THE RELATION OF SOCIOMETRIC STATUS, FREQUENCY OF
VERBALIZATIONS, AND A MEASURE OF
SELF-ACTUALIZATION

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THE RELATION OF SOCIOMETRIC STATUS, FREQUENCY OF VERBALIZATIONS, AND A MEASURE OF SELF-ACTUALIZATION

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By

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CHAPTER I

INTRODUCTION

Theoretical Background

Among the most valued traits in our society is sociability. As Northway, Frankel, and Potashin (20, p. 64) have stated, "Our American culture places a premium on sociability and all the qualities associated with the extravert. This is because we are a nation of salesmen and sociability pays." In fact, adequate social participation is even considered an expression of the healthy personality (21). It must be conceded that one who is psychologically healthy would, of necessity, "emit behavior which is on the whole socially desirable, because the feedback from society if socially inappropriate behaviors are manifested would soon destroy the individual's personal equilibrium (3, p. 530)."

An inspection of the literature reveals how much the culture's value of sociability has influenced the concept of psychological adjustment. Kogan, Quinn, Ax, and Ripley (13) report a correlation of .89 between a Q sort-based definition of health-sickness and a Q sort-based definition of social desirability, each definition being a composite derived from individual Q sorts by clinicians. Also, Wiener, Blumberg, Segman, and Cooper (25) found a correlation of .88 between
Independently constructed definitions of adjustment and social desirability by clinical psychologists in a similar study utilizing Q sorts. However, Block (3), in a statistical re-analysis of the Wiener et al., study, showed there were important significant differences between these two concepts and suggested that the personal qualities involved in the concept of social desirability emphasized facade and denial which did not appear to relate to intrinsic psychological health. At least part of the confusion in this area is due to the lack of agreement on a definition of mental health (2, 24).

In answering the need of counselors and therapists for a diagnostic instrument which measures positive mental health, Shostrom (22, 23) has incorporated the latest views in this area in the Personal Orientation Inventory (POI). The POI purports to measure values which have been deemed to be of significance in the attainment of self-actualization. The self-actualizing person has been defined as one who is more fully functioning and lives a more enriched life than the average person (22). In the present investigation mental health is operationally defined as what the POI measures.

Is there a relation, then, between mental health and the socially desirable, culturally valued extravert? The answer may be found through sociometry. Bronfenbrenner has defined sociometry as "a method for discovering, describing, and evaluating social status, structure, and development through measuring the extent of acceptance or rejection between
individuals in groups (9, p. 4)." Using the basic principles advanced by Moreno (17), "the founder and promoter of sociometry in America (8, p. 62)," numerous studies (4, 6, 8, 11, 12, 16, 19, 20) have found that scoring high sociometrically is either not related to personality traits considered singly nor in combination or that those scoring high are not the best adjusted psychologically. Since it has been shown that those scoring high sociometrically are significantly more extraverted than a similar group scoring low (14, 21), it is unlikely that there is necessarily a relation between mental health and extraversion. Since this conclusion is contrary to the cultural value placed on sociability, some explanation should be offered. Northway (19) hypothesized that the effort made by the highly chosen to direct energy to the goals of the group cause them inner stress and result in psychological imbalances. Block offers a similar solution in suggesting that socially desirable behavior "may reflect solely a submission, at great personal cost, to convention and cliche (3, p. 530)."

A number of sociometric studies have also been done on individuals scoring low sociometrically (5, 12, 18, 20, 21) with the common finding of many characteristics which would preclude them from being considered optimally adjusted. Lack of spontaneity, lack of sensitivity to the environment, and a distorted interpretation of reality are examples of what is typically found.
In summary, studies have been cited which would seem to support an assumption that both the sociometrically high and sociometrically low are lacking in optimal psychological health. Is it then the middle, or average, group that evidences the greatest degree of mental health? This is the main question the present study has attempted to answer. Two previous studies (1, 21), both utilizing the Rorschach Inkblot Test and a sociometric measure, have found the middle group to have fewer inner tensions and emotional disturbances. The subjects for one of these studies (21) were recruited from the eighth grade and the subjects for the other (1) were college undergraduates. It is felt that additional research concerning the relationship of mental health to sociometric status is needed in view of the fact that Mill (16) concluded that the Rorschach variables were not sufficiently sensitive for group comparison. To overcome the subjective element inherently present in a projective technique, the POI, an objectively scored test, was selected for the purpose of the present study.

