A STUDY OF SOCIOMETRIC PERCEPTION AS RELATED
TO SEVERAL OTHER SOCIOMETRIC VARIABLES

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A STUDY OF SOCIOMETRIC PERCEPTION AS RELATED
TO SEVERAL OTHER SOCIOMETRIC VARIABLES

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CHAPTER I

PURPOSE AND THEORY

The intent in formulating this study was to examine social perception, as related to several sociometric variables. By social perception is meant the ability of an individual to estimate correctly the feelings of his associates toward him, in terms of their desiring or not desiring him as a close friend. It was believed, at the time when this study was first conceived, that there should be some relationship between a person's ability to make this sort of estimation and his sociometric position in the group in which he was tested. This belief was held because it was felt that if human development was more accurately characterized in terms of the laws of correlation than by the laws of compensation, then there should be some small degree of positive relationship between all desirable characteristics. With the belief that both a high degree of social acceptance and a high degree of social perception are desirable characteristics, the assumption was drawn that there would exist at least a small degree of positive relationship between the two factors.

In addition to the first assumption, it also seemed plausible to draw several additional hypotheses. First was
the rather obvious hypothesis that if an individual has a high degree of social perception then his reciprocations and rejections of the feelings of the other members of his group should reflect this ability. In other words, an individual with a high score on the social perception portion of the examining instrument should also show a high number of mutual (reciprocated) positive and negative responses when his indications of feelings toward each individual in the group were checked against their indications of feeling toward him. It was also held that there should be some positive relationship between the feelings which the individual expressed toward the group as a whole and what he expected in the way of feeling from the group as a whole. This occurrence is assumed to be a function of projection.\(^1\)

While examining the construction of the instruments which were to be used and while reviewing the literature pertaining to other techniques of approach which might be used to collect the data desired, a statement which had been presented a number of times in various studies took on new significance. The statement was descriptive of the phenomenon of "socio dynamic effect,"\(^2\) that is, the tendency for

\(^{1}\)D. P. Ausubel, "Reciprocity and Assumed Reciprocity of Acceptance among Adolescents," *Sociometry*, XVI (1953), 339-348.

those of high status in a group to respond to others of high status to a much greater degree than those of lower status. This phenomenon appears not only in the results of sociometric testing but also in life situations. Some curiosity developed as to what effect this tendency might have on the social perception of the high individuals (stars) and low individuals (isolates or rejects) in the groups which were to be examined. It would seem reasonable that if an individual associated a great deal with another individual he should be better equipped to estimate the feelings of that individual toward him than he would be to estimate the feelings of an individual who was more or less an "associative stranger." It was held, therefore, that those who were stars and generally well accepted would be more accurate in estimating the feelings of those who accepted them since for these individuals the idea of being rejected is not part of their expectancy in a social situation. Perhaps a more detailed explanation would be useful in presenting this portion of the study.

First, if social learning theory is accepted, it is assumed that an individual learns in a cognitive manner and approaches each situation with an expectancy as to the results of a particular type of behavior.³ For example, we may conceive, for purposes of illustration, of an individual

in a situation for which he has nothing in his background of experience to indicate to him a mode of behavior. In this situation the individual will respond in a random manner. The results of this behavior will provide an expectancy for the individual not only for future duplications of the same situation but also for future contacts with situations which the individual perceives as similar.

Now for those individuals who are high in acceptance in a group, the expectancy is in terms of acceptance and not in terms of rejection. It is, therefore, logical to assume that the perception of these individuals will be more accurate in estimating the feelings of those whose responses are in agreement with their expectancy.

As for those whose expectancy is in terms of rejection, the same tendency should be observable; that is, they should be more accurate in their estimation of those who reject them.

There exists an element of inconsistency in holding the assumption outlined in the preceding paragraph and at the same time anticipating that those high in status will also be high in perception ability, and implicating that those low in status will also be low in perception ability. Obviously if an individual is high in perception ability he should not make the error suggested. Therefore, those high in status should estimate accurately both those who accept
and reject them; those low in status should have difficulty in estimating either those who accept or reject them. To clarify what is actually being suggested, it is necessary to point out that it is felt that both those who have high and low perception scores will make some errors in estimating responses of those in their group. It is also felt that these errors will be for the most part in the direction of the expectancies of the estimator in terms of his position in the group. However, it is also held that in an overall examination of the responses of both highs and lows the highs will make significantly less errors in perception than the lows.

Another analysis of the data was also possible. It was a comparison of the perceptive abilities of the boys as a group with the perceptive abilities of the girls as a group.

