89	80
95	Buys all own clothing	57	47
96	Goes to distant points alone	57	42
97	Looks after own health	93	79
98	Has a job or continues schooling	100	100
99	Goes out nights unrestricted	54	49
100	Controls own major expenditures	73	63
101	Assumes personal responsibility	87	73

gifted group surpassed the nongifted group by 77 to 63 per cent on this item.

Looks after own health, item 97, consisted of safeguarding health with regard to rules of hygiene, contagious or infectious diseases, illnesses and accidents. The gifted group exceeded the nongifted by 93 to 79 per cent on this item.

Assumes personal responsibility, item 101, involved directing own social affairs, being considerate of the welfare of others, exercising discretion in personal activities. The gifted group excelled by 87 to 73 per cent on this item.

Follows current events, item 91, included being able to discuss general news and sports events and following these with some continuity. The gifted group surpassed the nongifted by 72 to 59 per cent on this item.

Goes to nearby places alone, item 92, involved going outside the limits of the home town into areas that are relatively unfamiliar and being personally responsible for own arrangements. The gifted exceeded the nongifted by 71 to 58 per cent on this item.

Answers ads; purchases by mail, item 81, involved responding to magazine, radio, television advertising by mailing coupons, requesting samples, sending for literature, and ordering from catalogs. The gifted group exceeded the nongifted group by 45 to 34 per cent on this item.

Enjoys books, newspapers, magazines, item 84, consisted of reading for practical information or personal enjoyment. The gifted group excelled by 87 to 76 per cent on this item.

Buys all own clothing, item 95, involved selection and purchase of all major clothing items, either with money earned, from an allowance, or on a credit account. The gifted group surpassed the nongifted group by 57 to 47 per cent on this item.

Controls own major expenditures, item 100, included exercising discretion in providing for major expenses from allowances or earnings with only general advice from others. The gifted group surpassed the nongifted group by 73 to 63 per cent on this item.

Has own spending money, item 94, consisted of using allowance or earnings with reasonable discretion for personal needs. The gifted group excelled by 89 to 80 per cent on this item.

The gifted ranked higher than the nongifted on all twelve of these items. Six items, 93, 94, 95, 97, 100, and 101, were from the Self-Direction area; two items, 92 and 96, were from the Locomotion area; three items, 81, 84, and 91, were from the Communication area; and one item, 82, was from the Occupational Activities area.

On the fifteen remaining items the differences between the percentage ratings of the gifted and nongifted groups were so small as to be totally depreciated by the statistical allowance for sampling error.

Mooney Problem Check List.--In order to present the differences in perceived problems of the gifted and nongifted groups as indicated by the Mooney Problem Check List, Table 20 has been constructed showing item number, item name under the seven problem areas, and the percentage of the gifted and nongifted groups who identified themselves with each problem.

Of the total 210 items on the check list, only 33 are involved here as the differences between the percentage ratings of these groups on 177 items were so small as to be totally depreciated by the statistical allowance for sampling error.

Three items showed a sufficient difference in percentage between the gifted and nongifted groups to be of statistical significance. These items were afraid of tests, trouble with spelling or grammar, and trouble with writing. These items are all under the problem area School and mentioned more frequently by the nongifted.

On thirty items, there was a greater difference between the percentages of the gifted and nongifted groups than might be accounted for by sampling error. On ten of these items, more of the gifted identified themselves with

TABLE 20.--Differences between the gifted and nongifted groups on 33 items of the Mooney problem check list.

Item Number	Item Under Problem Area	Per Cent Marking Problem	
		Gifted	Nongifted
	Health, Physical Development		
2	Don't get enough sleep	51	38
3	Have trouble with my teeth	10	25
40	Not good-looking	32	21
73	Overweight	20	39
	School		
6	Getting low grades in school	12	27
7	Afraid of tests	7	34
10	Not interested in books	12	29
42	Trouble with arithmetic	22	40
43	Trouble with spelling or grammar	2	30
45	Trouble with writing	7	29
78	Can't keep my mind on my studies	42	55
79	Worried about grades	24	42
147	Trouble with oral reports	22	38
150	Afraid to speak up in class	22	34
184	Not interested in certain subjects	37	48
	Home and Family		
15	Never having any fun with mother or dad	15	25
50	Parents not understanding me	24	34
118	Parents not trusting me	34	21
119	Parents old-fashioned in their ideas	43	26
153	Not telling parents everything	22	34
	Money, Work, the Future		
18	Having no regular allowance	10	27
192	Not knowing what I really want	10	20
195	Wondering what becomes of people when they die	17	27
	Boy, Girl, Relations		
21	Not allowed to use the family car	15	29
92	So often not allowed to go out at night	22	33
	People in General		
27	Bashful	12	25
30	Wishing people liked me better	44	33
96	Wanting a more pleasing personality	51	39
134	Missing someone very much	22	34
	Self-Centered Concerns		
69	Giving in to temptations	34	17
136	Being careless	27	14
138	Forgetting things	44	29
139	Being lazy	34	20

the problem; whereas, on twenty of the thirty, more of the nongifted identified themselves with the problem.

Under the first problem area, Health and Physical Development, there was a difference in percentage between the gifted and nongifted groups on four items. The gifted marked two of the four more frequently: don't get enough sleep and not good-looking. The nongifted marked two more frequently: have trouble with my teeth and overweight.

Within the second problem area, School, there was a difference in percentage between the two groups on eight items. The nongifted marked all eight items more frequently: getting low grades in school, not interested in books, trouble with arithmetic, can't keep my mind on my studies, worried about grades, trouble with oral reports, afraid to speak up in class, and not interested in certain subjects.

In the third problem area, Home and Family, there was a difference in percentage between the two groups on five items. The gifted marked two items more frequently: parents not trusting me and parents old-fashioned in their ideas. The nongifted marked three items more frequently: never having any fun with mother or dad, parents not understanding me, and not telling parents everything.

Under the fourth problem area, Money, Work and the Future, there was a difference in percentage on three items. The nongifted marked all three more frequently: having no

regular allowance, not knowing what I really want, and wondering what becomes of people when they die.

Within the fifth problem area, Boy and Girl Relations, there was a difference in percentage between the two groups on two items. The nongifted marked each more frequently: not allowed to use the family car and so often not allowed to go out at night.

In the sixth problem area, Relations to People in General, there was a difference in percentage on four items. The gifted marked two items more frequently: wishing people liked me better and wanting a more pleasing personality. The nongifted marked two items more frequently: bashful and missing someone very much.

Under the seventh problem area, Self-Centered Concerns, there was a difference in percentage on four items. The gifted marked all four items more frequently: giving in to temptations, being careless, forgetting things, and being lazy.

Rohde Sentence Completion Method.--In order to present the material from both variables evaluated by the Rohde's method for the gifted and nongifted groups, Table 21 was constructed listing the 18 objects included, with three columns showing the percentages of each group giving positive, neutral, or negative cathection of each object.

TABLE 21.--Cathections of junior high school gifted and nongifted.

Object	Per cent Gifted			Per cent Nongifted		
	Positive	Neutral	Negative	Positive	Neutral	Negative
Boys	42	39	20	43	36	21
Children	46	29	24	53	18	29
Family	71	24	5	47	44	9
Father	56	29	15	57	23	20
Fighting	22	10	68	40	3	57
Friends	71	15	15	82	5	13
Girls	32	34	34	33	33	35
God	83	15	2	82	17	1
Home	42	27	32	35	14	51
Laws	71	10	20	70	9	21
Money	56	12	32	53	9	38
Mother	56	24	20	66	22	12
People	49	34	17	44	35	21
Religion	76	17	7	73	20	8
Schoolwork	56	5	39	51	12	38
Suicide	10	15	76	17	21	62
Teachers	61	17	22	73	7	21
Work	54	2	44	62	4	34

Of the total 18 objects included, there was only one, Family, where there was a sufficient difference in the percentage of positive cathections between the gifted and nongifted groups to be considered statistically significant. Of the gifted group, 71 per cent showed acceptance for the object, Family, with 24 per cent neutral, and 5 per cent showing rejection, as compared to 47 per cent of the nongifted group showing acceptance, 44 per cent neutral, and 9 per cent showing rejection.

