CORRELATES OF A TEST OF GROUP SENSITIVITY

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Ronald Leon Johnson

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CORRELATES OF A TEST OF GROUP SENSITIVITY

By

Ronald Leon Johnson

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1963

Approved _____

THE

ABSTRACT

CORRELATES OF A TEST OF GROUP SENSITIVITY

by Ronald Leon Johnson

The purpose of the present sutdy had three aspects: (1) The development of a generalized test of group sensitivity that would eliminate the rating scale problem of level and spread, and reduce the influence of the respondent's group memberships, so that his score would indicate the general level of his group sensitivity. (2) The deriving of specific hypotheses to be tested. (3) The exploration of a wide range of additional variables in order to generate additional testable hypotheses regarding group sensitivity.

The criterion for the generalized group sensitivity scale was drawn from the Strong Vacational Interest Blank. Four sub-scales were used: Men-Women, Young-Old, Executive-Unskilled, and Psychologists-Non-Psychologists. The corrected reliability for the total scale was .63.

Seventy-two other measures were correlated with the sub-scales, using an N of 110 males and 20 females in industrial Psychology course number 255. Analysis of the resulting correlation coefficients suggested that the male judges

accurate in group sensitivity were high in leadership attitudes, linguistically talented, able to profit from experience, a liberal, non-conformist, and a good observer of the people around him. They were not self-confident or socially bold. The small size of the female sample and the lack of significant correlations enabled only a very limited understanding of their correlates. The accurate female judge in group sensitivity was ambitious and perceptually inflexible.

A refined personality scale, designed to measure group sensitivity correlates, was developed with the hope that in the future the correlates can be measured in one short session. The subjects would not need to know for what they were being tested. The refined personality scale remains to be verified in future studies.

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TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

The ability to understand individuals has long been acknowledged as an essential attribute of the good clinician, the successful leader, and people in human relation occupations in general. Recent work indicates that the accuracy of predictions about individuals is heavily dependent upon the accuracy of predictions about the social groups to which the individuals belong. The ability to understand groups has been called stereotype accuracy, understanding of the generalized other, and group sensitivity. The purpose of the present study was to develop an estimate of general group sensitivity, to test specific hypotheses about differences in group sensitivity based on previous research, and to explore a broad field of sociological and psychological variables for other determinants and consequences of this ability.

HISTORY

Group sensitivity, as used in this study is the ability to predict accurately the typical attitudes, interests, and behaviors of a specific group. Defined in this manner, it is essentially the same as stereotype accuracy as defined by Cronbach (1955): "a judge's ability to predict the norm for others", and as defined by Bronfenbrenner et al. (1958): "an awareness of the social norm or the typical response of a large class or group". The present study considers the development of group sensitivity in determining judgments of others, the methods that have been used in its measurement, problems of its measurement, and specific hypotheses about the nature of group sensitivity as gathered from previous research.

Development of Group Sensitivity and the Judgment of Others

Dymond (1948, 1949, 1950) and Kerr (1951) were among the leaders who modernized the concept to judge people. They each had a different view of this ability, in that their tests measured different aspects of the same problem. Dymond was measuring a form of individual sensitivity, while

Kerr was measuring group sensitivity. In comparing and cross validating the findings of Dymond and Kerr, other investigators have found conflicting results.

Bronfenbrenner et al. (1958) and Cronbach (1955), in attempting to clarify the contradictory results, differentiated the factors of group understanding from individual understanding. Bronfenbrenner reported a correlation of .05 between accuracy in judging the group norm and accuracy in judging the individual. Cronbach divided the ability to judge people into four components: elevation, differential elevation, stereotype accuracy, and differential accuracy. Elevation is the average of the judge's predictions over all items and all subjects, thus reflecting the use of the response scale. Differential elevation reflects how closely the judge's average prediction for a subject corresponds to that subject's central tendency of response. It reports the judge's ability to access deviations of the individual's elevation from average. Stereotype accuracy is the ability of the judge to predict differences between subjects on any item and is averaged over items. Differential accuracy reflects the judge's ability to predict differences between individuals.

Cline and Richards (1960) checked Cronbach's components; and, since the correlations between the tests used in their study did not approach the limits set by the reliabilities of the various instruments, they concluded that the ability to judge people was factorially complex. The stereotype accuracy component accounted for a large portion of this ability.

Zavala (1960) and Silkiner (1962) have measured still another component of group sensitivity--differential group sensitivity. It is defined as the ability to differentiate between likes and dislikes of particular groups, e.g. the likes of psychologists as compared to those of non-psychologists.

Meehl (1954), in ascertaining the value of group sensitivity, reviewed twenty studies comparing the accuracy of predictions based on the actuarial method of group sensitivity and the accuracy of predictions based on the judgments of clinicians. In all but one case the actuarial method was equal to or superior to those judgments made individually.

Measurements of the Ability to Judge Others

There have been many attempts to measure the ability to judge others. One of the major methods has been through the development of tests claiming to measure individual sensitivity, when actually they were measuring group sensitivity.

Individual Measurements:

Dymond (1948, 1949) developed a test designed to measure individual sensitivity. Her judges filled out a rating scale for themselves and also predicted the rating responses of six to seven classmates on a series of personality traits, using a five point scale. An accuracy score was computed for each judge using the sum of the absolute differences between his predictions and the actual responses of his classmates. A low score was made by the accurate judge, while a poor judge obtained a high score. Bronfenbrenner et al. (1958) criticized Dymond's test with the following passage: "Over-all accuracy was determined primarily by the judge's ability to predict the modal pattern of response for the group rather than by his sensitivity to individual differences". In short, Dymond, while measuring individual sensitivity, was also measuring group sensitivity.

Cline and Richards (1960) have approached the problem of the ability to judge people by using filmed interviews composed of six subjects--three men and three women. Five tests have been developed: (1) the behavioral post-diction test, where the judge is required to describe how the interviewee behaves in everyday life, (2) the personality word card, which presents a list of adjectives, and the judge chooses which ones the subject checks as describing himself, (3) a multiple-choice sentence completion test, where the judge attempts to predict the sentence completion responses of each interviewee, (4) a trait rating scale, where the judge rates the interviewees on twenty-five personality traits, using a Likert scale of five categories, and (5) an opinion prediction scale of twenty MMPI items for each interviewee, where the judge checks whether the interviewee answers each true or false. In reviewing the results of their study, Cline and Richards concluded that group sensitivity accounted for a large portion of the ability to judge others. Like Dymond, they had started to measure individual sensitivity, but found that, at the same time, they were measuring group sensitivity.

Group Measurement:

Many tests such as the Empathy Test developed by Kerr (1951) were designed from the beginning to measure group sensitivity. The test was composed of three parts. Part one consisted of various types of music such as polka and classical; the judge was required to rank these types in order of their popularity among non-office, factory workers in the United States. Part two contained fifteen of what was then current, well-known magazines; they were also ranked in order of popularity for the forementioned group. In part three, the judge ranked a group of common annoying experiences from the most to the least annoying.

Travers (1941) used another approach in the development of tests to measure group sensitivity. Two-hundred post graduate teachers enrolled at a teachers' college were asked to express the percentage of their group that agreed with thirty-three popular social issues of that time. The most accurate judges would be the ones who were closest to assessing the correct group percentage that agreed with the items. Accuracy was a deviation score, a low score indicated the good judge. Travers also tested another group of fifty six undergraduates for whom he had additional measures such as I. Q. and personality. He correlated these measures

with the ability to judge accurately. Bronfenbrenner et al. (1958) using Cornell students and Hites and Cambell (1950), using Ohio State fraternity members, have also employed this method of estimation of group percentage with apparent success.

Silkiner (1962) and Zavala (1960), along with the present study, have measured group sensitivity using the Strong Vocational Interest Blank as criterion for the correct responses. Zavala employed four scales of group sensitivity: College Man, Knowledge of Women, Men-Women, and Young-old. Silkiner also used the Men-Women, Young-Old, and Knowledge of Women scale, along with two new ones he developed: Executive-Unskilled and Psychologists-Men in General.

Problems in Measurement

There are at least four problems in the measurement of group sensitivity: reliability, generality, group membership, and level and spread.

Reliability:

The reliabilities of the scales are of great importance, as without it, the generalizations made from the results are weak. In table 1, on the next page, is the listing of reliabilities obtained by previous investigators on the concept of group sensitivity.

TABLE 1

THE RELIABILITIES OBTAINED BY PAST INVESTIGATORS ON GROUP SENSITIVITY

Investigator	Scale	Reliability	
Bronfenbrenner (1958)	Total Accuracy Score	.85*	
Zavala (1960)	College Man	.51#	.60**
Zavala	Knowledge of Women	.16#	.44**
Zavala	Men-Women	.42#	.46**
Zavala	Young-Old	.58#	.37**
Zavala	Total Score	.30#	.56**
Silkiner (1962)	Executive-Unskilled	.69*	
Silkiner	Knowledge of Women	.44*	
Silkiner	Men-Women	.46*	
Silkiner	Young-Old	.37*	
Silkiner	Psychologists-Men in General	.56*	
Silkiner	Total Score	.73*	

*Corrected odd-even reliability

**Test-retest reliability

#Kuder-Richardson reliability

The total score reliabilities with the exception of the one obtained by Zavala using the Kuder-Richardson formula are very presentable. Silkiner (1962) obtained a corrected

odd-even total score reliability of .88 for foreign students at Michigan State University. This reliability coefficient is comparable to that obtained by Bronfenbrenner.

Generality:

Generality is the problem of whether the accurate judge on one scale of group sensitivity is accurate on another scale of group sensitivity. Research in this area has produced conflicting results. Zavala (1960) reported that group sensitivity is highly specific, whereas, Travers (1941) concluded that group sensitivity is general.

Group Membership:

The problem of group membership has been present to perplex the investigators of group sensitivity from the beginning of their interest in studying the accurate judgment of people. For example, professional workers would be able to predict the group norms for their own kind more readily than blue collar workers, just by projecting their own likes. The reverse would be true if the likes of blue collar workers were being predicted. Bender and Hastorf (1953) using Dymond's test have shown that projection affects the accuracy score. Thus there is the necessity of using some device to control for projection, such as, refined empathy in

which the projection score is subtracted from the total accuracy score. The use of differential group sensitivity batteries is another possible solution in that the judge must be able to separate two or more stereotypes from each other. Thus, in the latter case, projection is curbed.

Level and Spread:

Bronfenbrenner et al. (1958) has defined "level" as the mean value of responses a subject uses in rating group characteristics, and "spread" as the variance of the judges ratings. Judges approach rating scales with individual habits in its use. These rating habits may be different from those of the majority of the people whose behavior the judges are predicting. If that is the case, the judge would receive an inaccurate score, not on the basis of his knowledge of other groups, but on the basis of his rating scale habits.

Variables Related to Group Sensitivity

A review of the literature has established some of the variables related to group sensitivity. The following are specific hypotheses based on previous researches concerning the accurate judge of group sensitivity.

1. The higher a subject's group sensitivity, the more effective are his leadership attitudes.

There have been many investigations of the relationship between the ability to judge people and leadership position. Van Zelst (1953) administered the Kerr Empathy Test to members of the five A. F. of L. Building Trade Unions in Chicago. They were then ranked as to the success at their present leadership level and probable success at a higher level. Five more criteria were also employed: (1) the number of total votes the leaders received in the last election, (2) the score on the Remmers How to Supervise Scale (measures supervisory knowledge and insight), (3) the recruitment of new members, (4) the ability to settle grievances and disputes, and (5) the enforcement of rules and regulations. The union leaders' scores on the Empathy Test correlated .67, .38, .55, .60, .64, and .44 with each of the criterion respectively. A multiple correlation coefficient of .76 was obtained. All these coefficients are significant at the .01 level.

