SOCIOMETRY AND THE ELEMENTARY TEACHER

A RESEARCH PAPER
SUBMITTED TO THE HONORS COUNCIL
FOR FULFILLMENT OF THE REQUIREMENTS
OF I.D. 499, SENIOR HONORS THESIS

BY
MARY JANE CRONK

ADVISOR—DR. HELEN SORNSON

BALL STATE TEACHERS COLLEGE
MUNCIE, INDIANA
JUNE, 1963
PREFACE

This paper is being submitted to the Honors Committee in order to meet the requirements for graduating this June, 1963, on the Honors Program. I began this paper in June of last summer. It is with a great deal of relief and regret that I have now completed it almost one year later.

I began searching for a subject in the broad field of guidance in the elementary school. During the summer I did reading in this area, and with the guidance of Dr. Sornson, I decided to write on the area of sociometry. It was hard to decide on a specific area, since everything I read was interesting to me. However, I think that sociometry is one of the most important areas in the field of elementary guidance, since many of the other areas seem to revolve around or hinge on sociometry. Sociometry forms a good basis on which to base other types of guidance activities.

I did student teaching during the fall quarter of this year in a fifth grade classroom at Westview Elementary School in Muncie, Indiana. My critic teacher, Mrs. Irma Gale, and I carried out some action research in the area of sociometry. I would like to thank Mrs. Gale for her help, cooperation, patience, and understanding. Also, I would like to express my gratitude to Dr. Helen Sornson. Without her, this paper would not have been written. I also wish to thank my friends for their understanding and patience.

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How important is the group in the classroom? What influence does the teacher have on the group? How is a sociogram helpful to the teacher? Do the children need peer approval and acceptance in order to be secure and to learn? These are some of the questions that this paper will consider.

Sociometry, the study of the inter-relationships among people, can be very helpful in answering some of these questions. If a teacher uses the sociogram as a starting point in her understanding of children, then she can understand her children better. The sociogram points out relationships the teacher may not be aware of. She can also use other guidance techniques to better advantage.

In this paper, various sociometric techniques, tests, and sociograms are explored. The value of sociometry to the elementary teacher, how sociometry helps the teacher, and how the teacher can use the results of sociometric devices in her classroom will be discussed.

I. What Is Sociometry?

Before going further, it is necessary to have a basic understanding of what sociometry actually is and the terms used in this area. The word sociometry is from the Latin word "socirus" which means companion and the Latin word "metrum" which means measure. Its literal meaning is to

measure companions. "Sociometry is the study of the patterns of inter-
relations between people and the process of their measurement. It is not
concerned with official relationships but with the psychological compo-
nents of interactive relationships."¹ This is the definition used in
this paper. Sociometry "gives its subjects research status by changing
them from subjects into participating and evaluating actors ... It
puts an equally strong emphasis upon group dynamics and group action as
upon measurement and evaluation."² Mary L. Northway, however, has said
that sociometry does not measure in its basic procedure, but that it
discovers. "They therefore measure the width but not the depth of his
social values; in other words, they measure the extent to which he is per-
ceived by others as fulfilling their needs, or enhancing their experience."³

The sociogram is one of the most common devices used in the area of
sociometry. "A sociogram is a map or chart of the interrelationships
among the individuals within a group; it portrays the role of each person
within that group."⁴ The sociogram does not give the reasons behind the
choices. It presents "for a particular occasion a complete picture of
spontaneous interaction in the whole range of its manifestation in relation
to important criteria of group life. Sociometric methods focus attention on

¹ Helen Hall Jennings, Sociometry in Group Relations, Second Edition,

² Jacob L. Moreno, who shall survive?, (Boston, New York, Boston

³ Mary L. Northway, A Primer of Sociometry, (University of Toronto

⁴ Clifford A. Froshlich, John C. Carter, Studying Students, Chicago

⁵ Intergroup Education in Cooperating Schools, A Sociometric Work
Guide, Helen Saba Director ( New York, American Council on Education, 1959),
p. 13.
the dynamic aspects of interaction rather than on individual children in isolation from one another.\textsuperscript{1} The more one knows about the relationships of one person to other people and his environment and background, the better one is able to understand this person. It is sometimes hard to understand the person in isolation.

Many terms are involved in the interpretation of the sociogram. One of these is neglectee. The neglectee is the individual who receives relatively few choices on a sociometric test. A rejectee receives negative choices. Sometimes this is confused with the isolate, but the isolate receives no choices either positive or negative. A sociometric clique is a group which gives relatively few choices outside of the closely knit group. It is a subgroup within the larger group. When there is sociometric cleavage there is a lack of sociometric choices between two or more subgroups. A star is a person who is highly chosen by the group, and a mutual choice is the situation of two people choosing each other.

Sociometry is relatively new. Its father was Jacob L. Moreno, who wrote the first major book on sociometry, \textit{Who Shall Survive?}, in 1954. Although relatively new, it has become a very important tool. Moreno says that "sociometry has taught us to recognize that human society is not a figment of the mind, but a powerful reality ruled by a law and order of its own, quite different from any law or order permeating other parts of the universe."\textsuperscript{2}

II. \textbf{Why Sociometry?}

Why should educators be concerned with sociometry? As has been previously said, sociometry can be very important in the elementary school. Its importance is partially hinged on whether the school is subject matter oriented or pupil oriented. More schools today are more pupil oriented. "Educators have many responsibilities in common with the parents of their students. They must help children learn to live and work and play together.

\textsuperscript{1}\textit{Jennings, Sociometry in Group Relations}, p. 13.

\textsuperscript{2}\textit{Moreno, Who Shall Survive?}, p. 92.
cooperatively as models for their future functioning in society. They must aid children in achieving maturity. One indication of an individual's maturity is his relations to the other members of the groups to which he belongs.1

Other writers in the area of sociometry have pointed out the role of the school in developing social responsibility as well as helping children to learn facts. Edson Caldwell has said that "sociometry is derived from the developing attention to the socialization responsibility of the school. It has now become an important tool in providing individual guidance for children and in fostering a healthy classroom social climate."2 Mary Beauchamp and Howard Lane indicate that "the significant role of the school is to accept children, to understand their circumstances, and upon this acceptance and understanding to create an environment which complements the rest of their living."3 It seems that educators are going to have to be concerned about the individuals in the classroom and the interactions between and among them. This is just as important as teaching the children reading, writing, and arithmetic. Teachers need to understand their pupils if "their pupils are to be motivated to healthier personality and group development and to gain from the school curriculum the most possible."4 The sociogram "can reveal the workings of this child association and thereby help the teacher to serve the student's needs and at the same time


bring them within range of the teacher's educational objectives."1

"It is possible to affect the entire structure of the group when individual relationships are improved. The application of sociometric techniques and an understanding of the information gained permit the teacher to improve the social structure of a classroom and to raise the academic achievements of the pupils to some degree."

Sociometry and group dynamics are inter-related. A person is always part of some group in society. The saying that "no man is an island" is becoming more true every day. The world today is very inter-dependent. Consequently, it is important to learn to get along with others. Most people want to be a part of a group and to be accepted by their peers. The baby is a self-centered being. Through group interaction does he learn to think about others, to accept social responsibility, and become a good citizen. "Our associations with other human beings are continuously making us what we are becoming."3

Social acceptance is so very important to most people that often, without it, they become maladjusted, unhappy individuals. Mann has said that "children who are socially unacceptable by their peers often exhibit emotionally unstable habits that affect all areas of their development. If children can be helped to acquire positive social assets, they may become more socially acceptable to their peers. Social acceptance, in turn, may increase their academic achievement."4 Social belonging is a psychological necessity; the classroom has a profound effect on


Children. Helen Hall Jennings has said that "all learning in school takes place within the setting of pupil-pupil relationships. Teachers, in general, realize that the individual's personal and academic growth can be affected adversely or favorably by his position in the group and that all pupils stimulate or thwart each other in many ways."2

Children have various needs that must be met before they are ready to commit themselves wholly to academic learning. Among these needs are the basic physical needs of adequate nourishment, shelter, clothing, rest, and medical attention. The psychological needs are love, a feeling of success, and freedom from excessive fear. Besides these needs, there are also the social needs of being respected and accepted by others, belonging to a group, and being regarded as worth while and important.3 Beauchamp and Lane also have added the following needs to those already mentioned—"self-respect and a need for freedom so that a person could make a mistake without its bothering him, could express unpopular ideas without becoming unpopular, and could recognize a mistake made by the teacher and still feel secure with that teacher."4 "An assumption basic to understanding human behavior is that every act is for the purpose of satisfying some need."5 Needs are not always exposed to full view. "They never exist in isolation."6 It is the responsibility of


2Jennings, Sociometry in Group Relations, p. 1.


4Beauchamp and Lane, Human Relations in Teaching; the Dynamics of Helping Children Grow, pp. 132-140.


6Ibid., p. 25.
the teacher to look behind surface behavior to discover what needs of the pupil are not being met.

Froehlich and Darley said that whenever students come together, they participate in a social interaction process. To really understand a student, it is necessary to know the role he plays in the group and his satisfaction with that role.