Since amount of verbalization is an important aspect of sociability, when, in the review of the literature regarding sociability and sociometry, a discrepancy was noted in relating amount of verbalization to sociometric status, it was decided to attempt to reconcile the divergent results. Four studies (5, 7, 10, 14) reported that subjects who scored high in sociometric status also had a higher proportion of
of verbalization than those of low sociometric status, while one study, Miel (15), found that individuals in the high group varied in amount of verbalization from very little to a great deal in group discussions. The most important difference between the conflicting studies seemed to be that while the oldest subjects in the former studies were only in the fourth grade, the subjects in the latter investigation were members of an advanced college class. Therefore, to determine if the greater age of the latter subjects affected the results of the Miel study, a graduate class at North Texas State University which had a large amount of group discussions was tested sociometrically and observed in regard to frequency of verbalizations during the spring semester of 1966.

Significance of the Study

It was previously stated that our American culture places a premium on sociability and all the qualities associated with the extravert (20). If it could be shown, as this thesis shall attempt to do, that this value is not necessarily associated with mental health, additional support would be furnished to a call for a decrease in the value of sociability and a corresponding emphasis on an enjoyment value in social relationships. We would, as Northway, Frankel, and Potashin state,

no longer attempt to make all children leaders, a goal few of them can reach, but would help each
child to gain that level of sociability which best satisfies his unique needs. That is, we would formulate our requirements on the basis of the individual's ability to meet them (20, p. 64).

**Hypotheses**

In consideration of the above discussion, the following hypotheses are advanced:

1. The average sociometric status group will have significantly higher mean scores on the POI than will the high sociometric status group.

2. There is a positive relation between individuals who score high sociometrically and those who have a high frequency of verbalization.
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CHAPTER II

RELATED RESEARCH

Not long after the appearance of Moreno's book, Who Shall Survive? (11), which is the primary source of sociometric theory, techniques, practice, results, and implications (3), researchers began to try to identify correlates of sociometric scores. Northway (12), in her review of the literature in this area, pointed out that attempts had been made to relate age, mental age, I. Q., academic skills, performance skills, socio-economic status, proximity of living, and ratings on personality tests to sociometric status. She reported that this was done either by correlating scores from the whole sociometric scale to outside characteristics or by comparing the individuals grouped into high, middle, and low sociometric scores on the outside characteristics. She concluded that in most situations "such characteristics do not correlate highly or even positively with sociometric status (12, p. 28)" but noted that an exception, where a positive relation was found, was in the use of personality questionnaire scores when the personality test used included social items.

Boney and Fassenden (2), after inspecting a large number of studies using various methods of personality measurement to relate personality characteristics to sociometric data, concluded:
(1) When total groups are studied, the relationships between these various methods ... and sociometric scores are not marked, but (2) when those who are high in choice-status (such as the upper fourth) are contrasted with those who are low, the findings are quite consistent in showing most frequently-chosen individuals to be reliably superior to the infrequently-chosen ones in some psychologically and/or socially approved types of behavior adjustments (2, p. 7).

A longitudinal study which helped formulate the above conclusion is that of Bonney (1). After an intensive study of five "popular" and five "unpopular" children over a five year period, he concluded that, as a group, the "popular" children were superior to the "unpopular" ones in all desirable traits. He pointed out, however, that it appeared to him that a person was not liked or disliked because of particular personality traits but because of the total impression his whole personality structure made on others.

Another study which reached a similar conclusion, and also one of the few investigations that has reported characteristics of the middle group in sociometric status, is that of Northway and Wigdor (13). The subjects, forty-five children from three eighth-grade classrooms all of whom were from homes of the middle socio-economic class, were administered the *Rorschach Inkblot Test* and the sociometric test recommended by the Canadian National Committee for Mental Hygiene. Bronfenbrenner's method (3) was used to divide the sociometric scores into high, middle, and low groups on the basis of their deviation from chance expectancy. Upon an
analysis of the Rorschach Test records, it was concluded that
(1) the high group was more conventional, more sensitive to
the feelings of the group, and had a more conscious striving
for the approval of others, (2) the low group seemed more
seriously disturbed than the high group, (3) the middle group
appeared to possess a greater degree of contentment and inner
ease so that both the high and low groups appeared to contain
more disturbed individuals, (4) the middle group was found to
be able to view situations in a realistic manner which led to
a degree of acceptance equal to their desires and expectations,
but they were also found to be more shallow and dull and less
introspective, and (5) there does not appear to be any set
pattern which enables one to achieve high social acceptance:
"social acceptance ... seems rather to depend on effective
use of a variety of personality factors (13, p. 195)."