Foa (1958), also in an industrial setting, obtained similar results using 490 Israeli factory workers, and 51 Israeli foremen, in that the foremen obtained the better empathy scores. While these findings are typical of studies

involving the investigation of the leadership variable, a few studies such as the one by Hites and Campbell (1950) with fraternity members as subjects have shown no difference in group sensitivity between leaders and non-leaders.

It was the purpose of the present study to extend the relationship of group sensitivity and leadership to include favorable leadership attitudes using the measures developed by Dore (1960). He constructed a forced-choice scale battery for four leadership attitudes: (1) Employee-orientation--the degree to which the leader takes a personal interest in the work and considers the worker as an individual and not merely as an instrument to get out production. (2) Delegation of authority--the degree to which the leader sets up general conditions for the workers, and lets them decide how the details of the work will be handled. (3) Differential role--the degree to which the leader performs the same functions as the workers. (4) Creates teamwork--the degree to which the leader takes pride in his group and creates a spirit of teamwork. Differential role has been grouped under the heading of initiation of structure, while the remaining three attitudes of leadership were grouped under the heading of consideration. The final form of the

test battery contained 120 items, 30 for each of the four scales.

2. The higher the judge's intelligence, the greater his group sensitivity.

Dymond (1950), using her test of individual sensitivity which was actually measuring group sensitivity, investigated the relationship of high scores on the Wechsler Bellevue Adult Intelligence test and scores on her test. She found that the mean I. Q. for the high group on the ability to judge people was 132.1, while for the low group it was 126.4. There was a large difference on their verbal performance scores, with the mean score for the high group being 130.5 and for the low group 116.5. It seems very reasonable that the more intelligent judges would be more accurate in their judgments.

3. The more experience a judge has with a group, the higher his group sensitivity.

The subject must be old enough to have had time to learn the stereotypes. Dymond (1952) said that older children were more accurate in their stereotypes than the younger children. In adults, the age factor had no bearing Taft, (1955). Silkiner, (1962) compared the mean accuracy of

stereotypes of foreign college students and native American college students; in all cases, the American college student was significantly more accurate in his judgments.

4. The more open-minded the judge, the higher his group sensitivity.

Cline (1955), using his films which measured both individual and group sensitivity, correlated the California Public Opinion scales of facism and ethnocentrism with the ability to judge people. The facism scale correlated -.46 and the ethnocentric scale -.32 leading to the conclusion that the absence of ethnocentric and authoritarian, attitudes are important characteristics of the good judge of people. The open-minded judge would be ready to change his stereotypes when he discovered that they were not correct, while the closed minded judge would not change his beliefs so readily. Silkiner (1962) found disagreement with the above train of thought in that the personality variable of conformity correlated positively with the ability to judge people.

5. The less ambitious the judge, the higher his group sensitivity.

Silkiner (1962) found a significant negative correlation of ambition with the ability to judge people. The

implication of the relationship was that the unambitious judge of people learns stereotypes so that they would have to be in a new setting each time they met a new individual.

6. The more socially timid the judge, the higher his group sensitivity.

Silkiner (1962) found insignificant and negative correlations for the high subjects in group sensitivity and the personality traits of self-confidence, and practically a zero correlation of .02 for emotional control. Bronfenbrenner et al. (1958) obtained different results with a positive relationship for self-confidence, social extrovert, and lack of inhibition for the accurate judge of people.

PROBLEM

The problem undertaken by the present study had three aspects. The first aspect was the development of a generalized test of group sensitivity that would eliminate the rating scale problem of level and spread, and reduce the influence of the respondent's group memberships, so that the scores would indicate the general level of his group sensitivity. The second aspect was the deriving of the following hypotheses to be tested:

1. The higher a subject's group sensitivity, the more effective his leadership attitudes.
2. The higher the judge's intelligence, the greater his group sensitivity.
3. The more experience a judge has with a group, the higher his group sensitivity.
4. The more open-minded the judge, the higher his group sensitivity.
5. The less ambitious the judge, the higher his group sensitivity.
6. The more socially timid the judge, the higher his group sensitivity.

The third aspect was the exploration of a wide range of additional variables in order to generate additional testable hypotheses regarding group sensitivity.

METHOD

It is hoped that some pertinent answers in the overall investigation of the ability to judge people will have been found at the conclusion of the present study. The scales used to measure group sensitivity are discussed first, followed by the subjects, procedure, norms and reliabilities of the scales, the personality and non-personality measures available, along with their reliabilities, and then the method of analysis.

Measurement of Group Sensitivity:

Four scales were used to measure the concept of group sensitivity: Men-Women, Young-Old, Executive-Unskilled, and Psychologists-Men in General. The total score of each subject on these scales were added to form the Total Group Sensitivity Score. The Men-Women and Young-Old scales first appeared in Zavala's 1960 thesis and later in Silkiner's 1962 thesis along with the Executive-Unskilled and the Psychologists-Men in General scales. Silkiner simplified the Young-Old scale to it's present form by reducing the choices from three to two by omitting the 25 year old category used by Zavala. The instructions for each scale were

to choose which of the two groups measured were more favorably inclined toward the items, i.e. for scale one, men or women, for scale two, 15 year old males or 55 year old males, etc. The correct answers to the above test items were listed by Strong as having the highest preference.

Subjects:

Two groups of subjects were used, both of whom were students at Michigan State University enrolled in the fall and winter quarters in Industrial Psychology course number 255. The fall quarter was used for the refinement of the four subscales, and there was an N of 110 students of both sex. The refined form was given to 110 males and 20 females in the winter quarter.

Procedure:

The four scales of group sensitivity were each expanded to sixty items and administered to the fall class. The high and low twenty-five scorers were selected and their answer sheets item analyzed for discrimability using a method described by Lawshe (1948). The Men-Women scale was reduced to thirty items as was the Young-Old scale. The Executive-Unskilled and the Psychologist-Men in General scales were each reduced to forty-five items. A total possible group

sensitivity score was one-hundred-and-fifty. In using only those items which gave the greatest discrimination between the high and low judges in group sensitivity, a test battery was developed which was a measure of general group sensitivity. In table 2 the intercorrelations from the four scales and the total score are given for the males, females, and males and females combined.

The four scales were constructed with the hope of minimizing the effects of level and spread upon the accuracy score in group sensitivity. Table 3 contains the correlation of the measures with the total scores of group sensitivity for men, women, and men and women combined. From the lack of significant correlation coefficients it appears that the goal of separation was achieved.

Personality scales developed by Hershey (1958) in his M.A. thesis were administered to the winter group. The highest and lowest twenty-five scorers on the refined generalized sensitivity scales were selected, and their answer sheets for the personality inventory item-analized. Only the males were used, while in the item analysis for refinement of the generalized sensitivity scales, both sexes were used. The difference scores for the high and the low groups were converted into correlations, with the

TABLE 2

INTERCORRELATIONS OF THE GROUP SENSITIVITY SCALES (DECIMAL PT. OMITTED)

Scale	Men-Women			Young-Old			Ex.-Uns.			Psy.-Non-Psy.		
	M N=110	W N=20	T N=130	M N=110	W N=20	T N=130	M N=110	W N=20	T N=130	M N=110	W N=20	T N=130
Men-Women	--	--	--									
Young-Old	19*	19	20*	--	--	--						
Ex.-Uns.	11	08	10	26**	22	24	--	--	--			
Psy.-Men in Gen.	13	49**	16	23*	39	22*	34**	15	30**	--	--	--
Tot. Grp. Sen. Sc.	46**	60**	47**	60**	53*	62**	65**	52*	62**	78**	86**	79**

*Significant at the .05 level

**Significant at the .01 level

TABLE 3

THE CORRELATIONS OF TOTAL GROUP SENSITIVITY SCORE WITH MEASURES OF LEVEL AND SPREAD

Measure	Men-N-110	Women-N-20	Men and Women-N-130
Level	.06	-.09	.04
Spread	-.02	.32	.04

coefficients significant to the level of .10 retained. In this way, it is hoped that the personality traits of group sensitivity can be measured by the use of a short, refined personality scale. The original and refined group sensitivity scales can be found in Appendix A, and the refined personality scale in Appendix C.

Scale Norms:

For future reference, the test norms of the four group sensitivity scales and of the Total Group Sensitivity Score are presented in table 4.

TABLE 4

GROUP SENSITIVITY SCALES NORMS BASED ON
130 MICHIGAN STATE UNIVERSITY STUDENTS

Scale	Percentile									
	10	20	30	40	50	60	70	80	90	100
Men-Women	17	19	19.5	20	21	21.5	22	23	24	28
Young-Old	18	19	20	21	22	23	23.5	24	25	28
Executive-Unskilled	32	33	34	35	35.5	36	37	38	39	42
Psych.-Men in Gen.	24	26	28	30	31	33	35	36	37	40
Tot. Grp. Sensitivity Sc.	97	100	103	107	108	111	114	117	119	126

Reliabilities of the Generalized Sensitivity Scales:

The reliabilities of the scales were computed by the odd-even correlation procedure, and they were corrected by the Spearman-Brown formula for a scale twice as long as the one used. The corrected reliabilities are found in table 5.

TABLE 5

CORRECTED RELIABILITIES OF THE SCALES
FOR GROUP SENSITIVITY (N=130)

Scale	r
Men-Women	.31
Young-Old	.29
Executive-Unskilled	-.01
Psychologists-Men in General	.70
Tot. Grp. Sensitivity Score	.63

Personality Measures:

Twenty-eight personality measures developed by Hershey (1958) under the guide of H. C. Smith, professor of psychology at Michigan State University, were used. This scale is called the Smith Inventory. A partial use of these measures have been employed by Hershey, Mullin (1962), and Silkiner (1962), but for the present study, the complete scale was used. Each of the scales consisted of 30 true-false items, except the Breadth of Interest scale which had 60 items. Hershey explained the development of these scales, so only a brief description of each item will be given.

1. Activity
   Inactive-Active
   A measure of a subjects activity level.

2.	Sexuality Low-High	The degree of interest shown in members of the opposite sex.
3.	Expressiveness Inhibited-Expressive	The degree of freedom the individual exhibits in expressing emotion.
4.	Self-Confidence Low-High	The self-evaluation of own's worth, adequacy, and competence.
5.	Dominance Submissive-Dominant	Measures the degree of dominance through items related to dominant feelings, behavior and leadership.
6.	Total Boldness	The sum of the scores from variables 1-5.
7.	Calm Uncalm-Calm	Emotionality score obtained by subtracting thirty (number of questions in the scale). A high score indicates the subject is calm, while a low score indicates the subject is excitable.
8.	Optimism Optimism-Pessimism	The outlook of the subject to situations.
9.	Emotional Control Uncontrolled-Controlled	Reaction to emotional emergencies and to frustration.
10.	Total Stability	The sum of the scores from variables 7-9.
11.	Religious Skepticism Low-High	The degree to which the subject accepts religious teaching obtained by subtracting 30 from the scale as in variable #7.
12.	Liberalism Conservative-Liberal	The degree of liberalism and conservatism shown in relation to a number of issues.