"Through the sociometric technique a teacher can find out what reputations children have in the opinion of their peers, what children in the group think of each other, and what preferences and rejections pupils in a group have for each other. Much information for understanding individual or group problems can be obtained by pupils evaluating each other."\(^2\)

In the socialization process of human beings, getting along and being accepted by others is one of the major problems of children. "The strength he (the child) finds in a group of friendly peers serves the very necessary purpose of helping wean him away from complete dependence upon his parents. As the child learns at school how to relate closely to others, many of whom hold different values and opinions than his own, he is developing some of the human relations skills that he will need throughout all his adult life."\(^3\)

A child's self-concept is very important. The child who is secure in his self-concept will have the confidence to do things, to accept failure, to meet new people, and will usually be interested in learning. "A child's estimation of his own personal worth, his evaluation of his competence, and his sense of personal superiority or inferiority are shaped, often to a

\(^1\)Froehlich and Darley, *Studying Students*, p. 327.


\(^3\)Edson Caldwell, *Creating Better Social Climate in the Classroom Through Sociometric Techniques*, p. 40.
critical extent, by the status accorded or refused him by his peers. When a child fails to win belonging or is actively rejected by his classmates, the classical aggressive or withdrawing patterns of behavior that usually follow frustration are seen.\(^1\) Therefore, the rejected child does not have an adequate self-concept. He is usually so concerned with this self-concept and the relation of himself with his peers, that he continuously does the wrong thing when he tries to win approval. Often, this child is unable to learn academic material because his mind is on other things which are of more immediate importance and value to him.

Since the class is a large group with various groups contained within it, it is interesting to look at cohesiveness of groups. How much influence does the individual have on the group, and how much is the individual attracted to the group? "The power of a group may be measured by the attractiveness of the group for the member.\(^2\) "A person wants to stay in a group, he will be susceptible to influences coming from the group, and he will be willing to conform to the rules which the group sets up."\(^3\) "Given equal influence pressures, groups high in attractiveness will have fewer deviated from a group standard than will groups medium or low in attractiveness."\(^4\) It seems to be apparent that the stronger the group cohesiveness, the more conformity there is within the group.

Educators also have to be concerned with mental health and maladjustment. It is often the person who is not accepted by his peers or who does not accept his peers who is having

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\(^3\)Lester M. Libo, \textit{Measuring Group Cohesiveness} (Ann Arbor: Research Center for Group Dynamics, Institute for Social Research, University of Michigan, 1953), p. 3.
adjustment problems. "Mental health implies a satisfactory relationship to one's self and to one's environment, as well as the possession of problem-solving techniques for establishing a satisfactory relationship between the two."¹ Children are considered to be poorly adjusted if their behavior interferes with their learning, their personal growth and development, or the lives of others."² Kough and DeHaan said that a sociometric test will help identify children with problems and will show how the children in your group feel about their classmates and friends.³ By asking certain questions, such as Who Are They? questions, the teacher can identify aggressive and withdrawn behavior and friendship.⁴

There are several main types of maladjustment. The teacher will probably see that some of her children exhibit some of these kinds of behavior. However, it is important to remember that "the difference between maladjusted children and most children is one of degree rather than of kind. That is, maladjusted children have the same problems most children do--only much more so. They are much more unhappy, much more self-centered, much more fearful."⁵ Some children show an aggressive maladjustment such as:

1. Doesn't go along gracefully with decisions of teacher or group.
2. Is quarrelsome, fights often, gets mad easily.
3. Is a bully, picks on others.
4. Is resentful, defiant, rude, sullen, or apt to "sas" adults.
5. Disrupts class and is difficult to manage.


³Ibid., p. 63.

⁴Ibid., p. 65.

⁵DeHaan and Kough, "Identifying Children With Special Needs," p. 119.
6. Is regarded by other children as a pest. Rubs 
others the wrong way. Is excluded by others when-
ever they get the chance.
7. Often steals.
8. Lies frequently.
9. Occasionally is destructive of property.¹

Others exhibit withdrawn maladjustment with such traits as the
following:

1. Is not noticed by other children. Is neither
actively liked nor disliked—just left out.
2. Is one or more of the following: shy, timid,
fearful, anxious, excessively quiet, tense.
3. Daydreams a great deal.
4. Never stands up for himself or his ideals.
5. Is "too good" for his own good.
6. Finds it difficult to be in group activities or
to be relaxed when with others.
7. Is easily upset, feelings are readily hurt, is
easily discouraged.²

Other children may show symptoms of general maladjustment such
as:

1. Needs an unusual amount of prodding to get work
completed.
2. Is inattentive and indifferent, or apparently lazy.
3. Exhibits nervous mannerisms such as nail biting,
sucking thumb or fingers, stutters, extreme rest-
lessness, muscle twitching, hair twisting, picking
and scratching, deep and frequent sighing.
4. Is actively excluded by most of the children when-
ever they get a chance.
5. Is a failure in school for no particular reason.
6. Is absent from school frequently or dislikes school
intensely.
7. Seems to be more unhappy than most of the children.
8. Achieves much less in school than his ability
indicated he should.
9. Is jealous or overcompetitive.³

¹DeNan and Kough, "Identifying Children With Special
²Ibid., p. 61.
³Ibid., p. 62.
Besides noting some of the characteristics of maladjustment, it is also necessary to know some characteristics of sound mental health before trying to help or identify a maladjusted individual. Some of these characteristics are:

1. Children with sound emotional or mental health are able to accept themselves as they are, not to be. They estimate their ability realistically, having neither too high nor too low an opinion of themselves. They accept their shortcomings and try to correct those that can be corrected. They can even laugh at themselves.

2. They stand on their own feet; they are reasonably independent in deciding things as compared with other children of the same age.

3. They are confident of their ability to handle the situations that may confront them.

4. They are not constantly afflicted with such feelings as fear, anger, jealousy, worry, or guilt. Generally, they seem to be fairly relaxed.

5. They like and trust others and are able to form warm, lasting, personal relationships. They have at least one close friend. They expect people to like them.

6. They consider the interests of other people and feel some responsibility for the welfare of others.

7. They consider themselves an integral part of the group.

8. They accept reasonable responsibility.

9. They improve their abilities, skills, and talents, and face new experiences eagerly.

Perhaps the best short answer or summary to the question of Why Sociometry? is that sociometry is important to the teacher as a basis for understanding inter-relationships among individuals and groups. Once the teacher knows the relationships among her pupils, she has a starting place from which to work in improving the group relationships. She knows who the people are that are leaders and probably have a great influence on the group. Some classes may have several cliques or isolates. The teacher can help those people to relate to the rest of the group. By giving children a chance to succeed, to feel accepted, and to work in a positive atmosphere, some of the children's basic needs are met. When the social needs are met, children are free to learn. By

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1DeHann and Acuff, "Helping Children With Special Needs," p. 115.
using her knowledge of relationships, the teacher can help children to become mature, with a good mental health, well-rounded personality, and accepted by others.

III. The teacher: the judgment of children and the effect of classroom atmosphere on children.

A teacher can learn many things about the children in her classroom through observation. She can learn who their friends are, who is accepted and who is not accepted by the group, for certain experiences, and the leader of the class are, who is more intelligent and who is less intelligent. However, the teacher's judgment is not always correct in her observations because of her prejudices may overrule her objectivity.

Terminology and studies on the accuracy of teachers' judgment concerning the sociometric status of elementary pupils. A sociometric test was administered to the class in forty elementary schools. Each teacher each pupil to choose the five children with whom he would most like to work and the five children with whom he would most prefer to sit. In addition, each pupil was requested to respond to eight questions concerning the freedom he had in carrying out routine class activities. Each teacher, in turn, and forty other, made the actual sociometric ratings of the sociometric status of each pupil in the criteria of work-companion, play companion, and seating companion. Each teacher also indicated which three boys and which three girls she most preferred at, which three boys and the three girls she least preferred in her class. Information concerning the teacher's training and experience were obtained for each teacher. Examine these following interesting conclusions:

1. There is a difference between the accuracy of teachers' judgments of sociometric status of children in the classroom.

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6. There is no relationship between the accuracy of the teachers' judgments of the sociometric status of pupils and any of the following variables: sex of teacher, years of teaching experience, length of time in present position, semester hours of college training, sex role of college training, semester hours in education courses, semester hours in psychology courses, size of class, marital status of teacher, and length of time the teacher has been in contact with the class.

7. There is a relationship between taking a course in Child Development and more accurate judgment of the sociometric status of pupils.

8. There is a tendency for teachers to over- judge the sociometric status of pupils they like better, and to under- judge the sociometric status of pupils they least like.

9. There is no relationship to be found in pupils' attitudes toward the teacher responsible for the accuracy of the teacher's judgment of sociometric status.

The judgment of teachers seems, therefore, to be not very accurate. According to Mary L. Anthony, "Our adult impressions of which children are likely to be popular are often inaccurate because we are apt to judge children by the characteristics that appeal to us as adults; and these are not always the characteristics their contemporaries admire." Therefore, the sociogram is very helpful because it helps the teacher to be more objective.

