THE PERSONAL FEELING SCALES AS RELATED TO THE

DRAW-A-GROUP PROJECTIVE TECHNIQUE

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THE PERSONAL FEELING SCALES AS RELATED TO THE
DRAW-A-GROUP PROJECTIVE TECHNIQUE

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By

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CHAPTER I

INTRODUCTION

The purpose of this study was to investigate the relationship between mood and scores on the "Experimental Draw-A-Group Projective Technique for Measuring Interpersonal Responsiveness," a projective test devised by Cookerly in 1965 (6). This projective technique is a form of personality analysis based on the drawing of a group by the subject. The validity of this projective technique was investigated for a group of normal subjects, where normal was defined as non-clinical.

The Problem

The widespread use of drawing analysis in recent years can probably be said to have originated formally with Goodenough's instructions for approximating children's intelligence through their drawings of the human figure, published in 1926 (10). Machover can largely be credited with beginning the present trend to use the human figure drawing as a projective technique (16).

The basic theory behind projective techniques and free association is quite simple. Mursell states it clearly when
he writes:

The creative work of an artist is a projection and revelation of himself. So are the responses of a subject when he is asked to give free association to a set of stimulus words, or to tell what story is suggested to him by a picture, or to say what he sees in cloud shapes or ink blots. This idea is the working basis of projective testing (17 p. 416).

Ruch also explains it quite simply when he says:

The essence of projective methods is presenting the subject with stimulus situations which are "ambiguous" or neutral, that is, they have no particular meaning except the special, private meaning which the individual by virtue of his own needs projects into them (19 p. 36).

The "Experimental Draw-A-Group Projective Technique for Measuring Interpersonal Responsiveness," known as the DAG, was intended by Cookerly to add the best advantages of projective techniques to an area where measurements are increasingly useful but are often laboriously made; namely, the area of interpersonal responsiveness (6, 1, 2). Cookerly's (6) initial findings in 1965, based on a limited number of subjects, indicated that the "draw-a-group" technique was more adapted for use with clinical population than with normal population. This point is amplified in Chapter II.

The validity of the "draw-a-group" technique for normal populations was investigated by correlating DAG scores obtained from a normal sample with another measure, namely, The Personal Feeling Scale (23). The Personal Feelings Scale,
known as the PFS, was devised by Wessman and Ricks (23) to assess the mood or affective state of individuals. The definitions of mood in two psychological dictionaries indicate its shifting and temporal features. Moods are generally defined as states of emotional or affective arousal of varying, but not permanent duration. They are presented as predispositions to respond in certain emotional ways and experience certain feelings (7, 8).

Ryle substantiates this when he declares:

A person's mood during a given period colors all or most of his actions and reactions during that period. His work and his play, his talk and his grimaces, his appetites and his daydreams, all reflect his touchiness, his joviality or his depression. Any one of them may serve as a barometer for all the others (20 p. 99).

Jacobsen (14 p. 80) states that since moods influence all feelings, thoughts and actions, they are significant indications of the ego state.

Wessman and Ricks do an excellent job of summarizing the basic ideas on mood when they say:

Mood thus is a primary disclosure of one's "being in the world" indicating the significance of one's total condition. That the world matters, and how it matters—in other words, the quality and implications of one's whole engagement is implicitly revealed by mood (23 p. 15).

If an individual's mood at a particular moment establishes the whole nature of his relationships with the world, then it would seem logical to assume that an individual's
mood at a particular moment would affect his interpersonal responsiveness. The most striking evidence supporting this assumption is the behavior of abnormal subjects with affective disorders. Their behavior, which includes interpersonal responsiveness, is colored by the predominant emotional mood of the patient.

Interpersonal responsiveness is defined by Cockerly as

... the degree to which a person can successfully respond to others in many and varied situations, thus causing others to increase their positive responsiveness to, or acceptance of, that person. Interpersonal responsiveness can also be thought of as involving a number of other factors such as sensitivity to others; a general tendency to interact with people individually or in groups; a person's general choice-value among others; a lack of interpersonal isolation; an ability to interrelate meaningfully with numerous persons; and that which is sometimes called social maturity (6, pp. 3-4).

If one's mood or affective state does affect one's interpersonal responsiveness, and if the "draw-a-group" technique can give an indication of interpersonal responsiveness in a "normal" subject, then scores on The Personal Feelings Scale should bear a significant relationship to scores on the "Experimental Draw-A-Group Projective Technique for Measuring Interpersonal Responsiveness," when both are administered to a "normal" sample.
Survey of Literature

When discussing mood one immediately thinks of its two extremes, namely, depression and elation. White (24, pp. 496-505) believes that there is a fairly consistent set of feelings and reactions that generally defines elation and depression for most people. Depression in general, is characterized by a sense of sadness, dejection, and discouragement, accompanied by listlessness, apathy, and a lowering of self-esteem, possibly with feelings of failure and worthlessness. To varying degrees one withdraws from objects into oneself, the world seems empty, one feels apathetic and dull, alone and unwanted, yet with no particular desire or energy to participate with others. There is little satisfaction in personal relationships and work.

In elation there is a sense of gladness and joy. One feels encouraged, freshened, and renewed self-confidence scars. The world seems full and bright. The senses are lively, the mind keen and alert. Energy abounds. One is eager to communicate and participate with others (23, p. 34).

There have been a few empirical studies dealing explicitly with the degree of happiness-unhappiness in normal subjects, and relating it to other personality characteristics. Before summarizing the most informative of these studies, it should
be noted that elation-depression, hedonic level, happiness-unhappiness are synonymous in describing affective state (23).

Goodwin Watson (22), in a questionnaire study of 355 adult students of education, used a composite happiness score based on self ratings (with no independent criteria of its validity) that was compared with the responses to other questions concerning a large number of individual items that might be expected to have some relationship to happiness or unhappiness. A great number of positive and negative findings were reported. One of these findings was that success in dealing with people is fundamental to happiness (22, p. 108).

Hartman (11), in a study of 195 male and female college students, used self-ratings and ratings of the subject's happiness by four of his friends to obtain a composite happiness score, which was correlated with the subject's scores on the Allport Vernon Study of Values, the Bernreuter Personality Inventory, an intelligence test, and a prejudice scale. In this group, most subjects considered themselves happier than average. Except for a slight indication that the unhappy were more inclined toward neuroticism, the findings showed little or no correlation between happiness and tests of values, intelligence, prejudice, and the personality inventory.
Johnson (15) asked thirty female college students to furnish self-ratings on an eleven-point mood scale for sixty-five to ninety consecutive days. She found no apparent relation with menstrual periodicity. Measurable behavioral differences were found in elated and depressed moods. The subjective correlates of depressed mood were reduced feelings of physical energy, felt loss of power and capacities, reduced outgoing friendliness, indecisiveness, diffidence, and withdrawal from social interaction.