13.	Non-Conformity Conforming-Non-Conforming	The degree to which the subject conforms to norms obtained by subtracting 30 from the scale as in variables #7 and 11.
14.	Total liberalism	The total of the scores from variables 11-13.
15.	Introversion Extroversion-Introversion	Thinking scales with a low score showing introversion and a high score showing extroversion. It is obtained by subtracting as in variables #7, 11 and 13.
16.	Breadth of Interest Narrow-Broad	A measure of an individual's self extension by determining the number of interests.
17.	Sensory Awareness Unaware-Aware	The degree to which a subject is aware of his environment through his sense organs.
18.	Artistic Values Low-High	The measurement of interests in forms, harmony, beauty, and aesthetic activities.
19.	Total Awareness	The sum of the scores from the variables 15-18.
20.	Ambition Unambitious-Ambitious	A measure of the subjects desire to do things as rapidly and as well as possible, his efforts to complete difficult things, and the amount he enjoys competition.
21.	Organization Unorganized-Organized	Measures some aspects of Cattell's "Positive vs. Immature Dependent Character", e.g. Consistently ordered vs. Relaxed; Conscientious vs. Undependable, etc.

22.	Total Ambition	The sum of variables 20-21.
23.	Economic Values Low-High	The measurement of the subject's interest in what is useful, and his preoccupation with affairs of the business world.
24.	Gregariousness Unsociable-Sociable	A measure of the need for affiliation.
25.	Total Thing-People	The sum of variables 23-24.
26.	Suppression	The measure of the willingness of a subject to give unfavorable self-criticism.
27.	Scientific Values Low-High	The degree of interest in scientific endeavors and the scientific method.
28.	Warmth Cold-Warm	The degree to which an individual likes, accepts, approves, feels close to and wants to help others.

The corrected reliabilities for these personality measures are found in table 6. They were computed by the odd-even correlation procedure, and corrected by the Spearman Brown formula for a scale twice as long as the one used.

TABLE 6

CORRECTED RELIABILITIES OF THE PERSONALITY INVENTORY ITEMS N=130

Personality Scale	r
Activity	.77
Sexuality	.80
Expressiveness	.86
Self-Confidence	.87
Dominance	.87
Calm	.90
Optimism	.81
Emotional Control	.87
Religious Skepticism	.90
Liberalism	.75
Non-Conformity	.77
Sensory Awareness	.63
Introversion	.80
Breadth of Interest	.82
Artistic Values	.92
Ambition	.77
Organization	.91
Economic Values	.81
Gregariousness	.87
Suppression	.75
Scientific Values	.86
Warmth	.71

Educational and Experience Measures:

Class = A classification of the level of education obtained by the subject: Freshman, Sophomore, Junior, or Senior in college.

Curriculum = A classification on a five point scale of all majors in the winter sample based on the amount of scientific training, with one being the least and five the most scientific.

Number of Psychology Credits = A classification of the number of credits earned in psychology classes. The more credits the more psychology classes the subject has taken.

Grade Point Average = The mean average grade obtained by the subject on all his college courses with the grade A worth four points down to the grade D worth one point.

American College Entrance Examination = Three scores were available: the quantitative scale, the linguistic scale, and the total of the linguistic and quantitative scales.

Socio-Economic Status = The amount of education of the parents.

Final Grade = The course grade for Industrial Psychology class 255.

Measures of Observational Accuracy:

Bruni (1963) using the Cline film, has developed two tests of observational accuracy; one scale has as it's basis the personal appearance of the interviewee, while the other scale used the recorded donversation between the interviewee and interviewer. The two scales were farther divided on the basis of sex, since there were three women and three men interviewed in the film. Each of the four sub-scales contained 60 matching items.

Measures of Inferential Accuracy:

Grossman (1963), also using the Cline film, developed two scales on differential accuracy, one for the second person, and one for the third person. Like Bruni, he also made the sex division, thus obtaining four sub-scales with 60 items for each part.

Measures of Empathy:

Mullin (1962) has defined empathy as the tendency to make statements about another person's internal psychological status such as their thoughts and desires. Three measures of empathy were available for this study: Psychological, Physical, and Social.

Other Measures:

There were nine other measures which were available for the study of the 130 winter term Industrial Psychology students, and these are described below.

Perceptual Flexibility = Four measures used to determine the perceptual flexibility of the subjects: (1) Embedded Figures, (2) Spacial, (3) Nelson Reversal, and (4) the total of the above three variables.

Age = The age of the subjects used in the present study.

Sex = The sex of the subjects in this study.

Psychological Distance = The degree relationship of likes and dislikes of the interviewees on the Cline film and the subjects in the study.

Leadership Attitudes = (1) Consideration--The extent to which the subject thinks a leader should consider the worker as an individual rather than as an instrument to get production. (2) Initiation of Structure = Differentiated Role--the degree to which the subject thinks the duties of the leader and worker should differ. (3) Total of the above two variables. These measures come from the scales developed by Dore (1960) in his M. A. thesis at Michigan State University.

The reliabilities for all of the non-personality variables that were possible to calculate are found in table 7 on the next page. They were computed by the odd-even correlation procedure, and corrected by the Spearman-Brown formula for a measure twice as long as the one used.

Method of Analysis:

All of the correlational computations were performed by the Michigan State Integral Computer--MISTIC. The inter-correlations of the 77 measures were obtained for the male judges--N=110, the female judges--N=20, and the male and female judges combined--N=130. The measures pertinent to the specific hypothesis, that were set forth in the history, were examined for significance and for trends. The means and standard deviations for the measures are in Appendix B along with the pertinent correlations. In order to generate new testable hypothesis, the correlation coefficients for the male and female judges combined were arranged in descending order of magnitude and examined. A short, refined personality scale designed to measure the personality traits of the subjects accurate in group sensitivity, was developed by item analysis of the original personality scales. The refined measurement appears in Appendix C.

TABLE 7

CORRECTED RELIABILITIES OF THE
NON-PERSONALITY MEASURES N=130

Measure	r
Men-Observation	.68
Men-Inference	.50
Men-Total Score	.64
Women-Observation	.57
Women-Inference	.36
Women-Total Score	.61
Total Observation-Appearance	.49
Total Observation-Conversation	.73
Total Observation-Total Score	.74
Total Inference 2nd Person	.55
Total Inference 3rd Person	.40
Total Inference Total Score	.59
Empathy-Psychological	.86
Empathy-Physical	.88
Empathy-Social	.57
Level of Rating	.90
Spread of Rating	.57
Perceptual Flexibility-Embedded Figures	.86
Perceptual Flexibility-Space	.96
Perceptual Flexibility-Nelson Reversal	.97
Perceptual Flexibility-Total Score	.97
Consideration	.76
Initiation of Structure	.81

RESULTS

The results are divided into two sections: the examination of the original hypotheses and the exploration of other measures that were found to be related to group sensitivity.

Results of Specific Hypotheses Tested

1. The higher a subject's group sensitivity, the more effective his Leadership attitudes.

Table 8 contains the correlations of the Total Group Sensitivity Score with measures of leadership attitudes for male, female, and male and female judges combined. In table 8 and all the tables to follow, the N for the male judges is 110, for the remale judges--20, and for the male and female judges combined--130. The size of the correlation coefficients needed for significance at the .05 level for the males is .19, at the .01 level .25, while for the females, .44 and .56 is needed, and for the combined group .17 and .23.

Strong support for the hypothesis was obtained for the male judges. The hypothesis was not supported by the twenty female judges, as only a low positive correlation was obtained for consideration, and a low negative correlation

was obtained for initiation of structure and total leadership attitude.

TABLE 8

CORRELATION OF TOTAL GROUP SENSITIVITY SCORE WITH MEASURES OF LEADERSHIP ATTITUDE

Measure	Men	Women	Men and Women
Consideration	.21*	.09	.19*
Initiation of Structure	.28**	-.20	.20*
Tot. Leadership Attitude	.37**	-.10	.31**

*Significant at the .05 level

**Significant at the .01 level

2. The higher the judge's intelligence, the greater his group sensitivity.

Table 9 contains the correlations of the measures of intelligence and the total group sensitivity score.

TABLE 9

CORRELATION OF TOTAL GROUP SENSITIVITY SCORE WITH MEASURES OF INTELLIGENCE AND ACADEMIC ACHIEVEMENT

Measure	Men	Women	Men and Women
A.C.E.-Q Scale	-.08	-.19	-.10
A.C.E.-L Scale	.23*	.06	.21*
A.C.E.-Total	.16	.06	.14

*Significant at the .05 level

The hypothesis is partly supported, in that there were significant coefficients for the males and combined males and females, for the A.C.E.-L Scale. There was no relationship for the female judges when considered by themselves.

3. The more experience a judge has with a group, the higher his group sensitivity.

Four tables are presented for the purpose of establishing the relationship between group sensitivity and experience. Table 10 shows the relationship between the Total Group Sensitivity Score and age for males, females, and males and females combined.

TABLE 10

CORRELATION OF THE TOTAL GROUP SENSITIVITY SCORE WITH THE MEASURE OF AGE

Measure	Men	Women	Men and Women
Age	.16	.37	.17

There were no significant relationships, although the correlations for the males, and males and females almost reached significance at the .05 level, thus establishing a trend in the direction of the hypothesis.

Table 11 shows the correlation of the Psychologists-Men in General group sensitivity scale with the number of psychology credits, and the course grade achieved in Industrial Psychology course 225.

TABLE 11

CORRELATION OF THE GROUP SENSITIVITY SCALE-PSYCHOLOGISTS--MEN IN GENERAL WITH NUMBER OF PSYCHOLOGY CREDITS AND FINAL COURSE GRADE

Measure	Men Psy-Non Psy	Women Psy-Non Psy	Men and Women Psy-Non Psy
Number of Psych Credits	.03	.08	.04
Final Course Grade	.26**	.11	.22*

*Significant at the .05 level

**Significant at the .01 level

It was expected that the number of credits and the amount of knowledge obtained in the industrial psychology course would correlate positively with the judges knowledge of psychologists. There were no significant relationships between number of psychology credits and knowledge of psychologists. Part of the hypothesis was supported, as the final course grade was significantly correlated with the sub-scale for the males. When the females are considered alone, there was no significant relationship.

Table 12 contains the correlations of the Executive-Unskilled sub-scale of group sensitivity with socio-Economic status of the judge.

TABLE 12

CORRELATION OF THE EXECUTIVE-UNSKILLED GROUP SENSITIVITY SCALE WITH THE MEASURE OF SOCIO-ECONOMIC STATUS

Measure	Men Ex-Uns	Women Ex-Uns	Men and Women Ex-Uns
Socio-Economic Status	.22*	.02	.18*

*Significant at the .05 level

It was expected that the male college student should have had a higher correlation with socio-economic status, because the students from an upper socio-economic status should have had experience with both skilled and unskilled workers, while the female lives in a more home centered environment and would not have had the experience with the unskilled workers. As seen in table 12, the results supported the expectation. In general, the hypothesis has received support.

4. The more open-minded the judge, the higher his group sensitivity.

Table 13 below contains the correlations of the Total Group Sensitivity with the measures of open-mindedness.

TABLE 13

CORRELATIONS OF TOTAL GROUP SENSITIVITY SCORE WITH MEASURES OF THE OPEN-MIND

Measure	Men	Women	Men and Women
Religious Skepticism	-.01	.27	.04
Liberalism	.29**	.00	.25**
Non-Conformity	-.10	.37	-.03
Total Liberalism	.06	.29	.10

**Significant at the .01 level

The measure of liberalism supported the hypothesis for the male judges and the male and female judges combined. There was no correlation for the females when considered separately. The hypothesis received only limited support.

5. The less ambitious the judge, the higher his group sensitivity.

Table 14 contains the correlations of the Total Group Sensitivity with measures of ambition.