The teacher plays a very important role in the classroom. She cannot be a class room without a teacher. However, it depends on what kind of person the teacher is and her philosophy of education as to what kind of atmosphere there will be. In general, a teacher who has a good self-concept and a sense of security within herself will be more interested in individual children and social interactions between her pupils. She is more willing to try something new and will generally have a more atmosphere in the classroom. Her understanding, love of children and skill in dealing with them help to develop a psychological climate.

in the classroom which facilitate socialization. A teacher's great influence in the classroom. If this is positive influence, then the classroom will be a happier place for the children, according to a study by Libbey on the effect of teacher-student contact involving praise on the sociometric choices of students, praise of a student that is supportive and constructive is likely to increase the choice value of a student indicating greater acceptance of his peers. Therefore, a teacher praises a child, then that child assumes importance in the eyes of the other children.

The teacher not only sets the tone of the classroom atmosphere, sociometric groups: it limits its value for improving social relations. "unless the teacher creates the type of classroom environment that fosters the social development of pupils," it is the teacher's responsibility to help create a homogeneous atmosphere within the room to undermine the social structure of groups, in order to attain the goal of optimal learning." 4

In a positive atmosphere the children have a better attitude and do better in a democratic classroom using cooperative activities. It emphasizes cooperative activities allowing the children more freedom for expression in their social relationships. It reduces groups that are more cohesive, eliminates rigid cliques, and produces fewer unpopular children. The classroom environment must seem most conducive to improve social relations as one where the teacher reacts to the child in a socially integrated manner.


where teacher-pupil interaction is used, and where frequent opportunities are provided for pupil interaction.¹

One of the best ways to provide for pupil interaction is the classroom in through working in groups. "The teacher who understands the group structure may be in a position not only to lead the group more effectively in general learning experiences but also to help the group achieve better group living."² The classroom is a small community. Here the children need learn to work with each other and to respect and appreciate others. They can also learn to respect the feelings and needs of others. Through group work the children can extend their personalities, talents, and leadership abilities. Each group situation calls for a different response or role from a person. A person can learn to be a leader by being a committee chairman. In other groups he can be a follower and support someone else or share in making the decision. He can be a worker. He can learn to listen to the ideas of others, to give and to take, and to speak up for his own ideas. "There is more learning in a group-centered than in a teacher-centered classroom. The principle of self-activity seems to explain why learning increases significantly in a group-centered setting."³

In conclusion, it is evident that the teacher may sometimes be very surprised at the results of a sociometric test. Sometimes the child the teacher likes may be certain to be a child lower man in reality be rejected by the other children. Sometimes the child the teacher dislikes may be very popular. In order to plan for effective group dynamics, it is very helpful to know the isolated and other children. Encourage the children to make friends with the teacher in only naming the isolated and isolated. The teacher may also be learning against the teacher. As a result, the teacher,

¹Andrew, Sociology in the Classroom, p. 206.
the teacher can work to create a better classroom atmosphere for positive group dynamics and individual learning. This will also provide the children with a better learning situation.

IV. Setting Up the Sociometric Test.

Once a teacher is convinced of the value of sociometry and decides she wants to try using it in her classroom, it becomes necessary for her to know something about the sociometric test and how to set one up for her classroom. This seems like such a big task that some teachers are afraid to do this themselves in the classroom. However, the procedure is not too difficult, and the results are worthwhile.

One of the first things to consider in setting up the sociometric test is that kinds of questions and criteria to use. The question should "elicit from the members of the group expressions of their true feelings regarding the other members. Hence, the question should deal with a situation which has meaning to every group member. It should be clear and concise." Keep in mind that children make valid choices only if they are faced with realistic situations. Base your questions on a situation you can act on." It is important that the question be reasonable for the children. The children should know that the answers they give will be important and will be used. Therefore, they will want to express their true feelings and to take the sociometric test seriously. Remember that the children may not choose the same people for all the questions. They may prefer different people for different purposes."3

When stating the sociometric criterion or question, state it in the conditional mood. "The question is not 'With whom do you associate?' but rather one that implies 'If all things were possible and you could associate with anyone you like,' with whom

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1Freudlich and Harley, Studying Students, pp. 328-29.
2Taba and others, Diagnosing Human Relations Needs, p. 72.
3Ibid., p. 74.
would you choose to associate? 

In this way, the responses give the child an actual choice of what they consider to be their real feelings.

Several different types of criteria can be used in setting up the social interactions. The teacher may choose one specific criterion.

General criteria are in an area of activity, but do not specify the particular level of interaction, such as choice of seating, etc., or play materials. Specific indicates a very limited basis for social interaction such as levels to work on or criteria problems or tasks to complete in a task. Some criteria reveal basic or basic principles and indicators, while more criteria reflect superficial and fleeting aspects of the group. Structured, general criteria are related to informal situations such as choice of seating, common—no predetermined activities or intended.

Social criteria are related to the social situations where there is a common goal such as directed activities or working to achieve a group project. The teacher should use the type of criteria when least rat the particular situation or need. The following are some examples of social criteria questions:

METHOD 1
1. What foods would you like to keep on a class committee?
2. What rules would you like to sit near?

METHOD 2
1. How would you like to help with the certain?
2. What music would you like to sing with during the time that?
3. How would you want to receive the best for your ability on the program?

METHOD 3
1. What would you like to invite to a party at your place?
2. What music would you like to go with to a teen-

1. Lind, p. 41.
2. Lind, p. 41.
3. Lind, p. 41.
4. Lind, p. 41.
1. Those home would you like to be invited to?
2. Not person would you most like to come to school with?

The items discussed so far, have been positive ones. However, it is possible to use negative criteria in the sociometric test. It is generally recommended that teachers not use rejection items because it is possible to help build a rejection role for some students. Rejection questions should not be forced or required if they are used. It is better to permit the children to make rejection choices if they want to. "The desirable effects of negative criteria can be further reduced by adding a "to indicate which" column except last for the activity rather than indicate which pupils do not want as associates."\(^2\) In a rejection item is used, the teacher may gain insight by seeing the students individually say rejections were made.

The different authorities in the area of sociometry do not agree on the number of criteria and the number of choices to use. Sometimes the number of criteria depends on the purpose of the sociometric test. For sociometric grouping or for research purposes one criteria may be sufficient. For evaluation, inter-personal relationships and for determining the group acceptance of individuals, several criteria are usually necessary.\(^4\) An attempt should be made to include criteria which cover the main aspects of the group members' personal and social relationships.\(^2\)

The number of choices may also be fixed or unlimited. "Where an evaluation of the emotional or social expressiveness of individual is important, the use of an unlimited number is required."\(^5\) In

\(^1\) Caldwell, Creating Better Social Climata in the Classroom Through Sociometric Techniques, p. 11.

\(^2\) Bronfenbrenner, Sociometry in the Classroom, p. 47.


\(^4\) Bronfenbrenner, Sociometry in the Classroom, p. 46.

\(^5\) Ibid., pp. 40-47.

\(^6\) Ibid., p. 45.
In this case, the emphasis is on the chooser and the number of choices he gives to others rather than the number of choices he receives from others. According to John Barr, "it seems most effective to allow a student to make as many choices as he desires on each question. In the very fact of choosing many or few classmates, he reveals information about himself."\(^1\) "Such information is useful in evaluating the individual's desire and drive for social interaction."\(^2\)

Mary L. Northway suggests using three criteria and three choices. By using the same number of criteria and choices, the sociometric results are more directly comparable without statistical equating.\(^3\) Gronlund also says that a fixed number has statistical and practical advantages—the number being influenced partly by the age of the subjects but mainly by the stability of the sociometric results. Nursery school and kindergarten children have little ability to discriminate beyond first choice. In the early elementary years there should be three choices for each criterion. From the third grade on, five choices can be made without difficulty. Gronlund also says that studies have shown that five choices provide the most stable sociometric results.\(^4\)

In summary, to set up a sociometric test, the teacher must decide how many questions and how many choices she wants to use. Also, she needs a purpose behind her questions so that they will be real and have meaning for the children. Once she has the test set up, she is then ready to administer the test to her classroom.

V. Administering the Sociometric Test.

When a teacher decides to give a sociometric test to her class, it is important that she have an established rapport with the children. "If the teacher has already gained a good working

\(^1\)Barr, *The Elementary Teacher and Guidance*, p. 150.

\(^2\)Gronlund, *Sociometry in the Classroom*, p. 48.

\(^3\)Northway, *A Primer of Sociometry*, p. 5.

\(^4\)Gronlund, *Sociometry in the Classroom*, p. 48.
relationship with the class, the results are likely to be more valid."¹ The atmosphere of the classroom will affect the responses to a sociometric test.

Do not give the sociometric test until the group has been together from four to six weeks.² The opportunity the children have to know each other affects the responses. The children should understand why the test is being given and why they should answer the questions. The instructions should be clear. The answers should be confidential. Only the teacher should see them. The children should be assured of this before they begin. Be sure the children understand that they may write the name of any boy or girl.