Mill (10) had similar findings, though he neglected to
investigate the middle sociometric group, when he administered
the Minnesota Multiphasic Personality Inventory, the Thematic
Apperception Test, and the Rorschach Inkblot Test to socio-
metrically high and low students in a college men's dormitory.
His results indicated that neither the sociometrically high
group nor the low group were optimally adjusted, but that the
low group suffered greater anxiety. Also, the low group's
method of defense appeared to cause further rejection, and they
retaliated by expressing their hostility through devious
measures while the high group were reported to be more frank
and open in their behavior. The direct and understandable reactions in interpersonal relationships of the high group seemed to give others a sense of security, according to Mill. His tests did indicate, however, that some of the high group had achieved their status by having learned certain behavioral roles and that their adoption of these roles stemmed from a neurotic basis.

Jennings (7), in a comprehensive study utilizing over 400 individuals committed to the New York State Training School for Girls, applied sociometric techniques to divide her population into high, low, and average groups and made case studies of the girls appearing in these groups. In this manner she attempted to determine the personality characteristics related to sociometric status, and she did make a number of observations about them. However, she made no systematic attempt to relate personality and status on any level other than clinical; so the real significance of her investigation lies in the theory she advanced on the basis of her findings:

The "why" of leadership appears, however, not to reside in any personality trait considered singly, nor even in a constellation of related traits, but in the inter-personal contribution of which the individual becomes capable in a specific setting eliciting such contribution from him. Similarly, isolation appears as but the opposite extreme on this continuum of inter-personal sensitivity between the members of the group and the individual (7, p. 205).
Hilkevitch (5) claimed to confirm the above theory and added that it was implicit in the operational definition of personality that personality structure per se would bear no direct relationship to peer status. The criterion of social interaction in his study was reciprocal sociometric choice. He gave the Rorschach Inkblot Test and the Guess Who Test to fifty-five subjects in the eighth grade in his assessment of their personality structure.

The literature is not in complete agreement about the relationship of sociometric status to personality, however. Lemann and Solomon (9), using the members of three small dormitories at a girls' college, found evidence suggesting there was a relationship between the personality rating scale, devised by the investigators, on which traits ran from "good" to "bad" in terms of trait desirability, and sociometric status. It should also be noted, however, that they found the scores on a similar rating scale, on which traits ran from "bad" to "good", not related to status but to noticeability. That is, they found their second rating scale scores related to the extent to which subjects possessing these traits were noticed by the group.

The above study is not without support, for Hunt and Solomon (6) found several significant correlations between personality traits and group status. Their subjects, twenty-three boys of five to eight years attending Camp Indian Acres, in Maine, were given a sociometric test which was compared,
due to the age of the subjects, to ratings of counselors as the basis for the personality data in finding these correlations.

Brown (4) used a quite different population from any studies mentioned thus far. She found, in assessing sociometric choices of twenty-nine patients on a psychiatric ward, statistical support for her hypothesis that sociometric rank is inversely related to judged degree of illness of the patient. Thus, even in a therapeutic community the results of Lemann and Solomon and Hunt and Solomon, mentioned above, are reinforced.

Only one investigation has been published to date using Shostrom's (14, 15) Personal Orientation Inventory (POI), which was presented in 1963. Knapp (8) examined the relationship between the POI, a measure of self-actualization, and the Eysenck Personality Inventory, a measure of neuroticism-stability and extraversion-introversion. Mean scores on each of the POI scales were obtained for 136 undergraduate college students who had been divided into a high and a low neurotic group on the basis of the latter inventory. He found all mean differences between the two groups statistically significant. This would seem to lend credence to each of the inventories' ability to tap a common core of mental health.


CHAPTER III

METHOD

Materials

The sociometric test used, shown in the Appendix, was devised by K. E. Bonney of the Department of Psychology at North Texas State University for the purpose of the present investigation. It consists of two criteria designed to tap two quite different types of processes within a group. The first criterion pertains to uncovering sociogroup processes and the second to psyche-group processes. Jennings (6, p. 278; 7, p. 3) defines sociogroups as groups characterized by a sociometric structure based on a criterion which is collective in nature, such as working in a common work unit, and psyche-groups as groups having a structure based on a criterion which is strictly private in nature, such as associating in the time the individual has at his disposal. Both criteria were tested concomitantly in accordance with Jennings' finding (6) that if the population have the opportunity to choose for one criterion only, they will use the situation for expressing choices to secure whatever associations they desire regardless of the designation of the criterion.

Some sociometric tests include "negative" choices; that is, the subject is also asked to specify which members of the
group he would least like to associate with. However, it was decided not to include this criterion, in accordance with Northway's suggestion (13) based on her observation that it was an artificial question and that it caused resentment and comment in the group. It should not be assumed that there is universal agreement on this point, however, because Lemann and Solomon have stated that "a more accurate picture of group structure and individual social status should be obtainable if both choices and rejections are considered (9, p. 9)."