TABLE 14

CORRELATIONS OF TOTAL GROUP SENSITIVITY SCORE WITH MEASURES OF AMBITION

Measure	Men	Women	Men and Women
Ambition	-.01	.41	.06
Organization	-.06	.34	.00
Total Ambition	-.04	.48*	.03

*Significant at the .05 level

The only significant correlation is the total ambition of females with the Total Group Sensitivity Score, and it is in the opposite direction of the hypothesis. The other correlation coefficients are too small to show a trend either in support or rejection of the hypothesis. It can be concluded that the hypothesis was not supported, and for the females, the good judge is ambitious.

6. The more socially timid the judge, the higher his group sensitivity.

Table 15 contains the correlations of the Total Group Sensitivity Scores for the males, females, and males and females combined.

The hypothesis received limited support by the male judges. The measure of self-confidence was significantly correlated with group sensitivity for males, and with the

TABLE 15

CORRELATION OF TOTAL GROUP SENSITIVITY SCORE WITH MEASURES OF SOCIAL FORCEFULNESS

Measure	Men	Women	Men and Women
Self-Confidence	-.21*	.12	-.16
Expressiveness	-.09	.09	-.06
Sexuality	.02	-.12	-.02
Dominance	-.06	.05	-.05
Activity	-.05	.10	-.03
Total Boldness	-.14	.07	-.11

*Significant at the .05 level

exception of the low positive correlation of sexuality, the other measures employed were also in the direction hypothesized. The females, with the exception of the sexuality measure have positive correlations with group sensitivity, but they are too small to draw any trends.

Exploration of Other Measures

The remaining measures were explored to determine any existing relationships. The correlation of these measures with the Total Group Sensitivity Score for males, females, and males and females combined appear on the next page in table 16.

TABLE 16

CORRELATION OF TOTAL GROUP SENSITIVITY SCORE FOR OTHER MEASURES RANKED HIGH TO LOW

Men Measure	r	Women Measure	r	Men and Women Measure	r
Men-Obs-App	.29**	Pe Fl-Ef	-.52*	Tot-Obs-Con	.23**
Tot-Obs-Acc	.24*	Pe Fl-Tot	-.51*	Men-Obs-Con	.22*
Women-Obs-App	.22*	Tot Awr	.45*	Tot-Obs-Acc	.22*
Tot-Obs-Con	.22*	Artist	.40	Men-Obs-Tot	.21*
Men-Obs-App	.22*	Pe Fl-NRev	-.38	Women-Obs-Con	.21*
GPA	.17	Women-Inf-2nd	.38	Class	.18*
Men-Inf-2nd	.16	Women-Inf-Tot	.37	Artist	.16
Puls Rt	.16	Tot T-P	-.34	Men-Obs-Con	.16
Class	.15	Men-Obs-Con	.33	Women-Inf-Tot	.15
Tot-Obs-App	.15	Brd Int	.33	Tot-Inf-2nd	.15
Tot-Inf-2nd	.15	Emp-Phy	.33	Emp-Phy	.14
Women-Obs-Tot	.14	Emp-Soc	-.32	GPA	.14
Men-Obs-Con	.14	Class	.31	Emp-Psy	-.13
Artist	.13	Emp-Psy	-.30	Women-Obs-Tot	.12
Women-Inf-Tot	.12	Econ	-.28	Tot-Obs-App	.12
Tot-Inf-Acc	.11	Tot-Obs-Con	.26	Women-Inf-3rd	.12
Emp-Phy	.11	Calm	-.26	Tot-Inf-Acc	.12
Women-Inf-3rd	.11	Supper	.24	Women-Inf-2nd	.12
Emp-Psy	-.11	Intro	.23	Emp-Soc	-.12
Men-Inf-3rd	-.10	Greg	-.22	Men-Inf-2nd	.11
Suppr	-.10	Men-Obs-Tot	.20	Pulse Rt	.11
Calm	.09	Women-Inf-3rd	.19	Tot T-P	-.11
Emp-Soc	-.08	Wrm	.19	Greg	-.09
Tot T-P	-.08	Pe Fl-Spac	-.17	Tot Awr	.09

TABLE 16--Continued

Men Measure	r	Women Measure	r	Men and Women Measure	r
Women-Inf-2nd	.08	Supper	-.16	Intro	.09
Brd Int	-.08	Men-Inf-2nd	-.15	Men-Inf-3rd	-.08
Greg	-.07	Curric	-.14	Pe Fl-Tot	-.08
Intro	.06	Tot-Obs-Acc	.14	Pe Fl-Ef	-.07
Pe Fl-NRev	.06	Women-Obs-Con	.14	Pe Fl-Spac	-.06
Econ	-.05	Opt	-.13	Suppr	-.05
Sen Awr	-.05	Tot-Inf-2nd	.12	Pe Fl-NRev	-.05
Pe Fl-Spac	-.04	Tot-Inf-3rd	.11	Sen Aw	-.04
Tot Stb	.04	Age	-.11	Tot-Inf-3rd	.04
Opt	.03	Em Cnt	.08	Men-Inf-Tot	.03
Psy Dis	-.03	Women-Obs-Tot	.06	Curric	-.03
Em Cnt	-.03	Psy Dis	.04	Calm	.03
Tot Awr	.03	Scien	.04	Scien	-.03
Scien	-.03	Tot-Obs-App	-.03	Women-Obs-App	-.02
Wrm	-.03	Men-Inf-3rd	-.03	Em Cont	-.02
Women-Obs-App	-.02	Men-Obs-App	-.02	Soc Econ	-.01
Tot-Inf-3rd	.02	Women-Obs-App	-.02	Opt	.01
Curric	-.01	Puls Rt	-.02	Psy Dis	.01
Pe Fl-Tot	.01	Sen Aw	-.01	Wrm	.01
Pe Fl-Ef	.00	GPA	-.01	Brd Int	-.00

*Significant at the .05 level

**Significant at the .01 level

The observation of table 16 yields two more relationships. The females who were accurate in group sensitivity were not perceptually flexible. The relationship did

not hold for the males. The second relationship was between observational accuracy and group sensitivity for the male judges. The relationship held for both observation of male and female interviewees in the Cline film, with the exception of the female observation appearance scale which correlated -.02 with the Total Group Sensitivity Score. The males were more accurate with the male interviewees. While there were no significant relationships among the female judges, they also tended to be more accurate with the male interviewees.

DISCUSSION

The discussion first considers first the reliabilities of the measures used in testing group sensitivity. Then the results of the hypothesis tested and the associations found by the examination of the other measures are summarized in two tables and discussed. Future research possibilities are also considered.

Reliabilities of the Measures Used

The odd-even reliability of .63 for the Total Group Sensitivity Score was the highest yet obtained with the use of these scales. Zavala (1960) reported two total score reliabilities: .56 for the test-retest procedure and .30 using the Kuder-Richardson formula. Silkiner (1962) reported a .60 odd-even reliability for his total test. With these facts in mind, the reliability of -.01 for the Executive-Unskilled sub-scale will be discussed. The Executive-Unskilled sub-scale is not independent of the test battery as all the test intercorrelations with the sub-scale were significant with the exception of the .10 correlation coefficient obtained with the Men-Women sub-scale. The reason for the apparent lack of reliability in the

restricted range of scores on the Executive-Unskilled sub-scale. Guilford (1956) said that the narrower the range, the smaller the reliability. The sub-scale Psychologists-Men in General, with a reliability of .70, is directly comparable with the Executive-Unskilled sub-scale, because they were developed the same way, and contained the same number of variables. The range for the Executive-Unskilled sub-scale was 42-26, while for the Psychologists-Men in General, it was 40-9 which is almost twice as large. The variance followed a simular trend--9.18 for the Executive-Unskilled and 28.62 for the Psychologists-Men in General sub-scale. The 28.62 variance is over three times the size of the 9.18 variance. In view of the total scale reliability, the Executive-Unskilled sub-scale reliability is not of crucial importance.

Summary of the Hypotheses Tested and of Other Relationships

The results of the hypotheses tested and other relationships found through the examination of the measures not specifically called for by the tested hypotheses will now be discussed. Table 17 contains a summary of the hypotheses tested.

TABLE 17

SUMMARY OF RESULTS OF THE HYPOTHESES TESTED AND THE SIGNIFICANT RELATIONSHIPS OF OTHER MEASURES

Hypotheses Tested	Results
1. Leadership	++
2. Intelligence	+
3. Experience	+
4. Open-Minded	+
5. Ambition	0
6. Socially Timid	0
Other Measures	
a. Perceptual Flexibility	+
b. Observation	+

The results suggest the following sketch of the accurate stereotypes. The male judge accurate in group sensitivity is high in leadership attitudes, linguistically talented, able to profit from experience, a liberal, non-conformist, and a good observer of the people around him. He is not self-confident or socially bold. The small size of the female sample and the lack of significant correlations enables only a very limited description. The accurate female judge in group sensitivity is ambitious and perceptually inflexible.

The above description was in fair agreement with the findings of previous investigators. Van Zelst (1953) and Foa (1958) concluded that the accurate judge of people was successful in leadership positions, and now the relationship was extended to include the possession of leadership attitudes. Dymond (1950) found, as did this study, that the accurate judge in group sensitivity scored high on verbal intelligence scales. Silkiner (1962) said that the judge needed experience with the groups before he could be accurate in group sensitivity. The present study agreed with them that experience was an important variable in group sensitivity. The female judges did not agree with his statement that the accurate judge was unambitious, and no relationship was found for the male judges. Limited agreement was obtained with Cline (1955) who said that the accurate judge was not ethnocentric or authoritarian in his attitudes. Bronfenbrenner et al. (1958) said that the accurate judge in group sensitivity was self-confident, socially extroverted, and lacked inhibition. Silkiner found a different trend with negative correlations for self-confidence and dominance, and this study found the same trend.

The major source of disagreement with previous studies was with the measure of gregariousness and warmth.

Dymond (1948, 1949) found consistent evidence that the accurate judge was warm and gregarious. No relationship was found in these measures for either the male or female judges.

Future Research

The refined personality scale in Appendix C needs to be administered to a group of subjects along with the group sensitivity test battery. In this way it can be determined if the personality scales truly measure group sensitivity correlates. If it is successful, a short administration period is all that would be needed in the future to test for group sensitivity, and the subjects would not need to know for what they were being tested. In the light of the results of the present study, such a short scale would be particularly useful in selecting applicants for a position demanding leadership attitudes and ability.

In future studies of the kind performed here, a larger group of females is needed. With a larger group, more and stronger conclusions can be drawn regarding females and group sensitivity.

SUMMARY AND CONCLUSIONS

A generalized group sensitivity scale was developed using the data from the Strong Vocational Interest Blank as criterion for the correct responses. Four sub-scales were used: Men-Women, Young-Old, Executive-Unskilled, and Psychologists-Non-Psychologists. The corrected reliability of the total scale was .63. In examining the data, it was concluded that the scale measured a generalized ability, and that it was free from the effects of level and spread.

Seventy-seven measures were available from which six hypothesis were tested, and they are listed below with the conclusions regarding them.

1. The higher a subject's group sensitivity, the more effective his leadership attitudes.

The male judges strongly supported the hypothesis, while the correlation coefficients for the females were low and not in support of the expectation.

2. The higher the judge's intelligence, the greater his group sensitivity.

The hypothesis was supported by the male judges, on

the verbal measure. No relationship was found for the female judges.

3. The more experience a judge has with a group, the higher his group sensitivity.

In general, the hypothesis received support from the data tested.

4. The more open-minded the judge, the higher his group sensitivity.

The hypothesis received limited support by the male subjects and no support by the female subjects.