The whole procedure should be as casual as possible. "The questions should be presented in an informal and natural manner—that is, in such a way that it does not take on undue importance."³ Present the test with interest and some enthusiasm. It is also good to say how soon the arrangements based on the test can be made. Every blank should be filled unless the child absolutely feels he can't or doesn't want to.⁴

If the test is being given to a class below the fourth grade, give the test to each child individually and record the answers for him. Give it to the whole group within as short a time as possible so chance for discussion is lessened.⁵ When giving the test to the whole group at the same time, usually five minutes is enough time for the children to make their choices.

Sometimes the teacher might want to use a successive sociogram in order to diagnose the effect of changing rules and arrangements. A successive sociogram is a sociogram given after the first sociogram as a follow-up. "The chief value of successive sociograms

¹Barr, The Elementary Teacher and Guidance, p. 146.
²Taba and others, Diagnosing Human Relations Needs, p. 76.
³Froshlich and Barley, Studying Students, p. 330.
⁴Northway, A Primer of Sociometry, pp. 6-7.
⁵Ibid., pp. 5-6.
lies in their emphasis on the degree of stability within the structure as a whole and on the relative slowness with which members alter the feeling they have about one another."¹ "The use of successive sociograms gives individuals continuing opportunity to exercise choice and to learn to act in their own behalf and to live by their decisions."² If a second sociometric test is given, it should be given after a time interval long enough to make sense to the group members—to justify it from their point of view. For children up to the third grade, wait four or five weeks; for fourth, fifth, and sixth grade children, wait six weeks.³

VI. Plotting the Results of the Sociometric Test.

Once the teacher has given the sociometric test, then she has to know what to do with the results. These results have to be plotted and interpreted before they can be of help to her. One of the first things to do is to make a matrix chart. An example is given on page 47. On the matrix chart the choices of the entire class are tabulated. The names of the pupils are listed in the same order vertically and horizontally. Then the choice and the number of the choice are inserted in the proper square to indicate which choice is given. At the bottom of the vertical column the choices for each individual can be tabulated. Add together the choices from all the criterion and the result is the social acceptance score or choice-status or sociometric status. Count the number of different people who have chosen an individual and enter this in the column of "number choosing." This is the social receptiveness score.⁴ Count the number of different individuals whom the individual has chosen by counting the entries in the horizontal column. Enter this number under "number chosen." This is the emotional expansion

¹Jennings, Sociometry in Group Relations, p. 47.
²Ibid., p. 45.
³Ibid., p. 45.
⁴Northway, A Primer of Sociometry, p. 8.
score. It is also helpful to draw a diagonal line from the upper left-hand corner of the table to the lower right-hand corner. The main purpose of this is to serve as a guide in identifying mutual choices. This matrix chart will be helpful if the teacher chooses to plot her results in another way.

The most common way to show the results of a sociometric test is the sociogram. This is a diagram showing the relationships among a group of people—"who chose whom." An example of a sociogram may be found on page 45. When plotting a sociogram, first decide on the symbols that are going to be used. Generally circles are used to represent girls and triangles for boys. The name of each pupil should be printed in full inside the symbol. Place the girls on one side of the chart and the boys on the other. The symbols nearest the center should be used for frequently chosen children. The symbols nearest them should be for mutual choices. The most distant symbols should represent children who have received few or no choices. To show one-way choices, simply draw an arrow from the chooser pointing to the chosen person (——>). A mutual choice is shown with a line touching both symbols and a small vertical bar at the center (——). A dotted symbol is used for any person that is absent the day the test is given (△). If someone is chosen outside the group, the situation is indicated in the same way as for an unreciprocated choice and a dotted symbol should be drawn in. The connecting line should be left open so that an arrow or a completed joining can be made later if the child's choices become known.3 If rejection questions are used, plot these the same way using a different color.

Another way of showing social relationships obtained from sociometric testing is the target diagram. An example can be found in the appendix on page 62. Mary L. Northway is an authority on the target diagram. A target diagram contains four concentric circles

1 Northway, A Primer of Sociometry, p. 9.
2 Gronlund, Sociometry in the Classroom, p. 58.
3 Intergroup Education in Cooperating Schools, A Sociometric Work Guide, p. 28.
that are an equal distance apart. A vertical line is drawn through the center for a separation of boys and girls. The numbers on each circle indicate the choice levels for each of the concentric circles.\(^1\) The people with the highest scores are near the center. An arrow is drawn from each individual to the person to whom he gives his highest composite choice. A double arrow is drawn if the subject's highest choice is reciprocated.\(^2\) "When the sociogram is plotted on this diagram the sociometric status of individual group members as well as the social structure of the group is depicted."\(^3\) Northway has listed two important points or safeguards to remember when using the target sociogram:

1. It is an abstraction--by depicting only dominating choices (or else resulting in confusion), it is a further abstraction from the living situation.

2. It is a symbol. It is properly supposed that a higher sociometric score, reflected in position of nearness to the center of the target, is directly related to values of good mental health. This is not proven.\(^4\)

The rainbow sociogram is a half-target sociogram with some additional features. It allows for the measurement of many factors and many individuals. No other device is so helpful in detecting changes over a long period of time. This diagram can be read outwardly from the center out or inwardly. The rainbow diagram does not show the intricate network of individual choices. Rather it shows the relative position of students in the class.\(^5\)

\(^{1}\) Gronlund, Sociometry in the Classroom, p. 69.

\(^{2}\) Moreno, The Sociometry Reader, p. 224.

\(^{3}\) Gronlund, Sociometry in the Classroom, p. 69.

\(^{4}\) Moreno, The Sociometry Reader, p. 227.

\(^{5}\) Caldwell, Creating Better Social Climate in the Classroom Through Sociometric Techniques, pp 25-29.
It is possible to show the results of sociometric tests in many ways. There are many ways that have not even been mentioned in this paper. However, I have tried to give the most common and the primary ways of using the results so that they can be interpreted and put to use by the teacher.

VII. Interpreting the Sociometric Test.

Now that the teacher has plotted or shown the results of the sociometric test in some way, she needs to know how to interpret these results. The sociogram only points out the relationships; it does not explain them. "Interpretation involves attempting to account for the patterns that the sociogram reveals."¹ It is important to remember that "even the least accepted is liked by someone, and the best accepted not liked by someone."² So be cautious in interpreting sociograms.

To read the sociogram, concentrate on one person and follow all the likes that lead from and to him. If these patterns of relation are completely self-contained with no arrows or lines running between them, the friendship is a clique.³ Note the pairs or mutual choices. Also, look to see who the leaders or stars are. These are the children who are named by several other children. If there is a symbol with no lines leading to it, then this person probably is an isolate. The most frequent pattern in the youngest grades is a chain or string of one-way choices. This is because younger children are "not consciously aware of the impression they make on others. Being reciprocated does not have importance... -

¹ Rogers, Mental Hygiene
² "Cunning... and Girn"
the child is still self-centered. Little children do not know much about each other's feelings—one of their big problems is adjusting to others."¹ Sometimes the teacher is very surprised because certain children are highly chosen or overlooked that few adults would have predicted.² Sometimes opposites or likes mark each other.³

The teacher should also check the cliques or subgroups to see if there are few lines or choices between the different subgroups. There may be a sociometric cleavage among groups. Sex, race, or religion may account for this cleavage. Usually there is a cleavage in sex. Most boys and girls prefer members of their own sex. The lowest percentage of cross-sex choices appeared in the play companion criterion at all grade levels.⁴ Many choice lines occur between boys and girls in kindergarten and the first grade. After this there is a decline into the fifth and sixth grades. The number of choices then remains fairly constant until the eighth grade. After that the trend is reversed.⁵ In the fifth and sixth grades linked chains of mutual association become more constant, and there is a strong tendency for homogeneous groups to appear.⁶

When the teacher is interpreting a sociogram and sociometric scores, it is important to keep in mind the fact that sociometric status obtained in the usual groups is not related to I. Q., M. A., or C. A.; it is slightly related to skills when these are important to the group and to measures

¹Intergroup Education in Cooperating Schools, A Sociometric Work Guide, p. 45.
²Jennings, Sociometry in Group Relations, p. 27.
³Ibid., p. 28.
⁴Gronlund, Sociometry in the Classroom, p. 112.
⁵Jennings, Sociometry in Group Relations, p. 75.
⁶Ibid., p. 75.
of social adjustment and participation. Also, sociometric status is an
index of the degree to which an individual conforms to the folkways and
embodies the values of the group; it is not as close a measure of his
inner psychological security.¹ Jennings has listed the following questions
that the teacher may ask herself when analyzing a sociogram:

