

A CORRELATIONAL STUDY OF THE FIRO-B AND MMPI

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CHAPTER I

INTRODUCTION

Concurrent with the growth of clinical psychology has been the proliferation and use of psychological tests for the purposes of counseling, diagnosis and research. Advancements in psychometric testing have often come about through theoretical progress in clinical psychology. However, in the area of personality assessment, psychometric developments have not always kept pace with developments in personality theory. Historically, the development of personality theory can be seen as evolving from the intra-individual formulations of Freud to more interpersonal formulations.

Freud saw personality as the interplay of three major systems within the individual: the id, ego, and superego. However, in the latter part of the 19th century the emerging disciplines of sociology and anthropology led some personality theorists to see man as being extremely malleable and as a product of his society as much as the producer of it. This more interpersonal view of the nature of man gradually began to influence psychology. Hall and Lindzey (1970) trace this development in personality theory through the theories of Alfred Adler, Erich Fromm, Karen Horney and Harry Stack Sullivan. Adler was the first major theorist to recognize that man is motivated more by social urges than innate instincts. Fromm, leaning heavily on the works of Karl Marx, proposed that an understanding of man's psyche must be based on an

analysis of his nature in relation to society. Horney recognized the inadequacy of instinctual and genetic psychology and emphasized the importance that interpersonal relationships have in defining conflicts for the individual. Finally, Sullivan saw personality as a hypothetical entity which could not be isolated from interpersonal situations, and interpersonal behavior is all that can be observed as personality. He defined personality as "the relatively enduring pattern of recurrent interpersonal situations which characterize a human life" (Sullivan, 1953). Sullivan's view of personality represents the culmination of the evolution toward an interpersonal formulation of personality. While the importance of interpersonal relationship in the development and expression of personality is generally accepted in psychology today, with a few exceptions, this general theoretical development has not been reflected in the widely used personality tests. Little systematic work has been done with psychometric instruments that related personality functioning and the ways people orient themselves toward others. The purpose of the present study is to examine the relationship between two tests that attempt to measure personality functioning and interpersonal orientation.

The Minnesota Multiphasic Personality Inventory was developed in the late 1930's by Hathaway and McKinley to provide an objective multidimensional instrument to assist in the identification of psychopathology for psychiatric research and practice. It is a well established clinical scale that attempts to provide a description of psychological status and emotional adjustment. The instrument yields nine scales that are related to traditional diagnostic nomenclature. Since its development, it has been widely used in research and clinical practice.

Schutz (1966) developed a theory of interpersonal behavior that postulates three factors (Inclusion, Affection, and Control) which account for practically all of the variance in interpersonal relationships. In conjunction with his theory he has developed the FIRO-B, a psychometric instrument that attempts to measure a person's characteristic behavior toward other people in these three areas. Further, Schutz' theory relates interpersonal behavior to healthy and pathological psychological functioning. Research has indicated that this relationship can be determined empirically. Gard (1961) successfully demonstrated some of Schutz' postulates relating characteristic interpersonal orientations toward other people to various clinical groups. His conclusion for suggesting further research was that

At the present time . . . what may be needed most is simply a large scale correlational study. FIRO-B has not been related to many other well established clinical scales. . . . The relationship of FIRO-B to many other scales should be established.

These two tests, the FIRO-B and MMPI, are increasingly being used in the area of clinical psychology, and it is therefore considered important to investigate their relationship to each other and to determine where and how much the tests overlap in the information they provide.

Review of the Literature

This review of literature will survey: 1) the psychometric instruments used in this study (the Minnesota Multiphasic Personality Inventory (MMPI), a scale measuring personality traits and pathology, and the FIRO-B, a measure of interpersonal orientation), and 2) literature relevant to the present problem.

Minnesota Multiphasic Personality Inventory

A brief history of the development of the Minnesota Multiphasic Personality Inventory (MMPI) will be followed by discussion of the scales, the validity and reliability of the instrument.

The MMPI was developed by Hathaway and McKinley in the late 1930's to provide an objective multidimensional instrument to assist in the identification of psychopathology for psychiatric research and practice. From a collection of over 1000 statements taken from psychiatric examination forms, psychiatry text books, attitude and personality scales and clinical practice, they developed a self report true-false inventory containing 550 items. The inclusion of a particular item in the final form depended on its ability to differentiate statistically people with various psychiatric diagnosis from a control group. Though the items are presented in mixed order, when scored they are grouped together to form a number of separate scales. Originally, nine clinical scales were developed that were based on traditional psychiatric diagnoses: 1) Hysteria (Hs), 2) Depression (D), 3) Hypochondria (Hy), 4) Psychopathic deviate (Pd), 5) Masculine-Feminine interest (Mf), 6) Paranoia (Pa), 7) Psychasthenia (Pt), 8) Schizophrenia (Sc), and 9) Hypomania (Ma). More recently these psychiatric categories have fallen under criticism and the scales are now more commonly referred to by number or abbreviation. Although there is no longer a claim that these scales measure the original psychopathology intended by the authors, the empirical nature of the construction of the instrument allows a re-evaluation of what the scales do measure. A tenth clinical scale is now regularly included in administering the inventory, the Social introversion-extroversion scale (Si). The following list of the scales and brief outline of the

psychological attributes they measure is adapted from Lanyon and Goodstein (1971) and Carson (1969).

Scale 1 (Hs). This scale consists of 33 items dealing with body function and malfunction. People scoring high on this scale are sour on life, whiny, complaining and generally handle their hostile feelings by making those around them miserable. Frequently they use somatic complaints to control others. Low scorers are described as alert, capable and responsible.

Scale 2 (D). This scale consists of 60 items relating to such things as worry, discouragement, outlook and self esteem. This scale is highly sensitive to mood changes. It is an index of immediate satisfaction and comfort in living; it tells something of how an individual sees himself and the world. High scorers tend to be silent, retiring, and perhaps withdrawn. Low scorers are active, alert and cheerful.

Scale 3 (Hy). This scale consists of 60 items dealing with specific somatic complaints and denial of emotional or interpersonal difficulty. High scorers tend to be naive and self-centered. They are demanding of affection and support. They are imaginative yet insightful and immature. Low scorers seem to be socially isolated and misanthropic.

Scale 4 (Pd). This scale consists of 50 items dealing with social maladjustments and absence of strongly pleasant experience. High 4 people are characterized by angry disidentification with recognized conventions. Social relationships are shallow and they show an inability to plan ahead. Low 4 people tend to be conventional and rigid.

Scale 5 (Mf). This scale consists of 60 items dealing with interests, vocational choice, aesthetic preferences and a passivity-activity dimension. Males with high scores tend to be aggressive, dominating, competitive, confident and spontaneous. Low scorers tend to be passive, submissive, highly constricted, self-pitying and fault-finding.

Scale 6 (Pa). This scale consists of 40 items dealing with sensitivity, being easily hurt, excessive moral virtue, claimed rationality, denial of suspicion, and complaints about others. High scorers tend to be suspicious and brooding. Low scorers tend to be stubborn and evasive, afraid to reveal themselves in any way.

Scale 7 (Pt). This scale consists of 48 items relating to narcissism, magical thinking, and sado-masochistic tendencies. As a general measure of anxiety and self-doubt, high scorers tend to be worried, tense, indecisive, and unable to

concentrate. Low scorers are usually relaxed, self-confident and secure.

Scale 8 (Sc). This scale consists of 78 items relating to social alienation, isolation, bizarre feelings, peculiar body dysfunction, and depression. High scorers feel alienated, confused and have difficulty with social relationships. Low scorers are interested in people and practical matters.

Scale 9 (Ma). This scale consists of 46 items dealing with expansiveness, egotism and irritability. High scorers are warm, enthusiastic, out-going, sometimes tense and flighty. Low scorers are listless, apathetic and lack self-confidence.

Scale 0 (Si). This scale consists of 70 items that mainly reflect social participation. High scorers tend to be aloof and anxious around people. Low scorers are sociable and warm.

A special feature of the MMPI is the inclusion of four "validity" scales (? , L, F, K). These scales are not concerned with validity in the technical sense; rather they provide a check on carelessness, misunderstanding, malingering and the effects of special attitudes toward taking the test. These will be discussed later in this thesis.

The validity of the MMPI is discussed by Welsh and Dahlstrom (1960). They point out that the MMPI has been used in many settings against many different criteria and as a result the instrument has literally hundreds of validities. The wide use of the MMPI for psychological assessment for college students and norms developed for this purpose attest to its criterion related validity.

The reliability of the MMPI has been repeatedly investigated. Many of these studies have been summarized by Welsh and Dahlstrom (1960). Several of the studies found that the test-retest reliabilities of some of the scales to be inadequate. This seemed to be particularly true of the Pa and Hs scales. On the other hand, some of the studies found reliabilities for these scales to be in the .70's. In general, the test-retest reliabilities for college students were above .60. Split-

Half coefficients for college students were found to have a mean of .61. It should be noted, however, that the Pa scale had very low internal consistency.

FIRO-B

The FIRO-B, which stands for Fundamental Interpersonal Relations Orientations Behavior, was developed by Schutz (1958) in an attempt to describe how an individual acts in interpersonal situations and to predict interaction between people. The development of the instrument was in conjunction with and the result of his theory of interpersonal behavior.

Schutz (1960) postulates three interpersonal needs: Inclusion, Control and Affection. The need for inclusion is defined behaviorally as the need to establish and maintain a satisfactory relation with people with respect to interaction and association. Terms that connote a relation of positive inclusion are "associate," "interact," "communicate," "belong," "attend to," "member," "join," and "extrovert." Terms that connote lack of or negative inclusion are "exclusion," "isolate," "outsider," "outcast," "lonely," "withdrawn," and "ignored." The need for control is defined behaviorally as the need to establish and maintain a satisfactory relation with people with regard to control and power. Terms that connote a relation of positive control are "power," "authority," "dominance," "influence," "control," and "leader." Terms that connote lack of or negative control are "rebellion," "resistance," "follower," "anarchy," "submissive," and "milquetoast." The need for affection is defined behaviorally as the need to establish and maintain a satisfactory relation with others with respect to love and affection.

Terms that connote a relation of positive affection are "love," "like," "emotionally close," "personal," "friendship," and "sweetheart." Terms that connote a lack of or negative affection are "hate," "dislike," "cool," and "emotionally distant."