In regard to this, it is, of course, difficult to develop any substantial reason for assuming that one sex should show a reliably greater degree of accuracy in the estimation of the feelings of others toward them than the other. However, one's inability to formulate a reasonable theory on which to base this assumption appeared to be no assurance that such a relationship did not exist. Therefore, this portion of the study was approached with open inquisitiveness as to what the results might show.

Lack of evidence indicating a superiority of one sex over the other in perception justifies the development of a
null hypothesis in regard to this factor, but it should be remembered that theories, such as they are, are greatly inadequate for exacting prediction of human behavior and no single study will, in and of itself, contribute or detract a great deal from any of them. The relationships which might be found between apparently unlikely factors should serve to stimulate those with a scientific interest to check and cross-check the results and to search existing theories or develop new ones in an attempt to explain a particular phenomenon, providing that it can be reproduced frequently enough to warrant consideration.

To reiterate, holding the views which have just been outlined, it is assumed that there are:

1. A small but reliable degree of positive relationship between sociometric status and sociometric perception.

2. A small but reliable degree of positive relationship between perception ability and the number of mutual acceptances and mutual rejections for each individual.

3. A small but reliable degree of positive relationship between an individual's expectancy of the group's response toward him (indicated by perception score) and the feeling which he expresses toward the group as a whole (indicated by choices given score).

4. A reliably greater degree of accuracy on the part of highs when estimating the responses of those who accept them than when estimating the responses of those who reject them, and a reliably greater degree of accuracy on the part of lows when estimating those who reject them than when estimating the responses of those who accept them.
5. A null hypothesis in respect to the perceptive abilities of the different sexes.
CHAPTER II

RELATED STUDIES

The area of social perception is one which has only recently come to the attention of psychologists as being accessible to or worthy of extensive and exacting consideration. Because of this, related material is scant. An examination of this meager fund of information has, however, provided some valuable clues as to possible results which this study might yield. In addition, the wealth of information concerning other sociometric variables has been to some degree utilized.

In regard to the first hypothesis concerning the nature of the relationship which is assumed to exist between the relative status of an individual in a group and his ability to estimate accurately the feelings of others in the group toward him, no directly related information could be found. Material which has bearing on the factors which differentiate those high in status from those low in status, however, is abundant.

In a recent study by Bonney, Hoblit and Dryer\(^1\) concerning factors related to sociometric status in a men's

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dormitory, it was found that several rejects corresponded quite closely to the generally accepted description of individuals with psychopathic personality characteristics. In general these characteristics included egocentric attitudes, attention demanding or dominating behavior, vulgar and disparaging attitudes toward the opposite sex, excessive drinking, and at times, aggressive behavior directed toward others with whom they associated.

Both sociometric highs and lows showed on the personality tests, showed behavior patterns which differed to some degree from what is frequently described in personality test manuals as optimum. However, as a group the behavior patterns of sociometric lows and sociometric highs were distinctly different in the manner in which these deviations manifest themselves.

The rejects manifest behavior patterns in response to test items which were interpreted by the examiner to be similar to patterns of behavior which, according to the scoring manuals of the various tests, indicated anxiety and trends toward "psychopathic" deviance and "schizoid" personalities. On the other hand the sociometric selects, while showing some patterns which would be called neurotic, were generally more "open" in their behavior and "tended to give others a sense of security."

The study points out two factors of importance which in general distinguish the sociometric highs from the
sociometric lows. First, is the degree to which conflict and anxiety have pervaded the entire personality structure, and second is the technique adopted by each individual in meeting the conflict or defending against the anxiety.

A parallel study attempted to identify some personality traits of sociometrically selected and sociometrically rejected male college students by use of the Rorschach, the TAT, and the MMPI. The purpose of the investigation was to compare the personality patterns of a group of male college students who had been shown by a sociometric instrument to be among the least acceptable individuals in a men's dormitory with the personality patterns of those who on the same instrument were shown to be among the most acceptable individuals in the dormitory. Twenty-one subjects composed each group.

The results showed that the well accepted men were characterized by a sincere and objective interest in others, a high self regard without excessive demonstration, more mature interests, and interesting contributions in group situations. They also lacked the overanxiousness to please others which characterized to some degree the "passive rejects."

It is felt that both of these studies offer evidence that the human personality is more accurately characterized in terms of correlation rather than compensation and that in view of this, if we continue with the assumption that a high
degree of sociometric perception is a desirable trait then we can find some evidence in these studies on which to base the assumption that sociometric perception and status should go hand in hand.