Ascertaining the validity of a sociometric test is quite different from most psychological tests because, as Jennings (6, 7) states, it is not an indirect measure of other behavior but is a sample of the actual behavior studied and so is valid just as any behavior is valid. Bonney and Hampleman (3) agree with this "face validity" point of view but add that they and other writers in the sociometric field feel that if they are measuring an important aspect of human behavior, it should also be possible to show a relationship between other methods of assessing personal-social adjustment and sociometric data. After reviewing numerous, relevant studies in the literature, they concluded: "sociometric tests, in addition to revealing directly the interpersonal aspirations of the members of a group, are also significant indicators of a wide range of personal assets, especially those essential to making contributions to successful group functioning (3, p. 72)."
In regard to the reliability of sociometric tests, Bronfenbrenner (4) has explained that due to changes in individual social or psychological adjustment and in group developmental trends, complete status constancy is not to be expected; however, in his study of the entire population of the laboratory elementary school at the University of Michigan, over 125 children from the nursery to the sixth grade level, he concluded that on the whole, children tend to retain their same general status and that this tendency increases with age. More explicitly, Newstetter, Feldstein, and Newcomb (12) reported an average reliability of .95 for choices of tent-mates in summer camps, and Zeleny (17) found reliability coefficients ranging from .93 to .95 testing a college population on successive days. Also, Jennings (6, 7), who used an eight-month retest interval which is much longer than the previous two investigations quoted above, found a reliability coefficient of .65 using over 400 girls in a state reformatory.

Bonney and Hampleman reviewed approximately twenty investigations dealing with the stability of choice-status and concluded that there was a substantial constancy of choice-status in school groups over a period of several months, as evidenced by correlation coefficients falling between .56 and .76 (3, p. 69).

The measure of self-actualization used was the POI, presented by Shostrom in 1963 (15, 16). It is an objectively
scored, self-administering inventory which consists of 150 paired opposite statements of values which yield measures for fourteen scales representing a consensus of value areas held to be of major significance in the development of self-actualization. The first four scales also yield two ratio scores, in keeping with the idea that mental health is not absolute, but relative. There is no time limit and the inventory may be completed in as little as twenty minutes.

To test the validity of the POI, Shostrom administered the inventory to two groups of "relatively self-actualized" and "relatively non-self-actualized" adults who were assigned to their respective groups by a group of clinical psychologists. The Inventory was shown to significantly discriminate between the two groups on eleven of the twelve scales measured.

The only study appearing in the literature which used the POI was by Knapp (8), cited previously, who examined its concurrent validity with the Eysenck Personality Inventory and concluded that they appeared to be tapping a common core of mental health.

The frequency of verbalization, recorded for only twelve of the subjects in a single class, was determined by a single observer-recorder, investigator, from a very simplified version of Bales' (1) interaction analysis. Whereas the unit scored in Bales' suggested analysis was "the smallest discriminable segment of verbal or non-verbal behavior" (1, p. 37), it was decided for the purpose of the present study
that the unit of interaction scored would be limited to verbal behavior during class discussions addressed to the group, or to an individual in the group if the person speaking had the attention of the majority of the class as determined by the observer-recorder (hereafter referred to as the observer). Credit for only one unit of interaction was given regardless of the length of verbalization as long as the speaker had the attention of the majority of the class. Thus if there was an interruption for a question, etc., from another member of the class who gained the necessary amount of attention, the interruptor would receive one unit and the original speaker would receive another score if he regained the attention of the class.

The rationale for the scoring system outlined above lies in the assumption that the individual who chooses to deliver an impromptu speech or finds it necessary to give long explanations during time allotted to class discussion is really only interacting once. Thus while Bales claims to score "the single item of thought (1, p. 37)" with his definition of the unit to be scored, cited above, the present study calims only to measure frequency of verbalization which is operationally defined as interaction.

Subjects

The subjects were drawn from three psychology classes taught by M. E. Bormey at North Texas State University during
the spring semester of 1966. The total population was composed of twenty-eight male and sixteen female students whose mean age was 26.7 years, with a range of nineteen to sixty-two years.

Procedure

A copy of the sociometric test (see Appendix), a list of the names of the members of the respective classes, and an answer slip from the Bonney-Fessenden Sociograph (2), which contains a row of numbers from one to forty, were distributed to each individual in the three classes by M. E. Bonney during the third week of May, 1966, after the classes had been meeting for approximately three months. In each class the subjects were told to number the names appearing on their class list and to follow the directions on the sociometric test. A few of the subjects were absent but were treated identically upon their return.

