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A comparison of factors which influence the acceptance or rejection of boys in the eighth and ninth grade woodworking classes.

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Thesis

A COMPARISON OF FACTORS WHICH INFLUENCE
THE ACCEPTANCE OR REJECTION OF BOYS IN THE
EIGHTH AND NINTH GRADE WOODWORKING CLASSES

Submitted by

JOHN JOSEPH CONNORS
(B. S. in Ed., Fitchburg State Teachers College, 1935)
In partial fulfillment of the requirements for
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>2</td>
</tr>
<tr>
<td>Statement of the Problem.</td>
<td>3</td>
</tr>
<tr>
<td>Justification</td>
<td>3</td>
</tr>
<tr>
<td>Scope</td>
<td>4</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE AND RELATED RESEARCH</td>
<td>7</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>17</td>
</tr>
<tr>
<td>III. PROCEDURE</td>
<td>20</td>
</tr>
<tr>
<td>Administration of Sociometric Test A</td>
<td>20</td>
</tr>
<tr>
<td>Administration of Sociometric Test B</td>
<td>20</td>
</tr>
<tr>
<td>Administration of Sociometric Test C</td>
<td>21</td>
</tr>
<tr>
<td>Constructing Sociograms</td>
<td>21</td>
</tr>
<tr>
<td>Selection of Stars and Isolates</td>
<td>22</td>
</tr>
<tr>
<td>IV. ANALYSIS OF DATA</td>
<td>29</td>
</tr>
<tr>
<td>Analysis of Grades 8-1, 8-2, and 8-4</td>
<td>46</td>
</tr>
<tr>
<td>Analysis of Grades 9-5, 9-7, 9-8, and 9-9</td>
<td>69</td>
</tr>
<tr>
<td>Summary of Findings--Grade 8</td>
<td>72</td>
</tr>
<tr>
<td>Summary of Findings--Grade 9</td>
<td>75</td>
</tr>
<tr>
<td>V. SUMMARY OF DATA</td>
<td>79</td>
</tr>
<tr>
<td>Summary</td>
<td>80</td>
</tr>
<tr>
<td>Conclusions</td>
<td>84</td>
</tr>
<tr>
<td>Limitations of Study</td>
<td>86</td>
</tr>
<tr>
<td>Suggestions for Further Research</td>
<td>86</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>89</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>GRADE</th>
<th>SOCIOMETRIC TABULATION FORM</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II.</td>
<td>8-1A</td>
<td>Choosing In School Associate</td>
<td>33</td>
</tr>
<tr>
<td>III.</td>
<td>8-1B</td>
<td>Choosing a Shop Foreman</td>
<td>34</td>
</tr>
<tr>
<td>IV.</td>
<td>8-1C</td>
<td>Choosing Out of School Associate</td>
<td>35</td>
</tr>
<tr>
<td>V.</td>
<td>8-2A</td>
<td>Choosing In School Associate</td>
<td>38</td>
</tr>
<tr>
<td>VI.</td>
<td>8-2B</td>
<td>Choosing a Shop Foreman</td>
<td>39</td>
</tr>
<tr>
<td>VII.</td>
<td>8-2C</td>
<td>Choosing Out of School Associate</td>
<td>40</td>
</tr>
<tr>
<td>VIII.</td>
<td>8-4A</td>
<td>Choosing In School Associate</td>
<td>43</td>
</tr>
<tr>
<td>IX.</td>
<td>8-4B</td>
<td>Choosing a Shop Foreman</td>
<td>44</td>
</tr>
<tr>
<td>X.</td>
<td>8-4C</td>
<td>Choosing Out of School Associate</td>
<td>45</td>
</tr>
<tr>
<td>XI.</td>
<td>9-5A</td>
<td>Choosing In School Associate</td>
<td>50</td>
</tr>
<tr>
<td>XII.</td>
<td>9-5B</td>
<td>Choosing a Shop Foreman</td>
<td>51</td>
</tr>
<tr>
<td>XIII.</td>
<td>9-5C</td>
<td>Choosing Out of School Associate</td>
<td>52</td>
</tr>
<tr>
<td>XIV.</td>
<td>9-7A</td>
<td>Choosing In School Associate</td>
<td>55</td>
</tr>
<tr>
<td>XV.</td>
<td>9-7B</td>
<td>Choosing a Shop Foreman</td>
<td>56</td>
</tr>
<tr>
<td>XVI.</td>
<td>9-7C</td>
<td>Choosing Out of School Associate</td>
<td>57</td>
</tr>
<tr>
<td>XVII.</td>
<td>9-8A</td>
<td>Choosing In School Associate</td>
<td>60</td>
</tr>
<tr>
<td>XVIII.</td>
<td>9-8B</td>
<td>Choosing a Shop Foreman</td>
<td>61</td>
</tr>
<tr>
<td>XIX.</td>
<td>9-8C</td>
<td>Choosing Out of School Associate</td>
<td>62</td>
</tr>
<tr>
<td>XX.</td>
<td>9-9A</td>
<td>Choosing In School Associate</td>
<td>66</td>
</tr>
<tr>
<td>XXI.</td>
<td>9-9B</td>
<td>Choosing a Shop Foreman</td>
<td>67</td>
</tr>
<tr>
<td>XXII.</td>
<td>9-9C</td>
<td>Choosing Out of School Associate</td>
<td>68</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 8-1 Criteria</td>
<td>32</td>
</tr>
<tr>
<td>II. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 8-2 Criteria</td>
<td>37</td>
</tr>
<tr>
<td>III. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 8-4 Criteria</td>
<td>42</td>
</tr>
<tr>
<td>IV. Eighth Grade--Mean and Sigma Scores</td>
<td>47</td>
</tr>
<tr>
<td>V. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 9-5 Criteria</td>
<td>49</td>
</tr>
<tr>
<td>VI. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 9-7 Criteria</td>
<td>54</td>
</tr>
<tr>
<td>VII. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 9-8 Criteria</td>
<td>59</td>
</tr>
<tr>
<td>VIII. The Class Ranking and Fractional Choice of Stars and Isolates in Relationship to the 9-9 Criteria</td>
<td>65</td>
</tr>
<tr>
<td>IX. Ninth Grade--Mean and Sigma Scores</td>
<td>70</td>
</tr>
<tr>
<td>X. Comparison of T Scores--Eighth Grade</td>
<td>71</td>
</tr>
<tr>
<td>XI. The Mean T Scores and Combined Fractional Choices--Eighth Grade</td>
<td>74</td>
</tr>
<tr>
<td>XII. Comparison of T Scores--Ninth Grade</td>
<td>77</td>
</tr>
<tr>
<td>XIII. The Mean T Scores and Combined Fractional Choices--Ninth Grade</td>
<td>78</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

STATEMENT OF THE PROBLEM

JUSTIFICATION

SCOPE
CHAPTER I

INTRODUCTION

If the real purpose of education is to prepare children for living, it is important that teachers recognize this fact and imperative that they do something about it.

Teachers are aware that classes are composed of more than merely a group of individuals. Teachers are also aware that the social structure of the class is influenced by a certain few individuals in the class. The teacher may not be aware that the group has structure, form, cliques, and friendships. Nor may she realize that the social interaction of pupils determines the atmosphere in a classroom. In the social interaction, the parts which individuals play are determined. Some individuals are more accepted by the group than others. Some are more rejected. In this setting some individuals have a feeling of security, while others feel insecure and frustrated.

Although teachers recognize the more obvious influences of a group, subtler interpersonal relationships which exist are far more difficult to find. While there have been various accepted techniques for the study of individuals, the techniques developed for the study of interpersonal relationships of individuals within a class are limited. Currently the sociometric technique developed by Dr. J. L. Moreno is being used.\(^1\)

By this means teachers could learn the functions of interactions of students towards behavior and learning.

STATEMENT OF THE PROBLEM

The purpose of this survey is to discover the factors common to the boys most frequently chosen and to the boys least frequently chosen or rejected using seven woodworking classes in a junior high school.

JUSTIFICATION

To a large degree the learning processes taking place in schools are governed by the receptiveness of the individuals who comprise the various classes. Schools have emphasized the treating of individual differences, but have neglected to accept or investigate the importance of the individuals within a group. How receptive, interested, or adjusted a student is may be greatly influenced by the social atmosphere of the group of which he is a part.