The second hypothesis is presented without benefit of evidence from related studies. It appears rather obvious, however, that if an individual possesses, to a high degree, the ability to perceive the feelings of others toward him, then he should be in a better position to reciprocate these feelings; and further, that this advantage should be reflected in the actual number of mutual responses recorded for this individual.

Some evidence related to the third hypothesis was found in a study of reciprocity and assumed reciprocity of acceptance among adolescents by Ausubel.\(^2\) The results of his study showed that acceptance by the group and acceptance of the group correlated about zero. In other words no significant relationships existed between what has here been called net status scores and choices given scores.

It was found, however, that individuals of either high or low acceptance by the group who themselves showed a high acceptance of the group tended to expect the group to be highly accepting of them. In other words, a significant relationship was found between what has herein been called

the choices given score and the perception score. It is felt that the results of this study should to some degree corroborate the findings of Ausubel.

The fourth hypothesis is related to some degree to the work of Rotter who has emphasized the role of expectancy in the perception of situations. It should then follow that if an individual expects to be chosen, then his perception of the feelings of others will be affected correspondingly and the result will be that he will indicate that more persons will choose him than is actually the case. The same tendency but in the other direction should be evident for those who expect to be rejected.

The fifth hypothesis, like the second, is presented without benefit of related studies. However, in this instance the postulation is one of no relationship and is based in part of the fact that no evidence concerning the examination of differences in the perception abilities of the sexes could be found.

\(^3\text{Rotter, op. cit.}\)
CHAPTER III

DESCRIPTION OF MEASURING INSTRUMENTS

In order to prove or disprove the hypotheses advanced, a generalized sociometric type measurement, developed by the Psychology Department of North Texas State College and designated the "How I Feel Toward Others" scale, in conjunction with a "Guess Who" type of perception scale, was given.

Sociometric Scale

The "How I Feel Toward Others" scale allows for five levels of feeling: two levels of acceptance, two levels of rejection, and a middle or dividing category for those individuals in the group whom the testee feels he does not know well enough to have developed any positive or negative feeling toward.

The Best Friends category designates those toward whom the testee feels the highest degree of acceptance. Four substatements are offered for clarity and to give the testee some limits by which to govern his choosing. They are:

A. You play with your best friends a lot and have fun with them.
B. You treat them nice, help them whenever you can, and share your things with them.
C. You go places with them and talk with them a lot.
D. You go to their homes and they come to your home quite often.
The second and lesser degree of acceptance is called Other Friends. The defining substatements for this category are:

A. You play with them sometimes, but you do not always have fun with them.
B. You are nice to them most of the time, but you seldom share your things with them.
C. Sometimes you go places with them, and talk with them, but not very often.
D. You seldom go to their homes, and they seldom come to your home.

All children in the group which the testee feels he cannot respond to in any other manner are placed in the Don't Know category.

The first and mildest level of rejection is the Children Whom I Know But Who Are Not My Friends category. The descriptive substatements which were used for reference for this category are:

A. You seldom play with them.
B. You do not get along very well with them when you are around them.
C. You do not talk to them or go places with them unless it is necessary to be polite.
D. You do not like some of the things they do and the way they act at times.

The final division of the questionnaire used to indicate the most extreme form of rejection is the Children Whom I Do Not Want As Friends division. In addition to the original statement, "as long as they are like they are now," was added to allow for change in feelings on a possible retest. The descriptive statements for this division emphasize that,
A. You avoid playing with them and you never choose them as partners for a game.
B. Sometimes you fuss, quarrel, and fight with them when you are around them.
C. You never go places with them and you never talk with them unless you have to.
D. You dislike very much some of the things they do and the way they act at times.

The descriptive statements which play an important part in the effects of the instructions upon the testee and provide a set by which he judges his acquaintances were obtained from a questionnaire submitted, by Bonney, to 450 school children in three North Texas communities in grades four, five, six, and seven. The results were related to four of the five sections of the original sociometric instrument. The I Don't Know category was eliminated for obvious reasons.

The first section of the questionnaire asked the children to indicate how they felt and acted toward other children whom they considered to be their best friends. Tabulation of the results yielded 1,303 responses which were specific enough to be usable. The majority of these responses were similar enough to be grouped under four general headings which were worded into statements. In all, 71 per cent of the 1,303 responses were used in deriving the four substatements listed under the Best Friends category of the "How I Feel Toward Others" scale.

Similar procedures were utilized in developing the statements used under the other three sections of the test.
The Other Friends division yielded 612 usable responses, of which 74 per cent were used in developing the substatements.

In the Not My Friend category 75 per cent of 744 responses were used, and the substatements for the Do Not Want As Friends division were selected from 73 per cent of 651 definite responses.