The subjects' choices were transferred from the specially-designed answer slips provided with the Bonney-Fessenden Sociograph to the Sociograph proper for each class. The Sociograph was constructed to simplify collection and interpretation of sociometric data, and represents an improvement over the traditional square graph, or matrix, and the graphic or pictorial form of sociograph (2), often called a "target diagram" (4).
It should be noted that the basis chosen in the present study for status indices was number of choices received by a particular subject rather than number of persons choosing that individual. This was due to Bronfenbrenner's finding (4) that although the two methods of scoring were highly correlated, above .90 in all groups compared, number of choices received had greater variability and thus was a more sensitive indicator of status. He explained this phenomenon with the observation that each subject tended to choose the same persons for more than one criterion.

It should also be noted that although a ranking order of choices was requested of the subjects, it was not used in the analysis of the data so that in scoring total choices, each choice was counted as one point regardless of order given. Northway, Frankel, and Potashin (14) attempted a weighting method but this procedure has serious shortcomings (4, 9).

Another alteration was made in the subjects' expressions of preference other than the one mentioned above. Although the sociometric test used permitted an unlimited number of choices by each subject so that he would not feel restricted, only the first five choices were recorded in the totals for those subjects who actually made more than five preferences. This decision was made on the basis of Gronlund's finding (5) that although the number of choices made available to a group was increased, the pattern of
distribution tended to remain the same. Also this decision greatly simplified the statistical analysis of the present study.

For convenience, the three classes were labeled class I, II, and III respectively. Class I, a senior level class, contained twenty-seven students, all of which were used in the collection of the sociometric choice data; however, only twelve, six males and six females, were utilized in the present research. These twelve were chosen to match the sex and approximate age of the subjects in class III for another aspect of the research not reported in the present paper. It was necessary to include all the students in class I in the collection of the sociometric data because, as Moreno and Jennings (11) indicate, the sociometric situation has many characteristics of the Gestalt in that different portions of the structure are interdependent with other portions; therefore, a change in the structural pattern of a group would alter the status of the individual.

Class II, a graduate level course, was also composed of twenty-seven students, nineteen males and eight females. Seven of these students, three males and four females, however, were also members of class III. All seven were, nonetheless, used as separate individuals in both classes II and III in the present research. The justification for this unusual treatment of subjects in an experiment was cited above from Moreno and Jennings, but Bronfenbrenner has restated this Gestalt
principle in terms directly applicable to the treatment of these seven subjects: "Each sociometric setting, then, may be regarded as representing a unique organizational entity. When one passes either by inference or experiment into a larger social group, the effect is not that of moving up the scale, but of passing from one frame of reference to another (4, p. 8)." Therefore, though the actual number of subjects used in the present study was forty-four, as stated above, the theoretical number of subjects used was fifty-one, since seven were counted twice.

Class III had only twelve members, six males and six females. It was a graduate level course, and unlike classes I and II, which were primarily lecture courses, it was devoted to group discussion. The members were allowed to discuss anything they wished, and, in keeping with the permissive, non-competitive atmosphere as an ideal situation for learning, uniform grades were assigned at the beginning of the semester. It was in this class that the observer, described above, recorded the interaction data. This class was chosen for this purpose due to the greater possibilities for each member to make verbal contributions in a discussion.

In order to compare the sociometric scores of the three classes, a constant frame of reference was needed which would isolate top and bottom status groups by establishing limits independent of the sociometric structure itself (for example, size of class) and by which that structure could be measured.
Bronfenbrenner's (4) concept of deviation from chance expectancy supplies this constant frame of reference and was utilized in the present study. According to Bronfenbrenner's method, each raw score on a sociometric test should be transformed into its probability of chance occurrence thus defining the score in terms of the probability of obtaining it if chance alone were operating under the given mathematical conditions. Bronfenbrenner constructed a table (4, p. 71) based on his method, however, which precludes the necessity of calculating the probability of chance occurrence for each individual's raw score. Therefore, in the present research this table, which gives critical scores which are at most at a probability level of .05, was consulted to divide the subjects into high, average, and low status groups.

Since Bronfenbrenner's method yielded quite small groups (the average membership in the high and low groups was only 7.67, with a range of two to thirteen), it was felt that a more meaningful statistical comparison would be obtained if the upper and lower quarters of each class were also considered as members of the high and low groups respectively. This was accomplished by ranking the subjects in each class according to the number of choices they received on the respective criteria and dividing them into quarters. In cases of tied scores, subjects were randomly assigned to the upper and lower status groups by placing the tied subjects' names on slips of paper and drawing the number
required to complete the group. Thus thirteen members each were obtained for the star and neglectee groups, and twenty-five for the average group on each criterion. This process was based on Northway's suggestion that the "method of ranking and division into quarters is probably all that is necessary for many practical investigators (13, p. 12)."