Educators agree that the social and personal development of children is of vital importance—yet schools as a whole do very little to encourage the social development of children within their own classes.

Recent surveys and studies pertaining to Sociometry have emphasized the necessity of investigating the interaction of our school children.

This survey is concerned with the individuals in such groups, who by their acceptance or rejection of their class-
mates influence the social atmosphere of the group. More specifically, to investigate what factors are common to the individuals who influence the interrelationship pattern of groups in woodworking classes.

Possibly because emphasis has been placed on the progress and development of the individual, schools have not given adequate consideration to the development of the individual within his own society.

SCOPE

This survey was conducted at a junior high school in Rhode Island during the school year 1948-1949. The total school population was 1200. This city school is located in a progressive, fast-growing section made up of sixteen districts which vary from near slums to palatial homes. The parents of the children are engaged in many different professions and occupations. Some are doctors, teachers, and preachers. More of the parents do industrial and constructional work, or are engaged in the manufacture of jewelry and related trades. Many Asiatic and European nationalities are represented, with a majority of one nationality, Italian.

A total of 108 boys, fifty-two eighth grade boys and fifty-six ninth grade boys, were used. These boys comprised the following groups: 8-1, eighteen boys; 8-2, seventeen boys; 8-4, seventeen boys; 9-5, twelve boys; 9-7, fifteen boys; 9-8, thirteen boys; and 9-9, sixteen boys.
All classes were homogeniously grouped except the 8-4's who were heterogeniously grouped. The eighth grade boys represented the upper ranking students. The numbers in the respective groups were nearly equal. At the beginning of the study, the eighth grade boys ranged in ages from twelve years and four months to fifteen years. Their weighted, average teachers' subject marks ranged from seventy-three to eighty-nine. Their I. Q. scores on the Otis Quick Scoring Mental Ability Test ranged from seventy-four to one hundred forty-nine. In the Stanford Achievement Test, their grade placements ranged from 6.8 to grade 10.8. The ninth grade boys ranged in ages from thirteen years, two months to sixteen years, ten months. Their weighted, average teachers' subject marks ranged from sixty-five to ninety-two. Their I. Q. scores on the Otis Quick Scoring Mental Ability Test ranged from sixty-five to one hundred thirty-six. In the Stanford Achievement Test, the grade placements ranged from grade 5.7 to grade 10.6. Addresses of the students were located in sixteen different districts. Although ten different nationalities were represented, sixty-three per cent of the children were of Italian extraction. Children came from eighteen elementary schools to the junior high school where this study was conducted.
CHAPTER II

REVIEW OF LITERATURE and RELATED RESEARCH

DEFINITION OF TERMS
CHAPTER II

REVIEW OF LITERATURE

Traditionally our public school was designed for the academic training of a select few. Though there have been great changes in the social and economic structure of our society, schools tend to remain basically the same as they were because the curricula was organized for academic progress.

Children are expected to learn from society what society is like and how they may best learn to live in this society. Administrators and teachers in educational planning should consider what the school culture is and what the needs of the children are. Lewin\(^2\) says: "It is commonplace that a main source of many disasters in modern society is the discrepancy between our ability to handle physical nature and our lack of ability to handle social forces."

Educators agree that in the development of the whole child, academic achievement, though important, is but one of the numerous factors to be considered in preparing a child to make more thorough adjustments in a society.

The factors influencing the social attractiveness or repulsion of a child by his peers are many. Though there

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have been many surveys concerning these factors, consistent agreement lies only in the recognition of their existence.

The sociometric techniques as envisioned by Moreno⁴ and later refined in collaboration with Jennings⁵ has been widely utilized by guidance workers and teachers in the investigation of interpersonal relationships of groups. Through such a medium the most popular and the least popular children in a given situation at a given time are readily determined. The contributing factors consistent with those chosen and those rejected are much more difficult to determine.

Flotow⁶ says theoretically, one might reason that the resultant effects of the sociometric technique would vary with different criteria being used and with different treatment of the criteria after testing.

Flotow further clarifies opinions of the sociometric techniques. The sociometric test is no panacea for the social ills of the classroom. It is merely an instrument to diagnose some of the ills. At best it is a fairly accurate quantitative instrument tending to equate the social relationships with social happiness. However, it must at all


times be remembered that not every child needs fifteen or more choices to be socially happy in school and that not every child having fifteen or more choices is socially well adjusted. Nevertheless, within certain limitations, the sociometric test is an excellent instrument for measuring and interpreting the social relationships of children within the classroom.

Jennings, in 1937, presented an outstanding investigation in The New York State Training School for Girls. From a total of four hundred forty-three girls committed to this institution, two hundred twenty were selected for testing. In the first test, the girls selected were those who were assigned to the same cottages, same classroom, and the same working and leisure atmospheres. A second test was given eight months later to these same girls. Results of the one hundred thirty-three tests were analyzed through individual case studies.

Emotional expansiveness, contrary to popular belief, remained relatively constant in the upper and lower brackets of popular and unpopular girls. Choice and rejection were considered two aspects of a single choice.

Pertinent to this writer, the investigations by Jennings found that factors underlie the interpersonal reactions of

7. Ibid., 240 pp.
individuals, the most readily examinable being age, intelligence, length of residence, and contact. Intelligence, chronological age, length of residence, and contact showed no correlation.

Blanchard\(^8\) in an analysis of twelve sociometric studies confirmed some of the findings of Jennings in reference to the relationship of factors to Leaders and Isolates. In the studies compiled, there were numerous factors compared. Representative of the factors analyzed were: work, play, socio-economic, chronological age, mental age, intelligent quotient; the socio-economic factor was the only factor showing statistical significance. Correlations obtained on the influence of age, intelligence, weight adaptability, grade, location, or mental age all ranked below \(r .55\).

Stogdill,\(^9\) investigating research since 1947 on factors which influence the choice of leaders, concludes that leaders are superior to the average members of his group in the following respects: Intelligence, Scholarship, Dependability, Responsibility, Social Participation, and Socio-economic Status.

Young and Cooper,\(^10\) in an analysis of four hundred eighteen students in grades five to eight, and found six of

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thirty-three factors to be significantly associated with leaders: Express better standards, Feel they belong, Superior school relations, Feel more important, More Attractive, and More extroverted.

Kilroy, analyzing the results of sociometric tests given in twelve communities in grades one to eight, found higher intelligence, age, marks, factors to be indicative of the popular children. There was a wide distribution of marks, the leaders ranging from A to C. There was a wider distribution of marks for Isolates, ranging from A to E. The chronological age and mental age showed a wide distribution for both Leaders and Isolates. Kilroy found Leaders to be friendly in every case, while forty per cent of the Isolates were reported unfriendly.

Jennings concurs with this find when she states: "The underchosen appear five times as often as the average subjects to show quarrelsome and irritable behavior; while the over-chosen subjects show only one-third as great an incident of such behavior as the average-chosen subjects."

While the research investigated cautions against the statistical significance of such factors as chronological age, mental age, intelligence quotient, length of contact, and


nationality, many of them substantiate the implication of these factors.

Smith\textsuperscript{13} finds the most chosen pupils in a fifth grade to be fifteen months younger, Intelligence Quotient twenty points higher and Achievement Scores twelve points higher than the least popular children in the class.

Bonney,\textsuperscript{14} in a study of one hundred fifty pupils covering the second through the sixth grades, selected five representative popular children and five representative unpopular children for analysis. This study was primarily undertaken to investigate the social characteristics of the chosen and the rejected pupils, but in the comparisons Bonney used I. Q. scores, Academic Achievement, Home Background, Mutual Friendships, Social Acceptance, and others. As in the previous study, Bonney found the most popular children to have average or better ratings of I. Q., and Achievement Scores, but not outstandingly high scores. Least popular children had scores ranging from eighty to ninety-seven and these were in the lowest quarter of their respective groups. Again the socio-economic factor seemed to define itself most clearly indicating popularity. Chronologically the popular students were a year younger than the least popular students.


Bonney says further: "Unpopular children, as a group, are not equal to the popular ones in any of the ten traits syndromes developed in this study. In other words, when extreme cases on the basis of degree of social acceptance are considered, it is clearly evident that, as a group, the popular ones are superior to the unpopular ones in all the desirable traits; but at the same time there is considerable overlapping between individuals in the two groups such that the picture is one of unique patterns rather than types. This means that a person is liked or disliked, not because of particular traits, but because of his whole personality structure and the total impression he makes on others.

