AN EXAMINATION OF INTERNAL VS. EXTERNAL CONTROL
IN RELATION TO SOCIOMETRIC STATUS

APPROVED:

Jack R. Hayden
Major Professor

Ray Johnson
Minor Professor

James Kangas
Dean of the School of Education

Robert B. Turnbrow
Dean of the Graduate School
AN EXAMINATION OF INTERNAL VS. EXTERNAL CONTROL
IN RELATION TO SOCIOMETRIC STATUS

THESIS

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillments of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Warren F. Marks, B. S.
Denton, Texas
May, 1969
TABLE OF CONTENTS

LIST OF TABLES ........................................ iv

Chapter

I. INTRODUCTION AND BASIC HYPOTHESIS .......... 1
   Theoretical Background
   Hypotheses

II. METHOD .......................................... 14
   Subjects
   Materials
   Procedure
   Statistical Treatment

III. RESULTS ........................................... 21
    Presentation of Data
    Discussion of Data

IV. SUMMARY AND CONCLUSIONS ....................... 29

APPENDIX ............................................. 33

BIBLIOGRAPHY ....................................... 41
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Means and Standard Deviations of I-E Scores for Samples of Several Populations.</td>
<td>16</td>
</tr>
<tr>
<td>II. Means, Standard Deviations, t Value, and Level of Significance for the Upper and Lower Status Groups of Grade Ten on the Psychotele Criterion</td>
<td>22</td>
</tr>
<tr>
<td>III. Means, Standard Deviations, t Value, and Level of Significance for the Upper and Lower Status Groups of Grade Eleven on the Psychotele Criterion</td>
<td>23</td>
</tr>
<tr>
<td>IV. Means, Standard Deviations, t Value, and Level of Significance for the Upper and Lower Status Groups of Grade Ten on the Sociotele Criterion</td>
<td>24</td>
</tr>
<tr>
<td>V. Means, Standard Deviations, t Value, and Level of Significance for the Upper and Lower Status Groups of Grade Eleven on the Sociotele Criterion</td>
<td>24</td>
</tr>
<tr>
<td>VI. Means, Standard Deviations, t Value, and Level of Significance for the Males and Females in Grade Ten</td>
<td>25</td>
</tr>
<tr>
<td>VII. Means, Standard Deviations, t Value, and Level of Significance for the Males and Females in Grade Eleven</td>
<td>26</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION AND BASIC HYPOTHESES

Theoretical Background

The use of sociometric measurements has been shown to be very beneficial in the studying of group behavior and group processes. Through sociometry, an individual's social status within a group can be determined by examining the degree of interpersonal relationships which exist for that individual within the group. The importance of being accepted by others is of primary concern in the attainment of good personal and social adjustment. Isolated and rejected individuals frequently need to be placed in more favorable positions for developing social relationships. When groups are organized for this purpose, improved social adjustment usually occurs.

Although a sociometric test measures the extent to which individuals are accepted by the other group members and reveals the internal social structure of the group, it does not indicate why some individuals are highly chosen and others are isolated, nor does it indicate the reason the particular social structure evolved rather than some other (8). There have been many investigations over the years which have sought to determine the factors involved in elevating some individuals into high status positions while other individuals become isolates and group rejects.
Bonney (4) studied differences in high and low sociometric status of second-grade children and reported that children with high sociometric status were characterized by certain strong social assets much more than they were characterized by the absence of socially disapproval behavior. A study conducted by Jennings (9) in the New York Training School for Girls showed that high choice girls were frequently characterized as being very cooperative, as volunteering to do more than their own share of work, as being willing to accept minor roles and aiding in the development of other girls.

Jennings says:

Individuals who are isolated from choice by other members show in the trends of their behavior tendencies to conduct themselves in ways which imply a marked lack of orientation on their part to the elements of the total group situation; frequently they not only fail to contribute constructively to the group but hinder by their behavior the activities undertaken by other members. Individuals who are over-chosen by the impression of choice from other members who, in the trends of their behavior, tendencies to conduct themselves in ways which imply an unusual sensitivity and orientation on their part to the elements of the total group situation (9, p. 164).