5. The less ambitious the judge, the higher his group sensitivity.

The data for female judges rejected the hypothesis, in that the higher the ambition of the female judge, the more accurate her group sensitivity. The male subjects produced such low correlations that no conclusions could be made.

6. The more socially timid the judge, the higher his group sensitivity.

The hypothesis was supported by the male judges. The correlations obtained for the female judges were too low to draw any trends.

Other measures not required by the above hypothesis, were explored, and two more relationships were found. (1) The female judge who is accurate in group sensitivity is not perceptually flexible. (2) The male judge who is accurate in group sensitivity, is accurate in observation.

A refined personality scale, designed to measure group sensitivity correlates, was developed with the hope that in the future the correlates can be measured in one short session, without the subjects knowing for what they were being tested. The refined personality scale remains to be verified in future studies.

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APPENDIX A

THE JUDGMENT OF INTERESTS

GENERAL DIRECTIONS:

The following four tests investigate your knowledge of the different interests of men and women, young and old men, executives and unskilled workers, psychologists and men-in-general. For each test, large groups were questioned about their interests and activities.

PART I

DIFFERENCES BETWEEN MEN AND WOMEN

Directions - Mark "1" if you think more men than women like the interest; "2" if you think more women than men like the interest.

		ANSWER			ANSWER
1.	"Atlantic Monthly"	2	31.	Botany	2
2.	Actor (stage)	2	32.	Self-conscious	2
3.	Contributing to charities	2	33.	Buyer of merchandise	2
4.	Dramatics	2	34.	Calculus	1
5.	Magazine writer	2	35.	Treasurer of a society	1
6.	Author of a novel	2	36.	Retailer	2
7.	Art	2	37.	People who are natural leaders	1
8.	Entertaining others	2	38.	Carelessly dressed people	2
9.	Buyer of merchandise	2	39.	Writing personal letters	2
10.	Teacher, high school	2	40.	Sculptor	2
11.	Emotional people	2	41.	Interpreter	2
12.	Tell jokes well	1	42.	Athletic director	1
13.	People who have done you favors	1	43.	Art galleries	2
14.	Giving "first-aid" assistance	2	44.	Operating machinery	1
15.	Play ground director	2	45.	Very old people	2
16.	Have mechanical ingenuity (inventive)	1	46.	Sociology	2
17.	Religious people	2	47.	Music	2
18.	Ancient languages	2	48.	Physics	1
19.	Occasionally make bets	1	49.	Opening a conversation with a stranger	2
20.	Am quite sure of myself	1	50.	Office clerk	2
21.	Activity which produces tangible returns	1	51.	Musical comedy	2
22.	Organizing a play	2	52.	English composition	2
23.	Literature	2	53.	Entertaining others	2
24.	Psychology	2	54.	Mechanical drawing	1
25.	Musician	2	55.	Picnics	2
26.	People who have made a fortune in business	1	56.	Foreigners	2
27.	Tell jokes well	1	57.	Bookkeeping	2
28.	Physiology	2	58.	Chairman, entertainment committee	2
29.	Foreign correspondent	2	59.	Spelling	2
30.	Laboratory technician	2	60.	Modern languages	2

(over)

PART II
of
DIFFERENCES BETWEEN YOUNG AND OLD MEN

Directions: Mark "1" if you think more 15 year olds than 55 year olds like the interest; Mark "2" if you think more 55 year olds like the interest.

		ANSWER
61.	Marine engineer	1
62.	Pessimists	1
63.	Statistician	2
64.	Economics	2
65.	Follow up subordinates effectively	2
66.	Ship's officer	2
67.	Usually liven up the group on a dull day	2
68.	Tell jokes well	1
69.	Fishing	2
70.	Win friends easily	1
71.	Prepare advertising for machine	2
72.	Interviewing clients	2
73.	Do not get "rattled" easily	2
74.	Can correct others without giving offence.	2
75.	Manual training	1
76.	Definite salary (as opposed to commission on what is done)	1
77.	People who get "rattled" easy	1
78.	Electrical engineer	2
79.	Athletic director	1
80.	Can carry out plans assigned by other people	2
81.	Auto repairman	1
82.	When caught in a mistake practically never make excuses	2
83.	Locomotive engineer	1
84.	Interest the public in a machine	2
85.	Hunting	1
86.	Usually ignore the feelings of others	1
87.	Specialty salesman	2
88.	Politician	2
89.	Thrifty people	2
90.	Travel movies	2
91.	Definite salary (as opposed to commission on what is done)	1
92.	Floorwalker	2
93.	Put drive into the organization	2
94.	Carelessly dressed people	1
95.	Operating machinery	1
96.	Stimulate the ambition of my associates	2
97.	Smokers	2
98.	People who talk about themselves	1
99.	Spendthrifts	1
100.	Sociology	2
101.	Usually start activities of my group.	2
102.	Enter into situations and enthusiastically carry out programs	2
103.	Chauffer (as opposed to chef)	1
104.	Show firmness without being easy	2
105.	"National Geographic" magazine	1
106.	Saving money	2
107.	Clergyman	2
108.	Life insurance salesman	2
109.	Auctioneer	2
110.	Handling horses	1
111.	Am quite sure of myself	2
112.	Educational movies	2
113.	My advice sought by many	2
114.	Practically never borrow money for personal use	2
115.	Thomas A. Edison	1
116.	Teaching adults	2
117.	Musical comedy	2
118.	Machinist	1
119.	Physical training	1
120.	Quick-tempered people	2

PART III

DIFFERENCES BETWEEN EXECUTIVES AND UNSKILLED WORKERS

Directions: Mark "1" if you think more unskilled workers than professional and executive workers like the interest; Mark "2" if you think more professional and executive workers like the interest.

		ANSWER
121.	Typist	1
122.	Bank teller	1
123.	Civil service employee	1
124.	Interior decorator	1
125.	Sales manager	2
126.	Secret service man	1
127.	Office clerk	1
128.	Scientific research worker	2
129.	Draftsman	1
130.	Electrical engineer	1
131.	Editor	2
132.	Marine engineer	1
133.	Magazine writer	2
134.	Advertiser	2
135.	Lawyer, corporation	2
136.	Lawyer, criminal	1
137.	Manufacturer	2
138.	Physics	2
139.	Physical training	1
140.	Mathematics	2
141.	History	2
142.	Agriculture	1
143.	Golf	2
144.	Hunting	1
145.	Boxing	1
146.	Musical comedy	2
147.	Pet monkeys	1
148.	Detective stories	1
149.	"New Republic"	2
150.	Conservative people	2
151.	People who chew gum	1
152.	Socialists	1
153.	Energetic people	2
154.	Optimists	2
155.	People who assume leadership	2
156.	People who talk very slowly	1
157.	People with gold teeth	1
158.	Nervous people	1
159.	People who always agree with you	1
160.	Thrifty people	2
161.	Religious people	2
162.	Prepare the advertising for a new machine	2
163.	Courteous treatment from superiors	1
164.	Opportunity to make use of all one's knowledge and experience	2
165.	J. J. Pershing, soldier	1
166.	William H. Taft, jurist	2
167.	John Wanamaker, merchant	2
168.	President of a club	2
169.	Do a job yourself	2
170.	Definite salary	1
171.	Work for yourself	2
172.	Great variety of work	2
173.	Emphasis on quality of work	2
174.	Opportunity to understand just how one's superior expects work to be done	1
175.	Freedom in working out one's own methods of doing the work	2
176.	Repairing a clock	1
177.	Repairing electrical wiring	1
178.	Giving "first aid" assistance	1
179.	Adjusting difficulties of others	2
180.	Climbing along edge of precipice	1

(over)

-4-

PART IV

DIFFERENCES BETWEEN PSYCHOLOGISTS AND MEN-IN-GENERAL

Directions: Mark "1" if you think more psychologists than men-in-general liked the interest; Mark "2" if you think fewer psychologists than men-in-general like the interest.

		ANSWER
181.	Actor	1
182.	Artist	1
183.	Astronomer	1
184.	Corporation lawyer	2
185.	Manufacturer	2
186.	Athletic director	2
187.	Chemist	1
188.	Cashier in bank	2
189.	Editor	1
190.	Foreign correspondent	1
191.	Inventor	1
192.	Magazine writer	1
193.	Office manager	2
194.	Orchestra conductor	1
195.	Physician	1
196.	Poet	1
197.	Rancher	2
198.	Sculptor	1
199.	Statistician	1
200.	Surgeon	1
201.	Wholesaler	2
202.	Geometry	1
203.	Algebra	1
204.	Physical training	2
205.	Physiology	1
206.	Literature	1
207.	Hunting	2
208.	Symphony concerts	1
209.	Sporting pages	2
210.	Golf	2
211.	Chess	1
212.	Solving mechanical puzzles	1
213.	Travel movies	2
214.	Fishing	2
215.	Making a speech	1
216.	Teaching adults	1
217.	Taking responsibility	2
218.	Doing research work	1
219.	Writing reports	1
220.	Regular hours of work	2
221.	Developing business systems	2
222.	Saving money	2
223.	Conservative people	2
224.	Energetic people	2
225.	People who are natural leaders	2
226.	People who make fortunes in business	2
227.	Thrifty people	2
228.	Religious people	2
229.	Socialists	1
230.	Independents in politics	1
231.	People who talk about themselves	1
232.	Carelessly dressed people	1
233.	Absent-minded people	1
234.	Outside work	2
235.	Physical activity	2
236.	Usually drive myself steadily	1
237.	Have more than my share of novel ideas	1
238.	My feelings are easily hurt	2
239.	My advice is sought by many	1
240.	Put drive into the organization	2

REFINED TEST

RLJ/HCS
January, 1963

THE JUDGMENT OF INTERESTS

GENERAL DIRECTIONS:

The following four tests investigate your knowledge of the different interests of men and women, young and old men, executives and unskilled workers, psychologists and men-in-general. For each test, large groups were asked to check whether they "liked" or "disliked" various occupations, school subjects, activities, etc. The correct answers are based on what they reported.

PART I

DIFFERENCES BETWEEN MEN AND WOMEN

Directions--Mark "1" if you think more men than women like the interest;
"2" if you think more women than men like the interest.

		ANSWER
1.	Athletic director	1
2.	Operating machinery	1
3.	Emotional people	2
4.	Entertaining others	2
5.	Laboratory technician	2
6.	People who have made a fortune in business	1
7.	Foreigners	2
8.	Opening a conversation with a stranger	2
9.	Have mechanical ingenuity (inventive)	1
10.	Actor	2
11.	Musician	2
12.	Dramatics	2
13.	Mechanical drawing	1
14.	Calculus	1
15.	Physiology	2
16.	Treasurer of a society	1
17.	Interpreter	2
18.	Buyer of merchandise	2
19.	Sculptor	2
20.	Activity which produces tangible returns	1
21.	Sociology	2
22.	Botany	2
23.	Ancient languages	2
24.	People who are natural leaders	1
25.	Carelessly dressed people	2
26.	People who have done you favors	1
27.	Occasionally make bets	1
28.	Tell jokes well	1
29.	Art galleries	2
30.	Literature	2

PART II

DIFFERENCES BETWEEN YOUNG AND OLD MEN

Directions--Mark "1" if you think more 15 year olds than 55 year olds like the interest; mark "2" if you think more 55 year olds like the interest.