1. What appears that you had expected would appear?
2. What appears that you had not expected to appear?
3. What seems to account for certain pupils being the most
   chosen and receiving few, if any, rejections?
4. What seems to account for certain pupils being unchosen
   or receiving many rejections?
5. What seems to account for the mutual choices?
6. What seems to account for the mutual rejections?
7. Can you think of any classroom arrangements which may
   account for the above choices or rejections?
8. Can you think of any classroom arrangements which might be
   a factor in the general patterning of the sociogram?
9. What cleavages appear in the sociogram? Absences of
   choices between individuals related to a group factor.
10. Can you see any spots in the structure of the group as a
    whole that need to be more closely related to the rest of
    the group for better morale?
11. In the light of your analysis of their inter-relation
    structure, what understandings and skills do you estimate
    the pupils have already developed? Which do you estimate
    they need to develop further?
12. What do the majority of most-chosen children have in
    common?
13. What do the unchosen and rejected children have in
    common?
14. Are there visible signs of segmentalization in your com-
    munity—association patterns which divide according to
    race, religion, residence location, or any other factor?²

Looking at the over-all pattern of a sociogram, one can see that
there is an uneven distribution of sociometric scores. The tendency for
a larger percentage of pupils to appear in the low sociometric status
categories than in the high status categories has been shown to occur at
all age levels over different sociometric criteria, among both sexes,
and with varying numbers of sociometric choices. When an increased

¹Northway, A Primer of Sociometry, pp. 30-31.
²Jennings, Sociometry in Group Relations, pp. 31-32.
number of sociometric choices is made available to a group, there is a tendency for the largest number of choices to continue to go to the group members with high sociometric status while those with low sociometric status continue to receive a disproportionately small share of the choices.\(^1\) Shifts in sociometric status are relatively rare at the extreme sociometric 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."\(^2\) These facts have been incorporated by Moreno into his sociodynamic law which indicates that "the uneven distribution of sociometric choices is similar to the uneven distribution of wealth in a society. Thus, few are "sociometrically wealthy" but many are "sociometrically poor."\(^3\)

In interpreting the sociogram, the teacher needs to find out the patterns in the sociogram and the reasons behind them. "This interrelatedness of human beings is viewed as the very foundation of human society. The choices of children, then, take on new importance. Children feel drawn to certain people because they see traits in them which have a personal appeal. As noted on previous sociograms, the isolate tends to choose a star—he seems to sense that this person can help him."\(^4\) "Sociometric findings show that individuals tend to form two kinds of groups in which different needs are paramount: (1) groups in which the individual as a person receives sustenance, recognition, approval, and appreciation for just being "himself"; (2) groups in which the individual's

\(^1\)Gronlund, *Sociometry in the Classroom*, p. 111.

\(^2\)Ibid., p. 131.

\(^3\)Ibid., p. 95.

\(^4\)Caldwell, *Creating Better Social Climate in the Classroom Through Sociometric Techniques*, p. 140.
efforts and ideals are focused toward objectives which are not his alone but represent the fulfilling of goals which a number of individuals agree to seek.\(^1\) The stability and cohesion of groups is determined by the quantity of pairs and the interlocking between them and not the high or low number of unchosen.\(^2\)

Sometimes children choose others because of a combination of emotional and specific helpfulness which the chooser expects from the individual he has named.\(^3\) Sometimes the children know their needs better than the teacher does. Sometimes children are brought together by a common experience or problem.\(^4\) Children's responses are limited and modified by the community social structure, the family responses they have had, their residential proximity to other children, and social cleavages existing in the community. Sociometric results in some of these areas suggest that the sociometric results reflect the social pattern in the community.\(^5\)

Residential proximity has the greatest influence on children's actual friendships. In choosing desired associates, the influence of residential proximity is minimized.\(^6\) Usually children who are highly chosen by their peers tend to be more intelligent, to have higher scholastic achievement, to be younger in age, to have greater social and athletic skill, to participate more frequently in sports and special activities, to have a more pleasant physical appearance, to have more social and heterosexual

\(^{1}\) Moreno, \textit{The Sociometry Reader}, p. 87.


\(^{3}\) Jennings, \textit{Sociometry in Group Relations}, p. 72.

\(^{4}\) Ibid., p. 73.

\(^{5}\) Gronlund, \textit{Sociometry in the Classroom}, p. 222.

\(^{6}\) Ibid., p. 223.
interests, and to have more need-satisfying personality traits and characteristics than children who receive few or no sociometric choices.¹

In interpreting the sociometric scores, the "gross sociometric status may be interpreted as an indication of the individual's external social adjustment to the values of the particular group, but that it does not reflect directly his degree of inner psychological security."² It is an "index of the degree to which he attempts to conform to and abet the group's folkways and mores; in this sense it is a measure of his drive towards external social adjustment."³ It is suspected that there is a tendency for an individual's sociometric status in one group to be positively related to his status in another similar group.⁴ If one group likes or dislikes him, then another group of similar people would probably tend to like or dislike him, also.

Norman E. Gronlund has listed some common errors that teachers make in interpreting the sociogram. These errors are:

1. A tendency to consider the social relations depicted as actual relations among group members. Since the sociometric test measures underlying social structure, this is neither desirable or true.
2. The sociogram is sometimes viewed as a complete picture of the social structure of the group. However, sociometric criteria are limited, etc.
3. A network of choice patterns are frequently thought of as representing a fixed group structure rather than a picture of a changing social process.
4. The social structure depicted in the sociogram will look slightly different when constructed by different individuals.⁵

¹Gronlund, Sociometry in the Classroom, pp. 221-222.
²Northway, A Primer of Sociometry, p. 30.
³Ibid., p. 29.
⁴Ibid., p. 28.
⁵Gronlund, Sociometry in the Classroom, p. 77.
Knowing how to read the sociogram, the common patterns in the sociogram, and reasons behind some of the choices, is not enough to know when the teacher is interpreting the sociogram. The value of sociometric testing, as in any testing program, lies in the interpretation and use of the results. The conclusions drawn and recommendations made from sociometric test data necessarily are subjective. The soundness of the conclusions depends to a great extent upon the teacher's skill in obtaining additional information about his pupils from other tests, health records, interviews with pupils and parents, and observation. An understanding of children, their motivations and prestige values, plus the ability to determine the causes of pupil behavior, are some of the skills needed to interpret sociometric data effectively. The teacher needs to know something about where the students live, something of their present situation and background, local customs, and traditions of the school and community. When the teacher has done an adequate job of interpretation and knows and understands her children and their interrelationships, then she is ready to put these results into active use.

VIII. Using Results of the Sociometric Test.

The most important part of sociometry is putting the results of the test into use. This is the main purpose in giving the sociometric test---as a guide or tool in helping the teacher work with her class. There is no value in giving a sociometric test unless something is done with what the teacher has learned from the test. The sociometric test is valuable to the teacher in helping her attain insight into group behavior and class morale and into the individual children and their situations.

Since the sociometric test contained criteria that were real and of immediate importance to the children, the teacher should start here by carrying out the original agreement. She should group the class according to the way the children made their choices. Her object should be to provide for each student the best possible placement from his point of view so that he can learn—both in human relations and for academic purposes. When arranging sociometric groups, try to fulfill as many choices as possible. If the children have been allowed five choices, try to satisfy at least two of them. The following are some good directions for forming sociometric groups:

1. Decide on the size of the groups. Five is usually the most effective for small group discussion.
2. Start with the unchosen pupils—place them with their highest choices. Give them their first two choices if possible, but do not place two isolates in the same group unless it is necessary. Never place more than two isolates in a group.
3. Consider those who received only one choice next. If the choice a neglectee received was reciprocated by him, place the neglectee with the person with whom he has the mutual choice regardless of the level of the choice. Then attempt to satisfy his first choice or the highest level of choice it is possible to satisfy without disrupting the groups that have already been formed.
4. Continue to work from the pupils receiving the smallest number of choices to the pupils receiving the largest number of choices.
5. If there are conflicts in choices—several people having chosen the same person—satisfy the choice of the child who is in a weaker position in the group.
6. Do not put unchosen children near those who have rejected them, into a closed cluster, or with a mutual pair.
7. Do not break up completely the existing associations, not even those that may not be entirely desirable such as closed groups. 
8. Check pupil arrangement to be sure every pupil has at least one of his choices fulfilled.