For each of these areas of interpersonal behavior four types of behavior can further be delineated: deficient, excessive, ideal, and pathological. In the inclusion area, deficient behavior would be under-social; excessive behavior would be oversocial; ideal behavior would be social; and pathological inclusion behavior would be the unsuccessful resolution of inclusion relations. For the control area, deficient behavior would be the abdicat; excessive behavior would be the autocrat; ideal behavior would be the democrat; and pathological control behavior would be the inability to accept or assume control of any kind. In the affection area, the deficient behavior would be the underpersonal; the excessive behavior would be the overpersonal; the ideal behavior would be the personal; and pathological affection behavior are commonly referred to as "neurotic." It is assumed that an individual can express behavior in each of the three interpersonal areas and can want others to express such behavior. These are presented schematically as follows:

<u>Dimension</u>	<u>Expressed Behavior</u>	<u>Wanted Behavior</u>
Inclusion	I initiate interaction with people	I want to be included
Control	I control people	I want people to control me
Affection	I act close and personal toward people	I want people to get close and personal with me

The FIRO-B purportedly assesses each of the three interpersonal orientations for the behavior that is expressed by the individual

toward others and the behavior that the individual wants from others. The FIRO-B contains six Guttman type scales. These scales are to measure expressed inclusion (eI), wanted inclusion (wI), expressed control (eC), wanted control (wC), expressed affection (eA), and wanted affection (wA). Essentially the FIRO-B consists of only six basic questions repeated with slight variation nine times making a total of 54 items. For any particular item, the person is asked to choose one of six responses ranging from one extreme to the other, from "usually" for example, to "never." Thus he has nine chances to reveal whether or not he accepts or rejects the six basic questions (Ryan 1970). For each of the six scales an individual can receive a score from 0 to 9.

Reliability for the FIRO-B in terms of the coefficient of internal consistency and the coefficient of stability will be examined. If the rationale underlying the Guttman scaling technique is accepted, the appropriate measure of internal consistency is reproducibility. For all six of the FIRO-B scales reproducibility has been found to be above .90. The coefficients of stability were determined by the test-retest method over a one-month period. The coefficients ranged from .82 to .71 with a mean coefficient for the six scales of .76. At this point it is important to point out that the FIRO-B scales are not independent of each other. Intercorrelations of the scales can be found in Appendix A.

For the purposes of this study, it is particularly interesting to note the evidence Schutz (1966) presents as "antecedent" support for his theory. Although he reviews evidence from parent-child relations and group behavior, emphasis here will be given to personality theory and clinical psychology. He proposes that dependency, hostility and sex, for example, can be viewed as inclusion, control and affection,

respectively. Also, there would seem to be a correspondence between the oral stage and inclusion, the anal stage and control, and the phallic stage and affection. Likewise, there seems to be an asymmetrical correspondence between inclusion, control and affection types and Freud's "libidinal types" of narcissistic, obsessional and erotic. Schutz also notes that Horney's "moving away from people" corresponds to inclusion; "moving against people" to control; and "moving toward people" to affection. It is noted that there is a similarity between the central concepts of the three psychoanalytic "giants" and Schutz' interpersonal areas. Jung emphasized introverted and extroverted attitudes of viewing the world (inclusion); Adler, the will to power (control); and Freud, the libidinal impulses (affection).

Review of Literature

Although the preceding discussion of the MMPI and FIRO-B has indicated that they measure psychological functioning and interpersonal orientation, respectively, and further that potentially these tests have a relationship, the discussion will now focus on material that relates to methodological considerations, research concerning the problem and statements concerning the formulation of this research.

For any meaningful interpretation of a psychometric instrument, the instrument must be shown to measure an attribute and to measure it reliably. In discussing these two measures, it was indicated that they possess these requirements to an adequate degree. However, a third consideration is important for interpretation: whether or not the individual taking the test is intentionally distorting his answers for some reason. As mentioned previously the MMPI has four scales (?, L, F, K)

designed to check on this type of behavior. The ? scale indicates the number of questions not answered by the examinee. Although no interpretation is given to this scale, if it is inordinately high the other scales become invalid. The lie (L) scale consists of items that would be answered falsely by people that want to present themselves in a favorable light. A high score on this scale leaves the other responses open to question. The F scale indicates whether there has been a lack of comprehension, carelessness, malingering, or scoring errors. The K scale indicates whether a person is excessively defensive and presents a false picture of good health or excessively frank and presents a false picture of bad health. When the ? scale is above a T score of 60 and the L scale is above 70, there is a question as to what the other scales mean and the profile is considered "invalid." This criterion is generally accepted in research dealing with the MMPI (Rosen 1958, Meehl and Dahlstrom 1960b). Likewise the "fake good" and "fake bad" index (F-K) should fall within a range of 10 to -11 (Carson 1969).

Ryan (1970) indicates that the FIRO-B deals with faking in a different manner. The individual is asked to respond along a six-point continuum, while the item is scored dicotomously at an empirically determined cutoff point. The person is allowed to modify his responses without changing the meaningfulness of his scores. To invalidate the FIRO-B the individual must consistently record answers that are diametrically opposed to his real attitudes. Ryan states that the nonthreatening nature of the questions and fear of obvious lying will usually prevent such distortions.

Another necessary consideration in the use of psychometric instruments is an adequate "frame of reference" for interpretation. This is

indicated by the norms developed for the test. The original norms developed for the MMPI were included on the MMPI profile sheet. T scores above 70 were considered as indicators of psychopathology. However, since its development many new norms have been established that allow for interpretation for more specified populations. Goodstein (1954) in examining regional differences in MMPI responses for college males suggested the formation of separate norms for this group. She found that college students, both male and female, tended to be more deviant in their responses to the MMPI than the general adult population. For this reason it seems important not to define college students as abnormal by the usual criterion of one T score above 70 on the clinical scales. Rather, a somewhat looser criterion might be more appropriate.

Although there has been considerable research investigating the relation of sociological variables to various types of psychological diagnosis (Hollingshead and Redlich 1968, Goffman 1961, Szasz 1970) research efforts that have attempted to relate psychological functioning to interpersonal relations have been sparse. The first attempt to relate systematically psychological functioning to interpersonal orientations was done by Leary (1957). Working with Sullivan's interpersonal formulation of personality, Leary proposed that personality was composed of five levels defined by the sources of data which contribute to them: Level I-Public communication; Level II-Conscious description; Level III-Preconscious symbolization; Level IV-Unexpressed conscious; and Level V-Ego Ideal. At each level, the personality is described in terms of 16 interpersonal variables arranged in circular fashion (MATRIX). The relationship between levels is dealt with in terms of intrapersonal variability indices. These are, in some respects, operational

definitions of defense mechanisms. Observable, immediate behavior of an individual is rated and placed in the interpersonal matrix. More enduring tendencies of personality were found by the consistency of these ratings over time and situations. Thus, personality was described by determining the presence of a trait and the degree it was present for an individual and was described on a matrix. Laforge and Suczek (1955) elaborated this system and attempted to develop a tool to measure the variables defined by the Interpersonal Personality System: the Interpersonal Checklist.

Within the Interpersonal Personality System other psychometric instruments, both projective and objective, could be rated and included as data for various levels. As examples of this Leary (1957) devised a formula to convert MMPI scores into data applicable to the Public level and projective tests were rated and applied to the private level.

Despite the potential utility of this system, it is not now widely used in the area of clinical psychology. The development of this theory in the 1950's was at first met with enthusiasm. However, the research generated from this theory has declined considerably over the years.

A more recent attempt to relate psychological functioning to interpersonal orientation was a series of studies (Gard 1961, Gard and Bendig 1964, Gard 1964) that attempted to determine the relationship of the FIRO-B to various psychiatric groups and the relationship of the FIRO-B to various other psychometric scales.

Gard (1961) tested hypotheses generated by Schutz' theoretical formulations regarding the relationship of interpersonal orientations to various clinical diagnostic groups. The groups utilized in this study were paranoid, hebephrenic and undifferentiated schizophrenics,

obsessive-compulsives, anxiety hysterics, depressives and normals. As predicted, schizophrenics were lower than the other groups on eI and wI. The neurotics, exclusive of obsessive-compulsives, showed more dispersion than all other groups on eA, although this was not true for wA. It was found that paranoids tended to be low on all six scales; the hebephrenics low on eI and wI and high on eC and wC; the undifferentiated schizophrenics were low on eI, wI and eC and High on wC. The obsessive-compulsives were higher than all groups on eC but not significantly different from the other groups. Anxiety-hysterics were high on eI, wI and eC. Gard's normal group was high on eI and wI and low on eC. In fact, the eC scores for all groups in the study were lower than the eC scores for a group of Harvard freshmen investigated by Schutz (1966). The major hypotheses not supported were in regard to wA for neurotics and eC for obsessive-compulsives. Other interesting results of this study were that eC was negatively related to age and wC was negatively related to the MMPI lie scale.

Gard and Bendig (1964) further investigated these relationships in clinical groups by factor analysis. The variables included the Maudsley Personality Inventory, scales of overt and covert hostility, MMPI lie scale, FIRO-B, a FIRO-B behavioral checklist, age, social class and the seven clinical diagnoses used in the previous study. The factor loadings indicated that eI and wI and Eysenck's introversion-extroversion dimension were essentially the same for this population. The areas of inclusion and affection were different but related. Schutz (1966) indicated that these dimensions were related as seen in the scale intercorrelations, but indicated that they did offer somewhat different information. Gard and Bendig found further that wC is a separate factor but eC is

highly contaminated by eI and wI. In the affection area, the wanted score was a better measure than the expressed score. It was found that none of the scales was appreciably related to the emotionality factor.

In the above two studies, the subjects were hospitalized and out-patient veterans. The generalizability of these studies is somewhat limited by this. Ryan (1970) has indicated that at least one scale on the FIRO-B is sex dependent. The wC area is not interpreted the same for males and females. A moderate score for females may not indicate a true "wanted control" but might represent an acquiescence to the female stereotype. Further, the differences in average eC found between Gard's and Schutz' groups indicate a possible social class difference.

This review of literature has indicated that there is a possibility that the FIRO-B and MMPI are related and further that this relationship might be empirically determined. This study will explore this possibility. The exploratory nature of the study does not dictate the specification of hypotheses. However, it is considered important to outline what propositions guided the formulation of the research. First, simply that the FIRO-B and MMPI scales are related. Second, that there are relationships between the FIRO-B and MMPI scales in psychiatric and non-psychiatric college students. And third, that these relationships will not be the same for the two groups.

CHAPTER II

METHODOLOGY

In this study there is no manipulation of experimental variables. The variables considered in this study are the variables concerned with the selection of the subjects. For this reason, the selection of subjects will be considered under procedure.

Procedure

Subjects (Ss) consisted of two groups (clinic and non-clinic) of undergraduate students at Oklahoma State University. Clinic subjects were selected from the client files of the Bi State Mental Health Center on the Oklahoma State University campus where the MMPI and FIRO-B are routinely administered to all incoming clients. The clinic subjects were chosen by going through the files alphabetically from A to J, including all subjects that had valid MMPI profiles (T scores of $? < 60$, $L < 70$, $F < 80$; Raw scores $-12 < F-K < 11$) and with at least three clinical scales above a T score of 70. From this pool of 19 male Ss and 19 female Ss, 30 were selected by randomly drawing numbers attached to their profiles until 15 males and 15 females were selected. The Ss ranged in age from 18 to 26 years. Clients participating in marital counseling were excluded because of possible interrelations of scores.