All classification was done by a group of three experts who cross-checked the selections of one another. No statement was used unless two of the three experts agreed. For most of the selected statements, agreement was unanimous.

Administration of the Scale

For administrative purposes each child in each group used for the study at hand was given a copy of the instructions in addition to the list of names of the people in his group. Each child was instructed to read his copy of the instructions silently while the teacher or administrator read it aloud. Numbers one, two, three, four, and five were used to indicate the various levels of feelings, and each child was directed, after reading the instructions, to indicate his feeling toward every other child in the group by placing one of these numbers to the left of the name of the child whom he was considering. He was further instructed to place a six by his own name for purposes of identification. It was emphasized that he should respond in some manner to every name on the list.
In two of the three groups the test and instructions were administered by the regular teacher with the investigator in attendance. For the third group the investigator administered both test and instructions.

The only point which needed additional clarification occurred in regard to the substatements under the Best Friend category when applied to heterosexual choosing. Some children seemed to feel that the actions indicated did not apply so well to activities engaged in with the opposite sex as they did to activities engaged in with the same sex. For lucidity, the Best Friend category was extended to include those whom the testee felt as strongly about as those with whom he engaged in the activities indicated by the substatements.

Reliability and Validity of the Scale

In regard to the factors of reliability and validity as they relate to the "How I Feel Toward Others" scale, it should be pointed out that these terms are not used in the manner common to psychological literature when applied to a sociometric type instrument. Reliability is best understood in terms of constancy over a period of time. Table I is extracted from an article by Bonney published in Volume XXXIX of the Journal of Social Psychology and showing correlations between the rank of individuals within various groups on two
successive administrations of this scale over periods of
time ranging from one day to six months.

TABLE I

CONSTANCY OF SCORES ON CHOICES RECEIVED ON
TWO SUCCESSIVE ADMINISTRATIONS OF THE
"HOW I FEEL TOWARD OTHERS" SCALE

<table>
<thead>
<tr>
<th>Classes</th>
<th>N</th>
<th>Time Interval</th>
<th>Plo Correlation between Successive Group Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th</td>
<td>20</td>
<td>3 days</td>
<td>.87 ± .04</td>
</tr>
<tr>
<td>4th</td>
<td>38</td>
<td>2 days</td>
<td>.94 ± .009</td>
</tr>
<tr>
<td>4th</td>
<td>34</td>
<td>6 days</td>
<td>.89 ± .03</td>
</tr>
<tr>
<td>4th</td>
<td>22</td>
<td>6 weeks</td>
<td>.68 ± .08</td>
</tr>
<tr>
<td>4th</td>
<td>29</td>
<td>3 months</td>
<td>.74 ± .06</td>
</tr>
<tr>
<td>5th</td>
<td>33</td>
<td>3 days</td>
<td>.93 ± .01</td>
</tr>
<tr>
<td>5th</td>
<td>25</td>
<td>1 day</td>
<td>.88 ± .02</td>
</tr>
<tr>
<td>5th</td>
<td>14</td>
<td>2 months</td>
<td>.72 ± .09</td>
</tr>
<tr>
<td>5th</td>
<td>29</td>
<td>3 months</td>
<td>.86 ± .03</td>
</tr>
<tr>
<td>5th</td>
<td>21</td>
<td>6 months</td>
<td>.68 ± .08</td>
</tr>
<tr>
<td>6th</td>
<td>30</td>
<td>3 days</td>
<td>.89 ± .01</td>
</tr>
<tr>
<td>6th</td>
<td>16</td>
<td>3 months</td>
<td>.62 ± .12</td>
</tr>
<tr>
<td>6th</td>
<td>36</td>
<td>3 months</td>
<td>.89 ± .02</td>
</tr>
<tr>
<td>6th</td>
<td>21</td>
<td>3 months</td>
<td>.67 ± .05</td>
</tr>
<tr>
<td>6th</td>
<td>26</td>
<td>4 months</td>
<td>.81 ± .05</td>
</tr>
</tbody>
</table>

The reader may be curious as to why a correlation of only .88 should be obtained when the same scale is adminis-
tered to the same group on successive days. It should be
pointed out that since individual interpersonal feelings are
in a constant state of fluctuation, it is only reasonable to
assume that some alterations in status will appear for some
children on any re-test. And if the effect of the con-
tinuous socializing influences which act on any group causes
some members of the group to change their attitude toward
other members of the group in regard to desiring them as associates in some type of activity or just as associates in general, this does not invalidate the previous expressions of interpersonal desires. Both expressions are equally indicative of the individual's "real" feelings provided that the individual was equally honest in his expressions on both occasions.