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1Gronlund, Sociometry in the Classroom, p. 238.
2Taba and others, Diagnosing Human Relations Needs, p. 238.
It has already been said that we need to be aware of and value or use group dynamics in the classroom because we then create a better learning situation both academically and socially. There are many different ways that the teacher can use the sociometric data. Sociograms help the teacher to organize effective groups. "Clique patterns may indicate a need to form new groups for different kinds of activity to permit new friendships to develop."¹ "Through careful selection of the membership in a group and provision for a series of activities, it becomes possible for these pupils to interact in desirable directions."²

The teacher can use the results to form committees and work groups and to reseat the children. Teachers are alerted to values or skills needed in social relations. Sociometric results can show the effect of certain teaching techniques and learning experiences on social structure in otherwise comparable groups of children.³ The sociogram and its results can be used to evaluate the effectiveness of school practices or to see how well a new pupil is integrated into the class.⁴ It also helps with disciplinary problems by providing clues to the attitudes and values underlying the difficulty.⁵ The results can help determine the placement of exceptional children in the school program. Some studies have shown that mentally handicapped children are not socially accepted in the regular classroom.⁶ The results of the sociogram help to identify

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¹Rogers, Mental Hygiene in Elementary Education, p. 296.
²Caldwell, Creating Better Social Climate in the Classroom Through Sociometric Techniques, p. 38.
³Taba and others, Diagnosing Human Relations Needs, p. 96.
⁴Gronlund, Sociometry in the Classroom, p. 17.
⁵Ibid., p. 18.
⁶Ibid., p. 17.
leadership potential so that this potential can be developed. The results are also useful in studying special needs of children who are having difficulty in adjusting to the regular school program.\(^1\) Another use of the results of sociograms is in parent counseling. Parents can be told in which areas the child has the best acceptance and where he needs help. Parents may also add to the sociometric data by telling the teacher about the child's play activity outside the school.\(^2\) By discussing and analyzing with the class any problems of relationships that arise in the class, the children will come to understand the behavior of others. As the children work in groups, "they are able to appreciate different abilities as they are encouraged to work and plan together. Children feel warmer and more supportive toward one another. Fundamental needs for recognition, affection, and a sense of belonging are met in group life."\(^3\) Through group work, the atmosphere of the class is improved and pupils get to know and understand each other better. The atmosphere is more conducive for good mental health.

After grouping the children in some way or another sociometrically, the teacher should not expect to see all the problems in the classroom solved. This does not happen overnight. "It is the adjustment that gradually takes place in an enduring way which are so satisfying."\(^4\) "Teachers usually report that they notice an immediate change in pupils'...

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\(^1\)Gronlund, *Sociometry in the Classroom*, p. 326.


\(^3\)Los Angeles County Superintendent of Schools, *Office, Guiding Today's Children* (Los Angeles: California Test Bureau, 1959), p. 54.

attitudes when the sociometric choices are put into effect. The isolated pupils tend to feel accepted since they are placed with some of their choices. They have no way of knowing that they were unchosen unless they are told by the other children. The members of minority groups tend to feel less tension since they are placed with majority group members and the cleavage they feared did not appear in the sociometric grouping. These feelings tend to be reflected in improved morale and more active participation in classroom activities. Thus, the groundwork is laid for improving social relations.\(^1\)

The children benefit greatly in their personal lives as a result of group work. "When the boys and girls can be associated closely with those who respond to them and to whom, in return, they feel attracted, they have a greater sense of inner security. Then they feel that they can shed their inhibitions and act naturally. They feel free to be themselves and to react positively without inner dread of possible disapproval."\(^2\) "More creative work should come about and fewer tensions within the classroom should be noticed. The flow of communication should improve, and natural discipline should develop from children wanting to please others in the group."\(^3\) Using the sociometric results in group work begins a circle. "As the social climate of the class improves, so will the social adjustment of the individual students, particularly those who have been isolated because of group attitudes toward them. And in turn, as each child grows in social effectiveness, class social integration grows, too."\(^4\)

\(^1\) Oronlund, Sociometry in the Classroom, p. 241.

\(^2\) Caldwell, Creating Better Social Climate in the Classroom Through Sociometric Techniques, p. 40.


Sociometric results have many uses. By asking certain particular questions, the test can be used for different purposes. The teacher should carry out the original agreement. This point is stressed very strongly. If the teacher carries out the original agreement, the children know they can trust and believe her.

Putting sociometric results to use in grouping the children in different ways gives the children an opportunity to know other children in the class. Some children are too shy or do not have enough time in school to become acquainted unless they sit next to them, play with them, or walk with them to and from school. The dynamics within the group should be such that children learn to know and understand each other better. They also learn to appreciate and know others who are different in some way—another race, religion, or personality type—from them. This is very good because children need to know and appreciate people who are different from them whether they live in the same neighborhood or in another part of the world.

IX. Isolates—Stars.

Working with isolates and stars is part of putting the sociometric results to use. It is up to the teacher to try to help these pupils fulfill their needs. Although the star has received many choices and the isolate none, this does not necessarily mean that the star is liked by everyone and is well adjusted or that the isolate is disliked by everyone. No child in the class will be accepted by everyone, and few will be completely unaccepted by everyone.

The isolate is someone that the teacher needs to help because he has several problems to work out. The isolate may be the seldom conforming child that attracts everyone's attention. Usually this person cannot work
with a group. The isolate may also be the overlooked child who is con-
forming and silent.¹ Some teachers feel that if a child is not accepted
by his peers in the early grades, he will not be able to develop normal
interpersonal relations as he grows up. There is a good deal of research
which indicates that the child who is not accepted achieves at a lower
level than other members of his elementary-school class.² Since person-
ality patterns are often formed, according to psychologists, by the
time the child is six years old, it is possible that the child will not
become accepted by his peers if he is not accepted by them in the early
grades. "Every individual grows into a person whose behavior is shaped
by meeting the demands of his environment."³ A vicious circle often
begins. The environment shapes the personality. If this personality is
not accepted by the peer group because of certain characteristics or
behavior, then the peer group isolates the person. This in turn only
aggravates the undesirable traits. The person who acts aggressively in
order to get attention and is then rejected by his peers, only tries
harder to get attention and is only rejected further.

Isolated children often exhibit certain common characteristics.
Unpopular children are less self-confident, less cheerful, less enthusi-
astic, less acceptant of group standards, less conventional, and less
concerned with social approval than popular children.⁴ Least popular

¹Los Angeles County Superintendent of Schools Office, Guiding
Today's Children, p. 61.

²Edmund Amidon, "The Isolate in Children's Groups," Journal of

³Jones, The Use of Sociometric Data and Observational Records as
Guides for Promoting Social and Intellectual Growth of Primary Children, p. 2.

⁴Guinouard and Rychlak, "Personality Correlates of Sociometric
Popularity in Elementary School Children," p. 442.
children show less ability or desire to control their emotions. They are more self-centered, impulsive, and moody. Often they are unable to react to a situation although they often have the desire to participate.  

Sometimes a child is isolated, not because of his personality, but because of certain factors present in the classroom culture. Also, if a teacher dislikes a child and communicates this dislike to the class, this may cause the children to isolate this child.  

Each isolate should be treated as a separate case; the tool used should be fitted to the particular situation. "Before techniques are used, the teacher ought to have a clear understanding about why she is using the techniques, some well-thought-out hypotheses about how the techniques will affect the group, and a formal or informal procedure which can be used for evaluating the success of the technique." The teacher should take into consideration the pupil's social aspirations, the pattern of factors causing the pupil's social difficulty, the pupil's skills, abilities, and interests, the values held by group members, the degree of emotional disturbance underlying the pupil's social behavior, and the pupil's social potential.  

The teacher can do many things in the classroom to help the isolated pupil. She can encourage the child to take responsibilities that his classmates will recognize and appreciate. She can help him with his personal appearance and to practice and develop skills and abilities which

3. Ibid., p. 416
have prestige with his classmates. The teacher can help the child understand how his own behavior affects the feelings of others. If the child has interests and hobbies, the teacher can help him with these. The child can then share them with the class and perhaps achieve some social success and recognition.¹

If the teacher maintains an accepting attitude of personal warmth and acceptance, this adds to the child's feeling of security and belonging. Group techniques such as group discussions and role playing will also help the pupil see his own behavior and will help him find more acceptable behavior. The teacher can also help to modify the values of the group through helping the children to increase their acceptances of differences in themselves and others. Changes can also be brought about through individual conferences with pupils.² "When the pupil does not respond to the teacher's remedial efforts, he should be referred to a professional counselor for special help."³

Although it is easy to forget about the star because he must be popular and well-adjusted since he was chosen so often, the teacher should not neglect the star. The star or popular person may have adjustment problems of his own. People today tend to regard popularity as an end in itself. The value of a person is judged by the number of friends he has, how many people know him, and how many organizations he belongs to. However, it is possible that even though he knows a lot of people and has a lot of friends, he might not have one real friend. He may know a lot

¹Los Angeles County Superintendent of Schools Office, Guiding Today's Children, p. 62.
²Gronlund, Sociometry in the Classroom, pp. 280-285.
³Ibid., p. 297.
of people but be close to no one. Northway asks the question of "is it possible that we've overvalued popularity as an end in itself, and that our emphasis of business and social success has made us lose sight of some of the other values of human living?"\(^1\)

By using a sociogram, it is possible to learn something about the child's popularity and what it consists of: whether he has reciprocal choices or is often chosen by people he does not choose; whether he likes and is liked by both boys and girls; and whether belonging to a minority group affects his popularity.\(^2\) It is hard to define what makes a person popular. Popularity appears to depend on the extent to which one's energies are directed towards the goals the group values. "Some children work towards these goals easily, with genuine interest in and concern for people. Others do so with considerable effort and anxiety, not primarily for the welfare of others, but to bolster their own insecurity and enhance their own egos."\(^3\) The very popular child shows a greater sensitivity to his environment. He tends to view the situation in a conventional light. Popular children do not show much originality in their thinking nor do they seem to get a new slant on things. They show a strong need for affection and a conscious striving for approval.\(^4\)

Usually teachers consider the popular children to be the leaders of the class. "If we define a leader as a person with the ability to influence others, we can see by looking at sociometric test results that

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\(^2\)Ibid., p. 8.
\(^3\)Ibid., p. 17.
\(^4\)Ibid., p. 11.
almost every child is a leader to the extent that he influences those
who choose him. We can see, too, that most children also play the part
of follower; they choose and are influenced by others. In fact, most
children are a mixture of leader and follower, but some have a stronger
tendency in one direction than in the other. Northway says that there
are at least three different kinds of leaders:

1. The popular leader--his influence is wide but not deep. He
forms no close associations with the people who choose him.
He gets others to follow on impulsive ideas.
2. The powerful leader--he is not particularly powerful. He
has an average sociometric score. This score is made up
of popular children he has chosen in turn. Since he is
able to influence all of them, he holds the balance of power
in the group.
3. The power behind the throne--has a low score but is behind
the person who has the high score.