The report of most investigators seems to be that no single factor or set of factors determine who the chosen or rejected students shall be. High scores in such factors as Intelligence Quotients, Academic Achievement, Relative Chronological Age, Nationality, Scholastic Progress, and Socio-Economic Background are found to be consistent with the accepted child, while low scores in the same factors are more often associated with the rejected child.

Grossman and Wrighter note the inconsistency and insignificance of factors reported by investigators pertaining

15. Ibid., p. 75

to the accepted and rejected children, yet their findings substantiate the hypothesis that high scores are common to the most accepted children. A sociometric test composed of ten sociometric questions was administered to one hundred seventeen sixth-grade children. The sums of acceptance scores were compared with data taken from the school records. Data used were occupations of fathers, reading achievement, and intelligence scores. The study revealed that those children with the highest selection and rejection scores were more intelligent, had better reading ability, came from homes of higher status, and had more normal personality adjustment than did the children with the lowest selection-rejection scores.

The sociometric test as applied up to the present has had three characteristics: 17

1. A specific number of choices is allowed varying according to the size of the group tested.

2. A specific criterion for choice is used varying with the functional activities of the group.

3. Different levels of preference are designated for each choice.

Factors compiled by Tryon 18 are placed in three categories:

1. Physical factors consisting of height, weight, strength, ability.


2. Social factors consisting of leadership, enthusiasm, daring, action, participation, tidiness, good looks, frequent laughter, happiness, and friendliness.

3. Intellectual factors consisting of Mental Age, I. Q., and Achievement in academic fields.

Literature pertaining to Sociometry suggest that schools should make a greater effort to understand the social needs of children, and through constant investigation of intergroup relations the social needs of children will be better understood.

Goodrich and Folsom\textsuperscript{19} state: "Education progress should be more rapid when teachers and curriculum builders recognize more clearly the proper relationships between life's activities, subject matter, and basic growth needs; and when administrators organize schools in harmony with those relationships so that the work of teachers and curriculum builders can be most effective."

Anderson\textsuperscript{20} says: "The importance of social development and the development of an appropriate environment for developing the social reactions of the child are becoming of increasing concern, for it is obvious that an individual must live in close relationship with other persons and be dependent upon in a large measure for his success and happiness."

It has been emphasized that in order to investigate interaction among groups, a technique; such as, sociometry must be


employed rather than to depend on a teacher judgment. To be sure, the obvious cases of leadership or isolation can be noted but since the social atmosphere of the class is largely maintained by pupils, they are the ones who are attracted or rejected by their peers.

Leon\(^{21}\) finds that teacher-judgment in the selection of leaders and isolates is inadequate. In a study of thirty-eight fourth, fifth, and sixth grade teachers were unable to consistently choose leaders and isolates even though a wide latitude of choice was allowed.

Moreno\(^{22}\) finds that the accuracy of teacher-judgment of intergroups choice or attraction decreases as the child grows older.

Lewis\(^{23}\) contributes additional information about teacher-insight into child behavior. Teachers were asked to select children in their classrooms whom they considered to be retarded, brilliant, or problems. Lack of tidiness or resistant to teacher authority were mentioned as problems, rather than shyness or withdrawal which clinicians would consider serious.

The unruly child, the disgruntled teacher, and the objectionable parent are sometimes only clamoring for a place in the scene of social acceptance.

DEFINITION OF TERMS

Sociogram: A sociogram is a graph devised to show the interrelationships existing within a group. It is used to help discover the social structure of the class; such as, friendship patterns, cliques, and sub-group organizations. Sociograms may be constructed in many styles. The sociogram used in this survey is one suggested by Jennings. Basic material used in the construction of a sociogram is collected from group members in answer to such questions as: Who are your best friends in this group? Whom do you most admire in this group? Whom would you most enjoy visiting, going with on a picnic, to the movies, etc.?

Sociometric Test Situation: The test situation is an opportunity for members of a group to make a spontaneous choice of other members of the group in a given situation at a particular time. Such situations should be meaningful and as natural as possible, and free from limitations and restrictions. Typical situations are: Whom would you prefer to work with, play with, visit with, or engage in some outside activity?

Responses: Slips of paper or cards are distributed to children on which they may name or designate their choices of associates. These slips of paper or cards are collected and are used as the basic data in the construction of a sociogram.

24. Helen Hall Jennings, Sociometry in Group Relations, American Council on Education, Washington, D. C.
**Sociometric Tabulation Form:** This is a form on which the names of the choosers in the group are listed horizontally in such a manner that responses may be tabulated according to the frequency that responses were made by members choosing. (See Sample Tabulation Form, Figure I.)

**Stars or Leaders:** The three most frequently chosen members of a group in this survey are called STARS or LEADERS.

**Isolates:** The members of each group receiving three votes or less are called ISOLATES.

**Tele:** The attraction of one member of the group for another is called TELE.

**Chains:** A chain occurs when one member chooses another member who in turn chooses another.

**TRIANGLE:** Choices within a closed chain are called a TRIANGLE.

**Islands:** These are members of the group set apart because they voted among themselves and were not chosen by other members of the group.

**Mutual Choices or Pairs:** These are members within the group who have chosen each other, sometimes designated as reciprocal choices.

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CHAPTER III

PROCEDURE
CHAPTER III

PROCEDURE

In January, 1949, one hundred eight eighth and ninth grade boys of the Woodworking classes of the Bain Junior High School in Cranston, Rhode Island, were selected to take part in the study.

In order to offer a meaningful, varied set of test situations, the following were used:

1. Companion in Woodworking Class
2. Shop Foreman
3. Visitor in One's Home

TEST A

In January, 1949, the first sociometric test was given. The subject was introduced by stating:

"You've been in the shop for some months now. You know most of the boys in your class. In the future we will work in groups of three on a project. Select the three boys with whom you would most like to work. Write their names in order of preference on your card. Your choices will be confidential. No boys in the class will see the papers."

The cards were collected. From the data on the cards frequency charts were plotted and sociograms were made.

TEST B

In March, 1949, after a discussion of the qualities and duties of a good shop foreman, and with the assistance he can
give the instructor in mind, the boys were asked to write the names of three boys in order of preference, whom they would like to have fill the position.

The cards were collected, responses were checked, and sociograms were made based on the information received.

TEST C

In May, 1949, the third sociometric test was given. The following instructions were given:

"If you could choose three boys in this group to visit your home, whom would you choose? Write the names in order of your preference."

The cards were collected. Frequency charts and sociograms were made.

METHOD OF TABULATING A SOCIOGRAM

In order to facilitate the construction of Sociograms, a chart was drawn on which the choosers were listed alphabetically in vertical columns and the chosen written alphabetically across the top of the paper. When the choices were tabulated for each class for each situation, the totals were found. In this way the most frequently chosen, and the least frequently chosen, or rejected boy was evident.

From these tabulation forms a sociogram was constructed for each class for each test situation. Names of the boys most frequently chosen were placed near the center of the sociogram. Placement of other names was largely determined by
the number of times they were chosen. Isolates, or near Isolates, were placed at the greatest distance from the center. Boys receiving three or less votes are designated by the term "Isolates." Circles were used to represent individual boys. Continuous lines, ending with an arrow, were drawn from chooser toward chosen. In case of a reciprocal choice, two boys choosing each other, though not necessarily the same numerical choice, a continuous line was drawn between circles representing these boys and crossed by a short horizontal bar. A solid red line indicated a first choice, a solid black line indicated a second choice, and a black dotted line indicated a third choice. Each sociogram was marked to indicate the class and test situation.

A circle with five lines converging towards it means the person represented by the circle had been chosen by five classmates. Similarly a circle with three lines emanating from it denotes the individuals' choices and also that he was not chosen by anyone.

**SELECTION OF STARS AND ISOLATES**

In every test situation the three boys who were most frequently chosen are referred to as Stars. Boys receiving three votes or less are called Isolates. Charts were made of Stars and Isolates of every class with the following factors compared with the criteria:

1. Stanford Achievement Test Scores
2. Otis Quick Scoring Mental Ability Test
3. Nationality
4. Elementary School Attended
5. Neighborhood in Which Boy Lives
6. Subject Marks (Weighted and Averaged)
7. Age

The above information was taken from the school office six-year record cards. The addresses obtained from the office cards were located on a city map to discover the districts of the city from which the boys came. This was done to determine if the geographical location of a boy's home had a significant bearing on the choices he made or on the number of times he was chosen.