In another study conducted by Bonney (2), which examined the personality traits of socially successful and socially unsuccessful children, it was concluded that a child's acceptance within a group is contingent more upon what he is and what he does which may win the admiration of others than because of what he refrains from doing. It was felt that strong positive personality traits are more important than negative virtues.
An investigation by Kuhlen (10) examined the social acceptability scores and judgements as to personality characteristics of seven hundred sixth, ninth and twelfth graders. These two factors were compared to determine trends in adolescence in (a) social acceptability, (b) various personality characteristics, and (c) the relationship between social acceptability and the various personality traits studied. It was found that most personality characteristics studied showed substantial relationships with social acceptability. Those most acceptable were judged more frequently to be popular, cheerful, happy, enthusiastic, friendly, to enjoy jokes and to initiate games and activities.

These studies indicate that there are definite personality characteristics that distinguish the high choice from the low choice groups. There is no single characteristic or trait but rather a complex interaction of traits that are found in the high choice groups as opposed to the low choice groups.

Bonney says:

Although it is no doubt true that liking and disliking people is not due to primarily particular traits, but is due to the impression which are total personality makes upon another total personality, it is still necessary to study traits in order to discover which kinds are most important for certain purposes (2, p. 471). This constellation of traits then makes up the personality of an individual and a combination of positive traits (traits that are positive for a particular group) are found more in high choice than low choice individuals. The traits are highly
organized and each is both an integral product and producer of

the other.

Science dictates that the reason certain positive traits
are more prevalent in some individuals than in others is due
to the genetic and environmental factors affecting each indi-
vidual. Looking at the environmental realm of these factors,
social learning theory lends itself to some interesting ob-
servations.

Most learning theories, theories of personality and social
science theories in general which are concerned with the problem
of change include a concept of reinforcement (17). Rotter
states that reinforcement is something that changes behavior
in some observable way by either increasing or decreasing the
possibility of its occurrence. According to Rotter, an event
which increases the possibility of a response is by definition
positive reinforcement; should it decrease the possibility, it
is by definition negative reinforcement (16). A discrepancy
arises when this definition is compared with Skinner's inter-
pretation of reinforcement. Skinner maintains that any stimulus
is a reinforcer if it increases the probability of a response;
this applies to both positive and negative reinforcement. Rotter
feels that reinforcement is an important factor in determining
a person's behavior pattern and based on the nature of reinforce-
ment, he speaks of a construct which he labels internal vs. ex-
ternal control of reinforcement (16).
This concept is illustrated in an example given by Rotter (17). If an individual in psychotherapy tries out some new behavior and finds out it is successful (i.e., that it works in producing some end goal such as being accepted by another person), the potential for the new behavior to occur again would be increased. This would probably happen unless the person interpreted the events that occurred to him as characteristic of the other person rather than himself. That is, not only can situations vary in the degree to which people perceive that their own behavior rather than the behavior of others is the determiner of reinforcement, but individuals themselves can vary in the degree to which the same event in the same situation is perceived as a factor of their own characteristics vs. the characteristics of others. To include the idea of our characteristics vs. characteristics of others, and our own potential to control the environment vs. influence to others, Rotter has adopted the general term internal vs. external control of reinforcement. As a general principle, internal control refers to the perception of positive or negative events as being a consequence of one's own actions and thereby under personal control; external control refers to the perception of positive or negative events as being unrelated to one's own behavior in certain situations and therefore beyond personal control (11, p. 207).

To lend support to the construct validity of the internal-external control variable as a generalized personality dimension,
Battle and Rotter examined eighty Negro and white children (1). I-E scores (internal-external) were determined by using a test developed by Rotter to measure internal vs. external control of reinforcement. A high I-E score indicated a person with high external control and a low I-E score represented a person with high internal control. The interaction of social class and ethnic group was highly related to internal-external control attitudes. Lower-class Negroes were significantly more external than middle-class Negroes of whites. Middle-class children, in general, were significantly more internal than lower-class children.