P. M. Symonds (21) analyzed questionnaires from 1651 high school, college and graduate students in which "problems" and "interests" were ranked in fifteen life areas. A self-rating was made of general happiness. As in previous studies, the majority of the self-ratings were on the happy side of the scale. On the basis of his data, Symonds concluded that the happy are more concerned with affairs outside themselves, the unhappy are more concerned with themselves and their relation to others. In adolescence, with regard to sex, the happy are more interested in making themselves attractive for successful social relations; the unhappy are more directly concerned with sex.

All those earlier investigations of normal subjects used self-rating as the sole criteria of happiness-unhappiness.
With the exception of Johnson (15), Flugel (9), Hersey (12), and Wessman and Ricks (23), the assessments of happiness were all based on ratings made on only one occasion. Hersey's work consisted of a year's intensive study of twelve industrial workers and the effect of mood change on productivity.

Wessman and Ricks (23) hoped to achieve a considerable advance beyond the earlier work by studying the maintenance and change of hedonic level over an extended period of time, and by utilizing thorough clinical data and detailed knowledge of the subjects. They made two separate six-week mood studies. The first was with twenty-five Radcliffe students. The second was with eighteen Harvard students in a three-year personality study.

The large amounts of data gathered yielded a consistent picture of the characteristics of the happy and unhappy men. In general Wessman and Ricks (23) found consistently and significantly a variety of characteristics related to mood level. Particularly, there was ample evidence in happier men of their success and satisfaction in interpersonal relationships. There was excellent organization and direction to their lives, with a distinct sense of continuity and purpose and the necessary mastery of themselves and interpersonal situations to obtain their goals. The unhappy men, in contrast, were unsuccessful and dissatisfied in their interpersonal relationships,
fully isolated, anxious, and guilty. The happier girls also appeared to have more diverse interests and be more sociable.

Evidence from the foregoing studies supports the conclusion that mood does affect the quality and nature of one's interpersonal relations. The indications appear to be that happy people derive greater satisfactions from and appear to be more willing to enter into interpersonal interactions. In contrast, the less happy are prone to seek isolation and withdrawal.

The Measurement of Mood

There are a few fully developed instruments for the measurement of moods, namely the Hildreth (13) Feeling and Attitude Scales, the Nowlis (18) Mood Adjective Checklist, the Clyde (5) Mood Scale, and the Wessman and Ricks (23) Personal Feeling Scale.

The Hildreth Scale (13) was primarily designed for use with hospital patients, and the Nowlis (18) and Clyde (5) scales do not have the variety of dimensions and comprehensiveness of the Wessman and Ricks (23) scale.

The PFS was designed by Wessman and Ricks (23) on an a priori rational basis. Several aims were kept in mind in constructing the scale. The Scale should permit the report or "measurement" of a variety of feelings, because mood is not a unitary phenomenon, but has a variety of dimensions that
may be differentiated. To clarify these relationships it was desirable to keep each scale as unidimensional as possible, so that it measured only one specific variety of affect. On each scale it was desirable to encompass a wide and graduated range of feeling. An attempt was made to have approximately equal subjective gradations between adjacent items on a scale through the use of appropriate descriptive adjectives and statements. Also cross scale comparability was sought. The result was a battery of sixteen ten-point self-rating affect scales.

Average scores on elation-depression closely approximated the relative happiness-unhappiness of the men according to independent clinical judgement. The six judges correlated at .80. This happiness rank had a correlation of .71 with mean daily average Elation vs Depression (23, p. 103).

The Sixteen Personality Factor Questionnaire known as the 16PF test (3) is a carefully constructed and well studied test whose factors and their interrelationships have been repeatedly replicated. Factor scores for two forms of this test were correlated with the mean levels of mood as measured by the PFS. It was found that

The happier subjects (those with high mean scores or daily average elation-depression) had high scores on "H plus Parmia" a factor shown to be related to the following traits: "Adventurous,
likes meeting people; Shows strong interest in
the opposite sex; Gregarious, genial, responsive;
Kindly, friendly; Frank; Impulsive; Likes to
get into the swim; Self confident; and Carefree."
The more unhappy subjects were higher on "H minus.
Threatia or Threat Reactivity" traits of:
"Shy, timid, withdrawn; Little interest in
opposite sex; Aloof, cold, self-contained; Hard,
hostile; Secretive; Inhibited, conscientious;
Recoils from life; Lacking confidence; Careful,

The average hedonic level also correlated significantly
with a number of the Minnesota Multiphasic Personality Inven-
tory scales. Outstanding was the correlation of -.33 with
the MMPI "Depression" Scale (23, p. 115). It was found that:

"... more happy subjects tended toward the pole
of "social participation" or "normal extraversion"
with "poised, sociable, dominant, confident and
spontaneous" personalities. The less happy subjects
evidence "social withdrawal" or "disturbed intro-
version" with "shy, reclusive, submissive, guilty,
depressed, masochistic personalities" (23, p. 116).

The high correlation of the average hedonic level and the
clinical estimate of happiness indicates that the Personal
Feeling Scale has a high degree of validity. Its correlation
with such well known scales as the 16PF and the MMPI indicated
that it does successfully differentiate among some personality
characteristics.

Basic Assumptions and Hypotheses

As stated at the beginning of the chapter, the purpose
of this study was to investigate the relationship between
mood or affective state and scores obtained on the "Experimental Draw-A-Group Projective Technique for Measuring Interpersonal Responsiveness." Through this process it was hoped to establish the validity of the "draw-a-group" technique when used with "normal" samples. Three assumptions were made:

1. Interpersonal responsiveness is related to and dependent upon the affective state or mood of an individual.

2. Mood can be reliably assessed by the self-rating type of instrument.

3. The Personal Feelings Scale is a valid and reliable device for assessing mood level or affective state.

With the above three basic assumptions as premises, and in light of the facts presented in numerous studies concerned with mood, the following hypotheses were tested.

**Hypothesis I:** There will be a significantly positive relationship between mood as measured by the Personal Feelings Scale and interpersonal responsiveness as measured by the Draw-A-Group technique.

**Hypothesis II:** There will be a positive significant relationship between scores on the Draw-A-Group and the sociability vs. withdrawal, companionship vs. being isolated, and the elation vs. depression scales of the Personal Feelings Scale.
Scale, and these three scales will be the best predictors of the total PFS score.

Hypothesis III: Groups that score high on the PFS total will have DAG means that are significantly greater than the DAG means of groups that score low on the PFS total.
CHAPTER BIBLIOGRAPHY


5. Clyde, D. J., Clyde Mood Scale, Bethesda, Maryland, National Institute of Mental Health, 1958.


CHAPTER II

METHOD

Subjects

The sample utilized in the present study was drawn from a group of university students registered in eight freshmen English classes in introductory grammar and composition. This group was chosen because all freshmen must enroll for this course; hence the sample yielded an excellent cross section of university freshmen. The only criterion for selecting classes to be tested was one of convenience.

The group was composed of eighty-three males and sixty-seven females, a total sample of 150 students. The youngest was seventeen years old, the oldest was forty-seven, and the mean age of all subjects was 13.75 years, with a standard deviation of 2.91.