However, on four objects, there was a greater difference between the percentage of the positive cathections of the gifted and nongifted groups than might be accounted for by sampling error. On all of these objects the nongifted group showed greater acceptance of the object than did the gifted group.

On the object relative to Fighting, the nongifted group showed 40 per cent acceptance and 57 per cent rejection, as compared to 22 per cent of the gifted group showing acceptance and 68 per cent rejection.

For the object, Friends, the nongifted group showed 82 per cent acceptance and 13 per cent rejection, as compared to 71 per cent of the gifted group showing acceptance and 15 per cent rejection.

Concerning the object, Mother, the nongifted group showed 66 per cent acceptance and 12 per cent rejection, as compared to 56 per cent of the gifted group showing acceptance and 20 per cent rejection.

Pertaining to the object, Teachers, the nongifted group showed 73 per cent acceptance and 21 per cent rejection, as compared to 61 per cent of the gifted group showing acceptance and 22 per cent rejection.

In addition, there were a total of four objects for which there was a difference between the percentage of negative cathections for the gifted and nongifted groups. One of these, Fighting, is listed above in the discussion of positive cathections. The others not given there are Home, Suicide, and Work.

Regarding the object item, Home, the nongifted group showed 51 per cent rejection and 35 per cent acceptance, as compared to 32 per cent of the gifted group showing rejection and 42 per cent acceptance.

For the object, Suicide, the gifted group showed 76 per cent rejection and 10 per cent acceptance, as compared to 62 per cent of the nongifted group showing rejection and 17 per cent acceptance.

In regard to the object, Work, the gifted group showed 44 per cent rejection and 54 per cent acceptance, as compared to 34 per cent of the nongifted group showing rejection and 62 per cent acceptance.

For five of the objects, there was a difference between the percentages of neutral cathections for the gifted and nongifted groups. On one of these the nongifted group showed a greater percentage of neutrality. This was

the object, Family. The gifted group showed a greater percentage of neutrality on the objects: Children, Friends, Home, and Teachers.

The nongifted group showed the greatest acceptance of the objects: Fighting, Friends, Mother, and Teachers. This group showed the greatest rejection of the object: Home. The gifted group showed the greatest acceptance of the object: Family. This group showed the greatest rejection of the objects: Fighting, Suicide, and Work.

Locating Perceived Problems of the Two Isolate Groups and the Two Gifted Groups

Separation of the 118 students into gifted isolates, nongifted isolates, gifted nonisolates, and nongifted nonisolates yielded the following data:

The gifted isolate group consisted of 5 girls and 8 boys with chronological ages from 13.7 through 16.0 with a mean CA of 14.3 and CTMM IQs of 130 through 141 with a mean IQ of 134.

The nongifted isolate group consisted of 20 girls and 26 boys with chronological ages from 13.7 through 16.5 with a mean CA of 14.4 and CTMM IQ's of 60 through 128 with a mean IQ of 107.

The gifted nonisolate group consisted of 15 girls and 13 boys with chronological ages from 13.8 through 15.4 with a mean CA of 14.4 and CTMM IQs of 130 through 149 with a mean IQ of 136.

The nongifted nonisolate group consisted of 11 girls and 20 boys with chronological ages from 13.7 through 15.9 with a mean CA of 14.7 and CTMM IQs of 92 through 127 with a mean IQ of 112.

Vineland Social Maturity Scale.--In order to present the relative differences in social competence among the four basic subgroups as measured by the 27 Vineland items used, Table 22 was constructed showing item number, item, and per cent of greatest possible total for each of the four basic subgroups on all 27 items.

Tables 16 and 22 were used to compare the sets of perceived problems for the total isolate group and the two isolate subgroups, gifted isolates and nongifted isolates. Table 23 has been constructed to show those problems perceived by the total isolate group, those perceived by the gifted isolates, and those perceived by the nongifted isolates.

Comparing gifted isolates and nongifted isolates to all isolates, there are problems that both subgroups have in common, problems that other isolates have which gifted isolates do not have, and problems which nongifted isolates that other isolates do not have.

The differences between the percentage ratings of the gifted isolate group and the nongifted isolate group were not sufficiently different on any of the 27 items to be of statistical significance. However, there was a greater

TABLE 22.--Differences among the four subgroups on 27 items of the Vineland social maturity scale.

Item Number	Item	Per cent of Greatest Possible Total			
		Gifted Isolate	Nongifted Isolate	Gifted Nonisolate	Nongifted Nonisolate
75	Cares for self at table	81	77	66	56
76	Makes minor purchases	81	79	89	69
77	Goes about home town freely	77	77	80	68
78	Writes occasional short letters	42	61	55	53
79	Makes telephone calls	65	77	93	86
80	Does small remunerative work	81	78	80	69
81	Answers ads; purchases by mail	50	39	43	27
82	Does simple creative work	77	61	73	55
83	Is left to care for self or others	85	84	86	82
84	Enjoys books, newspapers, magazines	85	78	88	73
85	Plays difficult games	65	72	80	84
86	Exercises complete care of dress	85	86	93	89
87	Buys own clothing accessories	58	66	75	63
88	Engages in group activities	62	66	82	74
89	Performs responsible routine chores	92	87	82	79
90	Communicates by letter	31	36	36	34
91	Follows current events	69	59	73	60
92	Goes to nearby places alone	69	63	71	52
93	Goes out unsupervised daytime	73	66	79	58
94	Has own spending money	77	82	95	77
95	Buys all own clothing	35	47	68	48
96	Goes to distant points alone	27	45	71	39
97	Looks after own health	89	80	95	77
98	Has a job or continues schooling	100	100	100	100
99	Goes out nights unrestricted	50	47	55	52
100	Controls own major expenditures	58	60	80	71
101	Assumes personal responsibility	85	72	88	76

TABLE 23.--Vineland items isolates perceive as problems.

Area and Number	Per cent of Greatest Possible Total			
	All Isolates	Gifted Isolates	Nongifted Isolates	Non-isolates
Self-Direction				
95	44	35	47	58
100	59	58	60	75
101	75	85	72	81
Communication				
78	57	42	61	54
79	75	65	77	89
Social Participation				
85	70	64	72	82
88	65	62	66	78
Locomotion				
96	41	27	45	54
Occupational Activities				
82	64	77	61	64

difference than might be accounted for by sampling error on three of the twenty-seven items. One of these items, 78, helps to locate a problem of gifted isolates, and two items, 82 and 101, help to locate problems of nongifted isolates.

On the twenty-four remaining items the differences between the percentage ratings of the gifted isolates and nongifted isolates were so small as to be totally depreciated by the statistical allowance for sampling error.

Therefore, those Vineland items which may be helpful in locating problems of junior high school isolates are listed below under the appropriate areas of social competence.

All Isolates:

Self Direction

Buys all own clothing
Controls own major expenditures

Socialization

Plays difficult games
Engages in group activities

Communication

Makes telephone calls

Locomotion

Goes to distant points alone

Nongifted Isolates only:

Self Direction

Assumes personal responsibility

Occupational Activities

Does simple creative work

Gifted Isolates only:

Communication

Writes occasional short letters

Tables 19 and 22 were used to compare the sets of perceived problems for the total gifted group and the two gifted subgroups, isolate gifted and nonisolate gifted. Table 24 has been constructed to show those problems per-

ceived by the total gifted group, those perceived by the isolate gifted, and those perceived by the nonisolate gifted.