Sex was not a determiner of I-E scores in the study. Higher childrens' I-E scores were significantly associated with lower mean expectancies for success but not significantly associated with unusual shifts or trends.

Franklin (6), reported that getting lower (more internal) I-E scores related positively with being in a higher grade, a better student, from a higher socioeconomic group, ambitious and more sure about vocational plans, more religious and having a mother with more education. In another study conducted by Phares (13) it was found that low scores (internals) are better able to exert influence than externals. Phares felt that internals, having the generalized expectancy that they are in control of their own behavior-reinforcement sequences, should then be more effective agents in the induction of change than individuals not having such an expectancy.
Linton (12) tested the hypotheses that people have a generalized tendency to accept or reject external influence by establishing perceptual and conformity situations. Correlational patterns suggested that several variable determine conforming behavior rather than a simple "trait of suggestibility." Accepting external influence in the perceptual situation reflects central tendencies of the person that may or may not emerge in a specific test of conformity, while behavior in any one conformity situation is subject to greater fluctuation as a result of more peripheral factors.

Gore and Rotter (7) investigated the internal-external control variable at a southern Negro college which was very much involved in a social protest movement directed against segregation. It was found that Negro students who were willing to take part in protest activities had a higher belief in internal control than students not willing to do so.

Rotter feels that there are implications regarding some broad characteristics of people who place high or low on a dimension of belief in internal vs. external control of reinforcement. He suggests that it can be thought of as a continuum and hypothesizes that individuals with a high belief in external control of reinforcement might be relatively passive in any attempts to change the world. Such individuals might not try to better their position or condition or to increase the frequency and kind of reinforcements they normally receive. Towards the middle of the continuum would be found individuals who believe
that they can't change the world much, but by greater understand-
ing of it, increase their own satisfaction. Such people
would show characteristics of strong efforts to adjust to
present conditions and to maximize their understanding of the
"order of things" or the nature of other people. People with
a greater belief in internal control would include those who
believe in their own potential to change the environment and
the world around them (17).

An interesting illustration of how the internal-external
control variable may influence a person's behavior is given by
Crandall et al. (5). Personal beliefs in external-internal
control were felt to be important determiners of the reinforc-
ing effects of many experiences. It was suggested that if an
individual was convinced that he had little control over the
rewards and punishments he receives, then he had little reason
to modify his behavior in an attempt to alter the probability
that those events would occur. Rewards and punishments then
would have lost much of their reinforcing value, since they
would not be as effective in strengthening or weakening the
individual's response.

These studies have shown that internal-external control of
reinforcement seems to be an important variable in understand-
ing an individual's behavior. Possibly it may even contribute
significantly to the differences in behavior of individuals of
high sociometric status when compared to those of low socio-
metric status.
For example, the positive personality traits needed for acceptance in a particular group may be related to internal-external control. A person who expresses these positive traits may have learned them by being rewarded with good interpersonal relationships each time a particular trait was expressed. An individual who perceives such an event as being contingent upon his own behavior would probably increase his expression of the particular trait. An individual who perceives the event as being characteristic of the other person rather than himself might not develop these positive traits and consequently might not be in a favorable status position as the individual who exercised internal control.

Rotter feels that the differences arising in such a situation are the result of an individual's history of reinforcement. "It seems likely that, depending upon the individual's history or reinforcement, individuals would differ in the degree to which they attribute reinforcements to their own actions" (15, p. 2).

When comparing research done on internal-external control of reinforcement with research related to sociometric status, it seems that many of the personality variables attributed to high sociometric status might possibly be a function of high internal control.
Hypothesis

In consideration of the above discussion, the following hypothesis is advanced:

Those subjects who rank in the upper one-fourth of their peer group in sociometric status will be found to have higher internal control than those subjects who rank in the lower one-fourth of the peer group.
CHAPTER BIBLIOGRAPHY


CHAPTER II

METHOD

Subjects

The subjects obtained for this study were from the tenth and eleventh grades of a small Central Texas high school. There were twenty-two boys and twenty girls in the tenth grade. The eleventh grade consisted of seventeen boys and twenty-seven girls. Completed data was obtained on all subjects in both grades.