		ANSWER
31.	Floorwalker	2
32.	Handling horses	1
33.	Auto repairman	1
34.	Ship's officer	1
35.	Specialty salesman	2
36.	Clergyman	2
37.	Marine engineer	1
38.	Sociology	2
39.	Operating machinery	1
40.	Locomotive engineer	1
41.	Teaching adults	2
42.	Economics	2
43.	Educational movies	2
44.	Manual training	1
45.	Fishing	2
46.	Travel movies	2
47.	Spendthrifts	1
48.	Thrifty people	2
49.	Saving money	2
50.	Definite salary (as opposed to commission on what is done)	1
51.	Thomas A. Edison	1
52.	Enter into situations and enthusiastically carry out programs	2
53.	Show firmness without being easy	2
54.	Usually ignore the feelings of others	1
55.	Am quite sure of myself	2
56.	Carelessly dressed people	1
57.	Interest the public in a machine	2
58.	People who get "rattled" easy	1
59.	Tell jokes well	1
60.	Win friends easily	1

PART III

DIFFERENCES BETWEEN EXECUTIVES AND UNSKILLED WORKERS

Directions: Mark "1" if you think more unskilled workers than professional and executive workers like the interest; mark "2" if you think more professional and executive workers like the interest.

		ANSWER
61.	Physics	2
62.	History	2
63.	Boxing	1
64.	Physical training	1
65.	Detective stories	1
66.	Mathematics	2
67.	Climbing along edge of precipice	1
68.	Golf	2
69.	Agriculture	1
70.	Musical comedy	2
71.	"New Republic"	2
72.	Typist	1
73.	Office clerk	1
74.	Lawyer, criminal	1
75.	Lawyer, corporation	2
76.	Secret service man	1
77.	Manufacturer	2
78.	Sales manager	2
79.	Scientific research worker	2
80.	Electrical engineer	1
81.	Advertiser	2
82.	Draftsman	1
83.	Repairing a clock	1
84.	Magazine writer	2
85.	Editor	2
86.	Repairing electrical wiring	1
87.	Definite salary	1
88.	Opportunity to understand just how one's superior expects work to be done	1
89.	Work for yourself	2
90.	Freedom in working out one's own methods of doing the work	2
91.	Great variety of work	2
92.	Giving "first aid" assistance	1
93.	Adjusting difficulties of others	2
94.	People who always agree with you	1
95.	People who chew gum	1
96.	Thrifty people	2
97.	Nervous people	1
98.	Conservative people	2
99.	People who talk very slowly	1
100.	People with gold teeth	1
101.	Energetic people	2
102.	President of a club	2
103.	Pet monkeys	1
104.	J. J. Pershing, soldier	1
105.	John Wanamaker, merchant	2

(See above on right)

(over)

PART IV

DIFFERENCES BETWEEN PSYCHOLOGISTS AND MEN-IN-GENERAL

Directions: Mark "1" if you think more psychologists than men-in-general like the interest; mark "2" if you think fewer men-in-general like the interest.

		ANSWER
106.	Doing research work	1
107.	Teaching adults	1
108.	Rancher	2
109.	Statistician	1
110.	Regular hours of work	2
111.	Athletic director	2
112.	Actor	1
113.	Writing reports	1
114.	Orchestra conductor	1
115.	Office manager	2
116.	Artist	1
117.	Wholesaler	2
118.	Poet	1
119.	Sculptor	1
120.	Editor	1
121.	Corporation lawyer	2
122.	Manufacturer	2
123.	Astronomer	2
124.	Cashier in bank	1
125.	Physician	1
126.	Developing business systems	2
127.	Magazine writer	1
128.	Conservative people	2
129.	Carelessly dressed people	1
130.	People who make fortunes in business	2
131.	Thrifty people	2
132.	Absent-minded people	1
133.	Solving mechanical puzzles	1
134.	My advice is sought by many	1
135.	My feelings are easily hurt	2
136.	Independents in politics	1
137.	Put drive into the organization	2
138.	Have more than my share of novel ideas	1
139.	Saving money	2
140.	Fishing	2
141.	Chess	1
142.	Geometry	1
143.	Physical activity	2
144.	Physiology	1
145.	Sporting pages	2
146.	Hunting	2
147.	Algebra	1
148.	Literature	1
149.	Symphony concerts	1
150.	Physical training	2

APPENDIX B

CORRELATIONS OF THE GROUP SENSITIVITY SCALES
FOR MEN (N=110)

Measure	M-W	Y-Old	E-Uns	P-Non	TOTAL
Men-Obs-App	.038	.146	.197	.297	.284
Men-Obs-Con	-.118	.160	.211	.034	.135
Men-Obs-TTL	-.083	.180	.240	.152	.215
Men-Inf-2nd	-.098	.088	.100	.203	.162
Men-Inf-3rd	-.038	-.122	-.051	-.077	-.097
Men-Inf-TTl	-.093	-.007	.043	.101	.060
Women-Obs-App	.074	-.036	-.006	-.053	-.024
Women-Obs-Con	.121	.119	.108	.173	.223
Women-Obs-TTL	.126	.060	.070	.086	.136
Women-Inf-2nd	-.019	.117	.011	.069	.076
Women-Inf-3rd	.030	.020	.063	.164	.108
Women-Inf-TTL	.007	.086	.064	.146	.115
TTL-Obs-App	.072	.062	.113	.141	.152
TTL-Obs-Con	.010	.174	.190	.125	.219
TTL-Obs-Acc	.046	.155	.194	.164	.236
TTL-Inf-2nd	-.074	.128	.070	.171	.150
TTL-Inf-3rd	-.001	-.059	.016	.075	.022
TTL-Inf-Acc	-.051	.054	.057	.159	.114
Ster M-W	---	.190	.111	.125	.460
Ster Y-Old	.190	---	.258	.231	.604
Ster E-Uns	.111	.258	---	.336	.645
Ster P-Non	.125	.231	.336	---	.783
Ster TOTAL	.460	.604	.645	.783	---
TL SA&DA	.197	.349	.362	.507	.586
Emp-Psy	-.192	-.144	-.117	.078	-.107
Emp-Phy	.148	.155	115	-.053	.111
Emp-Soc	-.020	-.101	-.077	-.023	-.082
Lev Rtng	-.073	.192	-.047	.050	.061
Spr Rtng	.016	-.123	.001	.040	-.015
Pe Fl-EF	.054	-.061	-.043	.029	-.002
Pe Fl-Spac	.000	-.015	.040	-.085	-.039
Pe Fl-NRev	-.045	-.032	.018	.129	.056
Pe Fl-TTL	.007	-.047	.004	.025	.003
Age	.044	.027	.144	.156	.161
Class	.013	-.005	.169	.189	.153
Curric	-.012	-.040	.002	-.009	-.006
Psy Cr	-.020	.053	.046	.033	.052
GPA	-.012	.046	.236	.135	.169

CORRELATIONS OF THE GROUP SENSITIVITY SCALES
FOR MEN (N=110)

Measure	M-W	Y-Old	E-Uns	P-Non	TOTAL
ACE-Q Scale	.037	-.241	.117	-.066	-.080
ACE-L Scale	.036	.158	.273	.168	.233
ACE-TTL	.100	.017	.256	.093	.156
Soc Econ	.023	.171	.221	.002	.140
Sex	.000	.000	.000	.000	.000
Psy Dis	.009	.022	.050	-.111	-.032
Final Gr	.014	.219	.317	.255	.334
Puls Rt	.118	.114	-.001	.144	.157
Consid	.105	.074	.086	.224	.214
In Str	.013	.173	.277	.223	.279
TTL-Leadership	.086	.186	.275	.333	.369
Act	.094	-.018	.001	-.134	-.052
Sex	.072	-.034	-.033	.040	.018
Expr	.056	-.069	-.126	-.086	-.092
Slf Cnf	-.106	-.126	-.068	-.194	-.205
Dom	.070	-.017	-.027	-.121	-.064
TTL BLD	.053	-.089	-.095	-.176	-.144
Calm	-.093	.102	.034	.096	.085
Opt	-.038	-.018	.089	.023	.034
Em Cnt	-.068	.038	.026	-.059	-.030
TTL STB	-.085	.056	.059	.026	.037
Rel Sc	-.142	-.022	.067	.024	-.010
Lib	-.011	.138	.293	.241	.285
Noncnf	-.162	-.086	.061	-.088	-.100
TTL LIB	-.139	.005	.172	.056	.057
Sen Aw	-.057	-.024	-.109	.028	-.048
Intro	-.140	.058	.095	.072	.058
Brd Int	-.204	.008	-.073	.002	-.066
Artist	-.127	.229	.104	.077	.131
TTL AWR	-.213	.113	.012	.063	.030
Amb	-.124	.079	-.015	-.002	-.006
Org	-.091	.033	-.118	.009	-.055
TTL AMB	-.117	.059	-.084	.005	-.039
Econ	.184	.034	.020	-.187	-.053
Greg	.104	-.003	-.214	-.034	-.066
TTL T-P	.177	.017	-.142	-.128	-.077
Suppr	-.114	.051	-.034	-.144	-.097
Scien	-.086	.102	-.150	.067	-.030
Wrm	.019	.143	-.062	-.065	-.026

CORRELATIONS OF THE GROUP SENSITIVITY SCALES
FOR WOMEN (N=20)

Measure	M-W	Y-Old	E-Uns	P-Non	TOTAL
Men-Obs-App	.058	-.098	-.023	-.061	-.023
Men-Obs-Con	.349	.067	.304	.172	.329
Men-Obs-TTL	.263	-.014	.175	.070	.198
Men-Inf-2nd	.075	-.196	.077	-.081	-.146
Men-Inf-3rd	.026	.113	.276	-.062	-.028
Men-Inf-TTL	.060	-.055	.205	-.085	-.105
Women-Obs-App	.118	-.093	.074	-.043	-.023
Women-Obs-Con	-.079	.089	.048	.118	.137
Women-Obs-TTL	.030	-.009	.072	.038	.060
Women-Inf-2nd	.250	.120	.520	.177	.367
Women-Inf-3rd	.000	.297	-.097	.218	.192
Women-Inf-TTL	.167	.270	.284	.257	.367
TTL-Obs-App	.120	.128	.037	-.069	-.032
TTL-Obs-Con	.135	.093	.193	.168	.264
TTL-Obs-Acc	.152	-.013	.136	.060	.140
TTL-Inf-2nd	.208	-.067	.375	.050	.121
TTL-Inf-3rd	.019	.282	.144	.097	.107
TTL-Inf-Acc	.148	.122	.332	.090	.142
Ster M-W	---	.188	.084	.487	.601
Ster Y-Old	.188	---	.218	.392	.525
Ster E-Uns	.084	.218	---	.153	.516
Ster P-Non	.487	.392	.153	---	.857
Ster TOTAL	.601	.525	.516	.857	---
TL SA&DA	.455	.384	.529	.554	.669
Emp-Psy	-.104	.094	-.441	-.264	-.289
Emp-Phy	.152	-.019	.366	.311	.325
Emp-Soc	-.197	-.069	-.221	-.327	-.321
Lev Rtng	-.046	.157	-.112	-.009	-.087
Spr Rtng	.398	.004	.218	.197	.321
Pe Fl-EF	-.197	-.384	-.334	-.373	-.518
Pe Fl-Spac	.035	-.235	-.247	-.102	-.165
Pe Fl-NRev	-.168	.061	-.628	-.191	-.381
Pe Fl-TTL	-.167	-.201	-.640	-.307	-.512
Age	.289	-.009	.452	.204	.369
Class	.320	-.062	.305	.225	.311
Curric	-.116	-.245	-.290	-.069	-.144
Psy Cr	.078	-.206	-.156	.083	.029
GPA	.263	-.175	.238	-.135	-.006
ACE-Q Scale	-.262	.129	-.151	-.170	-.189