Comparing isolate gifted and nonisolate gifted to all gifted, there were nc problems that the two subgroups had in common. On only one of the twenty-seven items was there a sufficient difference between the percentage ratings of the isolate gifted and the nonisolate gifted to be of statistical significance. This was item 96 and was a greater problem for the isolate gifted. However, there was a greater difference than might be accounted for by sampling error on eight other items. Seven of these items, 79, 85, 87, 88, 94, and 100, help to locate problems of the isolate gifted and one item, 75, helped to locate a problem of the nonisolate gifted.

On the eighteen remaining items the differences between the percentage ratings of the isolate gifted and nonisolate gifted were so small as to be totally depreciated by the statistical allowance for sampling error.

Therefore, those Vineland items which may be helpful in locating problems of junior high school gifted are listed below under the appropriate areas of social competence.

TABLE 24.--Vineland items gifted perceive as problems.

Area and Number	Per cent of Greatest Possible Total			
	All Gifted	Isolate Gifted	Nonisolate Gifted	Non-Gifted
Self Help				
75	71	81	66	69
Self Direction				
87	70	58	75	65
94	89	77	95	80
95	57	35	68	47
100	73	58	80	63
Communication				
79	84	65	93	81
Locomotion				
96	57	27	71	42
Social Participation				
85	76	65	80	77
88	76	62	82	70

All Gifted: no items

Isolate Gifted only:

Self Direction

Has own spending money
Buys own clothing accessories
Buys all own clothing
Controls own major expenditures

Socialization

Plays difficult games
Engages in group activities

Communication

Makes telephone calls

Locomotion

Goes to distant points alone

Nonisolate Gifted only:

Self Help

Cares for self at table

Mooney Problem Check List.--In order to present the differences in perceived problems among the four basic subgroups as measured by the Mooney Problem Check List, Table 25 was constructed showing item number, item name under the seven problem areas, and the percentage of the four basic subgroups who identified themselves with each problem.

Tables 17 and 25 were used to compare the sets of perceived problems for the total isolate group and the two isolate subgroups, gifted isolates and nongifted isolates. Table 26 has been constructed to show those problems perceived by the total isolate group, those perceived by the gifted isolates, and those perceived by the nongifted isolates.

Comparing gifted isolates and nongifted isolates to all isolates, there are problems that both groups have in common, problems that other isolates perceive which gifted

TABLE 25.--Differences among the four subgroups on 73 items of the Mooney problem check list.

Item Number	Item Under Problem Area	Per Cent of Group Marking Problem			
		Gifted Isolate	Nongifted Isolate	Gifted Nonisolate	Nongifted Nonisolate
	Health, Physical Development				
2	Don't get enough sleep	54	30	50	48
3	Have trouble with my teeth	8	33	11	13
73	Overweight	15	43	21	32
143	Trouble with my eyes	39	11	11	29
178	Not being as strong as some other kids	31	20	14	10
	School				
6	Getting low grades in school	8	35	14	16
7	Afraid of tests	8	41	7	23
9	Don't like to study	69	50	39	39
10	Not interested in books	0	22	18	39
41	Afraid of failing in schoolwork	39	26	7	19
42	Trouble with arithmetic	23	41	21	39
43	Trouble with spelling or grammar	8	30	0	29
45	Trouble with writing	8	22	7	39
76	Not spending enough time in study	62	48	46	48
78	Can't keep my mind on my studies	46	59	39	48
79	Worried about grades	46	39	14	45
113	So often feel restless in classes	39	46	50	45
114	Not getting along with a teacher	46	30	29	26
115	Teachers not practicing what they preach	8	22	39	23
147	Trouble with oral reports	15	52	25	29
149	Poor memory	31	17	7	16
150	Afraid to speak up in class	31	39	18	26
181	Dull classes	23	48	50	32
184	Not interested in certain subjects	31	43	39	55
	Home and Family				
15	Never having any fun with mother or dad	39	26	4	23
50	Parents not understanding me	23	35	25	32
84	Parents expecting too much of me	31	22	11	19
85	Wanting things my parents won't give me	31	24	7	10
116	Being criticized by my parents	31	15	18	19
118	Parents not trusting me	39	17	32	26
119	Parents old-fashioned in their ideas	54	26	36	26
120	Unable to discuss certain problems at home	31	33	21	26
153	Not telling parents everything	15	33	25	36
186	Clash of opinions between me and my parents	46	22	21	19

	Money, Work, the Future				
18	Having no regular allowance	8	30	11	23
19	Family worried about money	31	13	7	16
55	Too little spending money	39	33	25	23
124	Wanting to know more about college	23	30	50	42
192	Not knowing what I really want	23	37	21	32
194	Wondering if I'll ever get married	39	35	25	36
195	Wondering what becomes of people when they die	0	24	25	32
	Boy, Girl Relations				
21	Not allowed to use the family car	8	30	18	26
23	Too Little chance to go to parties	31	17	18	7
92	So often not allowed to go out at night	23	37	21	26
165	Deciding whether to go steady	31	17	11	26
196	Learning how to dance	39	22	11	13
198	Thinking too much about the opposite sex	31	17	11	39
	People in General				
27	Bashful	15	33	11	13
28	Being left out of things	39	33	21	19
29	Never chosen as a leader	46	35	4	10
30	Wishing people liked me better	54	37	39	26
61	Being teased	54	26	11	26
62	Being talked about	39	26	21	19
63	Feelings too easily hurt	31	30	21	13
96	Wanting a more pleasing personality	39	41	57	36
98	Being picked on	31	24	4	10
100	People finding fault with me	46	26	14	19
134	Missing someone very much	31	30	18	39
166	Getting into arguments	8	20	39	26
168	Losing my temper	23	37	32	39
169	Being stubborn	15	33	25	23
	Self-Centered Concerns				
31	Being nervous	31	43	32	29
34	Being afraid of making mistakes	54	43	36	23
67	Trying to stop a bad habit	31	24	43	39
69	Giving in to temptations	15	15	43	19
102	Worrying	8	20	32	19
104	Lacking self-confidence	0	26	36	16
105	Sometimes wishing I'd never been born	31	33	18	23
136	Being careless	15	11	32	19
137	Daydreaming	23	37	39	36
139	Being lazy	39	22	32	16
171	Feeling ashamed of something I've done	15	17	25	36
172	Being punished for something I didn't do	39	22	11	13

TABLE 26.--Mooney check list items isolates perceive as problems

Area	Number	Per cent of Group Marking Problem			
		All Isolates	Gifted Isolates	Nongifted Isolates	Non-Isolates
Health, Physical Development	3	27		33	12
	73	37		43	27
	143		39		20
	178	22	31	20	12
Home, Family	15	29	39	26	14
	50	32		35	29
	116		31		19
	118		39		29
	119		54		31
	153	29		33	14
	186		46		20
School	6	29		35	15
	7	34		41	15
	9	54	69	50	39
	41	29	39	26	14
	42			41	31
	43	25		30	15
	76		62		47
	78	56		59	44
	114		46		27
	147	44		52	20
	149		31		12
Money, Work, The Future	18	25		30	17
	19		31		12
	192			37	24
Boy, Girl Relations	23		31		12
	92	34		37	24
	165		31		19
	196	25	39	22	12
	198		31		25
People in General	27	29		33	12
	29	37	46	35	7
	30		54		32
	61	32	54		19
	62		39		20
	100	31	46		17
Self Centered Concerns	31	41		43	31
	34	46	54	43	29
	139		39		24
	172	25	39	22	12

isolates do not, and problems which nongifted isolates perceive that other isolates do not.