Materials

Measure of Internal-External Control

The scale which was developed by Rotter (shown in Appendix A) to measure the variable of internal-external control is entitled, Generalized Expectancies for Internal versus External Control of Reinforcement (6). The scale is a twenty-nine item, forced-choice test including six filler items intended to make the purpose of the test somewhat more ambiguous. The scale assesses the degree to which a person attributes the events that happen to him as being within or beyond his personal control and understanding. The I-E score is the total number of external choices out of a possible twenty-three.

Rotter (6) reports that test-retest reliability is satisfactory with figures reported in a range from .49 to .83. The
scale correlates satisfactorily with other methods of assessing the same variable such as questionnaire, Likert scale, interview assessment and ratings from a story completion technique. Discriminant validity is indicated by the low relationships with such variables as intelligence, political liberalness and differences between male and females. The means and standard deviations for several populations are shown in Table I.

Measure of Sociometric Status

The sociometric measurement used (shown in Appendix B) was devised from findings introduced by Jennings (4). Jennings reports that a population tends to form two distinguishable groups: (a) sociogroups, where sociometric structure is based on a criterion which is collected in nature, such as working in a common work unit, and (b) psychogroups where sociometric structure is based on criteria which is entirely personal, such as associating in leisurely activities. Jennings labels the sociogroup criteria as sociotele and psychogroup criteria as psychetele. Therefore, in accordance with the two states hypotheses, the sociometric test for this study consisted of two criteria, one of a sociotele nature and the other of a psychetele nature.

Some sociometric tests include a criterion that asks an individual to specify which members of the group he would least like to associate with. Northway (5) feels that such a criterion which is intended to bring out negative choices is artificial and only arouses resentment and comment in the group. For this
reason, such criteria was not included in the sociometric test used for this study.

The traditional definition of validity is the extent to which a test measures what it is supposed to measure. When this definition is applied to sociometric testing, difficulties arise as to what a sociometric test is supposed to measure. In an attempt to broaden the concept of validity of a sociometric test a great many psychological and sociological variables have been related to sociometric results. This broadened concept of validity implies that the sociometric test should measure such meaningful variables of psychological and sociological interest. Which variables should be related to sociometric results, however, have not been clearly determined (3).

Gronlund (3) reported that detailed analysis of research findings in sociometry indicate that sociometric results are more closely related to measures of social adjustment than they are to measures of personal adjustment. He states: "measures of personal adjustment show little relationship to sociometric results until the more sensitive method of comparing extreme sociometric status groups is used. When this is done, the pupils with high sociometric status are generally noted to have better patterns of adjustment than those with low sociometric status" (3, p. 183). This personal adjustment might well contribute to an individual's generalized expectancies for internal versus external control. If personal adjustment does have an influence on an individual's expectancies of internal
versus external control, the influence might be accounted for by comparing the two extreme sociometric status groups.

Procedure

A copy of Rotter's I-E scale was distributed in each grade with the instructions: "Please read the directions given on the test and answer the questions accordingly." Upon completion of the I-E scale, a copy of the sociometric test was distributed with the following instructions: "Please state your preferences on the question listed on your paper. All preferences will be confidential."

Statistical Treatment

Treatment of the sociometric data involved the establishment of a sociometric distribution in each grade based on the number of choices each individual received. To prevent any feelings of restriction, the test was structured to permit an unlimited number of choices. However, only the first five choices were recorded in the totals for those subjects who actually made more than five choices. This is based on findings by Gronlund (3) which imply that although the number of choices made available to a group is increased, the pattern of distribution tended to remain the same.

Each grade was divided into quarters with the first quarter forming the high-status group and the fourth quarter forming the low-status group. The upper and lower quarters of the tenth
grade consisted of ten members each. The upper and lower quarters of the eleventh grade consisted of eleven members each.