The normal Ss were selected from volunteer students in undergraduate psychology and English courses at Oklahoma State University who took the

MMPI and FIRO-B in groups that ranged in size from 2 to 10. The Ss were assured of confidentiality and told the purpose of the study. The instructions are found in Appendix B. The MMPI and FIRO-B were scored by standard methods. A pool of 63 profiles was obtained. One profile was excluded because it was incomplete. One male and six females were excluded on the basis that they were presently in or had sought psychotherapy. Four females and four males were excluded because their profiles were invalid (T scores of $? > 60$, $L > 70$, $F > 80$; Raw scores of $F-K > -12$ and $F-K > 11$). Thirteen females were excluded because they had more than three clinical scales above a T score of 70. This resulted in a pool of 16 males and 19 females. From this pool of Ss, 30 were selected by randomly drawing numbers attached to their profiles until 15 males and 15 females were selected. Again husband and wife profiles were not included because of possible interrelation of scores.

Instruments

Two psychometric instruments, the MMPI and the FIRO-B, and an informational form were utilized in this study. This informational form was used to eliminate individuals from the normal group that had received or planned to receive professional counseling. It was also used to eliminate husband and wife profiles, because of possible interrelationship of scores. A copy of the information form can be found in Appendix C.

The Minnesota Multiphasic Personality Inventory (MMPI) developed by Hathaway and McKinley (1942) consists of 566 statements that can be answered true, false, or left blank. The instructions for the test are found in Appendix D. "The MMPI is a standardized inventory designed to

elicit a wide range of self-descriptions from each test subject and to provide in quantitative form a set of evaluations of his personality status and emotional adjustment" (Dahlstrom, Welsh and Dahlstrom 1960). The statements cover 26 different subjects including family and marital affairs, sexual attitudes, delusions, phobias, obsessive states, religious attitudes, psychosomatic conditions, and general health. They deal with observable behavior, feelings, general social attitudes, and pathological symptoms. In its regular administration the MMPI yields 14 scale scores, including 4 validating scales and 10 "clinical" scales. The original clinical scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma) are based on Kraepelin's psychiatric classification. A tenth scale, Si (Social introversion), is now regularly included in the MMPI. The questions for the MMPI are found in Appendix D. An individual question was scored as adding to the raw score total for one or more scales. The total raw scale score for the scales were computed and plotted on a profile sheet that indicates the T scale score.

The Fundamental Interpersonal Relations Orientations-Behavior (FIRO-B) developed by Schutz (1966) consists of 54 statements that are rated from 1 to 6 to the degree that an individual states he behaves in this manner. A copy of the FIRO-B statements and instructions for the test is found in Appendix E. This instrument attempts to measure a person's characteristic behavior toward other people along three major dimensions: Inclusion, Control and Affection. Schutz (1966) postulates that these three factors account for practically all of the variance in interpersonal relationships. The area of inclusion concerns being with or withdrawing from other people. The control area entails dominance and submission. The area of affection is related to liking and

disliking. These three factors are further divided into expressed (e), what the individual expresses to others; and wanted (w), what the individual wants others to express in these areas. The scoring and meaning of this scale has been discussed previously.

Data Analysis

To ascertain if sex determines the scores on the variables, point biserial correlation coefficients were computed between males and females and each of the 19 continuous variables (MMPI and FIRO-B scales) for each group (normals and clients). Although sex differences are not considered a crucial variable in this study, it was considered important to determine whether these are indeed single populations. Since not more than four of these correlations were significant, the data for males and females within the groups will be combined. The level of significance used in this study is $\alpha = .05$. This level was chosen for several reasons. First, the relatively narrow range of possible scores on the FIRO-B (0 to 9) has the effect of reducing the size of possible correlations. One way to correct for this is to increase the alpha level from the usual .01 to .05. Second, because this study is exploratory, it was considered more important to detect relationships between the scales that are potentially significant rather than exclude them from further consideration. In essence it was considered more important to decrease the risk of a type I error while increasing the risk of making a type II error. Therefore, all significance levels in this study will be .05.

To determine the relationship of the MMPI and FIRO-B scores and the patterns of their relationships in the clinic and normal groups, two correlation matrices were computed between the 10 clinical MMPI scales

and 6 FIRO-B scales: one for the clinic group, and one for the normal group. Tests for significance were done by use of critical values for the Pearson correlation coefficient. To determine if significant differences exist between the normal and clinic group, the correlations were transformed to Fisher Z scores and z tests were computed on the correlations for the two groups.

CHAPTER III

RESULTS

The males and females of the clinic group were determined to come from a single population. Only two of the point biserial correlation coefficients computed between sex and the sixteen (ten MMPI, six FIRO-B) test scale scores were significant at the .05 level or less for a two-tailed test in the clinic group. Likewise, the males and females of the normal group were determined to come from a single population. Only two of the point biserial correlation coefficients for this group were significant at the .05 level or less. These correlation coefficients are found in Table I.

The intercorrelations among the six FIRO-B scales and the ten clinical scales of the MMPI for the clinic group are found in Table II. There are eight correlations significant at the .05 level (two tailed, 28 df, critical $r = .361$) or above. One of the eight is significant at the .02 level (two tailed, 28 df, critical $r = .423$) and another is significant at the .01 level (two tailed, 28 df, critical $r = .462$).

The intercorrelations among the six FIRO-B scales and ten clinical scales of the MMPI for the normal group are found in Table III. There are seven correlations significant at the .05 level (two tailed, 28 df, critical $r = .361$) or above. Two of these are significant at the .02 level (two tailed, 28 df, critical $r = .423$) and one is significant at the .01 level (two tailed, 28 df, critical $r = .462$).

TABLE I
 POINT BISERIAL CORRELATION COEFFICIENTS BETWEEN
 SEX OF SUBJECTS AND SIXTEEN TEST VARIABLES
 WITHIN CLINIC AND NORMAL GROUPS

Variables	Clinic	Normal
Hs	-.1533	-.2619
D	.0533	-.1555
Hy	-.2818	.1681
Pd	-.0640	.3786 ¹
Mf	-.4293 ²	-.7258 ³
Pa	.0110	.1752
Pt	-.0457	-.1861
Sc	-.0434	-.0750
Ma	-.2770	-.1289
Si	.0958	-.2370
eI	-.4332 ²	-.1145
wI	-.1512	-.0664
eC	.0994	.2540
wC	.0370	-.0155
eA	-.3521	-.2190
wA	.1092	-.0739
	n = 30	n = 30

¹P < .05 - Critical values .361

²P < .02 - Critical values .423

³P < .01 - Critical values .462 df = 28

TABLE II
 CORRELATION COEFFICIENTS AMONG THE SIX FIRO-B SCALES
 AND TEN MMPI CLINICAL SCALES
 FOR THE CLINIC GROUP

Vari- ables	eI	wI	eC	wC	eA	wA
Hs	.0824	.0618	.0273	.1752	-.0901	-.0377
D	.1121	-.0155	-.1326	-.0375	-.0147	.0911
Hy	.1090	-.0994	-.1000	-.0204	.0425	-.1498
Pd	.1857	.1323	.1192	.0803	.2410	-.0723
Mf	.4121 ¹	-.0482	-.0082	.3206	.4143 ¹	.0888
Pe	-.1639	-.1066	.2848	.2799	.0397	-.0535
Pt	-.1370	-.0352	-.3266 ¹	.1911	-.1798	.0239
Sc	-.0112	.0003	-.0310	.2691	.0037	-.1850
Ma	.2700	.3821 ¹	.3795 ¹	-.0307	.3664 ¹	-.0737
Si	-.2601	-.3205	-.4782 ³	.1272	-.4504 ²	-.0275

n = 30 Critical r values df = 28 (two tailed)

¹P < .05 .361

²P < .02 .423

³P < .01 .462

TABLE III
 CORRELATION COEFFICIENTS AMONG THE SIX FIRO-B SCALES
 AND TEN MMPI CLINICAL SCALES
 FOR THE NORMAL GROUP

Vari- ables	eI	wI	eC	wC	eA	wA
Hs	-.0573	.2022	-.0005	-.0894	.0771	.0838
D	-.0341	.0493	-.1280	.1938	.0827	.1753
Hy	.0782	.1989	.1823	.2096	.1526	.2444
Pd	.2403	.0924	.1194	.0186	.1029	.1771
Mf	.0275	.1700	-.1576	.1283	.3021	.2500
Pa	-.0618	.0806	-.0000	.4033 ¹	.2912	.4479 ²
Pt	.2577	.3089	.0698	.2302	.3451	.3488
Sc	.1340	.2340	.0732	.4734 ³	.4139 ¹	.4557 ²
Ma	.1900	.0986	.3790 ¹	-.0456	.1212	.0812
Si	-.1716	-.2719	-.3903 ¹	.3008	-.0866	-.2082

n = 30 Critical r values df = 28

¹p < .05 .361
²p < .02 .423
³p < .01 .462

The results of the z test computed to test for differences between the correlations of clinic and normal groups are found in Table IV. There are sixteen significant differences at the .05 level (two tailed, critical value = 1.96) or above. One of these is significant at the .01 level (two tailed, critical value = 2.33) and eleven of these are significant beyond the .001 level (two tailed, critical value = 2.58).

TABLE IV
Z TESTS FOR DIFFERENCES BETWEEN THE CORRELATIONS
OF NORMAL AND CLINIC GROUPS

Vari- ables	eI	wI	eC	wC	eA	wA
Hs	1.0169	-1.0493	.2058	.6742	-1.2382	-.8985
D	1.0772	-.4706	.0301	-1.1654	-.7074	-.6294
Hy	.2220	-2.1985 ¹	2.0911 ¹	-1.7147	-.8176	2.9419 ³
Pd	-.4272	.2978	.0000	.4573	1.0471	-1.8282
Mf	3.0147 ³	-1.6154	1.1125	1.4845	.9463	-1.2294
Pa	-.4272	-1.3721	2.1470 ¹	-1.0346	-1.9176	-3.9433 ³
Pt	-2.9471 ³	-2.5904 ³	-2.9882 ³	-.2926	-3.9919 ³	-2.4940 ²
Sc	.9176	-1.7375	-.7654	-1.7683	-3.2088 ³	-4.9875 ³
Ma	.6198	2.2360 ¹	.0000	.0441	1.9206	-1.1419
Si	.0642	.3868	.7985	-1.3294	-2.9301 ³	.3462

n = 30 Critical Values

¹P < .05 1.96

²P < .01 2.33

³P < .001 2.58

CHAPTER IV

DISCUSSION

The results will be discussed in order of computation. First, the results concerning the possibility of sex dependent scores will be examined. Second, the relationship of the FIRO-B to the MMPI scales in the clinic and normal groups will be discussed. It should be noted that with a significance level of .05, at least three significant correlations would be expected by chance alone. Further, the nonindependence of these correlations would tend to increase the number of correlations found to be significant. Practically, the expected number of significant correlations would be around six or seven in each group. For this reason, the discussion of these correlations should be regarded as tentative. Third, the significant differences between the groups will be discussed. This will be followed by a summary of the differences between the groups and an examination of the patterns of correlations between the groups.