Materials

Measure of Mood

The Personal Feeling Scales, (see Appendix), by Wessman and Ricks, was used to measure the mood or affective state (4; pp. 267-273). The PFS has been described to some extent
in the previous chapter. It consists of a battery of sixteen ten-point self-rating scales, which an individual subject could use to give reports of his experience on a number of important aspects of mood. They cover such important affective dimensions as elation-depression, energy-fatigue, tranquility-anxiety, harmony-anger, sociability-withdrawal and feelings regarding such matters as love and sex, and work.

Examples of two of the scales are listed below.

6. OWN SOCIABILITY vs. WITHDRAWAL (how socially outgoing or withdrawn you felt today)
   10. Immensely sociable and outgoing.
   9. Highly outgoing, congenial and friendly.
   8. Very sociable and involved in things.
   7. Companionable. Ready to mix with others.
   6. Fairly sociable. More or less accessible.
   5. Not particularly outgoing. Feel a little bit unsociable.
   4. Retiring, would like to avoid people.
   3. Feel detached and withdrawn. A great distance between myself and others.
   2. Self-contained and solitary.
   1. Completely withdrawn. Want no human contact.

16. ELATION vs. DEPRESSION (how elated or depressed, happy or unhappy, you felt today)
   9. Very elated and in very high spirits. Tremendous delight and buoyance.
   8. Elated and in high spirits.
   7. Feeling very good and cheerful.
   6. Feeling pretty good; "O.K."
   4. Spirits low and somewhat "blue."
   3. Depressed and feeling very low. Definitely "blue."
   2. Tremendously depressed. Feeling terrible, miserable "just awful."
   1. Utter depression and gloom. Completely down. All is black and leaden.
The subject reads each of the ten possibilities offered for each scale and chooses the one that best describes the way the subject feels at that time. The choice that the subject makes on each scale is also the score the subject makes on that scale. For example, if the subject chose number 6 on scale 16, his score for that scale would be 6. A total PFS score is obtained by adding the sixteen scale scores. There is no time limit on this test.

Normative data were based on two separate six-week mood studies. The first was with twenty-five Radcliffe students. The second was with eighteen Harvard students in a three-year personality assessment project. Some 162 subjects began the study but only eighteen remained at the end of three years (4, pp. 30-32). When compared to normative samples for other tests, it would appear that the normative sample of Wessman and Ricks was extremely small. The smallness of the sample was compensated for by the richness of comparative data gathered during the three-year study, which indicated a high degree of validity. A summary of the highlights of the validity data is presented in the following paragraphs.

The correlation of the average hedonic level and clinical estimates of happiness was .71. Happiness estimates of the six judges correlated at .80, indicating high consensus (4, p. 103).
Few tests have been as widely researched as the MMPI personality test (2). The average hedonic level correlated significantly with a number of the MMPI scales. Outstanding was the correlation of - .83 with the MMPI "Depression Scale" (4, p. 115). The mood state characterized by this scale is one of pessimism of outlook on life and the future, feelings of hopelessness or worthlessness, slowing of thought and action, and frequently preoccupation with death and suicide (2, p. 55).

Mean daily average hedonic mood was also found to be significantly correlated with three factors on the 16 PF test (4, p. 113). These factors were, H. Parmia (Parasympathetic Immunity) vs. Threctia, E. Dominance vs. Submissiveness and O. Guilt vs. Confidence. The personality descriptions implied by these factors were stated briefly in Chapter I. The significant correlations were H. = .61, E. = .52 and O. = -.49.

Projective tests were used in the initial studies; however there was no evidence of relationship between mean level of average mood and any of the traditional scoring categories. The projective tests used were the Rorschach and the Rosenzweig Picture-Frustration Test.

Investigation of the subjects' college grade record indicated that the unhappy men were doing more poorly in
college than their classmates, although initially it appeared that their intellectual ability was in fact equal. Compared with their classmates the unhappy men were less adequate students, especially during their first two years in college (4, p. 123). The average level of daily mood correlated with the students' yearly grade average as follows: freshman year, .50; sophomore year, .53; junior year, .15; senior year, .31; and over-all four-year average, .43 (4, p. 123).

Although *The Personal Feeling Scale* is a new experimental test and has been validated on very few subjects, the preliminary data clearly indicated that it may indeed have validity as a tool for assessing mood by means of self report.

The subjects participating in the mood studies of Wessman and Ricks (4), compared with the general population, were probably above average in the qualities of being introspective, self-aware, and articulate, and therefore were likely to be ready and capable in examining and reporting their feelings. Some of the findings and relationships may hold true only for this select group and not for the population at large. However this did not create a problem in the present study because the population used was similar to that of Wessman and Ricks (4).

*The Personal Feeling Scale* was chosen for this study because there is more valid supporting data available for
it than for any other test of its type, even though the validating population was limited.

Measure of Interpersonal Responsiveness

The "Experimental Draw-A-Group Projective Technique for Measuring Interpersonal Responsiveness" was devised to add the best advantages of projective technique to the area of measuring interpersonal responsiveness (1, p. 3). The subject is given a blank piece of paper, a pencil with eraser, and is instructed to draw a group of people. This drawing is then evaluated by the examiner according to certain stated principles of evaluation. The principles, described fully by Cockerly (1, pp. 38-50), include such dimensions as degree of interaction, degree of role structure, richness of content, facial and postural expression, number and type of human figures, and graphic and structural indicators. Upon evaluation a score is ascribed to the drawing using the following scoring system:

5 points - very high in interpersonal responsiveness
4 points - high in interpersonal responsiveness
3 points - average in interpersonal responsiveness
2 points - low in interpersonal responsiveness
1 point - very low in interpersonal responsiveness (1, p. 38)

As the name of the test implies, it is an experimental technique and no research data is available other than
182 subjects; 107 were male and 75 female. The subjects were divided into three categories. Category A consisted of seventy-eight subjects who were members of various organized groups. One group was made up of children, another of adolescents, a third of adults, the fourth of middle-aged adults and fifth consisted of older adults.

Category B contained thirty-six subjects who had taken the Minnesota Multiphasic Personality Inventory. This yielded a score on the Social Introversion Extroversion Scale of the MMPI for each subject in this category.

Category C consisted of sixty-eight subjects who could be divided into five classifications of clients commonly tested by psychologists.

Category A could be considered as consisting of normal subjects representative of the general public while category C consisted of clinical subjects.

In category A the mean correlation between DAG Means of subjects and their sociometric scores was .68 with a standard deviation of .13. Although this correlation is moderate, it was reduced by the older adult group which had a correlation of .25 and a standard deviation of .13.

In category B the correlation between subjects' scores on the Social Introversion Extroversion Scale of the MMPI and the DAG means was .45 with a standard deviation of .14.
In category C the correlation between numerical ratings given by qualified observers and the DAG means was .80 with a standard deviation of .09.

Examination of the data by age group indicated that the "draw-a-group" projective technique appears to have more validity for mature adults. The degree of correlation increases as the mean age rises into the areas of mature adulthood, then falls with advanced age. The means of the coefficient of correlation ranged from .76 for the 7 to 12 age group, rose to .88 for the 18 to 55 age group then fell off to .50 for the 63 to 88 age range.