As a result of tied scores, the upper and lower status groups were larger than the required number. The required number was obtained, however, by placing the tied subjects' names on slips of paper and drawing the number to complete the group (1).

The I-E scale was scored according to the total number of external choices out of a possible twenty-three selected. Therefore, internals would have a lower score than externals. Each individual's I-E score together with his sociometric rank was then examined. I-E scores obtained from individuals in the upper fourth of the sociometric distribution were compared with the I-E scores of the individuals in the lower fourth of the distribution by means of a t test used in determining the significance of the difference between independent groups (2).

Although Rotter's findings indicate there is no significant difference between male and female I-E scores (see Table I), a t test was used to compare the boys' I-E scores with the girls' I-E scores for each group. Once again the t test for the significance of the difference between independent groups was used.
CHAPTER BIBLIOGRAPHY


5. Northway, Mary L., A Primer of Sociometry, Toronto, Canada, University of Toronto Press, 1952.

CHAPTER III

RESULTS

Presentation of Data

The results obtained from the procedure described in Chapter II were statistically examined as described. Tables containing the $t$ ratios are presented within the body of the discussion. For purposes of identification the subjects in the tenth and eleventh grades were assigned numbers. Numbers for students in the low and high status groups in each grade together with this corresponding I-E scores are found in the Appendix.

Psychotele and Internal versus External Control

The psychotele criterion was first examined in testing the hypothesis that those subjects who rank in the upper one-fourth of their peer group in sociometric status would be found to have higher internal control than those subjects who rank in the lower, one-fourth of the peer group.
TABLE II

MEANS, STANDARD DEVIATIONS, \( t \) VALUE, AND LEVEL OF SIGNIFICANCE FOR THE UPPER AND LOWER STATUS GROUPS OF GRADE TEN ON THE PSYCHETELE CRITERION

<table>
<thead>
<tr>
<th>Sociometric Status</th>
<th>N</th>
<th>Means</th>
<th>Standard Deviation</th>
<th>( t  )</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Quarter</td>
<td>10</td>
<td>7.80</td>
<td>3.38</td>
<td>2.2068</td>
<td>.05</td>
</tr>
<tr>
<td>Lower Quarter</td>
<td>10</td>
<td>11.00</td>
<td>2.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results from Table II indicate a significant difference between I-E scores at the .05 level. Grade ten seems to support the hypothesis.

Table III contains the \( t \) ratio of the difference between the mean I-E scores for the high and low sociometric groups of grade eleven.
TABLE III
MEANS, STANDARD DEVIATIONS, $t$ VALUE, AND LEVEL OF SIGNIFICANCE FOR THE UPPER AND LOWER STATUS GROUPS OF GRADE ELEVEN ON THE PSYCHETELE CRITERION

<table>
<thead>
<tr>
<th>Sociometric Status</th>
<th>N</th>
<th>Means</th>
<th>Standard Deviation</th>
<th>$t$</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Quarter</td>
<td>11</td>
<td>9.6</td>
<td>2.52</td>
<td>.3164</td>
<td>N.S.</td>
</tr>
<tr>
<td>Lower Quarter</td>
<td>11</td>
<td>10.6</td>
<td>4.21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The $t$ ratio obtained was not significant in grade eleven. Results from grade ten appear to confirm the hypothesis while the results from grade eleven fail to do so.

Sociotele and Internal versus External Control

The hypothesis was then tested with the sociometric results based upon the sociotele criterion. Table IV contains the $t$ ratio of the difference between the means of the I-E scores obtained from the high and low sociometric groups of grade ten.
TABLE IV
MEANS, STANDARD DEVIATIONS, t VALUE, AND LEVEL OF SIGNIFICANCE FOR THE UPPER AND LOWER STATUS GROUPS OF GRADE TEN ON THE SOCIOTELE CRITERION

<table>
<thead>
<tr>
<th>Sociometric Status</th>
<th>N</th>
<th>Means</th>
<th>Standard Deviation</th>
<th>t</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Quarter</td>
<td>10</td>
<td>8.30</td>
<td>3.72</td>
<td>1.920</td>
<td>N.S.</td>
</tr>
<tr>
<td>Lower Quarter</td>
<td>10</td>
<td>11.20</td>
<td>2.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results from Table IV indicate a t ratio which approaches significance at the .05 level. Although there is a trend towards significance, the results do not support the hypothesis.