There are eight items of the Mooney which assist us in locating perceived problems of isolates. Those items are listed below.

Health and Physical Development

Not being as strong as other kids

School

Don't like to study
Afraid of failing in school work

Home and Family

Never having any fun with mother or dad

Boy and Girl Relations

Learning how to dance

Relations to People in General

Never chosen as a leader

Self-Centered Concerns

Being afraid of making mistakes
Being punished for something I didn't do

Twenty-three items of the Mooney help to locate the perceived problems of nongifted isolates.

Health and Physical Development

Have trouble with my teeth
Overweight
Not being as strong as some other kids

School

Getting low grades in school
Afraid of tests

Don't like to study
Afraid of failing in school work
Trouble with arithmetic
Trouble with spelling or grammar
Can't keep my mind on my studies
Trouble with oral reports

Home and Family

Never having any fun with mother or dad
Parents not understanding me
Not telling parents everything

Money, Work, the Future

Having nc regular allowance
Not knowing what I really want

Boy and Girl Relations

So often not allowed to go out at night
Learning how to dance

Relations to People in General

Bashful
Never chosen as a leader

Self-Centered Concerns

Being nervous
Being afraid of making mistakes
Being punished for something I didn't do

Twenty-five items help to locate perceived problems of gifted isolates.

Health and Physical Development

Trouble with my eyes
Not being as strong as some other kids

School

Don't like to study
Afraid of failing in school work
Not spending enough time in study
Not getting along with a teacher
Poor memory

Home and Family

Never having any fun with mother or dad
Being criticized by my parents
Parents not trusting me
Parents old-fashioned in their ideas
Clash of opinions between me and my parents

Money, Work, the Future

Family worried about money

Boy and Girl Relations

Too little chance to go to parties
Deciding whether to go steady
Learning how to dance
Thinking too much about the opposite sex

Relations to People in General

Never chosen as a leader
Wishing people liked me better
Being teased
Being talked about
People finding fault with me

Self-Centered Concerns

Being afraid of making mistakes
Being lazy
Being punished for something I didn't do

Tables 19 and 25 were used to locate and compare the sets of perceived problems for the total gifted group and the two gifted subgroups, isolate gifted and nonisolate gifted. Table 27 has been constructed to show those problems perceived by the gifted group, those perceived by the isolate gifted, and those perceived by the nonisolate gifted.

Comparing isolate gifted and nonisolate gifted to all gifted, there are problems that both groups have in

TABLE 27.--Mooney check list items the gifted perceive as problems.

Area	Number	Per cent of Group Marking Problem			
		All Gifted	Isolate Gifted	Nonisolate Gifted	Non-Gifted
Health, Physical Development	143		39		18
	178		31		16
Home, Family	15		39		25
	85		31		18
	116		31		17
	119	42	54		26
	186		46		21
School	9		69		46
	41		39		23
	76		62		48
	114		46		29
	115			39	22
	149		31		17
Money, Work, The Future	19		31		14
	124			50	35
Boy, Girl Relations	23		31		13
	165		31		21
	196		39		18
People in General	28		39		27
	29		46		25
	30	44	54		33
	61		54		26
	62		39		23
	96	51		57	39
	98		31		18
	100		46		23
	166			39	22
Self-Centered Concerns	34		54		35
	67			43	30
	69	34		43	17
	104			36	22
	136	27		32	14
	172		39		18

common, problems that other gifted students perceive which isolate gifted do not, and problems which nonisolate gifted perceive that other gifted do not.

Below are five items of the Mooney which appear to assist us in locating perceived problems of all gifted students. However, it will be noted that these same items appear in either the isolate gifted or the nonisolate gifted listing but not in both.

Home and Family

Parents old-fashioned in their ideas

Relations to People in General

Wishing people liked me better
Wanting a more pleasing personality

Self-Centered Concerns

Being careless
Giving in to temptations

Eight items help to locate perceived problems of nonisolate gifted.

School

Teachers not practicing what they preach

Money, Work, the Future

Wanting to know more about college

Relations to People in General

Wanting a more pleasing personality
Getting into arguments

Self-Centered Concerns

Being careless
Giving in to temptations

Eight items help to locate perceived problems of nonisolate gifted.

School

Teachers not practicing what they preach

Money, Work, the Future

Wanting to know more about college

Relations to People in General

Wanting a more pleasing personality
Getting into arguments

Self-Centered Concerns

Trying to stop a bad habit
Giving in to temptations
Lacking self-confidence
Being careless

Twenty-five items help to locate perceived problems of isolate gifted.

Health and Physical Development

Trouble with my eyes
Not being as strong as some other kids

Rohde Sentence Completion Method.--In order to present the material from both variables evaluated by the Rohde's method, Table 28 was constructed listing the 18 objects included, with three columns showing the percentages of each of the four subgroups, giving positive, neutral, or negative cathection of each object.

TABLE 28.--Cathections among the four subgroups of junior high school students.

Object	Positive	Neutral	Negative	Positive	Neutral	Negative
	Per Cent Gifted Isolate			Per Cent Nongifted Isolate		
Boys	39	31	31	39	39	22
Children	54	8	39	50	24	26
Family	54	31	15	41	48	11
Father	46	31	23	54	30	15
Fighting	15	31	54	41	4	54
Friends	62	15	23	78	7	15
Girls	39	15	46	30	35	35
God	100	0	0	76	24	0
Home	54	31	15	26	15	59
Laws	62	0	39	65	9	26
Money	54	15	31	54	13	33
Mother	62	23	15	63	26	11
People	39	39	23	39	35	26
Religion	85	15	0	72	20	9
Schoolwork	54	8	39	41	20	39
Suicide	8	8	85	22	28	50
Teachers	69	8	23	63	9	28
Work	69	8	23	59	7	35
	Per Cent Gifted Nonisolate			Per Cent Nongifted Nonisolate		
Boys	43	43	14	48	32	19
Children	43	39	18	58	10	32
Family	79	21	0	55	39	7
Father	61	29	11	61	13	26
Fighting	25	0	75	39	0	61
Friends	75	14	11	87	3	10
Girls	29	43	29	36	29	36
God	75	21	4	90	7	3
Home	36	25	39	48	13	39
Laws	75	14	11	77	10	13
Money	57	11	32	52	3	45
Mother	54	25	21	71	16	13
People	54	32	14	52	36	13
Religion	71	18	11	74	19	7
Schoolwork	57	4	39	65	0	36
Suicide	11	18	71	10	10	81
Teachers	57	21	21	87	3	10
Work	46	0	54	68	0	32

Tables 18 and 28 were used to compare the cathected objects for the total isolate group and the two isolate subgroups, gifted isolates and nongifted isolates. The following list gives those objects showing the greatest acceptance, neutrality, and rejection by these three groups.

	Greatest Acceptance	Greatest Neutrality	Greatest Rejection
Isolate Group:	Work Suicide Fighting	Father Family Schoolwork Fighting Suicide	Home Laws People Schoolwork Teachers
Nongifted Isolate Group:	Friends Suicide Fighting	Schoolwork Family God Suicide Fighting Children Girls	Work Home
Gifted Isolate Group:	Schoolwork Family Work God Religion Home	Home	Boys Girls Children Laws Suicide

Tables 21 and 28 were used to compare the cathected objects for the total gifted group and the two gifted subgroups, isolate gifted and nonisolate gifted. The following list gives those objects showing the greatest acceptance, neutrality, and rejection by these three groups.