The weighted teachers' marks are: A--95; B--85; C--75; C- -65; D--50. The accumulated marks for the year were weighted and averaged.

Using the Pearson Product Moment formula, all the factors having a numerical value; such as, the mental ability scores, Stanford Achievement grade placement, average of the subject marks, ages, were standardized on the scale of zero to one hundred, using fifty as the mean. This was done in order to have a basis for comparison between the classes. For example, a boy in 8-4 might have a score of eighty-two for the average of his marks, while a boy in 8-1, in the same relative position in his group, might have an average of ninety-two. Standardizing these scores, each boy would have relatively the same t-score on the one hundred scale.

Using these scores, tables were made compiling all the individual grades. This was done first, to note agreement or
variation between the chosen boys (Stars) or the rejected boys (Isolates) and finally to note the comparison between chosen boys and rejected boys.
FIGURE I

The tabulation form is a device which may be used as an aid in the construction of sociograms. Names of individuals who have taken parts in the sociometric test are listed vertically and horizontally in the same order. The vertical listing of names is classified as the Choosers, and the horizontal listing of names is designated as the Chosen boys.

The responses as taken from individual cards are recorded on the form by following the line across on which the vertical chooser's name appears. The responses of first, second, and third choices are then entered in the vertical columns under the boys who are chosen. Since each card has first, second, and third choices, and each boy's name appears in the horizontal and vertical listings all responses are recorded when the cards are handled once. For example, Figure I shows that BAN chooses GLN first choice, COA second choice, and CAO third choice. On the line with BAN (the Chooser), the number 1 appears under GLN (first choice); the number 2 appears under COA (second choice); and the number 3 appears under CAO (third choice). When all responses are recorded, the first choices, the second choices, the third choices are totaled at the bottom of the figure to show the most frequently chosen boys.

Constructing a sociogram requires that individuals received the greater number of choices should be located near
the center of the figure, and individuals receiving choices from each other should be placed, when possible, near each other. The total choices as taken from a tabulation form helps greatly to determine the location of these boys. Unless such a precaution is made the converging lines may be unnecessarily interwoven and difficult to read.
FIGURE I

8-1 IN SCHOOL ASSOCIATES Eighteen Boys

<table>
<thead>
<tr>
<th>CHOSEN</th>
<th>BAN</th>
<th>BOK</th>
<th>BOL</th>
<th>CAO</th>
<th>CAY</th>
<th>CII</th>
<th>COE</th>
<th>DES</th>
<th>DEO</th>
<th>EVS</th>
<th>GLN</th>
<th>NAO</th>
<th>ICY</th>
<th>HIJ</th>
<th>TAI</th>
<th>YAA</th>
<th>VIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAN</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>BOK</td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOL</td>
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<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CAO</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>CII</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>3</td>
<td>2</td>
<td>1</td>
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<tr>
<td>COE</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
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<tr>
<td>DES</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2</td>
<td>1</td>
<td>3</td>
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</tr>
<tr>
<td>DEO</td>
<td></td>
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<td></td>
<td>3</td>
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<tr>
<td>EVS</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>GLN</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>MAO</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>MOY</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>HIJ</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>TAI</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>VAA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>VIS</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

CHOICES

| 1st   | 1   | 3   | 1   | 2   | 1   |     | 1   | 1   | 1   |     |     |     |     |     |     |     | 1   |
| 2d    | 1   | 1   | 2   | 1   | 2   | 2   |     | 1   | 4   | 1   | 2   | 1   | 1   |     |     | 3   |
| 3d    | 2   | 2   | 3   | 1   | 1   | 1   | 3   | 3   | 1   | 1   |     |     | 1   |     | 1   |     | 3   |

TOTALS

| 4   | 1   | 7   | 5   | 3   | 3   | 1   | 4   | 8   | 1   | 2   | 2   | 2   | 1   |     |     |     | 7   |
CHAPTER IV

ANALYSIS OF DATA
CHAPTER IV

ANALYSIS OF DATA

This chapter is concerned with an analysis of the survey as presented in Chapter III. Sociograms have been constructed in units of three test situations administered at two-month intervals to the seven woodworking classes used in the survey. Three test situations were used in order to more clearly define each individual's place in the group as he was chosen by other members of his group.

Sociograms serve as the basic source for determining who are the Stars and who are the Isolates. While the sociograms are invaluable aids in helping to locate the accepted and rejected child within a group, the significance of the sociogram lies in seeking the factors which influence the social structure of the class.

Several questions for study may be evident in the analysis and investigations of sociograms. This study is limited to a comparison of factors as previously detailed in relation to the chosen and rejected boys.

Viewing a sociogram for the first time, the reader is confronted with a confusion of circles, lines, and arrows. Further study reveals concentration of lines converging toward particular individuals denoting the frequently chosen boys (Stars); the absence of lines converging toward an individual denotes the underchosen boys (Isolates).
In any sociometric study this initial procedure would follow. For the purposes of this survey the selected boys from both extremes will be compared to determine what common factors, as furnished on the permanent record card, may influence the acceptance or rejection of boys in a woodworking class.

Stars shown in sociograms 8-1A, 8-1B, 8-1C defined BOL, VIS, and EVS as the Stars, and VAA and DES as the Isolates. The responses of first, second, and third choices were nearly equal for the Stars: BOL (twenty-one), VIS (twenty), and EVS (nineteen). The lack of responses (two) were equal for the Isolates. The Stars attracted responses from each other excepting the situation Choosing a Shop Foreman. EVS was not chosen by either companion Star, yet in the following situation, he was again chosen by both of these boys. VAA and DES received only two responses compared to the twenty-one, twenty, and nineteen responses attracted to the Stars. There was not a tele (Mutual Choice) between the Isolates, but VAA did make a third choice of DES in the School Associate situation.

The Stars confined their responses to triangles (Choices Among Themselves) the Isolates consistently chose Stars.

Of the nine opportunities in the unit to make responses, DES chose a Star seven times. The total responses received by the Stars were sixty, the total responses received by the Isolates were four.

The Stars and Isolates were ranked according to their
class position in each of the factors being investigated, one being assigned to the highest score in each instance that scored may be assigned. Factors; such as, district, elementary school attended, and nationality are shown by a common fraction. The numerator showing the number of choices received by the boys in that factor, and the denominator showing the opportunities that others had to choose him.
### Table I

The class ranking and fractional choice of stars and isolates in relationship to the criteria

<table>
<thead>
<tr>
<th>Grade 8-1</th>
<th>Three Stars</th>
<th>Two Isolates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
<td>BOL</td>
<td>VIS</td>
</tr>
<tr>
<td>Ages</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Marks</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Mental Age</td>
<td>6.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Stanford</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>District</td>
<td>4/6</td>
<td>1/3</td>
</tr>
<tr>
<td>Nationality</td>
<td>1/3</td>
<td>0/3</td>
</tr>
<tr>
<td>Elementary School</td>
<td>3/3</td>
<td>0/3</td>
</tr>
</tbody>
</table>
SOCIOMETRIC

FIGURE II

Class/Grade 8-1A  Date January, 1949
Number of Boys 18

Test Situation: Choosing in School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOMETRIC FIGURE III

Class/Grade: 8-1B  
Number of Boys: 18  
Date: March, 1949  
Test Situation: Choosing a Shop Foreman  

LEGEND

Class Member  
Mutual Choice  
Order of Preference  
First Choice  
Second Choice  
Third Choice
SOCIOPRAM

FIGURE IV

Class/Grade  8-10
Number of Boys  18

Date  May, 1949

Test Situation: Choosing Out of School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference

First Choice  - - -
Second Choice  ---
Third Choice  ---

CAO  CAE  CII  COO  DEO  GLN  BAN  BOL  DES  EVS  MAO  VIS  TAI  RUI  MCV  BOl
INVESTIGATION OF GRADE 8-2

Stars shown in Sociogram 8-2A, 8-2B, and 8-2C of Grade 8-2 were MAI, JAT, and MAO as the Stars and MAE, as the Isolate.