In the normal group there were only two scales that had a significant relationship to the sex of the subject, the Pd and the Mf scales on the MMPI. About 14 percent of the variance on the Pd scale could be accounted for from knowledge of sex of the subject. Males tended to score higher and females lower on this scale. This is consistent with the idea that males tend to score higher on all MMPI scales (Cooke 1967), yet this does not fully explain why this one scale was sex related. The

Pd scale is somewhat a measure of angry disidentification with recognized convention. This type of behavior is probably more culturally accepted for males than females; indeed the college environment often provides a milieu that encourages this behavior. The relationship of the Mf scale to the sex of the subject is to be expected. In both groups (Clinic and Normal) there was a significant relationship. Approximately 53 percent of the variance on the Mf scale was accounted for by the sex of the subject in the clinic group. Because this scale is scored differently for males and females, comparison between them is not possible. However, it is interesting to note that the raw score means for the two female groups were similar: 38.6 for normals and 37.66 for clinic with the normal females appearing less variable with a standard deviation (S.D.) of 2.96 as opposed to a S.D. of 4.047 for the clinic females. The clinic males tended to score higher ($M = 33.53$) than the normal males ($M = 28.66$), yet the normal males appeared more variable (S.D. = 6.23) than the clinic males (S.D. = 4.91). The larger variance accounted for in the normal group, as indicated by the larger correlation, would appear to be due to the larger variance in the normal males. The only other scale that was found to be sex dependent was the eI scale for the clinic group. Approximately 19 percent of the variance on the eI scale could be accounted for from knowledge of sex of the subject. The males in this group tended to score lower on eI ($M = 2.6$) and females higher ($M = 4.533$). The significant correlation in the clinic group indicates that these means are significantly different (Roscoe 1969). Thus clinic males show significantly less expressed inclusion behavior than clinic females.

Clinic Group

In the clinic group the only MMPI scale significantly related to eI scale was the Mf scale. Approximately 17 percent of the variance in Mf could be accounted for by variance in eI. These scales were positively related in that subjects who scored higher on eI also tended to score higher on Mf. The fact that both of these scales were sex dependent to some degree in the clinic group indicates that they do have a common factor. Inclusion behavior for the clinic group seems to be related to how they see themselves in their sex role behavior as shown by aesthetic interest, passivity-activity, and vocational choice.

The wI scale was positively related to the Ma scale of the MMPI. Approximately 14 percent of the variance in Ma could be accounted for by the variance of wI. This result is understandable in that the Ma scale reflects "out goingness" and wI reflects how much an individual wants others to associate with him. It is interesting to note that eI does not correlate significantly with Ma ($r = .27$). Clinically the Ma scale is often seen as a mood indicator (Carson 1969) and thus may reflect wanted behavior. This might indicate that the Ma scale is more sensitive to felt or wanted behavior than expressed behavior in the clinic group.

The eC scale is negatively related to Pt and Si scales and is positively related to Ma scale on the MMPI. Approximately 11 percent of the variance in Pt can be accounted for by the variance in eC. This finding does not support Schutz' theory regarding the proposed positive relationship of the control area to obsessive-compulsives. The Pt scale was designed to detect this diagnostic group. Although later revisions with regard to interpretation has modified this direct diagnosis, this

scale is seen to be related to this type of behavior. Gard (1961), in discussing his failure to support Schutz' theory with regard to obsessive-compulsives, indicated that Schutz formulations are in terms of an individual's control behavior with respect to others whereas the obsessive-compulsive individual has control problems with regard to self. The eC scale is sometimes considered a rough index of self image (Maxwell 1972). The clinic group scored similarly on the eC scale ($M = 2.13$) to the normal group ($M = 2.86$) and further, the clinic group scored higher on the Pt scale ($M = 40.16$) than the normal group ($M = 27.23$). This would tend to support Gard's explanation.

Approximately 22 percent of the variance in Si can be accounted for by the variance in eC. The inverse relationship between these two scales is consistent with their respective theoretical interpretation. Low scores on eC indicate an avoidance of making decisions and taking on responsibility. The individual presents an "image of adequacy" as a defense against self doubt (Ryan 1970). High Si scores indicate an individual who tends to be aloof and anxious around people.

The positive relationship between eC and Ma is also theoretically consistent. Individuals with high Ma scores are seen as enthusiastic, out-going and somewhat egotistical. High eC scores indicate an individual has a self concept of confidence and adequacy and is driven to do well (Ryan 1970). Approximately 14 percent of the variance in Ma can be accounted for by the variance in eC.

The wC scale was positively related to the Mf scale on the MMPI. Approximately 10 percent of the variance in Mf can be accounted for by the variance in wC. Both of these scales are interpreted differently for males and females. For females, high Mf scores would tend to

indicate less dependent individuals. For males high Mf scores would tend to be more dependent. For males high wC scores tend to indicate dependency, yet Ryan (1970) indicates that wC scores for females may not indicate dependency but rather an acquiescence to the culturally approved female stereotype of dependency. In that the Mf scale is heavily loaded with material regarding stereotypic sex roles, it is to be expected that the two scales would be related. Further, that they would be related positively for males and negatively for females. To test this correlation, coefficients were computed between wC and Mf for the males and females in the clinic group. For males the correlation ($r = .48$) was positive and significant at the .05 level (one-tailed, $df = 13$, critical $r = .441$). For females the correlation ($r = .23$) was not significant. There seems to be no relationship between the two scales for the clinic females.

The eA scale was positively related to the Mf and Ma scales and negatively related to the Si scale on the MMPI. Approximately 17 percent of the variance in Mf could be accounted for by the variance in eA. The relationship between these scales is explained in much the same way as the relationship between eI and Mf. The interdependence of the eI and eA scales is recognized in the literature (Schutz 1967). The correlation coefficient between eI and eA for this sample is $r = .63$. It is therefore probable that the same factors are involved in the relationships of these scales to the Mf scale.

Approximately 13 percent of the variance in the Ma scale could be accounted for by the variance in eA. The relationship of these scales can be explained in terms of their respective clinical interpretation. High Ma people are seen as warm as are high eA people.

The variance in eA accounts for approximately 20 percent of the variance in Si. The inverse relationship of these scales is to be expected from their respective theoretical interpretations. High Si people tend to be aloof and anxious around people; low Si people tend to be sociable and warm. High eA people tend to be warm and friendly; low eA people tend to be cool and emotionally distant. The relatively strong negative relationship is consistent with these interpretations.

Normal Group

In the normal group the eC scale was positively related to the Ma scale and negatively related to the Si scale. Approximately 14 percent of the variance in Ma can be accounted for by the variance in eC. The relationship of these scales in the normal group is similar to the relationship found in the clinic group. The relationship of the scales is consistent with their theoretical interpretation. High Ma scores are seen as enthusiastic, outgoing and somewhat egotistical. High eC scores indicate an individual has a self concept of confidence and adequacy and is driven to do well. The negative relationship of Si and eC in the normal group is similar to that found in the clinic group and the explanation is much the same. Low scores on eC indicate an avoidance of making decisions and taking on responsibility. The individual presents an "image of adequacy" as a defense against self doubt. High Si scores indicate an individual who tends to be aloof and anxious around people. The relationship of the scales, then, seems to follow from the similarity of their interpretation.

The wC scale was positively related to the Pa and Sc scales. Approximately 16 percent of the variance in Pa can be accounted for by

the variance in wC. High Pa scores indicate an individual who is overly responsive to opinions of others and inclined to blame others for his own difficulties (Pearson et al. 1964). This is consistent with descriptions of highly dependent individuals. The wC score indicates the amount of control an individual wants from others and is a rough index of dependency. With these considerations the relationship of these scales can be seen to follow from the clinical interpretation.

Approximately 22 percent of the variance in Sc can be accounted for by the variance in wC. Examination of the clinical interpretations for these scales does not indicate why they would correlate so highly. High Sc scores indicate an individual who feels alienated, confused and has difficulty with social relationships. High wC scores indicate an individual who wants others to assume responsibility for him. His concept of himself is one of worthlessness and inadequacy. Although these interpretations are not inconsistent they do not seem to explain the relationship of the scales. However, when examining many items on the Sc scale, this relationship does seem to make some sense. Individuals scoring high on the Sc scale are reporting alienation, bizarre feelings, confused thinking and conduct. Further, they are reporting an inability to control their behavior or denying that they have control. This then is consistent with the interpretation given the wC scale of wanting others to assume responsibility.

The eA scale is positively related to the Sc scale in the normal group. Approximately 17 percent of the variance in Sc can be accounted for by the variance in eA. This relationship can partially be seen as the result of the correlation between wC and eA ($r = .41$). Further, wA is found to be correlated highly with both Sc ($r = .46$) and eA ($r = .795$).

It therefore seems that the interrelatedness of the FIRO-B scales for the normal group seems to account for the significant relationships between eA and Sc better than any interpretative explanation. The high correlation between eA and wA would indicate that the factors relating wA to Sc would account for the relation between eA and Sc. The wA scale accounts for 21 percent of the variance in Sc. High wA scores describe a person who wants others to initiate close intimate relationships with him. High Sc scores indicate an individual who is socially alienated, and seclusive. It seems reasonable to assume that these individuals are feeling a need for close personal relationships. Further, as seen in discussing the relationship between wC and Sc, it would seem these individuals want others to assume responsibility for initiating the relationship.

In the normal group the wA scale is also positively related to Pa. Approximately 20 percent of the variance in Pa can be accounted for by the variance in wA. The relationship of these scales can be seen in much the same way as the relationship between wC and Pa. The Pa scale was seen to be related to dependency behavior. The wA scale indicates how much an individual wants others to initiate close personal relationships. This desire to have others take charge partly explains the relationship of these scales. Further, high wA scores are sometimes seen as indicative of defensiveness. Individuals with high wA scores are sensitive to cues that other people may no longer sustain affection for him (Ryan 1970). This sensitivity to others can also be seen in individuals scoring highly on the Pa scale.

Differences Between the Groups

In the preceding discussion, the relationship of the MMPI to the FIRO-B was examined for subjects who had sought psychiatric help and for subjects who had never sought such help. Discussion will now focus on how the relationship between the two scales differ for the two groups.