	Greatest Acceptance	Greatest Neutrality	Greatest Rejection
Gifted Group:	Family Home	Children Friends Home Teachers	Fighting Friends Mother Teachers Suicide Work
Isolate Gifted Group:	Work God Religion Children Teachers Home	Family Fighting	Family Friends Boys Girls Laws Father Suicide
Nonisolated Gifted Group:	Family Friends Laws People Father	God Boys Laws Suicide Children Girls Teachers	Work Religion Fighting Home

CHAPTER V

SUMMARY, CONCLUSIONS, AND APPLICATIONS

Summary

The purpose of the first of these two interrelated research studies was to evaluate the peer acceptance of the gifted in comparison to the nongifted in the junior high school. The purposes of the second study were: (1) to identify those perceived problems of personal and social adjustment held in common by all isolates as well as those peculiar to each subgroup, nongifted isolates and gifted isolates; and, (2) to identify those perceived problems held in common by all gifted students as well as those peculiar to each subgroup, isolate gifted and nonisolate gifted.

The hypotheses formulated were:

I. The greater the junior high school student's intellectual capacity, the more likely he is to be socially accepted by his peer group.

II. Those junior high school students involved in mutual choices, show greatest social preference for individuals with mental ability equal to or higher than their own.

III. There is a set of problems commonly perceived by both gifted and nongifted junior high school social isolates.

Participating in the first study were 2,733 students (1389 boys and 1344 girls) in grades seven and eight of five junior high schools. Included in the second study were 118 of these same students (67 boys and 51 girls) as eighth and ninth graders. These students all resided in Livonia, Michigan, a large residential suburb of Detroit with higher than average mean educational attainment and socio-economic level.

The California Test of Mental Maturity was administered, and the 2,733 students were classified by their resulting total IQ's into six psychometric categories, ranging from highly gifted through educable retarded. A sociometric device was administered employing three acceptance-oriented questions, each calling for three choices. The students were classified by the total number of choices received into six sociometric categories ranging from star through isolate.

The psychometric and sociometric taxonomies were used to create a grid to compart the total group into thirty-six subgroups for comparison of their relative sizes proportionate to the total group. To facilitate the second study, the students were then divided into four research categories: gifted isolate, nongifted isolate, gifted nonisolate, and nongifted nonisolate.

In the second study, in order to show the full effect of acceptance versus nonacceptance, the members of each of

the nonisolate groups were ranked by total number of choices received, assigned random numbers, and random selection began with those who received greatest acceptance and included only high status students. Regarding the selection of the two isolate research groups, all available gifted isolates were used since there were only thirteen, but the members of the nongifted isolate group were assigned random numbers and a random selection was made.

Three inventories, Vineland Social Maturity Scale, Mooney Problem Check List, and Rohde Sentence Completion Method were administered to the four research groups: gifted isolate, nongifted isolate, gifted nonisolate, and nongifted nonisolate, to identify those perceived problems held in common by all isolates, as well as those peculiar to each isolate subgroup; and, to identify those perceived problems held in common by all gifted, as well as those peculiar to each gifted subgroup.

Conclusions

Within the limitations of this study, the following conclusions may be drawn:

1. Hypothesis I, as stated, must be rejected since the gifted did not receive greater acceptance as a group than did the rapid learners; however, it should be noted that the entire psychometric distribution was skewed upward, and that the psychometric group test used was not suffi-

ciently discriminating at either the upper or lower extremes to locate numbers of students yielding percentages comparable to predicted percentages already established in the literature.

2. The junior high school student with above-average mental ability is more likely to attain greater social acceptance among his peers than the individual of average mental ability; and conversely, the student with less than average mental ability is less likely to attain extensive social acceptance among his peers than the individual of average mental ability.

3. The junior high school student with greater than average social acceptance among his peers is more likely to be an individual with above-average mental ability than the student with average social acceptance; and conversely, the student with less than average social acceptance among his peers is less likely to be an individual with above-average mental ability.

4. Hypothesis II, as stated, must be rejected since the gifted and rapid learners did not choose primarily from within their own group and above; however, it should be noted that this effect does operate with the average and below-average groups, and that with the use of an individual intelligence test and an improved fixed frame of reference, this effect might also then be found to operate among the above-average groups.

5. Individuals of above-average mental ability make more mutual choices with other individuals of above-average mental ability.

6. Individuals with average and above-average mental ability are more involved in within-group mutual choosing; whereas, those individuals with below-average mental ability are more involved in above-group mutual choosing with those of greater ability.

7. Students with above-average mental ability are involved in both a greater scope and a greater depth of mutual choice interaction with their peers.

8. Individuals of average sociometric status, involved in mutual choosing, tend to choose other individuals with average sociometric status.

9. The vast majority of social neglectees, involved in mutual choosing, choose to interact with individuals of greater social acceptance.

10. Individuals with Star sociometric status are involved much more often in mutual interaction friendships than those individuals with average sociometric status.

11. Hypothesis III, as stated, must be accepted. There is a set of eight perceived problems common to all junior high school social isolates. These problems are as follows:

Not being as strong as some other kids

Don't like to study

Afraid of failing in school work

Never having any fun with mother or dad

Learning how to dance

Never chosen as a leader

Being afraid of making mistakes

Being punished for something I didn't do

12. In addition to those perceived problems held in common by all isolates, gifted isolates share a set of 23 additional problems, and nongifted isolates share a dissimilar set of 19 additional problems.

13. There are no perceived problems held in common by all gifted junior high school students.

14. There is a set of 40 perceived problems held in common by the isolate gifted and a totally dissimilar set of 13 problems held in common by the nonisolate gifted.

Implications and Applications

The following implications and applications do not evolve entirely from the data obtained through the present investigation. They include personal observations and opinions formulated by the writer over a period of years while fulfilling a number of different rules within the framework of the public schools: elementary teacher, special education teacher, visiting teacher, school counselor and administrator; also as a critic teacher and college of education faculty member.

1. Hypothesis I may be re-presented here as an implication. The greater the junior high school student's intellectual capacity, the more likely he is to be socially accepted by his peer group.

If an individual test of mental ability were employed with the same population, the entire distribution would have been skewed downward in comparison with the present resulting distribution and would have shown a greater peak at the mean and a smooth decline at the upper extreme, resulting in fewer rapid learners and more highly gifted students.

2. Social competence as measured by peer acceptance is a characteristic distributed normally among the population and is related to intelligence.

3. The cases falling into the three sociometric categories labeled above-average, average, and below-average in this study, should all be considered average since there should be approximately two-thirds of all cases within the average range of the distribution for any characteristic which is distributed normally among the population. These categories might be re-labeled high-average, average, and low-average.

4. Hypothesis II may be re-presented here as an implication. Those junior high school students involved

in mutual choices, show greatest social preference for individuals with mental ability equal to or higher than their own.

If an individual rather than a group intelligence test were used, the known differences in results yielded by the more refined instrument would cause sufficient reassignment of students from one psychometric group to another to alter the percentages in favor of the hypothesis.

5. Greater involvement in mutual interaction is productive in gaining peer acceptance among junior high school students.

6. Those problems commonly perceived by isolates all seem to relate to self-defeating attitudes on the part of the isolate and apparently are unrelated to differences of intellectual ability.

7. Nongifted isolates seem to perceive themselves as having more problems related to academic pursuits; whereas, gifted isolates seem to perceive themselves as having more problems related to adjusting to other individuals of various ages.

8. Even the nonisolate gifted junior high school students perceive themselves as not being perfectly adjusted and seem to express a willingness to accept advice and direction to facilitate improvement in their social acceptance.