MAI (twenty-six responses) was chosen consistently by the companion Stars; JAT (eighteen responses) had no tele with companion Stars; MAO was chosen by companion Stars three times out of a possible six. The teles in Grade 8-2 were under fifty per cent for the Stars and the triangle was not as clearly defined as Grade 8-1.

MAE (two responses) was the sole Isolate in this Grade, being the only boy who received three or less responses. He was not chosen by either a Star or an Isolate. It may be that he received so few responses because he was a transfer from another eighth grade group.
TABLE II
THE CLASS RANKING AND FRACTIONAL CHOICE OF STARS AND ISOLATES IN RELATIONSHIP TO THE CRITERIA

<table>
<thead>
<tr>
<th>GRADE 8-2</th>
<th>THREE STARS</th>
<th>ONE ISOLATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTORS</td>
<td>MAE</td>
<td>JAT</td>
</tr>
<tr>
<td>AGES</td>
<td>13.5</td>
<td>8.5</td>
</tr>
<tr>
<td>MARKS</td>
<td>1.5</td>
<td>3.5</td>
</tr>
<tr>
<td>MENTAL AGE</td>
<td>7</td>
<td>14.5</td>
</tr>
<tr>
<td>STANFORD</td>
<td>1.2</td>
<td>6.5</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>4/6</td>
<td>0/0</td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>12/18</td>
<td>8/12</td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL</td>
<td>5/9</td>
<td>0/0</td>
</tr>
</tbody>
</table>
SOCIOGRAM

FIGURE V

Class/Grade 8-2A
Number of Boys 17
Date January, 1949

Test Situation: Choosing in School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOMGRAM

FIGURE VI

Class/Grade 8-2B
Number of Boys 17

Date March, 1949

Test Situation: Choosing a Shop Foreman

LEGEND

Class Member
Mutual Choice
Order of Preference

First Choice
Second Choice
Third Choice
SOCIOGRAM

Class/Grade 8-2C
Number of Boys 17

Test Situation: Choosing Out of School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference

First Choice
Second Choice
Third Choice
INVESTIGATION OF GRADE 8-4

Stars shown in Sociogram 8-4A, 8-4B, and 8-4C of Grade 8-4 were STE (twenty-two responses), DIO (seventeen responses), and BAE (fifteen responses). Isolates were DOY (three responses), FEI (three responses), and BIN (two responses).

STE, though receiving the greatest number of responses of the Stars, probably denoting his popularity, but not sufficiently strong enough to attract first-choice responses. In this set of sociograms, no triangle or teles existed among the Stars. In eighteen response possibilities, the stars had only two choices for each other and none for the Isolates.

The Isolates on the other hand chose stars in five instances, but only one tele existed for the Isolates.
### TABLE III

**THE CLASS RANKING AND FRACTIONAL CHOICE OF STARS AND ISOLATES IN RELATIONSHIP TO THE CRITERIA**

<table>
<thead>
<tr>
<th>GRADE 8-4</th>
<th>THREE STARS</th>
<th>THREE ISOLATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTORS</td>
<td>STE</td>
<td>DIO</td>
</tr>
<tr>
<td>AGES</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>MARKS</td>
<td>7</td>
<td>11.5</td>
</tr>
<tr>
<td>MENTAL AGE</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>STANFORD</td>
<td>4.5</td>
<td>12.5</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>0/6</td>
<td>3/6</td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>3/3</td>
<td>12/27</td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL</td>
<td>8/18</td>
<td>2/9</td>
</tr>
</tbody>
</table>
SOCIogram

Class/Grade 8-4A
Number of Boys 17
Date January, 1949

Test Situation: Choosing in School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOGRAM

FIGURE IX

Class/Grade 8-4B
Number of Boys 17

Date March, 1949

Test Situation: Choosing a Shop Foreman

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOGRAM

FIGURE X

Class/Grade: 8-40
Number of Boys: 17

Date: May, 1949

Test Situation: Choosing Out of School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
THE ANALYSIS OF FACTORS OF THE EIGHTH GRADE

The analysis of the factors pertaining to the Stars and Isolates of Grades 8-1, 8-2, and 8-4 shows that a wide dispersion exists in the ranking. The range of ages was from the oldest boy (fifteen years) in Grade 8-4 to the second youngest boy (13-3) in the same Grade. The mean age of Stars in T scores was 51. The mean age of the Isolates in T scores was 49.

There was a wide range in the marks the Stars and the Isolates had attained. The mean 53.11 for Stars was much higher than the mean T score of 43 attained by the Isolates. The same variance occurred in the mean T scores of Mental Ability for the two groups. The mean M. A. for the Stars was T 54, and the Isolates T 44. In the Stanford Achievement scores there was little difference between the mean for the Stars and the mean for the Isolates. The mean for the Stars was T51, for the Isolates T 49. The factors of district, nationality, and elementary school attended were not so well defined. Of these factors, nationality seemed to be the only influencing factor with forty-eight per cent of the Stars being chosen by boys of the same nationality. The district from which the boys came factor was least significant. Eighteen per cent of the boys choosing were from the same district as the Stars they chose. There was considerable variance between Stars and Isolates in the Eighth Grade groups.
TABLE IV

The mean and sigma scores of the factors based on the numerical scores are given in the following table:

<table>
<thead>
<tr>
<th></th>
<th>STARS</th>
<th>ISOLATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SIGMA</td>
</tr>
<tr>
<td>AGES</td>
<td>51</td>
<td>5.9</td>
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<tr>
<td>MARKS</td>
<td>53</td>
<td>7.7</td>
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<td>MENTAL AGE</td>
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<tr>
<td>STANFORD ACHIEVEMENT</td>
<td>52</td>
<td>9.7</td>
</tr>
</tbody>
</table>
INVESTIGATION OF GRADE 9-5

Ninth grade boys used in this survey were members of the lowest achievement groups for the grade, as compared to the eighth grade groups who attained better academic ratings.

Sociograms 9-5A, 9-5B, and 9-5C for Grade 9-5 showed CAO, FAO, and MOA as the Stars; PAA, CLG, and PAI as the Isolates.

CAA (twenty responses) was by far the most chosen boy in the group. He was chosen by companion Stars in each situation. Two teles existed between him and the other Stars, and these were a mutual second, and a mutual second and first choice between him, and FAA (fourteen responses). MOA (thirteen responses) was not chosen by either of the other Stars in any situation. The Isolates PAA (zero responses) and PAI (one response).

The Isolates in this grade were most clearly defined considering that they received but a single third choice. With the wide opportunity afforded for receiving responses, it seems more than chance when three boys are rejected to such a degree. These same Isolates were rejected by the Stars with the exception of a single third choice response from FAO. However, the Stars were highly attractive to the Isolates receiving twelve of the eighteen responses.
## Table V

The class ranking and fractional choice of stars and isolates in relationship to the criteria

<table>
<thead>
<tr>
<th>Grade 9-5</th>
<th>Three Stars</th>
<th>Three Isolates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factors</strong></td>
<td>CAO</td>
<td>FAC</td>
</tr>
<tr>
<td>Ages</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Marks</td>
<td>1</td>
<td>10.5</td>
</tr>
<tr>
<td>Mental Age</td>
<td>3</td>
<td>9.5</td>
</tr>
<tr>
<td>Stanford</td>
<td>4.5</td>
<td>7.5</td>
</tr>
<tr>
<td>District</td>
<td>1/3</td>
<td>3/3</td>
</tr>
<tr>
<td>Nationality</td>
<td>13/18</td>
<td>9/18</td>
</tr>
<tr>
<td>Elementary School</td>
<td>1/3</td>
<td>1/3</td>
</tr>
</tbody>
</table>
SOCIOMETRIC

Class/Grade  9-5A
Number of Boys  12

Date  January, 1949

Test Situation: Choosing in School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOMETRIC

FIGURE XII

Class/Grade 9-5B          Date March, 1949
Number of Boys 12

Test Situation: Choosing a Shop Foreman

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOGRAM

FIGURE XIII

Class/Grade 9-5C
Number of Boys 12

Date May, 1949

Test Situation: Choosing Out of School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
INVESTIGATION OF GRADE 9-7

Sociograms 9-7A, 9-7B, and 9-7C showed SEE, DOI, and SCO to be the Stars, and GUS, CAO, and MAN were the Isolates.