The relationship between eI and Mf was much stronger for the clinic group. There was almost no correlation between eI and Mf in the normal group ($r = .027$) but a relatively strong one in the clinic group ($r = .412$). As mentioned previously, inclusion behavior for the clinic group seems to be related to how they see themselves in their sex role as measured by Mf. This does not seem to be the case for the normal group. In this group there was no apparent relationship between sex role behavior and inclusion behavior. The means on the Mf scale for the groups are similar ($M = 38.60$ for normal females, $M = 37.67$ for clinic females, $M = 28.67$ for normal males, and $M = 33.53$ for clinic males) while the means on the eI scale are different ($M = 5.73$ for normal females, $M = 4.53$ for clinic females and $M = 5.33$ for normal males, and $M = 2.6$ for clinic males) for the groups. Since adequate inclusion behavior (being around people) is a prerequisite for exhibiting adequate interpersonal sex role behavior, it would seem that the clinic groups undersocial behavior results in an oversexualizing of that behavior. It is also possible that because the clinic group tends to see inclusion behavior as sexually related, they tend to become undersocial. Further research will be needed to clarify this.

The Pt scale was related to eI differently for the two groups. Although there was no significant correlation between the scales for

either group, a different pattern of relatedness existed for the two groups. In the normal group there was a positive relationship ($r = .258$) and in the clinic group this relationship was negative ($r = -.137$). This seems to be a reasonable finding. Adequate expressed inclusion behavior requires sensitivity to others, not too much, not too little. Over- or undersensitivity to others would create problems in "interacting" or "belonging with a group." The mean Pt scale for the normal group ($M = 27.23$) indicates that as a group they were sensitive to others but not too much. As a result one might expect a positive relationship between these scales. On the other hand, the higher mean for the Pt scale in the clinic group ($M = 40.16$) indicates that they were overly sensitive to others while being less sure of themselves. This would probably result in less expressed inclusion behavior.

Although the Hy scale was not found to be significantly related to any of the FIRO-B scales for either group, the relationship between Hy and WI was different for the two groups. The correlation between these scales for the normal group ($r = .1989$) was small and positive; the correlation for the clinic group was even smaller ($r = -.099$) and negative. For the normal group both scales seem to reflect that they want affection and support, while for the clinic group there was almost no relationship between the scales. The means of Hy for the two groups ($M = 27.56$ for the clinic group and $M = 19.00$ for the normal group) suggests that the clinic group was perhaps denying interpersonal difficulty.

A possible explanation for the differences between the groups lies in the types of questions scored for the Hy scale in the two groups. The clinic group might have scored more questions in total and probably more questions that reflect a denial of interpersonal problems, while

the normal group possibly scored more questions dealing with the desire for affection and support. This would explain the differential effect (Carson 1969).

The relationship between Pt and WI was different for the two groups. There was no relationship between Pt and WI for the clinic group ($r = -.035$); however, there was a relatively strong relationship between the scales for the normal group ($r = .309$). The normal group tended to express a stronger need to belong and be accepted as seen on WI ($M = 5.733$) while expressing self-confidence as seen on Pt ($M = 27.233$). This is seen in the positive correlation. However, the clinic group expressed less need to be included ($M = 4.166$) and more self-doubt as expressed in the Pt scale ($M = 40.167$). There was little relationship between the scales. From this it seems that while both groups want to be included, the criterion for inclusion is different for the groups. The normal group seems to be saying "I'm a pretty good person, so ask me along," while the clinic group is saying "I'm not too sure about myself but I want you to ask me along anyway."

The relationship between Ma and WI was different for the two groups. As discussed previously Ma was significantly related to WI in the clinic group. The scales seemed to have almost no relationship in the normal group ($r = .098$). There is a similarity of means for both groups and both scales. Again this suggests that the criterion for inclusion varies for the two groups. Like the D scale the Ma scale reflects mood and energy levels. It would seem that WI for the individuals in the clinic group was somewhat dependent on his mood and energy level. On the other hand, the WI for the individuals in the normal group was more constant regardless of mood.

The relationship between eC and Hy was different for the two groups. The correlations were small for both groups, the correlation was negative for the clinic group ($r = -.10$) and positive for the normal group ($r = .18$). This indicates that within the normal group the individuals who scored high on Hy also tended to score high on eC while in the clinic group the individuals who scored high on Hy tended to score low on eC.

A possible explanation for this is a differential response pattern to the questions on the Hy scale. This has been discussed previously in regard to the relationship between Hy and wI. However, the response pattern here is probably in regard to egocentricity that reflects self-concept for the normal group while the clinic group's higher score indicates immaturity and demandingness, reflecting less willingness to accept responsibility.

The relationship between Pa and eC was different for the two groups. There was no correlation between the scales in the normal group. There was a small positive correlation in the clinic group ($r = .28$). Although both groups tended to score low on eC ($M = 2.133$ for the clinic group and $M = 2.8667$ for the normal group) in the clinic group, the individuals with high eC scores tended to score higher on Pa. The more an individual in the clinic group was willing to make decisions and take on responsibility, the more suspicious and brooding he became. The more self-confidence an individual had, the more suspicious he was of others. It is understandable why this relationship did not exist in the normal group; self-confidence need not reflect an individual's perception of others. It is equally understandable why an individual with such a stance would seek psychiatric help.

The relationship between Pt and eC was different for the two groups. The significant negative correlation for the clinic group ($r = -.326$) has been discussed previously in terms of self-concept as measured by Pt. The small correlation for the normal group ($r = .069$) indicates that the low eC score is not necessarily related to an over-critical attitude toward self. An individual who is self-critical would probably be more likely to seek psychiatric help.

The relationship between eA and Pt was different for the two groups. The correlation between the scales in the normal group was relatively large and positive ($r = .3451$); in the clinic group it was smaller and negative ($r = -.1798$). An examination of the means for the two groups clarifies these correlations. The normal group mean was 27.23 and the mean for the clinic group is 40.167. Individuals with low Pt scores tend to be relaxed, self-confident and secure. High scorers tend to be worried, tense and indecisive. The negative correlation for the clinic group follows from the clinical interpretation of the scales: people who are worried, tense, self-critical and indecisive tend to be more cautious about initiating deep relationships with others. The positive correlation in the normal group can be seen in terms of their overall low score on the Pt scale. They are relaxed, self-confident, secure and can readily become involved, establishing intimate relationships with others. It would seem that given an individual who can initiate close relationships and is secure in doing so, the more anxiety and self-doubt he experiences about it.

The relationship between eA and Sc was different for the two groups. The correlation between the scales for the clinic group is extremely small ($r = .003$) while the correlation for the normal group is

relatively large ($r = .4139$). The correlation for the normal group has been discussed previously. Again the means for the Sc scale help to clarify the relationships. The means of the Sc for the normal group is 26.43 and for the clinic group is 40.76. It seems that given an individual who is interested in people, initiating close relationships tends to increase the confusion and difficulty he is experiencing. This would be the case for the normal group. On the other hand, given that an individual feels alienated and confused, initiating close relationships would not add to his confusion.

The relationship between eA and Si is different for the two groups. There is a very low correlation between these scales in the normal group ($r = -.086$) and a relatively strong negative correlation ($r = .4504$) in the clinic group. The correlation between these scales in the clinic group has been discussed previously. The most obvious explanation for the differences between the groups rests on the relation of inclusion and affection behaviors. Inclusion behavior must precede affection behavior. An individual must have someone around before he can establish a close relationship. The clinic group scored much higher on the Si scale ($M = 39.56$) indicating them to be more introverted, aloof and anxious around people. The normal group's score on the Si scale ($M = 28.33$) indicates the capacity to maintain adequate social relationships. It seems reasonable therefore that there would be no relationship between these scales for the normal group and a negative relationship for the clinic group.

The relationship between wA and Hy is different for the two groups. The correlation for the clinic group is relatively small and negative ($r = -.1498$). The correlation for the normal group is larger and

positive ($r = .2444$). Again the explanation seems to rely on the respective means and differential response patterns to the questions on the Hy scale. The mean of the Hy scale for the normal group is 19.00, while for the clinic group it is much higher, 27.56. Thus it would seem that given a low Hy score, the higher it is relative to that point the more it reflects questions relating to a demand for support and affection. This would explain the positive correlation for the normal group. On the other hand, given a high Hy score, the higher it is relative to that point, the more it reflects questions not relevant to affection behavior and further that it reflects questions dealing with denial of interpersonal difficulties. This would explain the smaller negative relationship found in the clinic group. Further research is needed to determine whether this hypothesis is correct.

The relationship between wA and Pa is different for the two groups. The correlation between these scales is small and negative in the clinic group ($r = -.053$) and large and positive in the normal group ($r = .4479$). The correlation in the normal group has been discussed previously in terms of dependency and sensitivity to others and wanting others to initiate close personal relationships. However, in the clinic group the Pa scale seems to reflect the suspiciousness and brooding rather than the dependency behavior. The larger mean for the clinic group ($M = 14.43$) would indicate that the scores of the individuals in the clinic group included items that went beyond a sensitivity to others to a suspicion of others. This would explain the difference between the correlations for the groups.

The relationship between wA and Pt is different for the two groups. The correlation for the clinic group is small ($r = .0239$) while in the

normal group it is somewhat larger ($r = .3488$). The high intercorrelations among the FIRO-B affection scales for the two groups ($r = .795$ for the normal group and $r = .548$ for the clinic group) indicates that the discussion concerning the difference in correlations of wA and Pa between the two groups is the same as the previous discussion of the relationship of eA and Pt for the two groups. Similarly, the discussion of the differential relationship of the wA and Sc scales for the two groups is the same as the preceding discussion of eA and Sc.

Summary

This summary will attempt to go beyond interpretation of individual correlations and examine the patterns of correlations between the two groups and their significance.

No MMPI scale was significantly related to the inclusion scales in the normal group. In the clinic group, their inclusion behavior increased as their energy level (Ma) and their attribution of opposite sex characteristic (Mf) increased. The most significant differences between the groups with regard to inclusion was that the clinic group tended to associate sex role behavior with inclusion behavior while the normal group did not.

This finding is interesting inasmuch as the construct validity of Mf scales in general have fallen under criticism. It has been questioned whether the Mf scales measure a masculinity-femininity dimension of personality or whether they reflect a response largely the result of social convention (Nichols 1962). This criticism has pointed to the lack of correlation between the widely used Mf scales and the discrepancies between self-description and other forms of behavior as pointing

to inadequate construct validity. However, the weight of criticism has fallen on the item content of these scales. The item content seems to reflect cultural biases of stereotypic masculine and feminine behavior, with a particular bias against items scored in the feminine direction. These items seem to reflect more pathology (Bieliauskas 1965). This study does not attempt to justify the construct validity of the MMPI Mf scale. However, the significant differences between the groups on this scale indicate its utility in viewing psychopathology, whether it is a true measure of masculinity-femininity or not.

Another significant difference between the groups with regard to inclusion was that the normal group, when compared to the clinic group, tended to associate inclusion behavior with self-doubt and anxiety (Pt) while the clinic group did not. The normal group tended to associate anxiety and self-doubt with inclusion behavior in a somewhat "realistic" manner: the more inclusion behavior in which they participated, the greater the anxiety and self-doubt they experienced. This would seem to reflect the "realistic" risks in expressing inclusion behaviors.