The validity data suggest that the "draw-a-group" technique would be of more use with clinical than with normal population, although in certain ways the technique seems equally useful for both groups. Some of the evidence indicated that children and older adults are less validly measured than are others, but this is not conclusive (1, p. 64).

The mean of the correlations between the three judges used to evaluate the drawings were .71, with the mean of the standard deviations being .03. These figures were interpreted as meaning there is substantial relationship between the judges' separate evaluations of interpersonal responsiveness. This indicated that sufficient reliability does exist to warrant further research.
Procedure

The PFS and the DAG were administered by the investigator during regular classroom periods, the PFS being administered first in all cases. Counterbalancing such as suggested by McGuigan (3, p. 113) was not employed, because it would have been necessary to limit the time allotted for the DAG test. It was felt that limiting the time available for the DAG test would tend to reduce productivity.

The subjects were not informed of the nature of the tests. They were told only that they were participating in an important research project of which the details could not be revealed at this time.

Each subject was supplied with a PFS questionnaire, an IBM form on which to mark his answer, and a blank sheet of standard size white paper and a pencil with an eraser.

The instructions given before the administration of the tests were as follows:

Print your name, age and sex on the IBM form provided, and also at the top of the blank sheet of paper provided. On the questionnaire are sixteen questions, each having ten possible answers. Read each question carefully and out of the ten possible answers, pick the one that applies best to you at this time. Mark your choice for each of the sixteen questions in the appropriate place on the IBM form. When you have finished this, take the blank sheet of paper and draw a group of people.
Questions asked by the subjects, e.g., "How many people should be drawn?", were met with the reply, "It is your drawing. You may do it however you wish." Statements indicating concern over artistic quality were told, "How good an artist you are doesn't matter at all. Just do it your own way and that will be good enough." In this manner all statements and questions were handled in such a way as to neither limit nor guide the drawing.

Furthermore, the subjects were asked not to copy the drawing of their neighbor and to cover up their own drawing when they had finished.

No difficulties were encountered during the administration of the tests. All students cooperated fully and no copying was evident. The tests required approximately forty-five minutes to administer in each class.

The DAG tests were all evaluated by two separate judges. The two judges were the experimenter and the original designer of the DAG. The values utilized in all computations were the means of the two separate evaluations.
CHAPTER BIBLIOGRAPHY


CHAPTER III

RESULTS

The hypotheses presented in Chapter I were tested by subjecting the obtained data to a multiple regression analysis and an analysis of variance. The criterion or dependent variable was the "Experimental Draw-a-Group Projective Technique for Measuring Interpersonal Responsiveness," known as the DAG. The independent variables or predictors were the sixteen sub-scores and the total score of the Personal Feeling Scales known as the PFS.

Chapter III has been organized in the following order:

1. Statistical Treatment
2. Means and Standard deviations of all test scores
3. Correlational Data
4. Analysis of Variance

Statistical Treatment

The multiple correlation regression problem and the analysis of variance were solved by an IBM 1620 computer. The program yielded the means and standard deviations of all the variables, the intercorrelations among the sixteen predictor variables, the correlations between the predictors and the criterion, and the regression coefficients. Also an analysis of variance and t-tests were computed from rank ordered data.
Means and Standard Deviations

Table I contains the means and standard deviations of all the predictor scores and of the criterion score employed in the present study.

### Table I

**Means and Standard Deviations of the Predictor Test, Its Sub Scales and the Criterion Test**

(N=150)

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
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<tbody>
<tr>
<td>PES (Predictor Test)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Fullness vs. Emptiness of Life (FE)</td>
<td>6.29</td>
<td>1.54</td>
</tr>
<tr>
<td>2. Receptivity Towards and Stimulation by the World (RS)</td>
<td>6.84</td>
<td>1.25</td>
</tr>
<tr>
<td>3. Social Respect vs. Social Contempt (SRC)</td>
<td>7.12</td>
<td>1.08</td>
</tr>
<tr>
<td>4. Personal Freedom vs. External Constraint (FC)</td>
<td>6.53</td>
<td>1.68</td>
</tr>
<tr>
<td>5. Harmony vs. Anger (HA)</td>
<td>6.95</td>
<td>1.42</td>
</tr>
<tr>
<td>6. Own Sociability vs. Withdrawal (SW)</td>
<td>6.75</td>
<td>1.65</td>
</tr>
<tr>
<td>7. Companionship vs. Being Isolated (CI)</td>
<td>7.50</td>
<td>1.53</td>
</tr>
<tr>
<td>8. Love and Sex (LS)</td>
<td>7.46</td>
<td>1.68</td>
</tr>
<tr>
<td>9. Present Work (W)</td>
<td>6.15</td>
<td>2.03</td>
</tr>
<tr>
<td>10. Thought Process (T)</td>
<td>6.21</td>
<td>1.40</td>
</tr>
<tr>
<td>11. Tranquility vs. Anxiety (TA)</td>
<td>5.72</td>
<td>1.74</td>
</tr>
<tr>
<td>12. Impulse Expression vs. Self-Restraint (ER)</td>
<td>6.27</td>
<td>1.24</td>
</tr>
<tr>
<td>13. Personal Moral Judgment (PMJ)</td>
<td>6.21</td>
<td>1.34</td>
</tr>
<tr>
<td>14. Self-confidence vs. Feeling of Inadequacy (SC)</td>
<td>6.63</td>
<td>1.52</td>
</tr>
<tr>
<td>15. Energy vs. Fatigue (EF)</td>
<td>6.27</td>
<td>1.59</td>
</tr>
<tr>
<td>16. Elation vs. Depression (ED)</td>
<td>6.15</td>
<td>1.65</td>
</tr>
<tr>
<td>PES Total</td>
<td>105.02</td>
<td>13.33</td>
</tr>
<tr>
<td>DAS (Criterion Test)</td>
<td>2.30</td>
<td>1.07</td>
</tr>
</tbody>
</table>
The first column in Table I lists the code number, the name, and the abbreviation of the sixteen predictor scores of the PFS. The second and third columns list the means and standard deviations of all scores, including the criterion DAG, which is at the bottom of the table.

The largest means were found to be CI=7.50, LS=7.46, and SRC=7.12. The smallest means were ED=6.15, W=6.15, and TA=5.72. All sixteen sub-score means of the PFS were above 5.00, which is considered the average score.

The factor associated with work satisfaction (W) had the greatest variability of scores, with a standard deviation of 2.03. The factor associated with social respect (SPC) had the least variability of scores, with a standard deviation of 1.03.

The DAG mean of 2.30 was slightly below the average of 2.50.

Correlational Data

Presented in Table II are the simple Pearson r correlations computed among the various independent and dependent variable employed in the study.