The Stars in this group were nearly equally attractive to the group. SEE (eighteen responses) was chosen by the companion Stars in three situations. DOI (seventeen responses) was chosen by companion Stars only once, and SCO (eighteen responses) was chosen five times in the six opportunities to be chosen by Stars. There were three teles among the Stars, the greatest attraction was between DOI and SEE. A triangle did not exist among the Stars since SCO did not choose either companion Star.

The Isolates GUS (three responses), CAO (four responses), and MAN (zero responses) had one choice attraction among themselves. The Isolates were not chosen by Stars, but the Isolates chose Stars in four of their nine opportunities to make a choice. No teles existed between the Stars and Isolates.
TABLE VI
THE CLASS RANKING AND FRACTIONAL CHOICE
OF
STARS AND ISOLATES
IN
RELATIONSHIP TO THE CRITERIA

<table>
<thead>
<tr>
<th>GRADE 9-7</th>
<th>THREE STARS</th>
<th>THREE ISOLATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTORS</td>
<td>SEE  DOI  SCO</td>
<td>GUS  CAO  MAN</td>
</tr>
<tr>
<td>AGES</td>
<td>13  6  10</td>
<td>9   8   1</td>
</tr>
<tr>
<td>MARKS</td>
<td>1   5   2</td>
<td>14  12  15</td>
</tr>
<tr>
<td>MENTAL AGE</td>
<td>1   6   2</td>
<td>7   5   15</td>
</tr>
<tr>
<td>STANFORD</td>
<td>1   5.2  4</td>
<td>5.5  7   14.5</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>1/3 0/3 6/9</td>
<td>1/9 0/9 0/0</td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>14/24 11/24 13/24</td>
<td>2/24 2/24 0/9</td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL</td>
<td>6/9 1/9 5/9</td>
<td>0/0 0/9 0/9</td>
</tr>
</tbody>
</table>
SOCIOGRAM

FIGURE XIV

Class/Grade 9-7A
Number of Boys 15

Date January, 1949

Test Situation: Choosing in School Associates

LEGEND

0 Class Member
× Mutual Choice
--- Order of Preference
- First Choice
--- Second Choice
---- Third Choice
SOCIOGRAM

Class/Grade 9-7B
Number of Boys 15

Date March, 1949

Test Situation: Choosing a Shop Foreman

LEGEND

Class Member
Mutual Choice
Order of Preference

First Choice
Second Choice
Third Choice
SOCIOPHARM

FIGURE XVI

Class/Grade 9-7C
Number of Boys 15

Date May, 1949

Test Situation: Choosing Out of School Associates

LEGEND

Class Member   First Choice
Mutual Choice   Second Choice
Order of Preference Third Choice
INVESTIGATION OF GRADE 9-8

Sociograms 9-8A, 9-8B, and 9-8C showed HEY, VOO, and COA to be the Stars, and RUI was the only Isolate.

Again the Stars receive nearly equal responses with VOO (sixteen responses) attracting the greatest number, and also the greatest number of first choices. VOO was chosen by companion Stars in five of the six opportunities to be chosen. COA (fourteen responses) was chosen once by a Star, and that a third choice by VOO. HEY (fourteen responses) was chosen in four of the six opportunities to be chosen by a companion Star. Two teles existed among the Stars, not enough attraction to set them apart as a triangle.

RUI (one responses) received no responses from a Star, he had a second to first mutual from one boy in the group. While he was not chosen by a Star, he chose a Star in six of his nine opportunities to make a choice, and three of these were first choices.
### TABLE VII

THE CLASS RANKING AND FRACTIONAL CHOICE
OF
STARS AND ISOLATES
IN
RELATIONSHIP TO THE CRITERIA

<table>
<thead>
<tr>
<th>GRADE 9-8</th>
<th>THREE STARS</th>
<th>ONE ISOLATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTORS</td>
<td>HEY</td>
<td>VOO</td>
</tr>
<tr>
<td>AGES</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>MARKS</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>MENTAL AGE</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>STANFORD</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>0/3</td>
<td>5/6</td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>0/0</td>
<td>12/33</td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL</td>
<td>0/0</td>
<td>5/6</td>
</tr>
</tbody>
</table>
SOCIOMETRIC

FIGURE XVI

Class/Grade 9-8A
Number of Boys 13

Date January, 1949

Test Situation: Choosing in School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference

First Choice ———
Second Choice ———
Third Choice ———
SOCIOMETRIC

FIGURE XVIII

Class/Grade 9-8B
Number of Boys 13

Date March, 1949

Test Situation: Choosing a Shop Foreman

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
SOCIOMETRIC

FIGURE XIX

Class/Grade 9-80  
Number of Boys 13  
Date May, 1949

Test Situation: Choosing Cut of School Associates

Legend

- Class Member

- Mutual Choice

Order of Preference

- First Choice

- Second Choice

- Third Choice

Diagram: Connections between individuals representing their choices and preferences.
INVESTIGATION OF GRADE 9-9

Sociograms 9-9A, 9-9B, and 9-9C showed IAO, CAO, and VAA to be the Stars. CHD, COE, and MAI were the Isolates.

IAO (thirty-three responses) received the largest proportion of responses of any boy in the entire survey. The magnitude of the responses were equally strong. IAO received more first place choices than the combined first choices of the other Stars. Viewing the sociograms it was apparent that the majority of lines converge at IAO's name. Every Star voted for him in every situation and teles existed with companion Stars. IAO was the most accepted by group members, all except the Isolates.

CAO (twenty responses) was chosen in five of the six situations offered to the companion Stars. First choice teles occurred with the other Stars. One Isolate chose him but he did not choose an Isolate.

VAA (seventeen responses) was the recipient of the fewest responses from companion Stars, three responses from the six opportunities to be chosen. There were two first choice teles with IAO.

The Stars in the grade formed a definite triangle, yet there were parts of chains being attracted strongly to other individuals.

Isolate CHS (two responses) received no responses from Stars, he voted twice for a Star. He was chosen once by a
companion Star.

COE (one response) and this from another Isolate. MAI (two responses) from other than Stars or Isolates.
TABLE VIII
THE CLASS RANKING AND FRACTIONAL CHOICE OF STARS AND ISOLATES IN RELATIONSHIP TO THE CRITERIA

<table>
<thead>
<tr>
<th>GRADE 9-9</th>
<th>THREE STARS</th>
<th>THREE ISOLATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTORS</td>
<td>IAO</td>
<td>CAO</td>
</tr>
<tr>
<td>AGES</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>MARKS</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>MENTAL AGE</td>
<td>5</td>
<td>6.5</td>
</tr>
<tr>
<td>STANFORD</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>12/18</td>
<td>9/18</td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>26/36</td>
<td>18/36</td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL</td>
<td>18/21</td>
<td>13/21</td>
</tr>
</tbody>
</table>
SOCIOGRAM

FIGURE XX

Class/Grade: 9-9A
Number of Boys: 16

Date: January, 1949

Test Situation: Choosing in School Associates

LEGEND

Class Member
Mutual Choice
Order of Preference

First Choice
Second Choice
Third Choice
Class/Grade: 9-9B
Number of Boys: 14

Test Situation: Choosing a Shop Foreman

LEGEND

Class Member
Mutual Choice
Order of Preference
First Choice
Second Choice
Third Choice
LEGEND
- Class Member
\(\downarrow\) Mutual Choice
Order of Preference

First Choice - - -
Second Choice - -
Third Choice -
THE ANALYSIS OF FACTORS OF NINTH GRADE STARS AND ISOLATES

The analysis of the factors pertaining to the Stars and Isolates of Grades 9-5, 9-7, 9-8, and 9-9 also shows a wide dispersion of criteria factors. As in the eighth grade, ages ranged from very high (16-10) to very low (13-2). The average age of the Stars and the Isolates had a variance equal to the difference found in the eighth grade. Stars were considerably younger for the grade than were the Isolates. The Mean was a T score 48 for the Stars and a T score 55 for the Isolates. There was a wide dispersion in the marks with a mean of T score 57 for Stars and T score 46 for Isolates. Mental ability was equally well defined. The mean for the Stars was a T score 56 as compared to T score 47 for the Isolates. Stanford Achievement scores favored the Stars to a lesser degree. The mean for the Stars was a T score 55, for the Isolates a T score 51.