In the normal group high energy level (Ma) and extroversion (Si) was related to more expressed control behavior, while increments in feelings of hypersensitivity (Pa), alienation and confusion (Sc) were related to increased wanted control. In the clinic group, as self-doubt, anxiety (Pt), and introversion (Si) decreased, and energy level (Ma) increased, expressed control increased. However, there was no evidence of a relationship between MMPI indices of psychological functioning and wanted control for the clinic group. In viewing these results, it is particularly interesting to note that Gard and Bendig (1964) found eC to be highly contaminated with the inclusion scales and wC to be a

separate factor. Both groups tended to associate expressed control behavior to the Ma and Si scales in a similar manner. In contrasting the groups, the most significant differences with regard to expressed control was on the Pt scale. Both groups tended to have low eC scores; yet in the clinic group these low scores were associated with anxiety and self-doubt while this was not the case for the normal group. No significant differences between the groups were found in the relationship between wC and the MMPI scales.

In the normal group increases in feelings of alienation and confusion (Sc) were associated with greater expressed affection. Greater wanted affection in this group was associated with more hypersensitivity (Pa), alienation and confusion (Sc). In the clinic group increases in attributions of opposite sex characteristics (Mf), energy level (Ma) and extroversion (Si) were associated with increased expressed affection. No MMPI scales were significantly related to wanted affection in this group. In contrasting the groups with regard to expressed affection, the normal group tended to associate increased anxiety, self-doubt (Pt), feelings of alienation and confusion (Sc) with increased expressed affection behavior, while the clinic group did not. In the clinic group, increased expressed affection behavior was related to greater extroversion (Si) while the normal group did not. In contrasting the groups with regard to wanted affection, the normal group associated increased self-centeredness (Hy), hypersensitivity (Pa), self-doubt, anxiety (Pt), feelings of alienation and confusion (Sc) with increased wanted affection, while the clinic group did not. For both groups the association between self-centeredness (Hy) and wanted affection was small, but the relationship was in opposite directions.

The relationship of Pt to wanted affection for the groups is comparable to the relationship of Pt to inclusion behavior. The relationship in the normal group probably reflects the "realistic" risks involved in engaging in affection behaviors. Again, there was little relationship between Pt and wA for the clinic group.

The normal group tends to associate confusion (Sc) and affection behaviors (eA and wA). Initiating or accepting close personal relationships tended to increase the confusion and difficulty experienced. In the clinic group, who scored highly on Sc, engaging in affection behaviors did not add to their confusion.

The normal group tended to associate sensitivity to others and being easily hurt (Pa) with wanted affection. There is almost no association between the scales for the clinic group. The clinic group tended to score higher on the Pa scale, which would tend to reflect suspiciousness and brooding that would not be associated with wanted affection.

It is interesting to note certain patterns between the groups. No MMPI scale was significantly related to the inclusion scales of the FIRO-B in the normal group. No MMPI scale was significantly related to wA in the clinic group. Yet in the normal group two MMPI scales (Pa and Sc) were related to the wA scale and in the clinic group two MMPI scales (Mf and Ma) were related to inclusion scales. This seems to indicate that the relationship between psychological functioning and interpersonal behavior is different for the two groups. In the normal group psychological functioning seems to be related to affection behavior. One can assume that inclusion behavior must precede affection behavior. Since the clinic group tended to be undersocial while having wanted affection

scores similar to the normal group, it seems probable that their under-social behavior was one of the factors that induced them to seek psychiatric help. While this is a reasonable hypothesis, it should be pointed out that the sample consisted of college students. The college setting provides individuals with much opportunity to interact with others, to compare their behavior with others. As a result, low inclusion behavior may be more of a motivator to seek psychiatric help for the college group than for the general population. Further research would clarify this.

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APPENDIX A

TABLE V
INTERCORRELATIONS OF FIRO-B SCALES

Variables	e^I	w^I	e^C	w^C	e^A	w^A
e^I		.49	.12	.08	.47	.27
w^I			.06	.06	.24	.24
e^C				.07	.19	.31
w^C					.22	.22
e^A						.42

n = 1340

Source: The FIRO-B Scales Manual, Schutz

APPENDIX B

INSTRUCTIONS GIVEN TO NORMAL GROUP

This study is designed to investigate the relationship between two psychometric tests. It is not to investigate you individually. To maintain your confidentiality, please do not put your name on any of the forms or tests. (Do include sex and age.) Instead, be sure that each of your forms has the same number on them.

If you are to receive credit in your class for participation in the experiment, I will give you a note that indicates that you did in fact participate, and you may give this to your instructor or make arrangements with me before you leave.

I will read the directions to both examinations. The directions are also found on the tests. Please take the FIRO-B and fill out the form first. When you have completed this, raise your hand and I will give you the other test. Thank you for your assistance in this study.

APPENDIX C

INFORMATION FORM

No. _____

Circle One

1. Have you ever participated in counselling or psychotherapy for personal problems? Yes No
2. Are you planning to seek counselling or psychotherapy in the future?
 Yes No
3. If married, is your spouse participating in this study?
 Yes No Don't know

APPENDIX D

BOOKLET FOR THE MINNESOTA
MULTIPHASIC PERSONALITY
INVENTORY

Starke R. Hathaway, Ph.D.

and

J. Charnley McKinley, M.D.

This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you.

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right. If a statement is TRUE or MOSTLY TRUE, as applied to you, blacken between the lines in the column headed T. (See A at the right.) If a statement is FALSE or NOT USUALLY TRUE, as applied to you, blacken between the lines in the column headed F. (See B at the right.) If a statement does not apply to you or if it is something that you don't know about, make no mark on the answer sheet.

Remember to give YOUR OWN opinion of yourself. Do not leave any blank spaces if you can avoid it.

In marking your answers on the answer sheet, be sure that the number of the statement agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks on this booklet.

Remember, try to make some answer to every statement.

NOW OPEN THE BOOKLET AND GO AHEAD.

Section of answer sheet correctly marked

T F

A

B

The inventory contained in this booklet has been designed for use with answer forms published or authorized by The Psychological Corporation. If other answer forms are used, The Psychological Corporation takes no responsibility for the meaningfulness of scores.

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70-189 TB

DO NOT MAKE ANY MARKS ON THIS BOOKLET

1. I like mechanics magazines.
2. I have a good appetite.
3. I wake up fresh and rested most mornings.
4. I think I would like the work of a librarian.
5. I am easily awakened by noise.
6. I like to read newspaper articles on crime.
7. My hands and feet are usually warm enough.
8. My daily life is full of things that keep me interested.
9. I am about as able to work as I ever was.
10. There seems to be a lump in my throat much of the time.
11. A person should try to understand his dreams and be guided by or take warning from them.
12. I enjoy detective or mystery stories.
13. I work under a great deal of tension.
14. I have diarrhea once a month or more.
15. Once in a while I think of things too bad to talk about.
16. I am sure I get a raw deal from life.
17. My father was a good man.
18. I am very seldom troubled by constipation.
19. When I take a new job, I like to be tipped off on who should be gotten next to.
20. My sex life is satisfactory.
21. At times I have very much wanted to leave home.
22. At times I have fits of laughing and crying that I cannot control.
23. I am troubled by attacks of nausea and vomiting.
24. No one seems to understand me.
25. I would like to be a singer.
26. I feel that it is certainly best to keep my mouth shut when I'm in trouble.
27. Evil spirits possess me at times.
28. When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing.
29. I am bothered by acid stomach several times a week.
30. At times I feel like swearing.
31. I have nightmares every few nights.
32. I find it hard to keep my mind on a task or job.
33. I have had very peculiar and strange experiences.
34. I have a cough most of the time.
35. If people had not had it in for me I would have been much more successful.
36. I seldom worry about my health.
37. I have never been in trouble because of my sex behavior.
38. During one period when I was a youngster I engaged in petty thievery.
39. At times I feel like smashing things.
40. Most any time I would rather sit and daydream than to do anything else.
41. I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going."
42. My family does not like the work I have chosen (or the work I intend to choose for my life work).
43. My sleep is fitful and disturbed.
44. Much of the time my head seems to hurt all over.
45. I do not always tell the truth.

GO ON TO THE NEXT PAGE

46. My judgment is better than it ever was.
47. Once a week or oftener I feel suddenly hot all over, without apparent cause.
48. When I am with people I am bothered by hearing very queer things.
49. It would be better if almost all laws were thrown away.
50. My soul sometimes leaves my body.
51. I am in just as good physical health as most of my friends.
52. I prefer to pass by school friends, or people I know but have not seen for a long time, unless they speak to me first.
53. A minister can cure disease by praying and putting his hand on your head.
54. I am liked by most people who know me.
55. I am almost never bothered by pains over the heart or in my chest.
56. As a youngster I was suspended from school one or more times for cutting up.
57. I am a good mixer.
58. Everything is turning out just like the prophets of the Bible said it would.
59. I have often had to take orders from someone who did not know as much as I did.
60. I do not read every editorial in the newspaper every day.
61. I have not lived the right kind of life.
62. Parts of my body often have feelings like burning, tingling, crawling, or like "going to sleep."
63. I have had no difficulty in starting or holding my bowel movement.
64. I sometimes keep on at a thing until others lose their patience with me.
65. I loved my father.
66. I see things or animals or people around me that others do not see.
67. I wish I could be as happy as others seem to be.
68. I hardly ever feel pain in the back of the neck.
69. I am very strongly attracted by members of my own sex.
70. I used to like drop-the-handkerchief.
71. I think a great many people exaggerate their misfortunes in order to gain the sympathy and help of others.
72. I am troubled by discomfort in the pit of my stomach every few days or oftener.
73. I am an important person.
74. I have often wished I were a girl. (Or if you are a girl) I have never been sorry that I am a girl.
75. I get angry sometimes.
76. Most of the time I feel blue.
77. I enjoy reading love stories.
78. I like poetry.
79. My feelings are not easily hurt.
80. I sometimes tease animals.
81. I think I would like the kind of work a forest ranger does.
82. I am easily downed in an argument.
83. Any man who is able and willing to work hard has a good chance of succeeding.
84. These days I find it hard not to give up hope of amounting to something.
85. Sometimes I am strongly attracted by the personal articles of others such as shoes, gloves, etc., so that I want to handle or steal them though I have no use for them.
86. I am certainly lacking in self-confidence.
87. I would like to be a florist.
88. I usually feel that life is worth while.
89. It takes a lot of argument to convince most people of the truth.