Table V contains the t ratio of the mean I-E scores for the high and low sociometric groups of grade eleven.

TABLE V
MEANS, STANDARD DEVIATIONS, t VALUE, AND LEVEL OF SIGNIFICANCE FOR THE UPPER AND LOWER STATUS GROUPS OF GRADE ELEVEN ON THE SOCIOTELE CRITERION

<table>
<thead>
<tr>
<th>Sociometric Status</th>
<th>N</th>
<th>Means</th>
<th>Standard Deviation</th>
<th>t</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Quarter</td>
<td>11</td>
<td>9.90</td>
<td>3.28</td>
<td>0.3597</td>
<td>N.S.</td>
</tr>
<tr>
<td>Lower Quarter</td>
<td>11</td>
<td>10.60</td>
<td>2.93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results from Table V do not indicate a significant difference between the means of the low and high sociometric groups. There was no trend toward significance as found in Table IV. Therefore, grade eleven does not support the hypothesis.

**Sex and Internal versus External Control**

A *t* ratio was also computed to determine the significance of difference between the mean I-E scores of males and females in each grade. Table VI contains the *t* ratio of the mean I-E scores for all males and females in the tenth grade.

**TABLE VI**

MEANS, STANDARD DEVIATIONS, *t* VALUE, AND LEVEL OF SIGNIFICANCE FOR THE MALES AND FEMALES IN GRADE TEN

<table>
<thead>
<tr>
<th>Subjects</th>
<th><em>N</em></th>
<th>Means</th>
<th>Standard Deviations</th>
<th><em>t</em></th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>22</td>
<td>9.67</td>
<td>3.01</td>
<td>.7384</td>
<td>N.S.</td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>8.95</td>
<td>3.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results from Table VI indicate that there is no significant difference in I-E scores for male and female subjects in grade ten. These findings agree with the findings of Rotter (see Table I).

The same type of analysis was done for grade eleven. Table VII presents the results.
TABLE VII
MEANS, STANDARD DEVIATIONS, t VALUE, AND LEVEL OF SIGNIFICANCE FOR THE MALES AND FEMALES IN GRADE ELEVEN

<table>
<thead>
<tr>
<th>Subjects</th>
<th>N</th>
<th>Means</th>
<th>Standard Deviations</th>
<th>t</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>17</td>
<td>7.81</td>
<td>3.56</td>
<td>2.7273</td>
<td>.01</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>10.70</td>
<td>4.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results from Table VII indicate a very significant difference in the means between the boys and girls with significance reaching the .01 level of confidence. These results do not coincide with the findings by Rotter (see Table I).

Discussion of Data
The results presented in the foregoing section are somewhat inconclusive. The tenth and eleventh grades were used to test the hypotheses. The results from grade ten supports the first hypothesis and indicates a trend towards significance in the second hypothesis. The results from grade eleven, on the other hand, fail to confirm either hypothesis. The inconsistency of the results between the two grades may possibly be explained by the significant difference found between the I-E means of the males and females in the eleventh grade. The significance was at the .01 level and might possibly contribute to the
non-significant results of the high and low status groups of that grade.

One of the basic assumptions of the I-E scale was that there were no significant differences between the I-E scores of males and females. This was supported in findings by Rotter (see Table I) and made the scale applicable to a group situation where both males and females were found. Since grade eleven did not conform to this assumption, results could easily have been influenced in testing the hypothesis. This fact stresses the uniqueness of each group structure and indicates the difficulty that arises in generalizing the existence of certain personality variables as being related to all groups.