Inspection of Table II shows that the intercorrelations among the sixteen PFS score ranged from almost negligible to high. There were 41 intercorrelations less than .20, 67
<table>
<thead>
<tr>
<th>W</th>
<th>T</th>
<th>TA</th>
<th>ER</th>
<th>FMJ</th>
<th>CI</th>
<th>EF</th>
<th>ED</th>
<th>PFS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE II -- Continued**

- .24**
- .24** .17
- .02 .24** .13
- .14 .19* .12 .25**
- .36** .29** .18* .02 .08
- .37** .36** .28** .08 .24** .40**
- .39** .24** .48** .12 .29** .32** .51**
- .56** .45** .52** .24** .43** .60** .70** .72**
- .12 .06 .02 .02 .14 .04 .09 .03 .08
intercorrelations that ranged between .20 and .40, 25 intercorrelations that fell between .40 and .70 and two that fell between .70 and .90.

Among the sixteen PFS scales the highest intercorrelation was between the Elation-Depression (ED) scale and the Energy-Fatigue (EF) scale. This intercorrelation was .51. The second highest intercorrelation of .50 was between the ED scale and the Fullness of Life (FL) scale. The lowest intercorrelations were between the Impulse Expression-Self-restraint (ER) scale and the Receptivity Toward and Stimulation by the World (RS) scale and between the Present Work (W) scale and the Self-confidence (SC) scale. Both of these intercorrelations were .02.

Scale ER (variable 12) as a unit had the lowest intercorrelations with the other scales and the total PFS score. All the intercorrelations of the ER scale, except three, were not significantly different from zero.

All sixteen variables, except ER, had moderate to high correlations with the total PFS score. This indicated that in general the total test was fairly homogeneous.

The highest correlation was between ED and the total (.72) while the lowest was between ER and the total (.24). All these correlations were significant at the one percent level.
Hypothesis I stated that there would be a significant positive relationship, that is at least at the five percent level of confidence, between total PFS score and the DAG score. This hypothesis was not confirmed. The correlation between the predictor total and the criterion was \(-.08\); this was not significantly different from zero.

Inspection of Table II (bottom row) reveals that none of the sixteen predictor sub-score correlations with the criterion were significantly different from zero. Twelve of the sixteen correlations were negative. The correlations of the SW, CI, and ED scales of the predictor test with the criterion test were \(.02\), \(-.02\) and \(-.03\) respectively. These data did not support Hypothesis II, which stated that there would be a positive and significant relationship between the SW, CI, and ED scales and the criterion test and that these three scales would be the best predictors out of the sixteen scales.

The next major analytic step was to compute a comprehensive multiple regression analysis involving the DAG as the criterion score and the sixteen PFS variables as predictors. The particular computer program utilized was a Stepwise Multiple Regression Analysis. The general data yielded by this program were discussed at the beginning of the chapter.
The multiple correlation ($R$) indicates the amount of correlation between the criterion test (DAG) and two or more predictors of the sixteen predictor scales (PPS) taken together. The multiple $R$ is also related to the intercorrelation among the sixteen predictor scales as a unit as well as to their separate correlations with the criterion test.

The procedure used to compute multiple $R$'s yields only positive multiple coefficients regardless of the sign of the zero order correlations. Correct signs for the multiple $R$'s are obtained from inspection of the signs of the zero order $r_{X,Y}$ between the predictor and the criterion. In this study the multiple correlations were considered to be negative.

Table III presents the results of the Stepwise Multiple Regression Analysis Program. The purpose of this program was to obtain a rank order of magnitude for each predictor variable with respect to its relative contribution to the overall multiple correlation.

Column One in Table III lists the sixteen predictor variables ranked in order of their contributions to the multiple correlation, taking into account the overlapping effect among the predictors. Consequently, it may be observed that the factor that contributed the most to the multiple correlation was PMJ, while the factor that contributed the least was LS.
**TABLE III**

Rank Order of Predictors with regard to contribution to the multiple correlation showing F level, standard error of the difference between $R$, multiple correlation and coefficient of correlation.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$F$ Level</th>
<th>Standard Error</th>
<th>$R^2$</th>
<th>$R_a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 PMJ</td>
<td>3.1782</td>
<td>1.0712</td>
<td>0.02102</td>
<td>-0.145</td>
</tr>
<tr>
<td>9 W</td>
<td>1.5253</td>
<td>1.0693</td>
<td>0.03107</td>
<td>-0.176</td>
</tr>
<tr>
<td>4 FC</td>
<td>1.6127</td>
<td>1.0671</td>
<td>0.04166</td>
<td>-0.204</td>
</tr>
<tr>
<td>2 RS</td>
<td>0.8992</td>
<td>1.0675</td>
<td>0.04757</td>
<td>-0.218</td>
</tr>
<tr>
<td>6 SW</td>
<td>0.9773</td>
<td>1.0676</td>
<td>0.053990</td>
<td>-0.232</td>
</tr>
<tr>
<td>3 SRC</td>
<td>0.6452</td>
<td>1.0689</td>
<td>0.05823</td>
<td>-0.241</td>
</tr>
<tr>
<td>5 HA</td>
<td>0.5135</td>
<td>1.0707</td>
<td>0.06163</td>
<td>-0.248</td>
</tr>
<tr>
<td>15 EF</td>
<td>0.2889</td>
<td>1.0734</td>
<td>0.06355</td>
<td>-0.252</td>
</tr>
<tr>
<td>16 ED</td>
<td>0.4241</td>
<td>1.0756</td>
<td>0.06637</td>
<td>-0.257</td>
</tr>
<tr>
<td>1 FE</td>
<td>0.2722</td>
<td>1.0784</td>
<td>0.06820</td>
<td>-0.261</td>
</tr>
<tr>
<td>7 CI</td>
<td>0.2638</td>
<td>1.0813</td>
<td>0.06998</td>
<td>-0.264</td>
</tr>
<tr>
<td>10 T</td>
<td>0.0998</td>
<td>1.0848</td>
<td>0.07064</td>
<td>-0.265</td>
</tr>
<tr>
<td>12 ER</td>
<td>0.0502</td>
<td>1.0886</td>
<td>0.07098</td>
<td>-0.266</td>
</tr>
<tr>
<td>14 SC</td>
<td>0.0185</td>
<td>1.0926</td>
<td>0.07111</td>
<td>-0.267</td>
</tr>
<tr>
<td>11 TA</td>
<td>0.0081</td>
<td>1.0966</td>
<td>0.07117</td>
<td>-0.267</td>
</tr>
<tr>
<td>8 LS</td>
<td>0.0037</td>
<td>1.1007</td>
<td>0.07119</td>
<td>-0.267</td>
</tr>
</tbody>
</table>

*a*None of the coefficients of multiple correlation differs significantly from zero.*
Listed in column four of Table III are the coefficients of multiple determination \( R^2 \) which represent the proportion of variance in the criterion variable that is accounted for by a given set of predictor variables. The \( R \) column (multiple correlation) is the square root of the coefficient of multiple determination \( R^2 \). To explain further, the fourth column entry of .03107 is the coefficient of multiple determination obtained when both variables PMJ and W (variables 13 and 9) were used as predictors in a multiple regression problem—and the resultant multiple correlation is \(-.176\). In other words, a given \( R \) presented in the last column of Table III represents the multiple correlation of the variable listed in the corresponding row plus all variables listed in preceding rows. As shown in the bottom row of Table III when all variables were used together, the \( R^2 \) is .07119, and the \( R \) is \(-.267\). Additionally, the \( F \) value of 1.5253 in column two represents the test of significance of the difference between PMJ \((r=-.145)\) and obtained for PMJ and W combined \((r=-.176)\). Each variable was added to the composite of predictor variables according to their \( F \) levels.