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90. Once in a while I put off until tomorrow what I ought to do today.
91. I do not mind being made fun of.
92. I would like to be a nurse.
93. I think most people would lie to get ahead.
94. I do many things which I regret afterwards (I regret things more or more often than others seem to).
95. I go to church almost every week.
96. I have very few quarrels with members of my family.
97. At times I have a strong urge to do something harmful or shocking.
98. I believe in the second coming of Christ.
99. I like to go to parties and other affairs where there is lots of loud fun.
100. I have met problems so full of possibilities that I have been unable to make up my mind about them.
101. I believe women ought to have as much sexual freedom as men.
102. My hardest battles are with myself.
103. I have little or no trouble with my muscles twitching or jumping.
104. I don't seem to care what happens to me.
105. Sometimes when I am not feeling well I am cross.
106. Much of the time I feel as if I have done something wrong or evil.
107. I am happy most of the time.
108. There seems to be a fullness in my head or nose most of the time.
109. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.
110. Someone has it in for me.
111. I have never done anything dangerous for the thrill of it.
112. I frequently find it necessary to stand up for what I think is right.
113. I believe in law enforcement.
114. Often I feel as if there were a tight band about my head.
115. I believe in a life hereafter.
116. I enjoy a race or game better when I bet on it.
117. Most people are honest chiefly through fear of being caught.
118. In school I was sometimes sent to the principal for cutting up.
119. My speech is the same as always (not faster or slower, or slurring; no hoarseness).
120. My table manners are not quite as good at home as when I am out in company.
121. I believe I am being plotted against.
122. I seem to be about as capable and smart as most others around me.
123. I believe I am being followed.
124. Most people will use somewhat unfair means to gain profit or an advantage rather than to lose it.
125. I have a great deal of stomach trouble.
126. I like dramatics.
127. I know who is responsible for most of my troubles.
128. The sight of blood neither frightens me nor makes me sick.
129. Often I can't understand why I have been so cross and grouchy.
130. I have never vomited blood or coughed up blood.
131. I do not worry about catching diseases.

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132. I like collecting flowers or growing house plants.
133. I have never indulged in any unusual sex practices.
134. At times my thoughts have raced ahead faster than I could speak them.
135. If I could get into a movie without paying and be sure I was not seen I would probably do it.
136. I commonly wonder what hidden reason another person may have for doing something nice for me.
137. I believe that my home life is as pleasant as that of most people I know.
138. Criticism or scolding hurts me terribly.
139. Sometimes I feel as if I must injure either myself or someone else.
140. I like to cook.
141. My conduct is largely controlled by the customs of those about me.
142. I certainly feel useless at times.
143. When I was a child, I belonged to a crowd or gang that tried to stick together through thick and thin.
144. I would like to be a soldier.
145. At times I feel like picking a fist fight with someone.
146. I have the wanderlust and am never happy unless I am roaming or traveling about.
147. I have often lost out on things because I couldn't make up my mind soon enough.
148. It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important.
149. I used to keep a diary.
150. I would rather win than lose in a game.
151. Someone has been trying to poison me.
152. Most nights I go to sleep without thoughts or ideas bothering me.
153. During the past few years I have been well most of the time.
154. I have never had a fit or convulsion.
155. I am neither gaining nor losing weight.
156. I have had periods in which I carried on activities without knowing later what I had been doing.
157. I feel that I have often been punished without cause.
158. I cry easily.
159. I cannot understand what I read as well as I used to.
160. I have never felt better in my life than I do now.
161. The top of my head sometimes feels tender.
162. I resent having anyone take me in so cleverly that I have had to admit that it was one on me.
163. I do not tire quickly.
164. I like to study and read about things that I am working at.
165. I like to know some important people because it makes me feel important.
166. I am afraid when I look down from a high place.
167. It wouldn't make me nervous if any members of my family got into trouble with the law.
168. There is something wrong with my mind.
169. I am not afraid to handle money.
170. What others think of me does not bother me.
171. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.
172. I frequently have to fight against showing that I am bashful.
173. I liked school.

GO ON TO THE NEXT PAGE

174. I have never had a fainting spell.
175. I seldom or never have dizzy spells.
176. I do not have a great fear of snakes.
177. My mother was a good woman.
178. My memory seems to be all right.
179. I am worried about sex matters.
180. I find it hard to make talk when I meet new people.
181. When I get bored I like to stir up some excitement.
182. I am afraid of losing my mind.
183. I am against giving money to beggars.
184. I commonly hear voices without knowing where they come from.
185. My hearing is apparently as good as that of most people.
186. I frequently notice my hand shakes when I try to do something.
187. My hands have not become clumsy or awkward.
188. I can read a long while without tiring my eyes.
189. I feel weak all over much of the time.
190. I have very few headaches.
191. Sometimes, when embarrassed, I break out in a sweat which annoys me greatly.
192. I have had no difficulty in keeping my balance in walking.
193. I do not have spells of hay fever or asthma.
194. I have had attacks in which I could not control my movements or speech but in which I knew what was going on around me.
195. I do not like everyone I know.
196. I like to visit places where I have never been before.
197. Someone has been trying to rob me.
198. I daydream very little.
199. Children should be taught all the main facts of sex.
200. There are persons who are trying to steal my thoughts and ideas.
201. I wish I were not so shy.
202. I believe I am a condemned person.
203. If I were a reporter I would very much like to report news of the theater.
204. I would like to be a journalist.
205. At times it has been impossible for me to keep from stealing or shoplifting something.
206. I am very religious (more than most people).
207. I enjoy many different kinds of play and recreation.
208. I like to flirt.
209. I believe my sins are unpardonable.
210. Everything tastes the same.
211. I can sleep during the day but not at night.
212. My people treat me more like a child than a grown-up.
213. In walking I am very careful to step over sidewalk cracks.
214. I have never had any breaking out on my skin that has worried me.
215. I have used alcohol excessively.
216. There is very little love and companionship in my family as compared to other homes.
217. I frequently find myself worrying about something.
218. It does not bother me particularly to see animals suffer.
219. I think I would like the work of a building contractor.

GO ON TO THE NEXT PAGE

220. I loved my mother.
221. I like science.
222. It is not hard for me to ask help from my friends even though I cannot return the favor.
223. I very much like hunting.
224. My parents have often objected to the kind of people I went around with.
225. I gossip a little at times.
226. Some of my family have habits that bother and annoy me very much.
227. I have been told that I walk during sleep.
228. At times I feel that I can make up my mind with unusually great ease.
229. I should like to belong to several clubs or lodges.
230. I hardly ever notice my heart pounding and I am seldom short of breath.
231. I like to talk about sex.
232. I have been inspired to a program of life based on duty which I have since carefully followed.
233. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
234. I get mad easily and then get over it soon.
235. I have been quite independent and free from family rule.
236. I brood a great deal.
237. My relatives are nearly all in sympathy with me.
238. I have periods of such great restlessness that I cannot sit long in a chair.
239. I have been disappointed in love.
240. I never worry about my looks.
241. I dream frequently about things that are best kept to myself.
242. I believe I am no more nervous than most others.
243. I have few or no pains.
244. My way of doing things is apt to be misunderstood by others.
245. My parents and family find more fault with me than they should.
246. My neck spots with red often.
247. I have reason for feeling jealous of one or more members of my family.
248. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world."
249. I believe there is a Devil and a Hell in afterlife.
250. I don't blame anyone for trying to grab everything he can get in this world.
251. I have had blank spells in which my activities were interrupted and I did not know what was going on around me.
252. No one cares much what happens to you.
253. I can be friendly with people who do things which I consider wrong.
254. I like to be with a crowd who play jokes on one another.
255. Sometimes at elections I vote for men about whom I know very little.
256. The only interesting part of newspapers is the "funnies."
257. I usually expect to succeed in things I do.
258. I believe there is a God.
259. I have difficulty in starting to do things.
260. I was a slow learner in school.
261. If I were an artist I would like to draw flowers.
262. It does not bother me that I am not better looking.
263. I sweat very easily even on cool days.

GO ON TO THE NEXT PAGE

264. I am entirely self-confident.
265. It is safer to trust nobody.
266. Once a week or oftener I become very excited.
267. When in a group of people I have trouble thinking of the right things to talk about.
268. Something exciting will almost always pull me out of it when I am feeling low.
269. I can easily make other people afraid of me, and sometimes do for the fun of it.
270. When I leave home I do not worry about whether the door is locked and the windows closed.
271. I do not blame a person for taking advantage of someone who lays himself open to it.
272. At times I am all full of energy.
273. I have numbness in one or more regions of my skin.
274. My eyesight is as good as it has been for years.
275. Someone has control over my mind.
276. I enjoy children.
277. At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it.
278. I have often felt that strangers were looking at me critically.
279. I drink an unusually large amount of water every day.
280. Most people make friends because friends are likely to be useful to them.
281. I do not often notice my ears ringing or buzzing.
282. Once in a while I feel hate toward members of my family whom I usually love.
283. If I were a reporter I would very much like to report sporting news.
284. I am sure I am being talked about.
285. Once in a while I laugh at a dirty joke.
286. I am never happier than when alone.
287. I have very few fears compared to my friends.
288. I am troubled by attacks of nausea and vomiting.
289. I am always disgusted with the law when a criminal is freed through the arguments of a smart lawyer.
290. I work under a great deal of tension.
291. At one or more times in my life I felt that someone was making me do things by hypnotizing me.
292. I am likely not to speak to people until they speak to me.
293. Someone has been trying to influence my mind.
294. I have never been in trouble with the law.
295. I liked "Alice in Wonderland" by Lewis Carroll.
296. I have periods in which I feel unusually cheerful without any special reason.
297. I wish I were not bothered by thoughts about sex.
298. If several people find themselves in trouble, the best thing for them to do is to agree upon a story and stick to it.
299. I think that I feel more intensely than most people do.
300. There never was a time in my life when I liked to play with dolls.
301. Life is a strain for me much of the time.
302. I have never been in trouble because of my sex behavior.
303. I am so touchy on some subjects that I can't talk about them.
304. In school I found it very hard to talk before the class.
305. Even when I am with people I feel lonely much of the time.
306. I get all the sympathy I should.

GO ON TO THE NEXT PAGE

307. I refuse to play some games because I am not good at them.
308. At times I have very much wanted to leave home.
309. I seem to make friends about as quickly as others do.
310. My sex life is satisfactory.
311. During one period when I was a youngster I engaged in petty thievery.
312. I dislike having people about me.
313. The man who provides temptation by leaving valuable property unprotected is about as much to blame for its theft as the one who steals it.
314. Once in a while I think of things too bad to talk about.
315. I am sure I get a raw deal from life.
316. I think nearly anyone would tell a lie to keep out of trouble.
317. I am more sensitive than most other people.
318. My daily life is full of things that keep me interested.
319. Most people inwardly dislike putting themselves out to help other people.
320. Many of my dreams are about sex matters.
321. I am easily embarrassed.
322. I worry over money and business.
323. I have had very peculiar and strange experiences.
324. I have never been in love with anyone.
325. The things that some of my family have done have frightened me.
326. At times I have fits of laughing and crying that I cannot control.
327. My mother or father often made me obey even when I thought that it was unreasonable.
328. I find it hard to keep my mind on a task or job.
329. I almost never dream.
330. I have never been paralyzed or had any unusual weakness of any of my muscles.
331. If people had not had it in for me I would have been much more successful.
332. Sometimes my voice leaves me or changes even though I have no cold.
333. No one seems to understand me.
334. Peculiar odors come to me at times.
335. I cannot keep my mind on one thing.
336. I easily become impatient with people.
337. I feel anxiety about something or someone almost all the time.
338. I have certainly had more than my share of things to worry about.
339. Most of the time I wish I were dead.
340. Sometimes I become so excited that I find it hard to get to sleep.
341. At times I hear so well it bothers me.
342. I forget right away what people say to me.
343. I usually have to stop and think before I act even in trifling matters.
344. Often I cross the street in order not to meet someone I see.
345. I often feel as if things were not real.
346. I have a habit of counting things that are not important such as bulbs on electric signs, and so forth.
347. I have no enemies who really wish to harm me.
348. I tend to be on my guard with people who are somewhat more friendly than I had expected.
349. I have strange and peculiar thoughts.
350. I hear strange things when I am alone.
351. I get anxious and upset when I have to make a short trip away from home.