In addition it should be emphasized that the constancy of which we speak is not constancy of choosing between individuals but rather constancy of relative position in successive rankings of the group. The factors involved in individual choosing, however, are not pertinent to this study and therefore should not affect the validity of the results.

The validity of the results of any investigation, obviously, can be no better than the validity of the examining instruments used. Validity for a sociometric instrument is simple although somewhat unusual. In most types of psychological tests some factor is used as an index of some other factor. More specifically, the approach is an indirect one and the validity of the relationship between the factors is extremely important. This, however, is not true with a sociometric type of test. With this type of instrument the approach is a direct examination of the factors being considered. Validity, then, is rather inherent in the nature of the response providing the response is honest.
Subjects Used in the Study

The subjects for this study were from three groups of children, composed of 52 boys and 52 girls, totaling 104 in all. They were all white, sixth grade students selected from class rooms in Denton, Texas. The ages were not obtained; however, it is possible for one to estimate with fair accuracy the age range because of its close correspondence with the grade level obtained in school. The group was organized in typical classroom fashion and all of the subjects had been associating with one another for at least seven weeks previous to administration of the test.

Scoring of the Scale

For scoring purposes, the raw scores obtained were weighted in the following manner:

+2 for number 1 choice  
+1 for number 2 choice  
0 for number 3 choice  
-1 for number 4 choice  
-2 for number 5 choice

The negative total was then subtracted from the positive total, or vice versa, so that the final score was the algebraic sum of all feeling indicated. The results were tabulated and each child in each group was placed in his relative position in his group as revealed by his score on the test. It was also possible to extract a choices given score and a quantitative estimation of mutual acceptances
and rejections for each individual from the data collected with this instrument.

**Perception Scale**

In addition to the "How I Feel Toward Others" scale, a five-part perception scale was also given. Each division corresponded to a division of the status scale and used the same substatements to assist the testee in making his decision. The divisions were worded as follows:

1. List the names of those whom you believe will choose you as Number 1, My Best Friend.
2. List the names of those whom you believe will choose you as Number 2, My Other Friend.
3. List the names of those whom you believe will choose you as Number 3, Children I Don’t Know.
4. List the names of those whom you believe will choose you as Number 4, Children I Know But Who Are Not My Friends.
5. List the names of those whom you believe will choose you as Number 5, Children I Do Not Want To Have As Friends.

**Administration of the Scale**

Each testee was requested to indicate in the appropriate space those in his group which he felt would respond to him in a particular manner. No minimum or maximum limitations were placed on the number of responses. This was done to reduce the incidence of blind guessing which would occur if a child was forced to respond beyond his capacity to perceive the feeling of others.

Frequently those who have worked with social perception have attempted to measure it by duplicating the technique
used to measure positive and negative feeling. It should be obvious that a testee would be more familiar with the exact nature of his feeling toward others than he would be with the exact nature of others' feelings toward him. One might be able to evaluate intelligently the feelings of a few members of his group toward himself because he perceives these persons as having done more to make their feelings evident. The area which has been proposed for investigation is the area of perception, not the realm of chance agreement between the blind or random guesses of the testee and response of his associates. Therefore, all that the subject should be required to do is estimate the feelings of those whom he feels he can perceive and not necessarily the feeling of the whole group.

The number of responses of the testees varied from no attempts on the part of one pupil to thirty-four attempts on the part of another.

**Scoring of the Scale**

Numerical information was not obtained because of the reasoning behind the development of the perception scale; therefore, scoring presented a rather difficult problem. The technique which was finally used necessitated the cross checking of each perceived response with the actual response and the assigning of a score from a weighting chart according to the accuracy of the response.
It should be remembered that the perception scale consisted of five divisions, each corresponding to a division of the status scale. It therefore seemed appropriate to use the same weighting scale for both instruments. For the perception scale +2 was used to indicate the exact perception of a response. For example, if the testee had estimated that an associate would indicate that he was among his Other Friends, and the associate did make this indication, then the estimation was accurate and received the weighted score of +2.

A +1 was used to indicate an estimation which was inaccurate by one division. In the example above if the cross check of scores had revealed that the associate had indicated that the testee was among his Best Friends or that he was one whom he Did Not Know, then the testee's estimation of his associate's feeling would have been inaccurate by one division and would have received the score of +1.

A zero was used to indicate estimations which were inaccurate to the extent of two divisions. It was felt that accuracy within two divisions was no better than chance accuracy and, therefore, should receive no positive or negative score.