Inspection of Table III will reveal that none of the coefficients of multiple correlation differed significantly from zero. Inspection of column one will show that scales
SW, CI and ED were not the ones that contributed the most to the multiple correlation. In fact scales CI and ED added very little to the correlation, and SW added little more. The data in Table III failed to support Hypothesis II.

In view of the fact that none of the coefficients of multiple correlation differed significantly from zero, there was no point in computing a multiple regression equation. However, in the interest of completeness of data, the statistics used in the computation of a multiple regression equation involving all sixteen variables as a set of predictors are listed in Table IV.

The partial regression coefficients (or $b$) function as a multiplying constant to give weight to the various predictors in the composite. Each $b$ coefficient is a ratio that indicates how many units the predicted values increase in a given variable when the effects of the other variables in the composite are held constant. The $t$ in column four of Table IV refers to the significance of the contribution of each independent variable. The purpose of the Beta coefficients in column five is to give the weight in standard score form, as a multiplying constant, to the various predictors in the composite. Beta coefficients determine the relative contributions of each independent variable in the multiple regression equation.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Partial Regression Coefficient (b)</th>
<th>Standard Error of ( b )</th>
<th>( t )</th>
<th>Standard Partial Regression Coefficient (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.040</td>
<td>.075</td>
<td>.530</td>
<td>.057</td>
</tr>
<tr>
<td>2</td>
<td>.070</td>
<td>.987</td>
<td>.800</td>
<td>.081</td>
</tr>
<tr>
<td>3</td>
<td>.104</td>
<td>.107</td>
<td>.973</td>
<td>.105</td>
</tr>
<tr>
<td>4</td>
<td>.072</td>
<td>.062</td>
<td>1.161</td>
<td>.113</td>
</tr>
<tr>
<td>5</td>
<td>.043</td>
<td>.076</td>
<td>.563</td>
<td>.056</td>
</tr>
<tr>
<td>6</td>
<td>.051</td>
<td>.071</td>
<td>.724</td>
<td>.079</td>
</tr>
<tr>
<td>7</td>
<td>.040</td>
<td>.079</td>
<td>.513</td>
<td>.057</td>
</tr>
<tr>
<td>8</td>
<td>.004</td>
<td>.063</td>
<td>.061</td>
<td>.006</td>
</tr>
<tr>
<td>9</td>
<td>.066</td>
<td>.053</td>
<td>1.231</td>
<td>.124</td>
</tr>
<tr>
<td>10</td>
<td>.020</td>
<td>.076</td>
<td>.264</td>
<td>.026</td>
</tr>
<tr>
<td>11</td>
<td>.005</td>
<td>.062</td>
<td>.082</td>
<td>.008</td>
</tr>
<tr>
<td>12</td>
<td>.017</td>
<td>.080</td>
<td>.213</td>
<td>.020</td>
</tr>
<tr>
<td>13</td>
<td>.110</td>
<td>.076</td>
<td>1.457</td>
<td>.137</td>
</tr>
<tr>
<td>14</td>
<td>.009</td>
<td>.075</td>
<td>.121</td>
<td>.013</td>
</tr>
<tr>
<td>15</td>
<td>.054</td>
<td>.078</td>
<td>.685</td>
<td>.079</td>
</tr>
<tr>
<td>16</td>
<td>.047</td>
<td>.077</td>
<td>.614</td>
<td>.073</td>
</tr>
</tbody>
</table>
Analysis of Variance

The statistical technique utilized to test Hypothesis III was a simple analysis of variance. The hypothesis specified that the DAG means of groups that had high PFS scores would be significantly greater than the DAG means of groups that had low PFS scores.

Analysis of variance is a technique which provides an objective criterion for deciding whether the variability between groups is large enough in comparison with the variability within groups to justify the inference that the means of the population from which the different groups were drawn are not the same.

The hypothesis was tested by ranking the 150 PFS total scores from highest to lowest. These scores were then divided into three groups on the basis of top twenty-five percent, middle fifty percent, and lower twenty-five percent of ranked PFS scores. Table V shows the DAG means and standard deviations of the three PFS groups which resulted as a function of partitioning. Inspection of column one shows that there were 37 subjects in the upper group, 76 subjects in the middle group, and 37 subjects in the lower group.

A simple analysis of variance was computed to determine the significance of the differences among the DAG means of
TABLE V
MEANS AND STANDARD DEVIATIONS OF THE CRITERION TEST GROUPS RESULTING FROM RANK ORDERING OF THE PREDICTOR TEST SCORES

<table>
<thead>
<tr>
<th>PFS Group</th>
<th>DAG Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper (N=37)</td>
<td>2.1081</td>
<td>1.1338</td>
</tr>
<tr>
<td>Middle (N=76)</td>
<td>2.3421</td>
<td>1.0072</td>
</tr>
<tr>
<td>Lower (N=37)</td>
<td>2.4054</td>
<td>1.1260</td>
</tr>
</tbody>
</table>

of the three PFS groups. The results of this computation are summarized in Table VI. Immediately apparent is the F level of 0.8173, which was not significant. In turn, this result indicates that there was no significant difference between the three DAG means. Therefore, Hypothesis III was not confirmed. To summarize, the obtained evidence did not support any of the three hypotheses.

TABLE VI
SUMMARY OF ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Variance Estimate</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error Between</td>
<td>2</td>
<td>1.9082</td>
<td>0.9541</td>
<td>0.8173a</td>
</tr>
<tr>
<td>Error Within</td>
<td>147</td>
<td>171.5917</td>
<td>1.1672</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>149</td>
<td>173.5000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^a F ratio not significant
CHAPTER IV

DISCUSSION

The results presented in Chapter III will be discussed within the framework of the three research hypotheses. Both tests used in the present study are new and experimental. The whole area of mood is one that has not been extensively researched; hence data are scarce. The data that were available indicated that a valid mood-assessing device might reflect differences in interpersonal responsiveness. The present study was an attempt to ascertain the relationship between The Personal Feeling Scales, a mood-assessing device, and the "Experimental Draw-a-Group Technique for Measuring Interpersonal Responsiveness." No other research has been done utilizing both these tests.

Hypothesis I predicted that the relationship between mood (PFS total) and interpersonal responsiveness (DAG) would be positive and significant. This hypothesis was not confirmed. The correlation was negative and not significant.

Mean scores on the sixteen PFS predictors indicate that most students scored themselves as above average in happiness. These findings agreed with other research (2, 3, 4, 5).
While plotting the raw data, it was found that many subjects who obtained high scores on the PFS obtained low scores on the DAG. This was contrary to what was expected; however, there are several reasons that may account for it. Some subjects who should have scored low on the PFS (indicating unhappiness) may have utilized the psychological defense of reaction formation and rated themselves as very happy. These subjects would be likely to have high PFS scores and low DAG scores. Conversely, many unhappy individuals have learned to interact successfully in the social setting; such individuals may tend to have low PFS scores but high DAG scores. These factors may account for the non-significant negative correlation.