The procedures outlined above were followed in determining each subject's status in regard to the psychegroup and the sociogroup criteria and also in regard to a combination of his scores on the two criteria, accomplished by addition, giving him membership in a third group, called the "total group".

A copy of the POI and its special answer sheet were also given to each subject during the third week of May by M. E. Bonney. He instructed the subjects to read the directions on the test booklet, so that he could answer any questions they might have, and to complete the test before the next class meeting. Absentees were given similar instructions upon their return. All answer sheets were returned before June 1, 1966.

Means and standard deviations on each POI scale were obtained for each of the three status groups, as determined by both methods described above, within the psychegroup, the sociogroup, and the "total group". Analysis of variance was used and the F test was done to determine the level of significance of the differences between the groups. Those which
were found significant were then treated by the $t$ test to
determine which groups differed significantly (10).

In regard to the interaction data collected in class
III, the total number of times each subject spoke in the
class discussions during the semester was divided by the total
number of minutes each subject spent in these discussions;
this yielded a frequency of verbalization per minute in discus-

cussion. Since the observer recorded the actual time spent
by the class in group discussion at each meeting and noted
which subjects were absent, a subject was not penalized for
absences. The Pearson Product Moment Coefficient of Corre-
lation, $r$, was computed between this frequency of verbaliza-

tion and the number of choices received by each subject on
the psychegroup and on the sociogroup criterion.


CHAPTER IV

RESULTS AND DISCUSSION

Results

The sociometric status groups were formed by the deviation from chance and the division into quarters method. The difference between the means on each scale of the POI of the high, average, and low sociometric status groups were analyzed by analysis of variance and then treated by the t test to determine which groups differed significantly within the psychegroup, sociogroup, and the "total group" categories. Since this procedure resulted in analysis of 288 differences, it was decided for the sake of brevity to present only those differences which were found to be statistically significant. The level of significance adopted for the purpose of the present study was .05.

Significant differences for all three status groups were reported rather than just those concerning the first hypothesis of the present study. This was done for the use of future researchers in the area of sociometry and/or those who utilize the POI.

The results of the comparison of the different status groups determined by the deviation from chance method are presented in Tables I through III. Those determined by the
division into quarters method are presented in Tables IV through VI.

TABLE I

LEVEL OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE HIGH AND LOW SOCIOMETRIC STATUS GROUPS OF THE SOCIOGROUP CRITERION ON THE POI

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<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>I/O</td>
<td>8</td>
<td>4.60</td>
<td>2.11</td>
<td>8</td>
</tr>
<tr>
<td>I</td>
<td>8</td>
<td>102.38</td>
<td>11.35</td>
<td>8</td>
</tr>
<tr>
<td>SAV</td>
<td>8</td>
<td>22.63</td>
<td>2.91</td>
<td>8</td>
</tr>
</tbody>
</table>

It can be seen from Table I that the high status group scored significantly higher than the low group on the Support Ratio (I/O), Inner Directedness (I), and Self-Actualizing Value (SAV) scales of the POI.

TABLE II

LEVEL OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE AVERAGE AND LOW SOCIOMETRIC STATUS GROUPS OF SOCIOGROUP CRITERION ON THE POI

<table>
<thead>
<tr>
<th>Scales</th>
<th>Average</th>
<th>Low</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>I/O</td>
<td>35</td>
<td>4.37</td>
<td>1.82</td>
<td>8</td>
</tr>
<tr>
<td>0</td>
<td>35</td>
<td>26.57</td>
<td>10.20</td>
<td>8</td>
</tr>
<tr>
<td>I</td>
<td>35</td>
<td>99.97</td>
<td>10.77</td>
<td>8</td>
</tr>
<tr>
<td>SAV</td>
<td>35</td>
<td>22.23</td>
<td>2.88</td>
<td>8</td>
</tr>
<tr>
<td>Nc</td>
<td>35</td>
<td>13.37</td>
<td>1.71</td>
<td>8</td>
</tr>
</tbody>
</table>
Analysis of Table II reveals that the average group scored significantly higher than the low group on the Support Ratio (I/O), Inner Directedness (I), Self-Actualizing Value (SAV), and Nature of Man (Nc) scales, while the low group scored higher, on the average, than the high group on the Other Directedness (O) scale of the POI. The O scale is a negative scale, however, in the sense that the possession of this characteristic is detrimental to the attainment of self-actualization and is only meant as a comparison with the I scale.