The teacher can see these different leaders among her pupils. The teacher
can help the leader or popular child by helping him to develop his leader-
ship abilities. She can help him be a good follower as well as a good
leader. Perhaps she can help the leaders to develop some individual inter-
ests and talents. Our society has a great need for good, responsible
leadership.

Popularity may be good or it may be bad. The children who show some
of the following characteristics may be in need of help:

1. The child who is chosen by no other children, or by very
few, over a period of time.
2. The child who receives a great many choices, but none of
them reciprocated.
3. The child whose social behavior seems far "too old" (or
"too young") for his years.
4. The child who is discontented with his own social pattern.

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1 Northway, What Is Popularity?, p. 32.
2 Ibid., pp. 32-33.
3 Ibid., pp. 27-30.
By knowing something about the isolate and the star and how to help them, the teacher can help integrate the class and build better working relationships within the class. It is possible that the child who is not accepted while he is young will not be accepted as an adult unless he is given help. The popular child may also need help so that he will know how to accept and use his popularity. By helping the isolates and the stars, the teacher may affect their whole lives. Helping them may also change the results of successive sociograms in that they may show more general acceptance of individuals. Therefore, it is important to know something about isolates and stars.

X. Reliability and Validity of Sociometric Tests.

Most psychological and guidance tests have proven to be reliable and valid. With most tests, it is valueless to give them unless the results are reliable and valid. However, with sociometric tests, the terms reliability and validity have different meanings. Sociograms have not been proven to be definitely reliable and valid according to the usual meaning of these words.

Sociometric tests have their limitation as most tests do. They paint a black or a white picture of choices of associates for certain activities yet they give no clue as to the vast shades of gray which must be present between the extremes of rejection and acceptance as first choice.¹ There are also limitations or cautions in the construction and administration of the test and in the interpretation and application of the results.²

¹Cunningham and Associates, Understanding Group Behavior of Boys and Girls, p. 171.

²Gronlund, Sociometry in the Classroom, p. 21.
Validity of a test usually refers to the degree that it measures what it is supposed to measure. In the area of sociometric testing there is little agreement as to what it is supposed to measure. "If the sociometric test is limited to the measurement of choice behavior, it is valid by definition." "The degree to which observed choices in the life situation agree with reported choices on the sociometric test, when the criterion of choice is held constant, may be considered a measure of validity." "A sociometric test is valid insofar as the choice criterion has reality value for the subjects." 

Most psychological tests assume that they are measuring a trait which remains constant—if the scores change, the test is inadequate. "Therefore, correlation of the scores obtained on the test given on two occasions is taken as a measure of reliability. Sociometry, however, is based on the assumption that social preferences change, and indeed that by arranging fortuitous situations we may bring about changes we consider desirable. For example, it is believed that by improving social conditions a teacher can help a child with a low score become more fully accepted by the group." If the scores on the sociometric test always remain the same, then the reasons behind administering the test have not been met. Changes in scores show the effect of changing conditions and classroom atmosphere on the isolate. Every group will have changes in

1 Gronlund, *Sociometry in the Classroom*, p. 158.
2 Ibid., p. 182.
4 Ibid., p. 289.
5 Northway, *A Primer of Sociometry*, p. 16.
in the sociometric results because human beings are not static in choices. The charting of a group at any one time is not sufficiently reliable over a period of time. It is helpful to give successive sociometric tests.

Sociometric test are more reliable on a group basis than for individual prediction. The choices within the group may change, but the overall pattern remains fairly constant. Those found in the highest and lowest choice groups tend to be more stable than those in the average categories. When choices given and mutual choices are considered, it appears that the social structure of a group tends to be less stable than the sociometric status score of its members. Thus, the degree of social acceptance an individual obtains in a group remains fairly constant, even though the sources of the choices may vary somewhat. Sociometric status on one criterion was closely related to sociometric status on other criteria; sociometric status tended to be consistent in groups of varying membership, and sociometric status remained fairly consistent from one measuring technique to another. In the elementary school, the stability of sociometric status scores was reported to be similar to the stability of intelligence and achievement test results over a one-year interval.

3 Gronlund, Sociometry in the Classroom, p. 134.
4 Ibid., p. 152.
5 Ibid., p. 152.
It seems that sociometric tests are reliable and valid in their own way. However, "considering all these reasons for not expecting sociometric results to meet the usual measures of reliability and validity, the amazing thing is that when such measures are applied to these data relatively high coefficients are discovered."¹ Sociometric tests are relatively valid and reliable. Their reliability and validity are partially dependent on the teacher—her professional qualifications and attitude and the degree of rapport she has with her pupils.

II. Action Research

Since a good way to learn is by doing, the writer decided to put some of the information about sociometry into actual practice. Fall quarter of 1962 the writer was a student teacher in a fifth grade class at Westview School in Muncie, Indiana. The teacher, Mrs. Gale, was very helpful in encouraging the project, and together we administered sociometric tests and tried to interpret and use the results.

A little background about this class will help to explain the research. Westview School is located in an economically well-to-do suburban section of Muncie, Indiana. Most of the people are of the middle-class or above. Many of the parents of the children were of professional status such as doctors or professors. People of this community are interested in the school and support its activities.

The atmosphere of the school was democratic. The teachers felt free to conduct their classes as they thought best, and the children were allowed considerable freedom. Mrs. Gale is an enthusiastic teacher who loves, appreciates, and enjoys children very much. Since she respects and shows

¹Northway, A Primer of Sociometry, p. 17.
that she loves the children, they respond to her in a similar way. She is able to have fun learning with the children. She has established good rapport with them.

This class is a superior class intellectually. The IQ's ranged from 88 to 140 with the median score of 110 to 115. The class was very interested in learning and able to progress rapidly.

The first sociometric test was administered on September 27, 1962. A sample of this test is on page 46. At this time the children had been in school for approximately five weeks. These children had not been together before September, since they had been in three different classrooms the previous year. Three of the children, pupils E, L, and 5, were new to the school this year. The purpose in giving the sociometric test was to form social studies committees. The purpose was explained to the children and they were assured that their choices would be confidential. The error made in giving this sociometric test was that the children were not allowed to make enough choices. Therefore, the results showed a large number of unchosen people who are not really isolates or neglectees.

The Matrix Chart No. 1. for the social studies committee question is on page 47. The sociogram is on page 48, and the committees formed are listed on page 49. It can be seen from looking at the sociogram that the class has no cliques or subgroups. The lines are very complex and go in many directions. This is probably a result of the classroom atmosphere which encourages interrelationships among the children. Also, the seating arrangements in the room are continually changed. Although only five weeks have passed, the children have been able to become better acquainted and no cliques have formed. The one person who was absent received no
Who would you like to work with on a social studies committee?

First choice __________________
Second choice __________________
Third choice __________________

Why did you make the above choices?

Which two states would you be interested in working on?

____________________
____________________

What person in the room would you most like to play with after school?

First choice __________________
Second choice __________________

Why did you choose these people?

Who do you think makes a good committee leader?

First choice __________________
Second choice __________________

Why did you make the above choices?

What person in the room has some of the most unusual or creative ideas?

First choice __________________
Second choice __________________

Why did you choose these people?
Who would you like to work with on a social studies committee? -- Three choices.

Matrix Chart Number 1

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Totals:

3 3 4 7 2 2 6 4 5 6 1 2 0 8 3 1 2 1 7 5 5 1 2 7 1 3 2 0 2 0 0 1 3 0 1 2

Mutual Choices:

1 2 1 3 2 0 2 1 1 3 2 0 2 1 1 0 1 2 2 1 2 2 1 2 0 1 2 0 1 0 0 0 0 0 0 1 0
FIGURE NUMBER 2
SOCIOGRAM

Who would you like to work with on a social studies committee?—Three choices

---

Legend:
- Mutual choice
- First choice
- Second choice
- Third choice
- Person absent
NOTE: The number by each pupil denotes the number of choice. If there is no number, then that person did not choose his working partner.