A -1 was used to indicate responses which were inaccurate to the extent of three divisions, and those estimations which were at opposite ends of the scale from the responses were scored -2.
The algebraic sum of the positive and negative scores was taken as the perception score. Both scores were now accessible to statistical treatment.
CHAPTER IV

STATISTICAL ANALYSIS OF DATA

The first element of this study which should be considered from a statistical standpoint is the technique utilized in developing the acceptance-rejection scores on which the conclusions are based. As has already been indicated, these scores represent the algebraic sum of all of the positive and negative feeling directed toward each individual in a group by all of the other individuals in that group. Some readers might feel that this technique could conceal more than it would reveal in regard to the actual nature of the acceptance or rejection of any one individual. For example, several individuals might have a net difference in positive and negative choices received of a +25. However, this would be no assurance that the same amount of positive or negative choices were recorded "for" and "against" each individual represented by that score. In one case the score of +25 might represent 50 positive choices less 25 negative choices; in a second case it might represent 27 positive choices less 2 negative choices; while in a third case it might represent 25 positive choices less zero negative choices. Each of these individuals might be considered as distinctly unique. The uniqueness, however,
would be concealed, to a great degree, by the technique used in evaluating the responses which they received. In regard to this problem, Norman has said one cannot "... deny the logic of this argument but can only say that this is a problem in the quantification of qualitative data with which psychology is constantly faced."¹

Additional contributions by Norman² were several approaches designed to test the feasibility of utilizing a net status score to represent the relative position of an individual in a group. The first of these was a technique to test the stability of a rank-order distribution based on the gross status scores of each individual when compared to a rank-order distribution based upon acceptance obtained by each individual per unit of rejection. To do this, acceptance scores of seventy-two subjects were divided by the number of rejections each subject had, with all zero rejection scores assumed to be one, to avoid dividing by zero. A rank order coefficient of .924 was obtained.

Another technique was to correlate total scores for each individual with his acceptance score and his rejection score, separately. Correlations of .868 and -.575 respectively were obtained.


²Ibid., pp. 205-235.
The third technique was the plotting on polygons of the acceptance scores alone, the rejection scores alone, and the combined acceptance-rejection scores for the group. It was found that the combined scores when plotted yielded a pattern which most nearly approached the pattern of a "normal" distribution.

Norman makes the following statement: "... it seemed to the writer that the NA score\(^3\) was the most workable of several to be tried which would express in one score both acceptance and rejection. ..."\(^4\)

It is felt that the preceding statements offer evidence which should provide a basis for some faith in results developed by utilizing the gross status score technique. If doubt still prevails, it can only be said that the judgment of the investigator is a variable in any investigation of this type. The effects on the data which this variable might have are extremely difficult to evaluate.

In addition to the net status score several other scores were obtained for each individual. They were: (1) a mutual acceptance-rejection score, (2) a net choices given score, and (3) a net accuracy of perception score (this was obtained from the perception test).

\(^3\)Norman's terminology for the Net Status score.

\(^4\)Norman, \textit{op. cit.}, p. 213.
The mutual acceptance-rejection score was obtained by comparing the rating, on the "How I Feel Toward Others" scale, given a particular individual by another individual with the rating given the other individual by the individual whom we were considering. For example, if individual A gives a rating of a +2 to individual B and individual B gives a rating of a +2 to individual A, then the indication of feeling on the part of each is said to be reciprocated by the indication of feeling on the part of the other. Mutual acceptances were scored when both individuals gave positive indications toward one another, and mutual rejections were scored when both individuals gave negative scores to one another. It was not felt that the same level of acceptance or rejection was necessary before the indication could be termed mutual. A mutual acceptance was scored wherever any combination involving ratings of +1 or +2 existed. Mutual rejections involved any combination of ratings of -1 or -2. The mutual acceptance-rejection score for each individual was the total of the number of mutual acceptances and rejections.

The reasoning which was used in the development of the choices given score was the same as used in developing the gross status or choices received score, with one major change. For this score the algebraic sum of all positive and negative choices given, rather than choices received, was used.
The sociometric perception score was not taken from the "How I Feel Toward Others" scale but rather from the "Guess Who" type of instrument which has been described previously in Chapter III. Admittedly, the scoring technique is highly arbitrary and is open to a great deal of criticism from those who might demand empirical evidence to support the assumption that the score given each individual is in reality an accurate representation of the perception ability of that individual. As has been pointed out previously, some attempt was made to allow each subject to set his own perception level by placing no quantitative demands on the number of responses which he should make. It was felt that this leniency would reduce, to some degree, errors which might be made because of chance agreement among force guesses. It is recognized, however, that other approaches to evaluation of each individual response might yield equally accurate representations of a subject's ability to perceive the feelings of others toward him.