**TABLE III**

LEVEL OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE AVERAGE AND LOW SOCIOMETRIC STATUS GROUPS OF THE TOTAL GROUP CATEGORY ON THE POI

<table>
<thead>
<tr>
<th>Scales</th>
<th>Average</th>
<th></th>
<th></th>
<th></th>
<th>Low</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>t</td>
</tr>
<tr>
<td>SAV</td>
<td>31</td>
<td>22.16</td>
<td>3.23</td>
<td></td>
<td>13</td>
<td>20.23</td>
<td>2.08</td>
<td>1.98</td>
</tr>
</tbody>
</table>

In Table III, it is shown that the average group scored higher on the Self-Actualizing Value (SAV) scale of the POI than the low group, at a level of confidence of .05.
TABLE IV

LEVEL OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE AVERAGE AND HIGH SOCIOMETRIC STATUS GROUPS OF THE PSYCHEGROUP CRITERION ON THE POI

<table>
<thead>
<tr>
<th>Scale</th>
<th>Average</th>
<th></th>
<th>High</th>
<th></th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
</tr>
<tr>
<td>C</td>
<td>25</td>
<td>22.08</td>
<td>2.70</td>
<td>13</td>
<td>19.38</td>
<td>4.23</td>
</tr>
</tbody>
</table>

It can be seen from Table IV that the difference between the means of the average group and the high group is significant at the .02 level of confidence, with the average group scoring significantly higher on the Capacity for Intimate Contact (C) scale of the POI. Even though the results of the C scale are as predicted by the first hypothesis, the fact that the other fifteen measures of the POI are omitted from Table IV means that they did not reach the required level of significance, and this latter finding is contrary to the prediction of hypothesis one.
TABLE V

LEVEL OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN
THE AVERAGE AND LOW SOCIOMETRIC STATUS GROUPS
OF THE PSYCHEGROUP CRITERION ON THE POI

<table>
<thead>
<tr>
<th>Scale</th>
<th>Average</th>
<th>Low</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>Nc</td>
<td>25</td>
<td>13.96</td>
<td>1.22</td>
<td>13</td>
</tr>
</tbody>
</table>

An inspection of Table V reveals that the average group scored significantly higher on the Nature of Man (Nc) scale of the POI than the low group.

TABLE VI

LEVEL OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN
THE HIGH AND AVERAGE SOCIOMETRIC STATUS GROUPS
OF THE TOTAL GROUP CATEGORY ON THE POI

<table>
<thead>
<tr>
<th>Scale</th>
<th>High</th>
<th>Average</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>A</td>
<td>13</td>
<td>19.46</td>
<td>1.99</td>
<td>25</td>
</tr>
</tbody>
</table>

It can be seen from Table VI that the high group scored significantly higher on the Acceptance of Aggression (A) scale of the POI than the average group; this is directly contrary to the first hypothesis. Again, the fact that
the other scales are omitted from this table means that they did not reach significance; this was contradictory to the prediction of the first hypothesis.

In summary, the finding was that there were no significant differences between the high and average sociometric status groups when the groups were formed by the deviation from chance method in any of the three categories. Also, analysis of Tables IV and VI revealed that when status groups were determined by the division into quarters method, one of the sixteen measures of the POI was significant in the hypothesized direction, and one was significant in a direction opposite to that hypothesized. Therefore, the first null hypothesis was accepted.

In regard to the interaction data, the Pearson Product Moment Coefficient of Correlation, r, was computed between the frequency of verbalizations and the number of choices received by each subject in class III on the psychosocial and sociocultural criteria. Correlations of .30 and .41 were found, respectively. These correlations were tested for significance by the t test, which resulted in a t of .99 for the r of .30 and 1.43 for the r of .41. However, t’s of this size with ten degrees of freedom were not significant at the .05 level. Therefore, the second null hypothesis was accepted.
Discussion

The fact that the first hypothesis was rejected may indicate that either there was no difference between the level of self-actualization of the high and average sociometric status groups in the population tested, or that the POI is not sufficiently sensitive to discriminate between them. If the former explanation were true, it would suggest that there is no relationship between self-actualization and the likelihood of being chosen on either psychegroup or sociogroup criteria. If the latter explanation were true, additional research would be needed to perfect the scales of the POI.

Evidence to support both acceptance and rejection of hypothesis one can be found in previous studies in the field of sociometry. The rejection of hypothesis one was contrary to what would be expected from several studies reviewed in Chapter I and II. Northway and Wigdor's (7) finding that the middle sociometric status group was less disturbed than either the high or low groups was most directly contradicted. They employed the Rorschach Inkblot Test in reaching their conclusion, however, which would suggest that there is a need for future investigators to determine the relationship between the Rorschach and the POI.

The views of several investigations were supported by the rejection of the first hypothesis. Hilkevitch (3), for
example, found no relation between peer status and personality structure with his eighth grade subjects. Also Jennings (4) concluded that status was not related to personality but to the interpersonal contribution of the individual to the group.