Southeastern States

Pupil 16 (2)—Pupil C  
Pupil N (1)—Pupil G (3)  
Pupil 8 (1)—Pupil 11 (3)  
Pupil 13—Pupil 6  
Pupil M (2)—Pupil O  
Pupil Q—Pupil F

Middle Atlantic States

Pupil D (1)—Pupil J (1)  
Pupil R (1)—Pupil E (2)  
Pupil 4 (2)—Pupil 17 (1)  
Pupil 10—Pupil I  
Pupil 18—Pupil 12

New England States

Pupil 15—Pupil 7 (1)  
Pupil L (1)—Pupil K (1)  
Pupil 14 (3)—Pupil 3  
Pupil B (3)—Pupil H (1)  
Pupil A (2)—Pupil P (2)  
Pupil 5 (3)—Pupil 2 (2)  
Pupil 1 (1)—Pupil 9 (1)
choices. It is possible that the children forgot about him, since he was not present. There are very few cross-sex choices, but this is normal for the fifth grade. In the primary grades there are many choice lines between boys and girls. After this there is a decline into the fifth and sixth grades which remains constant until the eighth grade. After that the trend is reversed.\(^1\) It is interesting to note that more boys made cross-sex choices than did girls. This is probably due to the fact that girls mature earlier than boys.

The sociometric test certainly presented a clearer picture of the class structure. Some of the children expected by the teacher to be stars were only average in number of choices. The student teacher thought many children would receive more choices than they did. However, most of the people expected to be either an isolate or a neglectee were shown to be an isolate or a neglectee. One isolate, pupil H, has a father who seemingly expects too much of her. She sometimes does not do her best work, probably because she knows it will not be good enough. She does have average intelligence and can do good school work. Her pessimistic attitude seems to cause others to avoid her. Nothing is done the way it should be, in her opinion. She is not enthusiastic about anything. She did not make any choices on the play companion question giving as a reason, "Because I like to play with myself." This is a child who certainly wants to be liked and accepted.

The other isolate is a boy, pupil J. He usually chooses girls on the sociometric tests and is himself not chosen by anyone. He is not chosen because he does not get along with the other children. He seems to be immature, a show-off, and rather "sissyish." He has also begun

\(^1\) Jennings, *Sociometry in Group Relations*, p. 75.
taking things that do not belong to him, which possibly reflects a feeling of insecurity. He seems to need an abundant amount of attention and affection.

One of the neglectees is pupil A. She is a child that a visitor to this class would undoubtedly notice. She is over-weight. This may be because she is not happy at home and eats to console herself. Her parents do not appreciate her the way she is. Her size is always being pointed out to her. This child reacts to the teasings of others by being aggressive. She torments others which only causes them to tease her more. Since she is so preoccupied with her relationships with others, she is not able to work up to her ability academically. Although she has average intelligence, she is working at the bottom of the class.

The teacher and student teacher worked on the problem of what to do for an isolate. They tried to accept each child in the class, including the isolate, for himself. Also, they tried to treat everyone in the room, including the isolates and neglectees, in the same way with a feeling of appreciation for everyone and no favoritism. It was known that if the teachers accepted the isolate, then the rest of the class would. Pupil 16 was given a big hug quite often. It was felt that if he were given the affection he wanted and needed his emotional and personality problems might be helped. Pupil A often stayed after school to complete her unfinished schoolwork. Then she received individual attention and usually did better school work. The teacher and the student teacher tried to accept pupil 16 for herself. They tried to give her a chance to be successful in the classroom. By changing the seating arrangements often, the isolates were in several different groups. The teachers tried to plan the work so each pupil had a chance to succeed at something. Pupil M did a very good job
in a play. She also won a prize for her Halloween costume. These helped to elevate her status somewhat. The teachers tried to help pupil A realize that as long as she was heavy and reacted aggressively to others, that she would probably be teased by the other children.

The second sociometric test was given approximately four weeks later on October 31, 1962. A sample of this test is on page 53. When the writer began talking to the class about forming committees for special social studies projects, the students immediately wanted to know if they could choose people to work with as they did before. They were very enthusiastic about making choices again. Evidently they had been pleased with the results of the first sociometric test.

This second sociometric test allowed the children to make five choices. Therefore, this test showed more reliable results. The use of five choices provides more stable sociometric status scores because of the spread of the scores.1 Even though there were more choices made, the over-all results were similar to the first sociometric test. Evidently the "sociometrically rich" remained "rich," and the "sociometrically poor" remained "poor." Pupil 12, who was absent on the first test, was present on this test. He received few choices, and they were usually reciprocated choices.

Although the children were placed on committees sociometrically as a result of this test, for many of the children the type of committee had more appeal than the people on the committee. Therefore, many people changed from one committee to another. The children were also reseated according to their choices. Figure No. 2 on page 54 presents these seating

1Gronlund, Sociometry in the Classroom, p. 132.
FIGURE NUMBER 4
SOCIOMETRIC TEST NUMBER 2

Administered on October 31, 1962

1. What five people in this classroom would you best like to work with on a special project for the New England states?

1. __________________________

2. __________________________

3. __________________________

4. __________________________

5. __________________________

2. If you could sit next to anyone in the class you wanted to, what five people would you like to sit by?

1st choice __________________________

2nd choice __________________________

3rd choice __________________________

4th choice __________________________

5th choice __________________________

3. What five people in this room would you invite to a Halloween party?

1. __________________________

2. __________________________

3. __________________________

4. __________________________

5. __________________________
If you could sit next to anyone in the class you wanted to, what five people would you like to sit by?
FIGURE NUMBER 5
SEATING ARRANGEMENTS

Mrs. Gale
choices. The seating arrangements are on page 55. After sitting in these places for a few weeks, there was evidence of need to change the seating arrangements. The children new to the class received more choices on this test than they did on the first. Pupil 5 is even a star.

The length of time between sociometric tests was not long enough to show a major difference in the children's attitude toward the isolates. However, pupil M was nominated by her first choice on the seating question for the office of class secretary. Placing her near her first choice also seemed to change her attitude of pessimism somewhat.

The use of sociometry helped me a great deal in understanding and in working with the children in the class. It gave Mrs. Gale and me aid in identifying the various people that we should be trying to help. If this class were to be given another sociometric test at the end of the school year, the results might differ considerably from the results of these first two tests. Some of the children may have become better acquainted with other members of the class. Some people who chose each other might no longer choose the same person. Friendships may change as interests change. Some of the isolates or neglectees may have greater acceptance by others. Other children may have lost some of their friends. There are many reasons why a new sociometric test might have different results. The use of sociometry in this classroom helped the teacher and the student teacher in understanding the pupils and in trying to help each pupil become a happier person by being able to relate positively with the other children.

XII. Conclusion.

This paper has answered the questions the writer set out to answer. The group is very important in the classroom since everyone learns most
of what he knows from others. Other people even shape and influence his personality. Therefore, it is necessary for the teacher to be concerned about and to know something about the groups in her classroom. The teacher influences and directs these groups. The teacher also sets the tone of the classroom atmosphere and can exert a strong influence on the group. She should try to make this a positive influence. This paper has shown that sociometry may be helpful to the teacher because it points out relationships in the classroom of which the teacher may be unaware.

The question of seeking peer approval and acceptance in order to be secure and learn is still a difficult question to answer. On the basis of the readings for this paper and the information given here in this paper, the writer feels that children will be able to give more attention to learning if they are accepted by their peers. They are also happier people.

Many questions to pursue further in the area of sociometry have been raised. These questions could be developed into other papers. If the isolate is helped to be part of the group, are teachers making them conform to the group and is this "good"? Is the star secure as a person? Is the isolate always an insecure person? What about the socially unconcerned isolate—is he secure within himself? If a cohesive group is usually a conforming group, do we, as teachers, want to promote group cohesiveness with conformity or individuality? Since the high and low status groups are more stable, is it futile to try to change an isolate's sociometric status? Do children select one another on the basis of similarities or differences in personality? Is it possible to change a child's popularity without first making basic changes in personality, or is this a two-way street?
What five people in this classroom would you best like to work with on a special project for the New England states?

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Total Choices:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Mutual Choices:
1 3 4 3 0 4 3 5 1 1 3 0 4 2 3 1 3 4 3 4 1 4 3 1 2 0 1 3 1 2 1 0 3
Who do you think makes a good committee leader? -- Two choices

[Matrix Chart Image]

Total Choices:
01420255222010501197230041320200020
What person in the room has some of the most unusual or creative ideas?

Two choices
What five people in this room would you invite to a Halloween party?

Total Choices
1 3 6 9 3 4 7 9 7 1 5 1 7 8 5 1 4 9 5 8 4 1 3 7 7 8 6 1 3 2 1 3 2 0 1

Mutual Choices
1 2 3 4 2 0 4 3 4 5 1 3 0 2 3 3 1 4 4 2 4 1 2 2 1 2 4 0 1 2 0 2 1 0
FIGURE NUMBER 6
TARGET SOCIOGRAM

What five people in this room would you invite to a Halloween Party?

- Highest choice
- Reciprocated choice
What person in the room would you like to play with after school?—Two choices.

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Total Choices: 1335212242120241052474212211010010.01
Mutual Choices: 12010101001200111021211022010000010
BIBLIOGRAPHY