Hypothesis II predicted that there would be a positive and significant relationship between scores on the DAG and the sociability vs. withdrawal (SW), companionship vs. being isolated (CI), and the elation vs. depression (ED) scales of the PFS, and that these three scales would be the best predictors of the total PFS score.

Hypothesis II was not confirmed. Only the SW scale showed a positive direction; however, none of the three correlations was significant. The three scales chosen were not the best predictors of the total PFS score. The three best
predictors were found to be personal moral judgment (PMJ), present work (W) and personal freedom vs. external constraint (FC). This is in partial contradiction to previous data (5), which found the ED scale to be the best single predictor of total PFS scores.

The final hypothesis predicted that there would be a significant difference between the DAG means of three groups formed on the basis of high, middle and low PFS total scores. This hypothesis was not confirmed. There was no significant difference found between the DAG means of the three groups. The possibility existed that the population sampled, and from which the three groups were formed, was too homogeneous, thus accounting for low obtained correlations. However, examination of the data revealed that this was not so. The high PFS group included scores ranging from 138 to 114 on the PFS total. The middle group had a range from 114 to 97 and the scores of the low group ranged from 97 to 60. This clearly indicated a wide range of variability on PFS total scores. The same reasons that account for the lack of correlation in Hypothesis I might reasonably account for the lack of a significant difference between the groups in Hypothesis III.
No immediate conclusions can be drawn from this study regarding the validity of the DAG technique. Although the results did not offer significant data pertaining to the validity, they did substantiate the reliability of the DAG scoring criteria. The scores of the two independent judges who evaluated the DAG had a correlation of .73. This compared very favorably with the value of .71 obtained by Cookerly in his original study (1, p. 67).

From the standpoint of future research, several recommendations are suggested. For instance, fewer subjects might be used in the future. This would give the experimenter an opportunity to become well acquainted with each subject. It has been found that as rapport with the subject increases, there is a tendency for the subject to give more truthful answers to test questions (5).

The PFS should be administered to each subject over an extended period of time to obtain an average mood level. Experimenters have found a wide range in mood fluctuation from day to day (5).

Both PFS and DAG test results should be correlated with some well researched tool such as the MMPI. There are two scales in particular in the MMPI which might contribute meaningful data. These are the Depression Scale and the Social
Introversion Scale. Data from these scales would help in validating both the PFS and DAG.


CHAPTER V

SUMMARY

The present study was undertaken to investigate the relationship between mood and interpersonal responsiveness. Through this process it was hoped to establish the validity of the "draw-a-group" technique when used with normal subjects. This was accomplished by computing a multiple correlation between the criterion variable and the predictor variables and by computing a simple analysis of variance. The following hypotheses were tested.

Hypothesis I. The relationship between mood (PFS) and interpersonal responsiveness (DAG) will be positive and significant.

Hypothesis II. There will be a positive and significant relationship between scores on the DAG and the sociability vs. withdrawal (SW), companionship vs. being isolated (CI) and the elation vs. depression (ED) scales of the Personal Feelings Scales, and these three scales will be the best predictors of the total PFS score.

Hypothesis III. Groups that score high on the PFS total will have DAG means that are significantly greater than the DAG means of groups that score low on the PFS total.
The sample was composed of 150 students enrolled in eight freshman English classes at North Texas State University. The sample included 83 males and 67 females; the mean age was 18.75 years.

The **Personal Feeling Scales** were used as independent variables to assess the mood or affective state of the subject. The PFS is a self-rating scale which gives a total score and sixteen sub-scores. The "Experimental Draw-a-Group Projective Technique for Measuring Interpersonal Responsiveness" was used as the dependent variable. The subject is asked to draw a group of people. The drawing is then evaluated according to a number of specific scoring criteria. Both tests were administered by the investigator during regular fifty-minute classroom periods. Subjects were not informed as to the nature of the task.

Hypotheses I and II were tested by subjecting the data to a multiple regression analysis. Hypothesis III was tested by calculating an analysis of variance. The statistical calculations were carried out by the North Texas State University Computer Center. The principal results obtained were as follows:

1. Hypothesis I was not verified. The correlation between the predictor and the criterion \( r = -0.08 \) was not
significantly different from zero. The correlation was negative in sign.

2. Hypothesis II was not verified. The SW, CI and ED scales of the PFS were not the best predictors of total PFS score. Scales PMJ, W and FC were the three best predictors of total PFS score. However, none of these scales correlated significantly with the criterion.

3. Hypothesis III was not confirmed. There was no significant difference between the DAG means of the three groups.
APPENDIX

THE PERSONAL FEELING SCALES

I. FULLNESS vs. EMPTINESS OF LIFE (how emotionally satisfying, abundant or empty, your life felt today)
10. Consummate fulfillment and abundance.
8. Filled with warm feelings of contentment and satisfaction.
7. My life is ample and satisfying.
6. Life seems fairly adequate and relatively satisfying.
5. Some slight sense of lack, vague and mildly troubling.
4. My life seems deficient, dissatisfying.
3. Life is pretty empty and barren.
2. Desolate, drained dry, impoverished.
1. Gnawing sense of emptiness, hollowness, void.

II. RECEPTIVITY TOWARDS AND STIMULATION BY THE WORLD (how interested and responsive you felt to what was going on around you)
10. Passionately absorbed in the world’s excitement. My sensations and feelings incredibly intensified.
8. Senses lively. Great interest and delight in everything around me.
7. Open and responsive to my world and its happenings.
5. Slightly disinterested and unresponsive.
3. Dull and apathetic. Almost no interest or desire for anything.
2. Mired down in apathy. My only desire is to shut out the world.
1. Life is too much trouble. Sick of everything, want only oblivion.

III. SOCIAL RESPECT vs. SOCIAL CONTEMPT (how you felt other people regarded you, or felt about you, today)
10. Excite the admiration and awe of everyone who matters.
9. Stand extremely high in the estimation of people whose opinions count with me.
8. People I admire recognize and respect my good points.
7. Confident that some people think well of me.
6. Feel I am appreciated and respected to some degree.
5. Some people don't seem to see much value in me.
4. I am looked upon as being of small or of no account.
3. People have no respect for me at all.
2. I am scorned, slighted, pushed aside.
1. Everyone despises me and holds me in contempt.

IV. PERSONAL FREEDOM vs. EXTERNAL CONSTRAINT (how much you felt you were free or not free to do as you wanted)
10. Absolutely free to consider and try any new adventurous prospect.
9. Independent and free to do as I like.
8. Ample scope to go my own way.
7. Free, within broad limits, to act much as I want to.
6. Can do a good deal on my own initiative and in my own fashion. No particularly restrictive limitations.
5. Somewhat constrained and hampered. Not free to do things my own way.
4. Checked and hindered by too many demands and constraints.
3. Hemmed in, cooped up. Forced to do things I don't want to do.
2. Trapped, oppressed.
1. Overwhelmed, smothered. Can't draw a free breath.