The following recommendations are made to future investigators:

1. A larger population should be tested sociometrically so that the upper status group would be of sufficient size for meaningful comparisons.

2. More studies should be made of the middle sociometric group to determine the characteristics of its members since the majority of people are found in this group. Relatively few attempts have been made in the past to clarify the meaning of membership in this group.

3. Additional validation of the POI on larger groups is needed.

4. The normative group of the POI needs to be expanded from college freshmen to a representative sample of the general population.

5. The scales of the POI need to be subjected to factor analysis to determine if they are measuring different aspects of the self-actualizing person.

Although the second hypothesis concerning the relation of frequency of verbalization and sociometric status was rejected, the correlations were in the hypothesized direction.
However, the attempt to reconcile Miel's (6) finding, cited in Chapter I, with those of other investigators (1, 2, 5) failed. Therefore, the results of the present study were also considered in disagreement with the hypothesis that there is a significant positive relation between those who score high sociometrically and those who have a high frequency of verbalizations.

Future investigations in this area should use larger groups and a more refined method of interaction analysis. Also, more than one observer would be desirable to permit a check on the reliability of the data.
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CHAPTER V

SUMMARY

Sociability is one of the most valued traits in our American culture and is, naturally, reflected in the socialization of the young. If this value were sound, then those who score high on sociometric tests should evidence a greater degree of mental health than those scoring below them. However, the results of a number of investigations have cast doubt on an assumption that either the sociometrically high or the sociometrically low are optimally adjusted. The purpose of the present study, then, was to attempt to determine if it were the average, or middle, group which evidenced the greatest degree of mental health.

The present investigation also attempted to reconcile the divergent results found regarding the relation of amount of verbalization, an important aspect of sociability, to sociometric status.

The sociometric test used, consisting of both psyche-group and sociogroup criteria, was devised by M. E. Bonney, of the Department of Psychology at North Texas State University. The measure of mental health selected was The Personal Orientation Inventory (POI).
The frequency of verbalizations, obtained for only a small number of the subjects during the entire spring semester of 1966, was recorded by the investigator, using a simplified version of Bales' interaction analysis.

The following hypotheses were advanced: (1) the average sociometric status group will have significantly higher mean scores on the POI than will the high sociometric status group, and (2) there is a positive relation between individuals who score high sociometrically and those who have a high frequency of verbalizations.

The subjects, twenty-eight male and sixteen female students, with a mean age of 26.7 years ranging from nineteen to sixty-two years, were obtained from three advanced classes at North Texas State University.

The number of choices received by a particular individual was selected as the basis for status indices in regard to the psychogroup and the sociogroup criteria and also in regard to a combination of the two criteria, accomplished by addition, called the "total group".

Means and standard deviations on each of the POI scales were obtained for each of the three status groups within the three categories described above. Analysis of variance was used and the F test was run to determine the level of significance of the differences in the groups. Those which were found significant were then treated by the t test to determine which groups differed significantly.
No significant differences were found between the high and average groups when the deviation from chance method was used to form the status groups. When the division into quarters method was used, one scale of the POI was significant in the hypothesized direction and one was significant in a direction opposite to that hypothesized. Therefore, the first hypothesis was rejected. It was concluded that the level of self-actualization of the two groups in the population tested or that the POI was not sufficiently sensitive to discriminate between them. Recommendations for future researchers were offered.

In regard to the interaction data collected in one of the three classes, Pearson's r was computed between the frequency of verbalizations and the number of choices received by each subject in that class on the psychegroup and on the sociogroup criterion and correlations of .30 and .41 were found respectively. When subjected to a t test with ten degrees of freedom, these correlations were not found to be significant. Therefore, the second hypothesis was rejected. It was pointed out, however, that the results were in the hypothesized direction and suggestions for improvement of the method employed were offered.
APPENDIX

SOCIOMETRIC TEST DEVISED BY M. E. BONNEY

1. If some kind of sub-groupings within this class were to be formed, which other students in this class would you choose to be with you in one of these groupings when the purpose would be to carry on some kind of class project or report?

Indicate your choices by putting a 1, 2, 3, 4, or 5 beneath the numbers on your slip which correspond to the names of persons on your class list whom you wish to choose. However, you need not choose 5 and you may choose more than this number if you want to. Please put your choices in order of preference with the number 1 being your first level choice.

2. If you had your choice of others in this class with whom to associate in informal social activities such as conversation, coffee drinking, or trips to a show, which others would you choose? Indicate your preferences by putting numbers 1, 2, 3, 4, or 5 above the numbers on your slip which correspond to the names on your class roll. You may choose less than 5 or more than 5. These choices may be the same or different than those made for a class project. Put choices in order of preference as described above.
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