Research already completed in related areas of study indicates that Pearson Product Moment correlations between factors of sociometric interest are generally uncomfortably low to provide an accurate description of the individuals tested. It was felt, therefore, that the Pearson was an inappropriate measure of the results obtained. The same research has also revealed that significant ratios frequently exist between the upper and lower quartiles of
distributions obtained from this type of investigation. In view of this, the statistical analysis of data was approached from the standpoint of attempting to discover the reliability of the differences which existed between the means of the upper and lower quartiles of three groups used to test each of the five hypotheses presented in Chapter I.

The hypotheses will be examined in the order of their original presentation.

Hypothesis I

There is a small but reliable degree of positive relationship between sociometric status and sociometric perception.

Each of the three groups was arranged in rank order according to the net status scores of the members and the upper and lower quartile difference reliabilities of the means obtained. For Group I the difference between the means was significant at less than the .80 level; for Group II the difference was significant at less than the .90 level; and for Group III the difference was significant at slightly more than the .80 level. The evidence seems clear and gives ample justification for rejecting the first hypothesis. It is conceivable that crudeness of the instrument or error in experimental design might be responsible for these figures, but in light of both consistency of direction and the extremeness of the results there seems ample justification for extending the assumption that absolutely no relationships of value, from the standpoint
of prediction, exist between the two factors under consideration.

The implications of these findings seem to be that the concept of perception should be further refined and both the technique and design used here be subjected to close scrutiny in an attempt to discern what factor may not have received just consideration.

Bender and Hastorf, in a recent study entitled "On Measuring Generalized Empathic Ability," found several factors which seem to have some direct bearing upon this point. Quoting from their section on "Interpretation and Summary,"

The following results are reported: (1) low positive correlations between obtained and forecast scores on each of the three scales; (2) no apparent consistency in forecasting ability either when forecasting for a subject on the three scales or when forecasting on the same scale for two different subjects; and (3) the emergence of projection in one of the scales.\(^5\)

For our purposes the second finding is of most interest.

Another study offers similar findings. It states that subjects who are indistinguishable from the standard type of sociometric material may be found to differ significantly in regard to perception ability.

These findings in conjunction with a lack of relationship between sociometric status and perception of this

status, herein reported, tend to indicate that perception ability per se is not a useful construct, as here defined. It is felt that perception ability is more adequately characterized in terms of ability per individual per situation. For example, if individual A accurately predicts the response of individual B in a particular situation which we shall call X, we could say that A perceived accurately the effects of X on B. This, however, would be no assurance that A could with equal accuracy perceive the effects of situation Y on B or the effects of situation X on another individual whom we shall call C.

It is felt that these findings tend to support the point of view advanced by Snygg and Combs that an individual responds to an internal frame of reference based in part on the current field of perception and in part on a general groundwork of experience.\(^6\)

Hypothesis II

There is a small but reliable degree of positive relationship between perception ability and the number of mutual acceptances and mutual rejections for each individual.

For this hypothesis findings were based on the upper and lower quartiles of each group, when arranged in rank order according to perception scores, rather than net status scores as was the case for tabulations of Hypothesis I. The

results were significant at the .02 level, at more than the .01 level, and at more than the .02 level respectively. These results, it was felt, were adequate for supporting the second hypothesis. This finding appears to indicate that a high degree of sociometric perception offers the possessor a medium by which he measures out positive and negative tele toward those whose actions he perceives as being indicative of his value to them. Perhaps it is possible to elaborate on an old axiom: "The best way to have a friend is to be a friend," and be sure the other party knows it.

Hypothesis III

There is a small but reliable degree of positive relationship between an individual's expectancy of the group's response toward him (indicated by perception score) and the feeling which he expresses toward the group as a whole (indicated by choices given score).

Using the same rank order distribution as used in Hypothesis II, the choices given scores were paired with the perception score of each individual and subjected to the same statistical treatment as were the other two sets of data. Results thus obtained were significant at more than the .10 level, at more than the .05 level, and at nearly the .05 level, respectively. It was felt that the evidence, while not clear-cut, favored accepting rather than rejecting the hypothesis. Group I, which gave results which were significant slightly beyond the .10 level, was characterized throughout the study by less internal consistency of
response toward one another. It is felt that this characteristic may account for the discrepancy in results between this group and the other two. This would seem to demonstrate a certain degree of generosity on the part of a testee when considering his responses toward a group which he feels holds him in high esteem. It also might indicate generosity on the part of a testee when estimating the responses toward him of a group which he holds in high esteem. The fact that in both cases the "generosity" is allotted in the direction of the expectancy supports to some degree the general point made by both Rotter and Snygg and Combs, that objective reality cannot explain individual behavior. It is necessary to estimate his perception of, or expectancies in, a particular situation.