Applications

General Education

Eventually, teacher training institutions will fully recognize the importance of the sociology of education, and the resulting psychological ramifications, and begin to prepare educators to understand and work with this total situation. Perhaps educators will then be trained to administer and interpret sociometric devices and effectively use the resulting information gained. When this occurs, it will then be valuable to do annual or perhaps even periodic school-wide sociometric inventories and record the results in the cumulative records for the many obvious uses. However, until practitioners are trained, particularly to interpret the findings and their meanings, this practice could produce more problems than it might help solve.

Special Education

1. A group intelligence test, such as the CTMM, is sufficiently valid for the differentiation of the above-average, average, and below-average psychometric groups when comparative peer acceptance is to be evaluated. However, where it is necessary to differentiate either between several above-average groups or several below-average groups, or both, an individual intelligence test will need to be employed because of the limitations of validity of the group test at both the upper and lower extremes.

2. Individuals of greater than average ability have been shown to have greater interaction with each other and more interaction with their own group than with the average group. If we are interested in fully preparing as many of these individuals as possible as leaders of the future, we must locate them as early as possible and provide for in-group interaction and instruction at their level of achievement.

3. Since our democratic socity is faced with an ever expanding need for leadership personnel, we must be constantly on the watch for individuals with latent leadership potential. Because of the correlation of superior mental ability and superior social adjustment, and because it has been shown that the gifted are able to attain social skills more easily, we must then turn to the problem of early identification of the maladjusted gifted. Because of their leadership potential, we must make every effort to assist every gifted student to accomplish social acceptance, and thus perhaps ensure his success in his bid for leadership.

4. The frustrations which evolve from an individual's awareness of his lack of achievement are indirectly responsible for the additional handicap of further loss of social acceptability. This is an additional reason for the public schools to provide sufficient numbers of teachers trained in remedial techniques, rooms, and schedule patterns to

facilitate small group and individual tutorial instruction, to insure each child's opportunity to develop to his fullest potential.

Guidance and Counseling

1. Because the intellectually superior usually seem to acquire socially desirable traits of personality with greater ease, counseling should be highly effective in assisting those few gifted individuals with low acceptance to attain the level of acceptance more often accorded to those of their ability level.

2. The analysis of the positions held by isolates and neglectees within their respective classroom constellations, which may be gained through sociometry in the classroom, will greatly aid the understanding of the crux of the students' social problems and facilitate planning for the students' prepared re-entrance into competitive interaction.

3. Those individuals with the intellectual potential for a higher level of social acceptance than they are presently accorded by their peers should be encouraged by their counselors to interact more frequently both with other individuals of superior ability and, more important, with those individuals already accorded sufficient acceptance to be considered as stars or "socially talented".

4. Because social isolation or neglect may be specific-not general, localized-not wide spread, and instantaneous rather than prolonged, there should be pre-

caution, particularly with cases with students of above-average ability, that records of such atypical adjustment be at least annually screened by the teachers or counselors who gathered this material, with particular scrutiny as to whether it continues to represent the current pattern of the student's adjustment. Where materials are obsolete in comparison to improved adjustment, they should, in many cases, be destroyed in order to prevent devaluative labeling.

5. If the counselor can help the isolate overcome his feelings of inadequacy, he will become more self-assured and thus more self-assertive, more effective in his academic pursuits, and perhaps more accepted by his peers.

6. Those problems commonly perceived by nonisolate gifted junior high school students indicate that they would be willing to accept counseling, and therefore might well benefit from it. This further substantiates the concept that the counseling program should reach all students.

Educational Sociometry

The fact that there should be approximately two-thirds of all cases within the average range of the distribution for any characteristic which is distributed normally among the population indicates that the three categories labeled above-average, average, and below-average in the fixed frame of reference used in this study should all be considered as average and the upper and lower of

these be entitled high and low average. Further, there should be a category included between the star and high-average groups which might be entitled "socially talented" as contrasted to the "socially neglected" at the opposite end of the range. These changes would allow for the creation of a theoretical normal distribution of social competence with which actual distributions of social acceptance might be compared.

Below is a revised fixed frame of reference, devised by the writer, and a theoretical normal distribution using the actual percentages for each sociometric choice as shown in the frequency table in Appendix F.

Category	Choices	Per cent	
Isolate	0	8.4	
Neglectee	1, 2	9.6	
Low Average	3, 4, 5	18.1	
Average	6, 7, 8, 9, 10	31.3	-65.6
High Average	11,12,13, 14	16.2	
Socially Talented	15,16,17, 18	8.7	
Star	19 -Up	7.7	
		100.0	

It should be borne in mind that this frame of reference is based on, and designed for, a sociometric device including three criteria with three choices each, used with classes of twenty-five to thirty-five students.

Recommendations for Further Research

The following recommendations may assist in formulating hypotheses and purposes or perhaps suggest procedures for future research.

1. A longitudinal study should be made following a group of isolates and/or neglectees, with particular attention to those of above-average ability, from grade level to grade level, with and without counseling, to determine whether their lack of acceptance prevails or whether counseling can be an effective force toward their attaining greater peer acceptance.

2. Where a broad sociometric study has been done including all students of a given grade or grades in a fair-sized school district, insuring an accurate cross-section, a secondary study should be made analyzing the choices awarded by gifted isolates, in an effort to more specifically determine the position of these students in their respective classroom constellations.

3. A study should be made evaluating the depth of mutual interaction friendships comparing the friendships of gifted students with those of students of average ability, utilizing a sociometric device including three or more criteria with three or more choices each, and recording which pairs of students chose each other once, twice, or three or more times.

4. A research study should be made evaluating the social acceptability of a group of underachievers, before remedial instruction, with follow-up evaluation of their social acceptability upon their attainment of grade-level achievement.

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APPENDICES

APPENDIX A

SOCIOMETRIC TEST FORM

SOCIOMETRIC FORM

Name_____ Date_____

Grade_____Section_____ School_____

We are all interested in making our school experiences more pleasant for everyone for the remainder of the year. Now that we all know each other so well you can help me do this by writing the names of some of your classmates in the blanks below. You may choose anyone in our room you wish, including any students who may be absent. Give the first name and the initial of the last name of each choice. You should make three choices for each question. You may choose the same student in more than one group if you wish. Your choices will not be seen by your classmates.

Which three of your classmates would you now most like to sit near?

1._____ 2._____ 3._____

If our class were to be divided into four groups for a field trip, which three classmates would you most like in your group?

1._____ 2._____ 3._____

Which three classmates would you like to assist you in selecting a group of sixteen students to arrange a grade-level party?

1._____ 2. _____ 3. _____

APPENDIX B

MATRIX TABLES

Whitman Junior High School
Grade 7 Section 5

Pupils Chosen I.

Choices Given	Name		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
3	Constance A.	1						X					⊠	⊠																							
3	Sharon B.	2			⊠				⊠																		X										
3	Charlene C.	3					⊠				⊠						⊠																				
3	Catherine D.	4	⊠					⊠																			X										
3	Kathy E.	5		X											X		X																				
3	Carla H.	6					X					⊠					⊠																				
3	Sylvia H.	7	⊠		⊠										X																						
3	Lindsay J.	8		⊠										⊠			⊠																				
3	Georgina M.	9										X			X	X																				
3	Victoria N.	10		⊠											⊠		X																				
3	Margaret O.	11	⊠			⊠						X																									
3	Connie S.	12	⊠					⊠									X																				
3	Sally S.	13		X							⊠						X																				
3	Trudy T.	14		X	X										X																						
3	Marilynn Z.	15		⊠		⊠		⊠																													
3	Arthur (Jon) A.	16																										⊠		X		⊠					
3	Steven B.	17																X						X				X									
3	Danny E.	18																									X	X				Y				
3	Bruce E.	19																X						⊠				⊠									
3	Randolph (Lee) H.	20																						⊠		X							Y				
3	Thomas H.	21																										X		⊠		X					
3	Randolph K.	22																			⊠	⊠												⊠			
3	Al K.	23	X																								X	X									
3	Alan K.	24																					X					X				X					
3	Russell P.	25																										X		X		⊠					
3	Gregory P.	26																⊠			⊠											⊠					
3	James R.	27																X												X			X				
3	Russell S.	28																					X					X				X					
3	Charles S.	29																X										X				X					
3	Harold (Hal) S.	30																⊠										⊠	⊠								
3	Paul V.	31																X							X										X		
3	Hugh W.	32													X									⊠				X									
		33																																			
		34																																			
		35																																			
	Choices Received X		3	2	6	3	0	3	2	4	0	4	2	2	6	1	7	7	0	0	2	1	2	4	1	1	5	12	0	4	0	7	2	3			
	Mutual Choices ⊠		2	2	3	2	0	2	2	3	0	2	2	2	1	0	3	2	0	0	2	1	1	3	0	0	1	3	0	1	0	3	0	1			

Whitman Junior High School
Grade 7 Section 5

Pupils Chosen II.