In judging the meaning of high or low acceptance by peers it is important to consider the standards and values the peers are applying. Peer standards may be structured in such a way as to place emphasis on the value of competition between one another. A person who has gained high acceptance with his peers may have done so by being highly competitive but adopting an external view as a defense against failure. Such a person would still maintain striving behavior in clearly structured competitive situations but defensively account for failures by expressed external attitudes.

Rotter's studies on interna-external control were based chiefly upon data obtained from college students. Therefore, age of the students in this study might be a factor influencing the results. Rotter feels that as a person grows older, his
generalized expectancies may become slightly more internal. Students in high school, therefore, might show higher external beliefs than the students in Rotter's studies.

Looking only at grade ten it might be assumed that internal-external control is a factor in differentiating the high-choice students from the low-choice students. This suggests that an individual's generalized expectancies for internal-external control may contribute to how he interprets his experiences in interpersonal relationships. If such expectancies do exist and can be differentiated from low and high status sociometric groups, valuable insight into the factors which determine sociometric status may be gained. Based on the results of one group, however, the above statement cannot be considered conclusive. Further investigations along the lines of the present study needs to be conducted to establish any definite relationship between generalized expectancies of internal versus external control and sociometric status.
CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the relation between generalized expectancies of internal versus external control and sociometric status. The following hypothesis was tested:

Those subjects who rank in the upper one-fourth of their peer group in sociometric status will be found to have higher internal control than those subjects who rank in the lower one-fourth of the peer group.

The members of the tenth and eleventh grade classes of a small Central Texas high school were used as subjects. The two grades were tested separately and the data was treated separately.

To assess the variable of internal versus external control a scale developed by Rotter (2) was used. The name of the scale is "Generalized Expectancies for Internal versus External Control of Reinforcement." The scale is a twenty-nine item forced choice test with six filler items intended to make the purpose of the test somewhat more ambiguous. Scores were determined by the number of external choices selected out of a possible twenty-three.
Sociometric assessment was based on criteria investigated by Jennings (1). The two criteria were intended to reveal two different types of group structure, one of a psychetele nature and the other of a sociotele nature.

In order to test between the high and low ends of the two sociometric distributions, the subjects were divided into four groups on the basis of choice status. A t test was used to test the significance of the difference between the means of the high and low groups with reference to I-E scores. This was done for both of the sociometric criterion in each of the grades. A t ratio test was also used to test the significance of the difference between the means of the males and females with reference to I-E scores. This was done for both grades.

The results of the study were inconclusive. Although the hypothesis was not confirmed by both grades, the tenth grade did confirm the hypothesis when the sociometric group was based on the psychetele criterion and showed a trend toward significance when the sociometric group was based on the sociotele criterion. No data for grade eleven yielded an acceptable level of significance.

The conflicting nature of the results was based on the significant difference found between the mean I-E scores of the male and female subjects in the eleventh grade. No such difference was found between the male and female mean I-E scores in the tenth grade. Other factors influencing the results
may have been the age of the subjects and the standards and values each group applies for peer acceptance.

The fact that results from the tenth grade confirmed the hypothesis on the psychosocial criterion and showed a trend toward significance on the sociometric criterion lends support for further investigation along the lines of this study. Several different groups from different environments need to be studied to establish any positive relationship between internal-external control and sociometric status. If such a positive relationship does exist, a new insight into group structure and interpersonal relationships might be gained.
CHAPTER BIBLIOGRAPHY


APPENDIX A

The I-E Scale

(The underlined letters are the EXTERNAL choices)

1.a. (filler) Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy on them.

2.a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3.a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4.a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognised no matter how hard he tries.

5.a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6.a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7.a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8.a. (filler) Heredity plays the major role in determining what they are like.
   b. It is one's experiences in life which determine what they are like.

9.a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10.a. In the case of the well prepared student there is rarely, if ever, such a thing as an unfair test.
b. Many times exams' questions tend to be so unrelated to course work that studying is really useless.

11.a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.