District, Nationality, and Elementary School Attended were far more significant in the choosing of Stars. Sixty per cent of the boys choosing Stars lived in the same district. Forty-seven per cent of the boys choosing Stars were of the same nationality. Fifty-six per cent of the boys chose Stars who had attended the same elementary school.

The following table included the mean and sigma scores of the factors related to the Stars and Isolates:
TABLE IX

The following table included the mean and sigma score of the factors related to the Stars and Isolates:

<table>
<thead>
<tr>
<th></th>
<th>STARS</th>
<th>ISOLATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SIGMA</td>
</tr>
<tr>
<td>AGES</td>
<td>48</td>
<td>10.57</td>
</tr>
<tr>
<td>MARKS</td>
<td>57</td>
<td>12.21</td>
</tr>
<tr>
<td>MENTAL AGE</td>
<td>56</td>
<td>10.08</td>
</tr>
<tr>
<td>STANFORD ACHIEVEMENT</td>
<td>55</td>
<td>8.8</td>
</tr>
</tbody>
</table>
TABLE X
A COMPARISON OF T SCORES OF NINE STARS AND SEVENTY-FOUR CHOOSERS, SIX ISOLATES, AND ELEVEN CHOOSERS IN THE EIGHTH GRADE

<table>
<thead>
<tr>
<th></th>
<th>8-1 Eighteen Boys</th>
<th>8-2 Seventeen Boys</th>
<th>8-4 Seventeen Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>52 53.6 66 61</td>
<td>49.6 50.8 59 0</td>
<td>59.3 56.6 53.6 57.7</td>
</tr>
<tr>
<td>Marks</td>
<td>50.3 50.9 47.5 44.5</td>
<td>57.3 64.6 36 0</td>
<td>54.6 51.1 42 44.8</td>
</tr>
<tr>
<td>Otis Quick Scoring Test</td>
<td>60 66.5 50.5 44.9</td>
<td>46.3 54.4 33 0</td>
<td>49.6 50.8 45 44.2</td>
</tr>
<tr>
<td>Stanford Achievement Test</td>
<td>55.3 59.2 54 46</td>
<td>50.3 50.4 43 0</td>
<td>47.3 49.2 47.6 48.7</td>
</tr>
</tbody>
</table>

FRACTIONAL CHOICES

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>Nationality</th>
<th>Elementary School Attended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4/10 0/0</td>
<td>7/9 0/0</td>
<td>10/24 0/8</td>
</tr>
<tr>
<td></td>
<td>17/36 2/3</td>
<td>30/51 2/2</td>
<td>23/57 3/13</td>
</tr>
<tr>
<td></td>
<td>3/12 2/6</td>
<td>2/21 0/0</td>
<td>5/21 2/6</td>
</tr>
</tbody>
</table>
ANALYSIS OF EIGHTH GRADE STARS AND ISOLATES AS THEY COMPARED TO GROUP MEMBERS WHO CHOSE THEM

The previous analysis of Stars and Isolates showed a significant difference. The difference between Stars and the boys who chose them, and Isolates and the boys who chose them is not so well defined. As indicated in Table IV, there is agreement, in each of the factors and the boys in the group who chose them.

The mean of ages for Stars and Choosers was T score 53.6. The mean of weighted average teachers’ marks was T score 54.3 for Stars and T score 54.4 for Choosers. The Stars had a slightly lower mean T score of 52 for the Otis Quick Scoring Test as compared to T score 54.2 for the Choosers. The Stars were also slightly lower in the Stanford Achievement scores, with a mean of T score 51 compared to T score 52.9 for the Choosers.

Isolates and their Choosers showed the same factors analyzed. The mean T scores of the ages was 56 for the Isolates and 56.2 for their Choosers. The mean of weighted average teachers’ marks was T score 44.8 for the Isolates and T score 44.7 for their Choosers. In the Otis Quick Scoring Test the mean for the Isolates was 47.8 and for their Choosers 44.1. The Isolates also had a higher mean of T score 50.8 in the Stanford Achievement Test than their Choosers with a mean T score of 47.4.

District, Nationality, and Elementary School Attended
factors applied only to the Stars because boys who were the least chosen were designated as Isolates and the responses received by these were too limited for any practical comparison to be made. Forty-eight per cent of the boys choosing Stars were of the same nationality as the Stars. Forty per cent of the boys choosing Stars lived in the same district as the Stars. The Elementary School Attended factor had the least numerical influence upon the selection of the Stars. Thirty-six per cent of the boys attended the same Elementary School as the Stars they choose.
TABLE XI

THE MEAN T SCORES AND COMBINED FRACTIONAL CHOICES OF NINE STARS AND SEVENTY-FOUR CHOOSES, SIX ISOLATES, AND ELEVEN CHOOSES IN THE EIGHTH GRADE

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>STAR MEAN</th>
<th>CHOOSER MEAN</th>
<th>ISOLATE MEAN</th>
<th>CHOOSER MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGES</td>
<td>53.6</td>
<td>53.6</td>
<td>56</td>
<td>56.2</td>
</tr>
<tr>
<td>MARKS</td>
<td>54.3</td>
<td>54.4</td>
<td>44.8</td>
<td>44.7</td>
</tr>
<tr>
<td>OTIS QUICK SCORING TEST</td>
<td>52</td>
<td>54.2</td>
<td>47.8</td>
<td>44.1</td>
</tr>
<tr>
<td>STANFORD ACHIEVEMENT TEST</td>
<td>51</td>
<td>52.9</td>
<td>50.8</td>
<td>47.4</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>21/43</td>
<td></td>
<td>0/8</td>
<td></td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>70/134</td>
<td></td>
<td>7/18</td>
<td></td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL ATTENDED</td>
<td>15/54</td>
<td></td>
<td>4/12</td>
<td></td>
</tr>
</tbody>
</table>
ANALYSIS OF NINTH GRADE STARS AND ISOLATES AS THEY COMPARED TO GROUP MEMBERS WHO CHOOSE THEM

Contrary to the close agreement formed in the eighth grade between the Choosers and the Chosen, the ninth grade showed some variance. The ages for Stars was a little lower with a mean in T score of 48.2 compared to the Choosers age mean T score of 51.5. Stars and their choosers showed the greatest difference in the factor of marks with a mean in T score of 56.6 for the Stars, and a mean in T score of 47.7 for the Choosers. The Otis Quick Scoring Test Scores and the Stanford Achievement scores had means slightly higher for the Stars than for their Choosers.

The Isolates and Choosers also showed variance. The age mean for Isolates was T score 55.7; the age mean for their Choosers was T score 54.4. The Stars' weighted teachers' marks had a mean in T score of 44.5, while their Choosers had a mean T score of 47.8. In the Otis Quick Scoring Test the Isolates had a mean of T score 50.5, while their Choosers showed a mean T score of 43.4. The greatest variance is shown in the scores of the Stanford Achievement scores; the mean for the Isolates was T score 54.3; the mean of the Choosers was T score 44.4.