V. HARMONY vs. ANGER (how well you got along with, or how angry you felt toward, other people)
10. Boundless good will and complete harmony.
9. Enormous good will and great harmony.
8. Considerable good will.
7. Get along well and rather smoothly.
6. Get along pretty well, more or less good feeling.
5. A little bit annoyed, somewhat "put out". Minor irritations.
4. Annoyed, irritated, provoked.
3. Very angry. Ill will.
2. Enraged. Seething with anger and hostility.
1. Violent hate and fury. Desire to attack, destroy.
VI. OWN SOCIABILITY vs. WITHDRAWAL (how socially outgoing or withdrawn you felt today)
10. Immensely sociable and outgoing.
9. Highly outgoing, congenial and friendly.
8. Very sociable and involved in things.
7. Companionable. Ready to mix with others.
6. Fairly sociable. More or less accessible.
5. Not particularly outgoing. Feel a little bit unsociable.
4. Retiring, would like to avoid people.
3. Feel detached and withdrawn. A great distance between myself and others.
2. Self-contained and solitary.
1. Completely withdrawn. Want no human contact.

VII. COMPANIONSHIP vs. BEING ISOLATED (the extent to which you felt emotionally accepted by, or isolated from other people.)
10. Complete participation in warm, intimate friendship.
9. Enjoy the warmth of close companionship.
8. Thoroughly and genuinely liked.
7. Feel accepted and liked.
6. More or less accepted.
5. Feel a little bit left out.
4. Feel somewhat neglected and lonely.
3. Very lonely. No one seems to care much about me.
2. Tremendously lonely. Friendless and forlorn.

VIII. LOVE AND SEX (the extent to which you felt loving and tender, or sexually frustrated and unloving)
10. Feel the rapture of full, joyous, and complete love.
8. Warm sharing of intimacy and affection.
7. Pleasant companionship and some affection. Sharing interests and good times.
6. Fairly satisfying experiences or expectations. Some mutual interest and understanding.
5. Not much feeling of mutual understanding. Some lack of interest. Slightly frustrated.
3. Feel unable to maintain good relationships. Unloved. Much frustration.
2. Hurt, bewildered, incapable of loving or being loved. Vast amount of frustration.
1. Hopeless, cold, unloved and unloving.

IX. PRESENT WORK (how satisfied or dissatisfied you were with your work)
10. Tremendous, intense delight in my work. Proud of my purpose, skill, and accomplishment.
9. Great pleasure and enjoyment in my work. Much fulfillment through work.
8. Considerable satisfaction with my work. Eager to continue.
7. Satisfied with my work. Encouraged to go on with it.
6. More or less satisfied with my work. Keep plugging along.
5. Somewhat dissatisfied with my work. Not much enjoyment doing it.
4. Dissatisfied with my work. Can't see much good in it. Moderately frustrated.
3. Greatly dissatisfied with my work. Not doing a good job. Markedly frustrated.

X. THOUGHT PROCESSES (how readily your ideas came and how valuable they seemed)
10. I am a surging torrent of spectacular insights.
9. Brilliant penetrating ideas emerging spontaneously and with great rapidity.
8. Ideas coming quickly and effortlessly.
7. Clever and keen.
6. Quite alert. Thoughts fairly quick and clear.
5. Not particularly alert. My ideas trivial and commonplace.
4. My mind feels ponderous and dull. My thoughts are slow and monotonous.
3. My thoughts all seem weary, stale, flat, and unprofitable.
2. My mind is stagnant. Almost nothing freshens it.
1. My mind is cold, dead. Nothing moves.
XI. TRANQUILLITY vs. ANXIETY (how calm or troubled you felt)
9. Exceptional calm, wonderfully secure and care-free.
8. Great sense of well-being. Essentially secure, and very much at ease.
7. Pretty generally secure and free from care.
6. Nothing particularly troubling me. More or less at ease.
5. Somewhat concerned with minor worries or problems. Slightly ill at ease, a bit troubled.
4. Experiencing some worry, fear, trouble, or uncertainty. Nervous, jittery, on edge.
2. Tremendous anxiety and concern. Harassed by major worries and fears.
1. Completely beside myself with dread, worry, fear. Overwhelmingly distraught and apprehensive. Obsessed or terrified by insoluble problems and fears.

XII. IMPULSE EXPRESSION vs. SELF-RESTRAINT (how expressive and impulsive or internally restrained and controlled, you felt)
10. Wild and complete abandon. No impulse denied.
8. Quick to act on every immediate desire.
7. Allowing my impulses and desires a pretty free rein.
6. Moderate acceptance and expression of my own needs and desires.
5. Keep a check on most whims and impulses.
4. On the straight and narrow path. Keeping myself within strong bounds.
3. Obeying rigorous standards. Strict with myself.
2. Refuse to permit the slightest self-indulgence or impulsive action.

XIII. PERSONAL MORAL JUDGMENT (how self-approving, or how guilty, you felt)
9. I have a sense of extraordinary worth and goodness.
8. In high favor with myself. Well up to my own best standards.
7. Consider myself pretty close to my own best self.
6. By and large, measuring up to most of my moral standards.
5. Somewhat short of what I ought to be.
4. I have a sense of having done wrong.
3. Feel that I have failed morally.
2. Heavy laden with my own moral worthlessness.
1. In anguish. Tormented by guilt and self-loathing.

XIV. SELF-CONFIDENCE vs. FEELING OF INADEQUACY (how self-assured and adequate, or helpless and inadequate, you felt.)

10. Nothing is impossible to me. Can do anything I want.
8. Highly confident of my capabilities.
7. Feel my abilities sufficient and my prospects good.
6. Feel fairly adequate.
5. Feel my performance and capabilities somewhat limited.
4. Feel rather inadequate.
3. Distressed by my weakness and lack of ability.
2. Wretched and miserable. Sick of my own incompetence.
1. Crushing sense of weakness and futility. I can do nothing.

XV. ENERGY vs. FATIGUE (how energetic, or tired and weary, you felt)

9. Exuberant vitality; tremendous energy, great zest for activity.
8. Great energy and drive.
7. Very fresh, considerable energy.
6. Fairly fresh. Adequate energy.
5. Slightly tired, indolent. Somewhat lacking in energy.
2. Tremendously weary. Nearly worn out and practically at a standstill. Almost no resources.
1. Utterly exhausted. Entirely worn out. Completely incapable of even the slightest effort.

XVI. ELATION vs. DEPRESSION (how elated or depressed, happy or unhappy, you felt today)
9. Very elated and in very high spirits. Tremendous delight and bouyance.
8. Elated and in high spirits.
7. Feeling very good and cheerful.
6. Feeling pretty good, "O.K."
4. Spirits low and somewhat "blue."
3. Depressed and feeling very low. Definitely "blue."
2. Tremendously depressed. Feeling terrible, miserable, "just awful."
1. Utter depression and gloom. Completely down. All is black and leaden.
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