12.a. The average citizen can have an influence in government decisions.
b. This world is run by the few in power, and there is not much the little guy can do about it.

13.a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14.a. (filler) There are certain people who are just no good.
b. There is some good in everybody.

15.a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might just as well decide what to do by flipping a coin.

16.a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17.a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b. By taking an active part in political and social affairs the people can control world events.

18.a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck."

19.a. (filler) One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.

20.a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends upon how nice a person you are.
21. a. In the long run the bad things that happen to us are balanced by the good ones.
   b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
   b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
   b. There is a direct connection between how hard I study and the grades I get.

24. a. (filler) A good leader expects people to decide for themselves what they should do.
   b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
   b. It is impossible for me to believe that chance or luck plays important role in my life.

26. a. People are lonely because they don't try to be friendly.
   b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. (filler) There is too much emphasis on athletics in high school.
   b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
   b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
   b. In the long run the people are responsible for bad government on a national as well as a local level.
APPENDIX B

Directions:

Please state your preferences on the following questions:

1. List one or more of your classmates whom you would enjoy working with on a class assignment.

2. List one or more of your classmates whom you would enjoy being with at some recreational activity.
### APPENDIX C

**PSYCHOMETRIC CRITERION**

**GRADE TEN**

<table>
<thead>
<tr>
<th>Student of Upper Quarter</th>
<th>Student Choices</th>
<th>I-E Score</th>
<th>Students of Lower Quarter</th>
<th>Student Choices</th>
<th>I-E Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>9</td>
<td>11</td>
<td>42</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>8</td>
<td>8</td>
<td>37</td>
<td>0</td>
<td>.8</td>
</tr>
<tr>
<td>30</td>
<td>7</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>29</td>
<td>6</td>
<td>4</td>
<td>41</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>11</td>
<td>5</td>
<td>10</td>
<td>31</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>22</td>
<td>5</td>
<td>15</td>
<td>10</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>19</td>
<td>4</td>
<td>10</td>
<td>20</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>5</td>
<td>18</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>5</td>
<td>14</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>25</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Students of Upper Quarter</td>
<td>Students of Lower Quarter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Student</strong></td>
<td><strong>Choices Received</strong></td>
<td><strong>I-E Score</strong></td>
<td><strong>Student</strong></td>
<td><strong>Choices Received</strong></td>
<td><strong>I-E Score</strong></td>
</tr>
<tr>
<td>13</td>
<td>12</td>
<td>13</td>
<td>22</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>7</td>
<td>7</td>
<td>10</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>34</td>
<td>7</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>38</td>
<td>7</td>
<td>8</td>
<td>43</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>8</td>
<td>36</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>40</td>
<td>6</td>
<td>7</td>
<td>28</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>37</td>
<td>5</td>
<td>8</td>
<td>24</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>41</td>
<td>5</td>
<td>7</td>
<td>21</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>42</td>
<td>5</td>
<td>11</td>
<td>17</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>44</td>
<td>5</td>
<td>5</td>
<td>32</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>
## SOCIOTELE CRITERION
### GRADE TEN

<table>
<thead>
<tr>
<th>Students of Upper Quarter</th>
<th>Students of Lower Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Choices Received</td>
<td>Student Choices Received</td>
</tr>
<tr>
<td>I-E Score</td>
<td>I-E Score</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>22</td>
<td>42</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>30</td>
<td>37</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>32</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>27</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>
## SOCIOTELE CRITERION

### GRADE ELEVEN

<table>
<thead>
<tr>
<th>Student</th>
<th>Choices Received</th>
<th>I-E Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>14</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>32</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>29</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>34</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>41</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>13</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>39</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student</th>
<th>Choices Received</th>
<th>I-E Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>36</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>36</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>13</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

Books


Northway, Mary L., A Primer of Sociometry, Toronto, Canada, University of Toronto Press, 1952.


Monographs


Rotter, J. B., "Generalized Expectancies for Internal versus External Control of Reinforcement," Psychological Monographs, 80, No. 1, Whole No. 609.

Articles


Unpublished Material