District, Nationality, and Elementary School factors were more significant in the Ninth Grade groups than they were in the Eighth Grade groups. The Stars received sixty-three percent of the responses from boys living in their districts.
The greatest difference occurred in the Elementary School Attended, fifty-three per cent of the Choosers came from the same Elementary School as the Stars they chose.
### Table XI

**A Comparison of T Scores of Twelve Stars and Eighty-Seven Choosers, Choosers in the Ninth Grade**

<table>
<thead>
<tr>
<th></th>
<th>9-5 Twelve Boys</th>
<th>9-7 Five</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stars</strong></td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td><strong>Choosers</strong></td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td><strong>Isolates</strong></td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td><strong>Choosers</strong></td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td><strong>Ages</strong></td>
<td>43.3</td>
<td>49.2</td>
</tr>
<tr>
<td><strong>Marks</strong></td>
<td>58.3</td>
<td>49.8</td>
</tr>
<tr>
<td><strong>Otis Quick Scoring Test</strong></td>
<td>60.6</td>
<td>55</td>
</tr>
<tr>
<td><strong>Stanford Achievement Test</strong></td>
<td>61</td>
<td>52.6</td>
</tr>
<tr>
<td><strong>Fractional Choices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>District</strong></td>
<td>7/12</td>
<td>2/36</td>
</tr>
<tr>
<td><strong>Nationality</strong></td>
<td>36/81</td>
<td>3/81</td>
</tr>
<tr>
<td><strong>Elementary School Attended</strong></td>
<td>11/45</td>
<td>0/24</td>
</tr>
</tbody>
</table>
TABLE XIII

THE MEAN T SCORES AND COMBINED FRACTIONAL CHOICES OF TWELVE STARS AND EIGHTY-SEVEN CHOOSERS, AND TEN ISOLATES AND TWELVE CHOOSERS IN THE NINTH GRADE

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>STAR</th>
<th>CHOOSER</th>
<th>ISOLATE</th>
<th>CHOOSER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN T SCORE</td>
<td>MEAN T SCORE</td>
<td>MEAN T SCORE</td>
<td>MEAN T SCORE</td>
</tr>
<tr>
<td>AGES</td>
<td>48.2</td>
<td>51.5</td>
<td>55.7</td>
<td>54.4</td>
</tr>
<tr>
<td>MARKS</td>
<td>56.6</td>
<td>47.7</td>
<td>44.5</td>
<td>47.8</td>
</tr>
<tr>
<td>OTIS QUICK SCORING</td>
<td>56.3</td>
<td>52.9</td>
<td>50.5</td>
<td>43.4</td>
</tr>
<tr>
<td>TEST</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STANFORD ACHIEVEMENT</td>
<td>54.6</td>
<td>51.4</td>
<td>54.3</td>
<td>44.4</td>
</tr>
<tr>
<td>TEST</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISTRICT</td>
<td>60/96</td>
<td></td>
<td></td>
<td>4/47</td>
</tr>
<tr>
<td>NATIONALITY</td>
<td>132/279</td>
<td></td>
<td></td>
<td>4/197</td>
</tr>
<tr>
<td>ELEMENTARY SCHOOL</td>
<td>63/123</td>
<td></td>
<td></td>
<td>4/36</td>
</tr>
<tr>
<td>ATTENDED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER V

SUMMARY OF DATA
SUMMARY

The purpose of this survey was to discover what factors, if any, were common to boys chosen or rejected by their associates in the eighth and ninth grade classes in woodworking.

To discover the chosen and rejected boys, three sociometric tests were administered to 108 boys in three eighth grade and four ninth grade woodworking classes in a Rhode Island Junior High School. The boys used in this survey comprised a cross section of a small city, having come to the junior high school from eighteen different elementary schools.

Eleven nationalities were included among these boys, with a majority being of Italian extraction. (63%)

As typical of many junior high schools, there was a wide range in scores and the relationship of such factors pertinent to this survey as Age, Teachers' Subject Marks, Stanford Achievement Grade Placement Scores, Otis Quick Scoring Mental Ability Scores, the District in which the boys lived, and the Elementary School they had attended.

The three Sociometric Test administered at two-month intervals were:

I. Test Situation--Choosing in School Associate
II. Test Situation--Choosing a Shop Foreman
III. Test Situation--Choosing out of School Associate

The responses of the boys were tallied and sociograms were constructed for each test of each group in each grade.

The three boys most frequently chosen were designated as
Stars and the boys receiving three responses or less were designated as Isolates.

Analyses were made comparing Stars and Isolates in the eighth grade and Stars and Isolates in the ninth grade. Comparisons were made of Stars and the boys who chose them and Isolates and the boys who chose them in the eighth and ninth grades.

In the first place, it will be evident from the material that has been analyzed that the boys used in this survey cannot be specifically classified as an accepted boy or Star, neither can he be classified as a rejected boy or Isolate. Attention may be called to the various factors analyzed in this survey and to note the wide dispersion and overlapping of scores attained by the boys from each classification. However, it is evident from the analysis of each group and of each grade that the Stars were superior to the Isolates on the basis of the scores attained on ages, average marks, Otis Quick Scoring Test scores and the score of the Stanford Achievement tests.

The factors; such as, District, Nationality, and the Elementary School Attended applied only to the Stars because the responses received by Isolates were too limited to consider significant. In many instances Isolates received no responses at all from other boys in the group.

Attention is also called to the selection of Stars and Isolates in each of the seven Sociometric test groups used in the survey. It will be apparent from the class ranking of
Stars and Isolates that the great variability of scores would make it quite impossible to designate as a Star or Isolate any individual solely on the basis of the factors used. In Grade 8-4 the range of ages was from the second oldest to the youngest boy in the group. The range of ages for Isolates was from the youngest boy in Grade 8-1 to the oldest boy in Grade 8-2. Nearly the same variability occurred in the factors of weighted teachers' marks, Otis Quick Scoring Test Scores, and the Grade Placement as taken from the Stanford Achievement Test.

However, the mean ranking of Stars and Isolates as shown in the analysis of Grade Eight and Nine defined higher scores for the Stars in weighted teachers' subject marks, mental ability, and grade placement scores. The Stars in both groups were considerably younger than the Isolates. The teachers' subject marks in both the eighth and ninth grades showed eleven points difference between the Stars and Isolates. The mean for the eighth grade was T score 57 for the Stars and a mean of 46 for the Isolates. In the ninth grade the Stars had a mean score of T 53, and the mean for the Isolates was T 46.

Observing further it may be noted in the analysis of the two grades that the mean difference of the factors related to Stars and Isolates are almost identical despite the tabulation of a wide range of scores. While decided differences are found in the scores of Stars and Isolates, the differences found between the Stars and the boys who chose them, and the
Isolates and the boys who chose them is insignificant with the exception of the factor of subject marks in the ninth grade. In this factor the Stars had a mean T score of 56.6 compared to a mean T score of 47.7 for the choosers.

The district factor showed that Stars in the ninth grade were chosen by sixty-three per cent of the boys who came from their districts. In the eighth grade forty per cent of the boys chose Stars who came from their districts. The nationality factor in both grades seemed to bear the same influence on the selection of Stars, forty-seven per cent of the Choosers were of the same nationality as the Stars in the ninth grade, and forty-eight per cent in the eighth grade. Fifty-three per cent of the choosers came from the same elementary school as the Stars in the ninth grade, while only thirty-six per cent of the Choosers recorded responses for the Stars from the same school in the eighth grade.
CONCLUSIONS

1. Stars were found to be superior to Isolates in the factors of Ages, Marks, Otis Quick Scoring Tests, and Stanford Achievement grade placement scores.

2. Stars were found to be slightly younger than the mean age of boys who chose them, but considerably younger than Isolates in the same group.

3. In choosing associates Stars chose boys who had approximately the same academic ratings; and boys choosing Stars had approximately the same academic rating.

4. Isolates invariably chose boys in the class with much higher class ranking.

5. The mean score between Stars and the boys who chose them showed very little difference indicating that additional influences other than the factors used in this survey effect the selection of the Stars.

6. Stars and Isolates were equally well defined in both the higher and lower academically ranked groups.

7. Stars and Isolates had equally large ranges of scores related to the various factors; however, Stars consistently attained higher scores, while Isolates consistently attained lower scores.
8. The obvious Stars and the obvious Isolates can be readily observed, but the social interrelationships of the group as a whole require more accurate diagnosis than casual observation. Teachers could gain this insight by using the sociometric technique.
LIMITATIONS OF THE STUDY
and
SUGGESTIONS FOR FURTHER RESEARCH

I. Limitations of the survey

1. The boys taking part in this survey were limited to the students assigned to Woodworking at a given time.

2. After presenting the test situation, it was necessary to follow up absentees who made their choices at a later time depending upon the duration of the absence.

3. The population tested was predominantly of the same nationality thus weakening this factor as a measure of choice.

4. There was no consideration given to personality as a basis for choosing an associate.

5. The test situations asked for three choices by each boy. At times, a boy might have but one or two choices. Consequently, a third choice might be made at random.

II. Problems of research

1. Conduct a similar survey in the lower grades in order to discover if the data used in this study would have more influence upon a younger student's choice of an associate.
2. Conduct a survey to include boys and girls in the eighth and ninth grades using a Personality Test instead of Test Situations in order to discover if greater significance exists using this instrument rather than situations of choices.

3. Conduct a survey having the same test situations applied to classes other than Woodworking.


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