CORRELATIONS OF THE GROUP SENSITIVITY SCALES
FOR WOMEN (N=20)

Measure	M-W	Y-Old	E-Uns	P-Non	TOTAL
ACE-L Scale	.227	-.119	.145	-.028	.059
ACE-TTL	.154	.014	.083	-.020	.056
Soc Econ	-.396	-.227	.017	.012	-.041
Sex	.000	.000	.000	.000	.000
Psy Dis	-.399	-.065	.389	.011	.041
Final Gr	.135	.106	.186	.112	.193
Puls Rt	.146	-.326	.049	-.046	-.017
Consid	-.018	.249	.214	-.006	.092
In Str	-.215	-.087	.049	-.156	-.202
TTL-Leadership	-.250	.179	.272	-.269	-.098
Act	-.222	.131	.153	.010	.104
Sex	-.238	-.241	.007	-.088	-.121
Exp	-.150	-.079	.328	-.096	.094
Slf Cnf	-.032	.369	.210	-.052	.118
Dom	-.069	.129	.305	-.172	.045
TTL BLD	-.208	.073	.298	-.116	.070
Calm	.156	-.059	-.382	-.177	-.260
Opt	-.407	.257	.071	-.205	-.129
Em Cnt	.147	.426	.081	-.136	.079
TTL STB	-.004	.249	-.150	-.235	-.158
Rel Sc	.303	-.123	-.069	.254	.271
Lib	-.030	-.210	-.088	.055	-.002
Noncnf	-.095	.246	.192	.302	.373
TTL LIB	.120	-.033	.011	.272	.292
Sen Aw	-.279	-.136	-.054	.056	-.008
Intro	-.123	.033	.235	.073	.226
Brd Int	.093	.328	.466	.197	.328
Artist	.128	.247	.272	.352	.400
TTL AWR	-.006	.280	.473	.303	.447
Amb	.612	.181	.228	.252	.414
Org	.175	.325	.458	.136	.344
TTL AMB	.474	.329	.449	.240	.477
Econ	-.093	.222	-.255	-.129	-.276
Greg	-.304	-.078	.005	-.279	-.221
TTL T-P	-.344	.017	-.105	-.335	-.340
Suppr	.286	.339	.147	.117	.242
Scien	.145	-.273	.030	.173	.037
Wrm	.205	.142	.009	.162	.189

CORRELATIONS OF THE GROUP SENSITIVITY SCALES
FOR MEN AND WOMEN (N=130)

Measure	M-W	Y-Old	E-Uns	P-Non	TOTAL
Men-Obs-App	.029	.109	.152	.220	.224
Men-Obs-Con	-.058	.164	.218	.047	.160
Men-Obs TTL	-.037	.169	.228	.132	.213
Men-Inf-2nd	-.070	.070	.095	.145	.114
Men-Inf-3rd	-.016	-.086	.013	-.079	-.082
Men-Inf-TTL	-.058	-.009	.074	.055	.032
Women-Obs-App	.101	-.019	.008	-.060	-.020
Women-Obs-Con	.118	.130	.094	.151	.211
Women-Obs-TTL	.138	.073	.066	.063	.124
Women-Inf-2nd	.025	.128	.088	.079	.119
Women-Inf-3rd	.028	.038	.038	.170	.120
Women-Inf-TTL	.034	.105	.080	.156	.150
TTL-Obs-App	.087	.053	.097	.092	.121
TTL-Obs-Con	.043	.181	.185	.120	.226
TTL-Obs-Acc	.078	.153	.180	.133	.221
TTL-Inf-2nd	-.029	.124	.116	.142	.147
TTL-Inf-3rd	.010	-.024	.036	.074	.036
TTL-Inf-Acc	-.014	.069	.099	.138	.119
Ster M-W	---	.204	.102	.163	.472
Ster Y-Old	.204	---	.241	.223	.580
Ster E-Uns	.102	.241	---	.297	.621
Ster P-Non	.163	.223	.297	---	.791
Ster TOTAL	.472	.580	.621	.791	---
TL SA&DA	.235	.352	.385	.503	.597
Emp-Psy	-.195	-.140	-.153	.036	-.128
Emp-Phy	.157	.149	.153	.005	.143
Emp-Soc	-.039	-.097	-.100	-.075	-.117
Lev Rtng	-.040	.204	-.059	.027	.042
Spr Rtng	.041	-.125	.042	.078	.037
Pe Fl-EF	.005	-.097	-.081	-.024	-.072
Pe Fl-Spac	-.026	-.054	-.006	-.073	-.062
Pe Fl-NRev	-.049	-.008	-.149	.033	-.045
Pe Fl-TTL	-.031	-.071	-.103	-.028	-.079
Age	.027	-.002	.172	.166	.169
Class	.029	-.028	.195	.203	.176
Curric	-.025	-.056	-.056	-.022	-.030
Psy Cr	.021	.045	-.004	.035	.049
GPA	.041	.043	.233	.071	.141
ACE-Q Scale	-.033	-.234	.074	-.067	-.099

CORRELATIONS OF THE GROUP SENSITIVITY SCALES
FOR MEN AND WOMEN (N=130)

Measure	M-W	Y-Old	E-Uns	P-Non	TOTAL
ACE-L Scale	.089	.165	.241	.115	.208
ACE-TTL	.103	.015	.228	.074	.142
Soc Econ	.014	.165	.175	-.012	.113
Sex	.147	.123	-.014	-.062	.021
Psy Dis	.005	.042	.089	-.102	-.019
Final Grade	.038	.216	.293	.222	.314
Puls Rt	.108	.052	.012	.095	.114
Consid	.099	.095	.110	.167	.192
In Str	-.036	.129	.236	.156	.196
TTL-Leadership	.043	.174	.272	.240	.306
Act	.033	-.018	.033	-.094	-.025
Sex	-.046	-.102	-.015	.038	-.018
Expr	.051	-.050	-.049	-.094	-.059
Slf Cnf	-.123	-.116	-.026	-.155	-.164
Dom	.028	-.026	.031	-.118	-.050
TTL BLD	-.016.	-.098	-.014	-.145	-.108
Calm	-.089	.064	-.034	.055	.027
Opt	-.084	-.010	.086	-.009	.010
Em Cnt	-.052	.056	.034	-.067	-.017
TTL STB	-.095	.050	.029	-.007	.009
Rel Sc	-.095	-.040	.042	.076	.037
Lib	-.011	.114	.233	.206	.245
Noncnf	-.156	-.064	.084	-.011	-.025
TTL LIB	-.112	.004	.143	.103	.096
Sen Aw	-.041	.000	-.101	.017	-.037
Intro	-.099	.081	.113	.057	.088
Brd Int	-.169	.028	.020	.040	-.003
Artist	-.054	.253	.117	.095	.163
TTL AWR	-.148	.147	.074	.083	.088
Amb	-.051	.066	.032	.057	.062
Org	-.066	.047	-.023	.033	.003
TTL AMB	-.068	.063	.000	.050	.032
Econ	.089	-.013	-.001	-.133	-.075
Greg	.060	-.006	-.177	-.080	-.089
TTL T-P	.095	-.012	-.129	-.135	-.108
Suppr	-.057	.078	-.007	-.102	-.046
Scien	-.082	-.021	-.126	.082	-.025
Wrm	.055	.062	-.052	-.031	.008

MEANS AND STANDARD DEVIATIONS OF THE MEASURES
FOR MEN, WOMEN, AND MEN AND WOMEN

Measure	Men		Women		Men and Women	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Men-Obs-App	18.38	2.77	17.90	3.42	18.31	2.87
Men-Obs-Con	20.64	3.60	21.65	2.74	20.79	3.50
Men-Obs-TTL	38.84	5.02	39.60	4.53	38.95	4.93
Men-Inf-2nd	14.62	3.10	14.95	3.11	14.67	3.10
Men-Inf-3rd	16.70	2.49	17.30	2.92	16.79	2.57
Men-Inf-TTL	31.32	4.32	32.25	5.10	31.46	4.44
Women-Obs-App	15.42	3.12	16.80	3.83	15.63	3.27
Women-Obs-Con	19.02	3.58	20.35	3.34	19.22	3.57
Women-Obs-TTL	34.44	5.29	37.15	6.11	34.85	5.52
Women-Inf-2nd	15.08	3.05	16.00	2.67	15.22	3.01
Women-Inf-3rd	10.42	3.05	10.50	2.56	10.43	2.98
Women-Inf-TTL	25.50	4.88	26.50	4.01	25.65	4.78
TTL-Obs-App	33.80	4.67	34.70	5.37	33.39	4.79
TTL-Obs-Con	39.75	5.96	42.00	5.15	40.09	5.90
TTL-Obs-Acc	73.55	8.55	76.75	9.04	74.04	8.70
TTL-Inf-2nd	29.70	4.90	30.95	4.33	29.89	4.82
TTL-Inf-3rd	27.12	4.12	27.80	3.86	27.21	4.07
TTL-Inf-Acc	56.82	7.22	58.75	6.58	57.12	7.16
Ster M-W	20.64	2.55	21.70	1.87	20.79	2.48
Ster Y-Old	21.84	2.88	22.80	1.25	21.99	2.72
Ster E-Uns	35.43	2.95	35.30	3.42	35.40	3.03
Ster P-Non	30.80	5.08	29.85	6.58	30.65	5.35
Ster TOTAL	108.61	8.88	109.65	9.19	108.69	8.93
TL SA&DA	98.55	13.42	101.90	12.57	99.06	13.35
Emp-Psy	29.10	9.97	26.95	6.71	28.77	9.57
Emp-Phy	39.96	12.14	42.45	10.85	40.33	11.99
Emp-Soc	20.74	5.39	20.65	4.88	20.72	5.31
Lev Rtng	116.18	10.76	121.55	10.24	117.01	10.86
Spr Rtng	23.99	12.88	19.30	13.39	23.27	13.07
Pe Fl-EF	50.23	9.34	46.25	7.51	49.62	9.19
Pe Fl-Spac	50.77	8.96	45.95	8.91	50.03	9.12

MEANS AND STANDARD DEVIATIONS OF THE MEASURES FOR MEN, WOMEN, AND MEN AND WOMEN

Measure	Men		Women		Men and Women	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Pe Fl-NRev	49.44	7.73	51.55	12.86	49.78	8.76
Pe Fl-TTL	150.46	20.41	143.75	19.88	149.43	20.47
Age	21.16	2.99	19.90	1.70	21.34	2.89
Class	2.97	.82	2.65	.91	2.92	.85
Curric	2.58	1.07	2.60	1.24	2.59	1.10
Psy Cr	10.75	6.44	13.90	9.39	11.23	7.07
GPA	2.38	.47	2.54	.51	2.41	.48
ACE-Q Scale	32.04	8.46	26.50	8.05	31.19	8.63
ACE-L Scale	47.34	11.77	55.10	9.60	48.53	11.80
ACE-TTL	130.44	20.89	130.00	17.45	130.37	20.40
Soc Econ	4.63	2.00	6.10	2.05	4.85	2.08
Sex	1.00	.00	2.00	.00	1.15	.38
Psy Dis	11.73	1.57	12.55	1.12	11.85	1.54
Final Grade	100.88	11.72	103.25	10.55	101.25	11.58
Puls Rt	75.32	10.53	73.60	16.77	75.05	11.72
Consid	18.29	4.98	19.50	5.95	18.48	5.16
In Str	19.91	5.22	17.85	5.33	19.59	5.29
TTL Leader-ship	38.21	6.82	36.90	5.29	38.01	6.62
Act	19.17	4.57	17.80	5.55	18.96	4.76
Sex	19.38	4.33	13.05	5.45	18.41	5.07
Expr	15.71	6.78	18.15	6.77	16.09	6.83
Slf Cnf	14.99	6.38	12.00	4.99	14.53	6.28
Dom	19.70	5.69	17.25	5.58	19.32	6.28
TTL BLD	88.86	16.89	78.25	19.69	87.23	17.78
Calm	14.72	7.24	11.15	7.02	14.17	7.32
Opt	19.55	5.88	18.45	4.80	19.39	5.74
Em Cnt	14.42	7.06	13.90	5.50	14.34	6.84
TTL STB	48.69	16.13	43.50	12.68	48.06	15.81
Rel Sc	20.46	6.89	18.85	7.67	20.22	7.04
Lib	19.71	4.76	19.90	4.07	19.74	4.66
Noncnf	16.56	5.36	16.10	5.44	16.49	5.38
TTL LIB	56.65	12.94	54.85	14.04	56.29	13.11
Sen Aw	17.30	4.06	19.80	3.17	17.68	4.03
Intro	15.57	5.43	18.90	5.56	16.09	5.58
Brd Int	36.81	8.26	36.35	8.34	36.81	8.28
Artist	12.60	7.05	18.25	5.51	13.47	7.13