Hypothesis IV

There is a reliably greater degree of accuracy on the part of highs when estimating the responses of those who accept them than when estimating the responses of those who reject them and a reliably greater degree of accuracy on the part of lows when estimating those who reject them than when estimating the responses of those who accept them.

The statistical development of this hypothesis was somewhat more complex than that used in examining the previous hypotheses. Groups were again arranged according to net status scores. In order to check the assumption, it was

7Rotter, op. cit.
8Snygg and Combs, op. cit.
necessary to obtain two significance scores for each group. It was also necessary to make two estimations of accuracy for each individual. To do this, accuracy in predicting +2 and +1 choices was compared with accuracy in predicting -2 and -1 choices for the three groups of highs, and the inverse of this process was used for the lows. Operationally this was done by arranging in separate columns all of the acceptance ratings and all of the rejections ratings for each sociometric high and each sociometric low. Then reference was made to the results of the perception test to see how accurate each individual was in estimating the responses which he would receive which were accepting as compared with his accuracy of estimating responses which were rejecting. These estimations were then converted to deviation scores which represent the difference between the actual response and the observed response. For example, if A estimates that B will give him a rating which when weighted would be equal to a +2 and B does give A this rating, then there is no deviation between the estimation and the rating. The deviation score, therefore, would be zero. If, however, B had given A a rating which when weighted was equal to +1, then the deviation score would have been 1. Obviously the higher the deviation score the less accurate the subject's estimations.
Deviation scores were obtained in this manner for accuracy of estimation of acceptances and accuracy of estimation of rejections for each individual in both the high and low groups. The significance of the differences between the mean deviation score for acceptances and the mean deviation score for rejections was computed for each of the three groups of highs and each of the three groups of lows. The table below gives the results.

**TABLE II**

SIGNIFICANCE RATIOS OF THE DIFFERENCES BETWEEN THE MEAN DEVIATION SCORE FOR ACCEPTANCES AND THE MEAN DEVIATION SCORE FOR REJECTIONS FOR EACH OF THREE GROUPS OF "HIGHS" AND THREE GROUPS OF "LOWS"

<table>
<thead>
<tr>
<th>Group</th>
<th>Highs</th>
<th>Lows</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>.05+</td>
<td>.10+</td>
</tr>
<tr>
<td>II</td>
<td>.05+</td>
<td>.05-</td>
</tr>
<tr>
<td>III</td>
<td>.05+</td>
<td>.05+</td>
</tr>
</tbody>
</table>

Results of all six comparisons were significant at nearly the .05 level with Group I, again, showing slightly less consistency.

It would seem that this finding also would support psychological theories based on an approach utilizing the internal frame of reference. In order to explain this phenomenon, imagine, for a moment, a who is, according to sociometric examinations, very low in status. The frequency
of social rebuffs in the life of A would, if the estimate of his acceptance is accurate, be considerably higher than the frequency of social acceptances. Under these circumstances it is conceivable that A should soon define himself as an unwanted individual, and rather than rationalize or otherwise avoid recognition of social failure, reverse the process and avoid recognition of social success. This phenomenon would account for the consistency of estimations of rejection which characterize the responses of persons low in status.

Obviously, if the self-concept were one of being a socially acceptable person, the same tendency for consistent estimation of others' responses at a particular level would be present. However, in this case the level of estimation would be in terms of acceptance. As has already been pointed out, both of these characteristics were evident in the groups studied.

Hypothesis V

There is no difference in respect to the perceptive abilities of the different sexes.

Since sex was to be the discriminatory factor, it was felt that for this portion of the study it would be appropriate to combine all three into one large group and compare the mean of the female group with the mean of the male group. The results were not significant at the .20 level.
CHAPTER V

SUMMARY

To summarize the findings of this study it would be adequate to state that there exist:

1. No relationship between the sociometric status of an individual and his sociometric perception ability.

2. A very marked degree of relationship between sociometric perception ability and the number of mutual acceptances and rejections for any individual.

3. A possible relationship between an individual's expectancy of the group's responses toward him (indicated by perception score) and the feeling which he expresses toward the group as a whole (indicated by choices given score).

4. A reliably greater degree of accuracy on the part of highs when estimating the responses of those who accept them than when estimating the responses of those who reject them, and a reliably greater degree of accuracy on the part of lows when estimating the responses of those who reject them than when estimating the responses of those who accept them.

5. No significant difference in the perceptive abilities of the sexes.
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