Choices Given	Name		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
3	Constance A.	1				X							⊠		X																						
3	Sharon B.	2				⊠			⊠																		⊠										
3	Charlene C.	3						⊠			⊠						⊠																				
3	Catherine D.	4	⊠					⊠																			⊠										
3	Kathy E.	5						X						X			X																				
3	Carla H.	6						X					⊠				X																				
3	Sylvia H.	7	⊠		⊠										X																						
3	Lindsay J.	8		⊠										X			⊠																				
3	Georgina M.	9	X												⊠	X																					
3	Victoria N.	10		⊠											⊠		X																				
3	Margaret O.	11	⊠	X		⊠																															
3	Connie S.	12	X		X		X																														
3	Sally S.	13		X						⊠	⊠																										
3	Trudy T.	14			X		X								X																						
3	Marilynn Z.	15		⊠			X	⊠																													
3	Arthur (Jon) A.	16																									⊠		X		⊠						
3	Steven B.	17																X									X	X									
3	Danny E.	18																									X	X			y						
3	Bruce E.	19																X									⊠							X			
3	Randolph (Lee) H.	20																		X			⊠		X												
3	Thomas H.	21																									X	X			X						
3	Randolph K.	22																			⊠													X	X		
3	Al K.	23																									X	X			X						
3	Alan K.	24																		X			X											X			
3	Russell P.	25	⊠		⊠																							X									
3	Gregory P.	26																⊠		⊠											⊠						
3	James R.	27	X																											X		⊠					
3	Russell S.	28																					X					X			X						
3	Charles S.	29																X										X			X						
3	Harold (Hal) S.	30																⊠									X	⊠									
3	Paul V.	31																X										X	⊠								
3	Hugh W.	32																X						⊠				X									
		33																																			
		34																																			
		35																																			
	Choices Received X		3	4	5	6	0	1	5	4	1	2	2	2	5	1	5	7	0	0	3	1	1	3	0	1	6	12	2	2	0	7	3	2			
	Mutual Choices ⊠		1	3	3	3	0	1	2	2	1	2	2	0	2	0	2	2	0	0	1	1	0	2	0	0	2	3	1	0	0	2	1	1			

Whitman Junior High School
Grade 7 Section 5

Pupils Chosen III.

Choices Given	Name		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
3	Constance A.	1				X								X			X																				
3	Sharon B.	2				⊠			⊠																		X										
3	Charlene C.	3									⊠				X		X																				
3	Catherine D.	4		⊠																							⊠	X									
3	Kathy E.	5	X												X		X																				
3	Carla H.	6							X				⊠				⊠																				
3	Sylvia H.	7		⊠		X									X																						
3	Lindsay J.	8			X									X			⊠																				
3	Georgina M.	9	X												X	X																					
3	Victoria M.	10			⊠										⊠		⊠																				
3	Margaret O.	11	X					⊠				X																									
3	Connie S.	12		X		X			X																												
3	Sally S.	13		X							⊠																X										
3	Trudy T.	14		X		X									X																					
3	Marilynn Z.	15					⊠		⊠		⊠																										
3	Arthur (Jon) A.	16																				X					⊠				⊠					
3	Steven B.	17																			X						X						X			
3	Danny E.	18		X		X																					X									
3	Bruce E.	19																	X								X				Y					
3	Randolph (Lee) H.	20																					⊠		X								X			
3	Thomas H.	21		X																							X		⊠							
3	Randolph K.	22																				⊠										X	X			
3	Al K.	23	X																								Y					Y				
3	Alan K.	24																	X										X	X						
3	Russell P.	25				⊠								X																X						
3	Gregory P.	26		X															⊠													⊠				
3	James R.	27		X																									X				⊠			
3	Russell S.	28																					⊠				X					X				
3	Charles S.	29																	X								X					X				
3	Harold (Hal) S.	30																	⊠								X	⊠								
3	Paul V.	31																									X	⊠	⊠	X						
3	Hugh W.	32													X									X			X									
		33																																			
		34																																			
		35																																			
	Choices Received X		4	9	2	7	0	2	2	2	0	4	1	2	8	1	6		5	0	0	0	2	2	1	1	1	4	12	2	5	0	5	3	3	
	Mutual Choices ⊠		0	2	1	2	0	2	1	1	0	3	1	0	1	0	3		2	0	0	0	1	1	1	0	0	1	2	1	1	0	2	1	0	

APPENDIX C

SUMMARY TABLE

SUMMARY TABLE

_____ Jr. High School Grade 7 Section 5

Matrix Table Number	Name	CTMM Total IQ	P* C	Sociometric Criteria I	II	III	Total Choices Received	S** C
1	Constance A.	102	A	3	3	4	10	A
2	Sharon B.	104	A	2	4	9	15	S
3	Charlene C.	106	A	6	5	2	13	AA
4	Catherine D.	111	A	3	6	7	16	S
5	Kathy E.	88	A	0	0	0	0	I
6	Carla H.	80	SL	3	1	2	6	BA
7	Sylvia H.	108	A	2	5	2	9	A
8	Lindsay J.	127	RL	4	4	2	10	A
9	Georgina M.	94	A	0	1	0	1	N
10	Victoria N.	115	RL	4	2	4	10	A
11	Margaret O.	97	A	2	2	1	5	BA
12	Connie S.	113	A	2	2	2	6	BA
13	Sally S.	132	G	6	5	8	19	S
14	Trudy T.	112	A	1	1	1	3	N
15	Marilynn Z.	115	RL	7	5	6	18	S
16	Arthur A.	112	A	7	7	5	19	S
17	Steven B.	123	RL	0	0	0	0	I
18	Daniel E.	115	RL	0	0	0	0	I
19	Bruce E.	100	A	2	3	0	5	BA
20	Randolph H.	117	RL	1	1	2	4	BA
21	Thomas H.	107	A	2	1	2	5	BA
22	Randolph K.	109	A	4	3	1	8	A
23	Al K.	113	A	1	0	1	2	N
24	Alan K.	118	RL	1	1	1	3	N
25	Russell P.	100	A	5	6	4	15	S
26	Gregory P.	122	RL	12	12	12	36	S
27	James R.	100	A	0	2	2	4	BA
28	Russell S.	98	A	4	2	5	11	A
29	Charles S.	109	A	0	0	0	0	I
30	Harold S.	115	RL	7	7	5	19	S
31	Paul V.	114	A	2	3	3	8	A
32	Hugh W.	104	A	3	2	3	8	A

*	Psychometric Category	**	Sociometric Category
HG	Highly Gifted	S	Star
G	Gifted	AA	Above Average
RL	Rapid Learner	A	Average
A	Average	BA	Below Average
SL	Slow Learner	N	Neglectee
E	Educable	I	Isolate