MEANS AND STANDARD DEVIATIONS OF THE MEASURES FOR MEN, WOMEN, AND MEN AND WOMEN

Measure	Men		Women		Men and Women	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
TTL AWR	82.28	16.79	93.30	13.77	83.98	16.84
Amb	14.79	4.86	12.95	5.27	14.51	4.97
Org	13.19	6.83	12.55	6.31	13.09	6.76
TTL AMB	27.98	10.45	25.50	9.12	27.60	10.29
Econ	17.80	4.99	12.15	2.63	16.93	5.13
Greg	15.14	6.42	15.50	6.14	15.19	6.38
TTL T-P	32.94	8.95	27.65	6.13	32.12	8.78
Suppr	11.86	4.81	12.90	4.32	12.02	4.75
Scien	12.52	6.16	11.10	3.60	12.30	5.86
Wrm	14.16	5.23	15.70	4.72	14.40	5.18

APPENDIX C

Personality Inventory

High	Low	r	Ans	Item
40	00	.73	T	Our courts should probably be in the hands of sociologists rather than lawyers.
04	52	-.62	F	The proposal to change the present calender to one having 13 months of 28 days is completely unsound.
84	100	-.56	F	I am primarily interested in what is useful.
00	16	-.55	F	Criminals retard our moral progress as much as all other people combined.
36	88	-.55	F	I would rather see a musical comedy than a documentary film.
80	100	-.55	F	I am very intense about the things which interest me.
04	40	-.54	F	Personal criticism never bothers me.
04	40	-.54	F	A leader should be the most technically skilled member of the work group rather than explain the reasons for changes.
100	84	.51	T	I like to become sexually excited.
00	12	-.46	F	I become sexually excited a little less than the average person of my sex.
00	12	-.46	F	I seldom become sexually excited.
24	68	-.45	F	A leader should be an authority in the type of work the group does, rather than explain in detail the reasons for changes.
04	28	-.44	F	Criticism never bothers me.
28	04	.44	T	I rarely feel anything that could be called an emotional thrill.
72	96	-.44	F	The idea of personal immortality sometimes leads to disillusionment.
40	80	-.43	F	I don't think I would enjoy teaching poetry at a University.
12	48	-.43	F	My skin is insensitive to the sun.
20	60	-.42	F	A leader should act as he thinks best, regardless of the views of his workers rather than be proud of his work group.
52	16	.40	T	I only work for tangible and clearly-defined results.

High	Low	r	Ans	Item
04	24	-.40	F	I am not affected by flattery.
100	92	.40	T	A leader should study new procedures that might apply to his job, rather than make his job similar to the jobs of his workers.
16	52	-.40	F	I prefer friends who have a well developed artistic taste.
00	08	-.40	F	Conservative people are more intelligent than radical people.
16	52	-.40	F	It is unlikely that wood will ever be converted into humanly edible food.
44	80	-.39	F	I don't like to read poetry.
12	44	-.39	F	It is of little importance to me whether people agree with my ideas or not.
04	24	-.38	F	A leader should be a respected authority in the type of work the group does, rather than pass along to his workers information from higher management.
32	68	-.37	F	A leader should be known as a man of great technical skill in the field, rather than schedule the work to be done.
68	32	.37	T	I adopt an extremely matter-of-fact attitude towards life.
68	92	-.37	F	I have never tried to collect pictures of paintings I like.
16	48	-.37	F	I would rather see a musical comedy than a documentary film.
52	84	-.37	F	I have often been much more hopeful about my chances than the facts warranted.
80	96	-.36	F	I believe that our modern industrial age has attained a much greater degree of culture than that ever attained by any previous civilization.
40	12	.36	T	I think the public schools should give more thought to promoting the study and performance of drama.
60	88	-.36	F	I am guided in most of my decisions by strong ambitions.
96	80	.36	T	My desires are occasionally at war with one another.

High	Low	r	Ans	Item
20	04	.36	T	I hesitate to tell other people how to do a job even when I am sure I could be of some help.
80	96	-.36	F	I like people that are like me.
12	40	-.36	F	A leader should be known as a man of great technical skill in the field, rather than schedule the work to be done.
20	52	-.35	F	If I start working on a puzzle, I always stick to it until it is solved.
24	56	-.34	F	I believe that the most successful person in life is one who knows what he wants in a material way and sets out to get it.
24	56	-.34	F	I would like to be a worker in Y.M.C.A., K. of C., etc.
68	36	.33	T	I sometimes take the remarks of others in a too personal way.
32	64	-.33	F	I always feel even the minor interests of others as if they were my own.
16	44	-.33	F	I think it is more important for a person to be reverent than to be sympathetic.
36	12	.32	T	I am over weight.
08	28	-.32	F	I very rarely tell jokes in which sex plays a major part.
28	08	.32	T	I can't say that I have ever been very amazed at anything.
64	88	-.32	F	When I think out a problem, I keep very close to the facts that I have seen and observed.
72	92	-.32	F	I like entertaining others.
20	48	-.31	F	A leader should spend a great deal of time in scheduling the work of the group, rather than make prompt, firm decisions.
20	48	-.31	F	Once I have decided something is wrong, I always resist the temptation to do it.
40	16	.30	T	I enjoy taking examinations.
76	48	.30	T	I occasionally neglect serious things in order to have a good time.
48	76	-.30	F	I assert myself with energy on almost any occasion.

High	Low	r	Ans	Item
04	16	-.30	F	Cat meat is out of the question for the human diet under any circumstances.
84	96	-.30	F	The theory of evolution should be taught in our schools.
16	40	-.30	F	I would very much enjoy the kind of work that a scientific research worker does.
24	52	-.30	F	A man who works in business for his living all the week can best spend Sunday in hearing a sermon.
48	76	-.30	F	I almost always feel that people approve of me.
48	76	-.30	F	I can deal much better with actual situations than with ideas.
60	84	-.30	F	I like amusement parks.
52	24	.30	T	I am disturbed when people severely criticize my way of life.
16	40	-.30	F	I feel that I have a tremendous amount to contribute to other people.
48	76	-.30	F	I like looking at shop windows.
48	76	-.30	F	A leader should do the important jobs himself, rather than have workers take their rest periods when they wish.
24	52	-.30	F	A leader should set up all projects himself, rather than leave it up to each worker to take his share of work and get it done.
96	88	.30	T	A leader should let his workers know how they are doing on their jobs, rather than spend some of his time helping get the work done.
44	72	-.29	F	I like animal zoos.
72	44	.29	T	I occasionally feel self-conscious in the presence of very important superiors.
68	40	.29	T	I am inclined to trust almost everyone.
56	28	.29	T	I believe few things in life are more than increasing our scientific information.
32	60	-.29	F	The scientific approach needs to remain central in our efforts to solve national problems.

High	Low	r	Ans	Item
68	40	.29	T	The world might benefit from having a new kind of religion.
40	68	-.29	F	Whenever I have to undertake a job I make out a careful plan of procedure.
36	64	-.29	F	I am very insistent on having all my written work extremely neat and well organized.
36	64	-.29	F	I can always do a good job even when I'm very excited.
08	24	-.29	F	Radical foreigners who wish to visit the United States should not be admitted.
88	68	.28	T	The idea of divine inspiration may be a form of wish fulfillment arising from suggestibility.
08	24	-.28	F	I am never aware of my heart beating.
32	12	.28	T	I am a rather adventurous person.
32	12	.28	T	I have had dreams that I refust to talk about.
44	20	.27	T	I accept the world as it is and do not try to imagine how it might be.
84	60	.27	T	I like continually changing activities.
20	44	-.27	F	I am considered rather emotional by my friends.
52	76	-.26	F	I keep my workplace extremely neat and very orderly.
52	76	-.26	F	I am extremely systematic in caring for my personal property.
36	16	.26	T	I like nothing better than parties and dances.
76	52	.26	T	I think that the pollution of streams by factories is becoming a major social problem.
52	76	-.26	F	I am extremely particular about the members of the opposite sex with whom I associate.
24	48	-.26	F	My hearing is somewhat above average.
24	48	-.26	F	I am careful of the way I spend my physical energy.
28	52	-.26	F	I would rather be a good listener than a good talker.
48	72	-.26	F	I am a rather carefree person.
00	04	-.26	F	I never enjoy it when I persuade someone to do what I want.

High	Low	r	Ans	Item
16	36	-.26	F	I have never really disliked any teacher.
56	32	.25	T	I like literature.
40	64	-.25	F	I'm always eager to take a chance alone in a situation of doubtful outcome.
40	64	-.25	F	I enjoy speaking in public.
64	40	.25	T	I sometimes like to just sit.
44	68	-.25	F	I am physically more active than most of the people I know.
44	68	-.25	F	I have had considerable sex experience.
32	56	-.25	F	I never complain about my sufferings and hardships.
44	68	-.25	F	I believe that one should develop his chief loyalties toward his business organization and it's associates.
36	60	-.25	F	In a discussion, I tend to lost interest if we talk about serious literature.
60	36	.25	T	Divorce by mutual consent would be a better system than our present one.
32	56	-.25	F	I am inclined to agree with the poet who said that "Beauty is truth".
64	40	.25	T	The metric system of weights and measures should be substituted for our present system.
56	32	.25	T	I think I can lead a full life without knowing much about science.
36	60	-.25	F	I see life as a constant series of problems which must be solved.
68	44	.25	T	Most of my spare money is used for pleasure.
36	60	-.25	F	I generally criticize my acquaintances when I disapprove of their behavior.
80	60	.24	T	We owe our progress to radicals more than to "middle of the road" people.
80	60	.24	T	Women should have as much right to propose dates to men as men to women.
20	40	-.24	F	It is bad for a married man to take another man's wife to the movies under any circumstances.
80	60	.24	T	I sometimes make useless moves as I go about my work.
60	80	-.24	F	I always prefer to work with others.

High	Low	r	Ans	Item
08	20	-.23	F	In the long run, science provides the best hope for solving the world's problems.
80	92	-.23	F	A leader should teach his workers new things, rather than work along with the men as much as possible.
96	84	.23	T	A leader should pass along to his workers information from higher management, rather than help to get the work done.
44	24	.22	T	A leader should give the workers the power to act independently of him, rather than assign workers to particular tasks.
76	56	.22	T	I am occasionally lacking in self-confidence.