APPENDIX D

MUTUAL CHOICE TABLE

MUTUAL CHOICE TABLE

Jr. High School — Grade 7 — Section 5

Matrix Table Numbers	CTMM Total IQs	Psychometric Categories	Total Number Choices Received	Sociometric Categories	Criterion Number
4-2	111-104	A - A	16-15	S - S	I,II,III
7-2	108-104	A - A	9-15	A - S	I,II,III
7-4	108-111	A - A	9-16	A - S	I,II,
8-3	127-106	RL - A	10-13	A - AA	I,II,
10-3	115-106	RL - A	10-13	A - AA	I,II,III
11-1	97-102	A - A	5-10	BA - A	I,II,
11-6	97- 80	A - SL	5- 6	BA - BA	I,II,III
12-1	113-102	A - A	6-10	BA - A	I,
12-8	113-127	A - RL	6-10	BA - A	I,
13-9	132- 94	G - A	19- 1	S - N	II,
13-10	132-115	G - RL	19-10	S - A	I,II,III
15-3	115-106	RL - A	18-13	S - AA	I,II,
15-6	115- 80	RL - SL	18- 6	S - BA	I,II,
15-8	115-127	RL - RL	18-10	S - A	I,II,III
15-10	115-115	RL - RL	18-10	S - A	III
22-19	109-100	A - A	8- 5	A - BA	I,
22-20	109-117	A - RL	8- 4	A - BA	I,II,III
25-2	100-104	A - A	15-15	S - S	II,
25-4	100-111	A - A	15-16	S - S	II,III
26-16	122-112	RL - A	36-19	S - S	I,II,III
26-19	122-100	RL - A	36- 5	S - BA	I,II,
28-21	98-107	A - A	11- 5	A - BA	I,II,
30-16	115-112	RL - A	19-19	S - S	I,II,III
30-25	115-100	RL - A	19-15	S - S	I,
30-26	115-122	RL - RL	19-36	S - S	I,II,III
31-27	114-100	A - A	8- 4	A - BA	II,III
32-22	104-109	A - A	8- 8	A - A	I,II,

APPENDIX E

FREQUENCY DISTRIBUTION OF STUDENTS BY CTMM TOTAL SCALE IQ SCORES

FREQUENCY DISTRIBUTION OF STUDENTS BY CTMM TOTAL SCALE IQ SCORES

Total Scale IQ	Sociometric Categories						Total Number Students
	Star	Above Average	Average	Below Average	Neglectee	Isolate	
153			1				1
149		1	1				2
147			1				1
146	1		1		1		3
145		1	3		1		5
144			1	2			3
142	1		1	1	1		4
141	3		2			1	6
140		1	2				3
139	3	1	2			2	8
138		3	2		2		7
137	2	3		1	2		8
136	1	1	4	4	2	2	14
135	3	2	2	2	4	1	14
134	1	3	5	4	1		14
133	7		6	5	2	1	21
132	5	5	4	4	1	2	21
131	1	4	4	2	5	2	18
130	7	5	6	6	11	3	38

APPENDIX E--Continued

Total Scale IQ	Sociometric Categories						Total Number Students
	Star	Above Average	Average	Below Average	Neglectee	Isolate	
129	5	1	18	12	5		41
128	4	2	12	5	2	3	28
127	7	5	17	5	8	1	43
126	9	7	9	9	3	3	40
125	6	8	11	10	3	6	44
124	9	2	13	14	7		45
123	8	4	22	7	8	6	55
122	10	5	19	10	13	4	61
121	5	8	19	12	7	1	52
120	25	10	20	10	8	3	76
119	23	7	20	10	9	2	71
118	14	7	24	11	13	7	76
117	12	8	23	12	13	1	69
116	10	11	26	13	10	4	74
115	21	7	27	10	15	8	88
114	15	10	14	12	8	5	64
113	7	5	22	7	17	6	64
112	12	11	23	10	15	7	78
111	12	17	18	19	17	5	88
110	7	15	16	8	14		60

APPENDIX E--Continued

Total Scale IQ	Sociometric Categories						Total Number Students
	Star	Above Average	Average	Below Average	Neglectee	Isolate	
109	7	5	29	21	17	8	87
108	12	8	20	20	6	10	76
107	16	6	20	13	13	8	76
106	8	8	22	13	12	3	66
105	11	6	14	6	9	4	50
104	11	12	21	18	13	1	76
103	11	4	22	11	11	5	64
102	12	7	19	3	12	8	61
101	8	6	18	13	8	5	58
100	10	8	19	17	11	8	73
99	14	6	13	12	13	4	62
98	7	2	18	11	6	7	51
97	4	4	12	12	6	5	43
96	3	4	9	6	5	3	30
95	9	3	13	6	9	2	42
94	2	5	10	12	13	4	46
93	5	3	14	12	2	5	41
92	8	3	5	8	4	6	34
91	6	2	9	4	7	6	34
90	2	1	6	8	2	3	22
89	2		8	3	5	4	22
88	3	3	6	4	3	4	23
87	4	2	8	2	3	1	20
86	2	1	4	3	3	3	16
85	3	3	5	4	2	2	19

APPENDIX E--Continued

Total Scale IQ	Sociometric Categories						Total Number Students
	Star	Above Average	Average	Below Average	Neglectee	Isolate	
84	3	3	4	9	3	2	24
83	2	1	3	5	3	4	18
82	1	1	4	4	4		14
81			2	4	4	2	12
80			2	5	2	1	10
79	1	1	1			3	6
78	1		4	4	1	2	12
77	1	2	1				4
76		1	1		1	1	4
75						1	1
74		1	3	1		1	6
73	1		1				2
72		2	1			1	4
71		1	2			1	4
70				1			1
69		1	1			1	3
68						2	2
66			1				1
64	1			1			2
62						1	1
60						2	2
Totals	447	306	796	513	441	230	2733

APPENDIX F

FREQUENCY DISTRIBUTION OF STUDENTS BY TOTAL NUMBER OF CHOICES RECEIVED

FREQUENCY DISTRIBUTION OF STUDENTS BY TOTAL NUMBER OF CHOICES RECEIVED

Number Socio-metric Choices	Psychometric Categories						Total Number Students
	Highly Gifted	Gifted	Rapid Learner	Average	Slow Learner	Educable Retarded	
41			1				1
40							0
39				1			1
38				1			1
37				1			1
36			1	2			3
35				2			2
34				1			1
33		1	1	3			5
32			1	2			3
31		1		3			4
30			3	2			5
29			3	2			5
28			6	2	1		9
27		1	1	6			8
26		1	3	2			6
25			6	4			10
24		2	4	7			13
23		5	5	11			21
22		1	9	14			24
21		1	11	5			17
20		2	14	16			32
19		5	13	18	1		37
18		2	15	31	3		51
17		4	21	33	1		59
16		2	25	20		1	48
15		7	25	44	4		80

APPENDIX F--Continued

Number Socio-metric Choices	Psychometric Categories						Total Number Students
	Highly Gifted	Gifted	Rapid Learner	Average	Slow Learner	Educable Retarded	
14		7	30	48	4	1	90
13		16	30	47	5		98
12		7	32	75	4		118
11		11	52	72	3		138
10		10	49	92	6		157
9	1	10	56	89	6		162
8		9	58	95	5	1	168
7		7	65	89	9	1	171
6		16	62	101	16	1	196
5		3	48	96	12		159
4		12	40	101	5		158
3		13	55	103	7		178
2		9	27	92	8		136
1		11	42	71	3		127
0		14	48	143	19	6	230
Totals	1	190	862	1547	122	11	2733