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352. I have been afraid of things or people that I knew could not hurt me.
353. I have no dread of going into a room by myself where other people have already gathered and are talking.
354. I am afraid of using a knife or anything very sharp or pointed.
355. Sometimes I enjoy hurting persons I love.
356. I have more trouble concentrating than others seem to have.
357. I have several times given up doing a thing because I thought too little of my ability.
358. Bad words, often terrible words, come into my mind and I cannot get rid of them.
359. Sometimes some unimportant thought will run through my mind and bother me for days.
360. Almost every day something happens to frighten me.
361. I am inclined to take things hard.
362. I am more sensitive than most other people.
363. At times I have enjoyed being hurt by someone I loved.
364. People say insulting and vulgar things about me.
365. I feel uneasy indoors.
366. Even when I am with people I feel lonely much of the time.
367. I am not afraid of fire.
368. I have sometimes stayed away from another person because I feared doing or saying something that I might regret afterwards.
369. Religion gives me no worry.
370. I hate to have to rush when working.
371. I am not unusually self-conscious.
372. I tend to be interested in several different hobbies rather than to stick to one of them for a long time.
373. I feel sure that there is only one true religion.
374. At periods my mind seems to work more slowly than usual.
375. When I am feeling very happy and active, someone who is blue or low will spoil it all.
376. Policemen are usually honest.
377. At parties I am more likely to sit by myself or with just one other person than to join in with the crowd.
378. I do not like to see women smoke.
379. I very seldom have spells of the blues.
380. When someone says silly or ignorant things about something I know about, I try to set him right.
381. I am often said to be hotheaded.
382. I wish I could get over worrying about things I have said that may have injured other people's feelings.
383. People often disappoint me.
384. I feel unable to tell anyone all about myself.
385. Lightning is one of my fears.
386. I like to keep people guessing what I'm going to do next.
387. The only miracles I know of are simply tricks that people play on one another.
388. I am afraid to be alone in the dark.
389. My plans have frequently seemed so full of difficulties that I have had to give them up.
390. I have often felt badly over being misunderstood when trying to keep someone from making a mistake.
391. I love to go to dances.
392. A windstorm terrifies me.
393. Horses that don't pull should be beaten or kicked.
394. I frequently ask people for advice.

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395. The future is too uncertain for a person to make serious plans.
396. Often, even though everything is going fine for me, I feel that I don't care about anything.
397. I have sometimes felt that difficulties were piling up so high that I could not overcome them.
398. I often think, "I wish I were a child again."
399. I am not easily angered.
400. If given the chance I could do some things that would be of great benefit to the world.
401. I have no fear of water.
402. I often must sleep over a matter before I decide what to do.
403. It is great to be living in these times when so much is going on.
404. People have often misunderstood my intentions when I was trying to put them right and be helpful.
405. I have no trouble swallowing.
406. I have often met people who were supposed to be experts who were no better than I.
407. I am usually calm and not easily upset.
408. I am apt to hide my feelings in some things, to the point that people may hurt me without their knowing about it.
409. At times I have worn myself out by undertaking too much.
410. I would certainly enjoy beating a crook at his own game.
411. It makes me feel like a failure when I hear of the success of someone I know well.
412. I do not dread seeing a doctor about a sickness or injury.
413. I deserve severe punishment for my sins.
414. I am apt to take disappointments so keenly that I can't put them out of my mind.
415. If given the chance I would make a good leader of people.
416. It bothers me to have someone watch me at work even though I know I can do it well.
417. I am often so annoyed when someone tries to get ahead of me in a line of people that I speak to him about it.
418. At times I think I am no good at all.
419. I played hooky from school quite often as a youngster.
420. I have had some very unusual religious experiences.
421. One or more members of my family is very nervous.
422. I have felt embarrassed over the type of work that one or more members of my family have done.
423. I like or have liked fishing very much.
424. I feel hungry almost all the time.
425. I dream frequently.
426. I have at times had to be rough with people who were rude or annoying.
427. I am embarrassed by dirty stories.
428. I like to read newspaper editorials.
429. I like to attend lectures on serious subjects.
430. I am attracted by members of the opposite sex.
431. I worry quite a bit over possible misfortunes.
432. I have strong political opinions.
433. I used to have imaginary companions.
434. I would like to be an auto racer.
435. Usually I would prefer to work with women.
436. People generally demand more respect for their own rights than they are willing to allow for others.

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437. It is all right to get around the law if you don't actually break it.
438. There are certain people whom I dislike so much that I am inwardly pleased when they are catching it for something they have done.
439. It makes me nervous to have to wait.
440. I try to remember good stories to pass them on to other people.
441. I like tall women.
442. I have had periods in which I lost sleep over worry.
443. I am apt to pass up something I want to do because others feel that I am not going about it in the right way.
444. I do not try to correct people who express an ignorant belief.
445. I was fond of excitement when I was young (or in childhood).
446. I enjoy gambling for small stakes.
447. I am often inclined to go out of my way to win a point with someone who has opposed me.
448. I am bothered by people outside, on streetcars, in stores, etc., watching me.
449. I enjoy social gatherings just to be with people.
450. I enjoy the excitement of a crowd.
451. My worries seem to disappear when I get into a crowd of lively friends.
452. I like to poke fun at people.
453. When I was a child I didn't care to be a member of a crowd or gang.
454. I could be happy living all alone in a cabin in the woods or mountains.
455. I am quite often not in on the gossip and talk of the group I belong to.
456. A person shouldn't be punished for breaking a law that he thinks is unreasonable.
457. I believe that a person should never taste an alcoholic drink.
458. The man who had most to do with me when I was a child (such as my father, stepfather, etc.) was very strict with me.
459. I have one or more bad habits which are so strong that it is no use in fighting against them.
460. I have used alcohol moderately (or not at all).
461. I find it hard to set aside a task that I have undertaken, even for a short time.
462. I have had no difficulty starting or holding my urine.
463. I used to like hopscotch.
464. I have never seen a vision.
465. I have several times had a change of heart about my life work.
466. Except by a doctor's orders I never take drugs or sleeping powders.
467. I often memorize numbers that are not important (such as automobile licenses, etc.).
468. I am often sorry because I am so cross and grouchy.
469. I have often found people jealous of my good ideas, just because they had not thought of them first.
470. Sexual things disgust me.
471. In school my marks in deportment were quite regularly bad.
472. I am fascinated by fire.
473. Whenever possible I avoid being in a crowd.
474. I have to urinate no more often than others.
475. When I am cornered I tell that portion of the truth which is not likely to hurt me.
476. I am a special agent of God.
477. If I were in trouble with several friends who were equally to blame, I would rather take the whole blame than to give them away.

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478. I have never been made especially nervous over trouble that any members of my family have gotten into.
479. I do not mind meeting strangers.
480. I am often afraid of the dark.
481. I can remember "playing sick" to get out of something.
482. While in trains, busses, etc., I often talk to strangers.
483. Christ performed miracles such as changing water into wine.
484. I have one or more faults which are so big that it seems better to accept them and try to control them rather than to try to get rid of them.
485. When a man is with a woman he is usually thinking about things related to her sex.
486. I have never noticed any blood in my urine.
487. I feel like giving up quickly when things go wrong.
488. I pray several times every week.
489. I feel sympathetic towards people who tend to hang on to their griefs and troubles.
490. I read in the Bible several times a week.
491. I have no patience with people who believe there is only one true religion.
492. I dread the thought of an earthquake.
493. I prefer work which requires close attention, to work which allows me to be careless.
494. I am afraid of finding myself in a closet or small closed place.
495. I usually "lay my cards on the table" with people that I am trying to correct or improve.
496. I have never seen things doubled (that is, an object never looks like two objects to me without my being able to make it look like one object).
497. I enjoy stories of adventure.
498. It is always a good thing to be frank.
499. I must admit that I have at times been worried beyond reason over something that really did not matter.
500. I readily become one hundred per cent sold on a good idea.
501. I usually work things out for myself rather than get someone to show me how.
502. I like to let people know where I stand on things.
503. It is unusual for me to express strong approval or disapproval of the actions of others.
504. I do not try to cover up my poor opinion or pity of a person so that he won't know how I feel.
505. I have had periods when I felt so full of pep that sleep did not seem necessary for days at a time.
506. I am a high-strung person.
507. I have frequently worked under people who seem to have things arranged so that they get credit for good work but are able to pass off mistakes onto those under them.
508. I believe my sense of smell is as good as other people's.
509. I sometimes find it hard to stick up for my rights because I am so reserved.
510. Dirt frightens or disgusts me.
511. I have a daydream life about which I do not tell other people.
512. I dislike to take a bath.
513. I think Lincoln was greater than Washington.
514. I like mannish women.
515. In my home we have always had the ordinary necessities (such as enough food, clothing, etc.).
516. Some of my family have quick tempers.

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517. I cannot do anything well.
518. I have often felt guilty because I have pretended to feel more sorry about something than I really was.
519. There is something wrong with my sex organs.
520. I strongly defend my own opinions as a rule.
521. In a group of people I would not be embarrassed to be called upon to start a discussion or give an opinion about something I know well.
522. I have no fear of spiders.
523. I practically never blush.
524. I am not afraid of picking up a disease or germs from door knobs.
525. I am made nervous by certain animals.
526. The future seems hopeless to me.
527. The members of my family and my close relatives get along quite well.
528. I blush no more often than others.
529. I would like to wear expensive clothes.
530. I am often afraid that I am going to blush.
531. People can pretty easily change me even though I thought that my mind was already made up on a subject.
532. I can stand as much pain as others can.
533. I am not bothered by a great deal of belching of gas from my stomach.
534. Several times I have been the last to give up trying to do a thing.
535. My mouth feels dry almost all the time.
536. It makes me angry to have people hurry me.
537. I would like to hunt lions in Africa.
538. I think I would like the work of a dressmaker.
539. I am not afraid of mice.
540. My face has never been paralyzed.
541. My skin seems to be unusually sensitive to touch.
542. I have never had any black, tarry-looking bowel movements.
543. Several times a week I feel as if something dreadful is about to happen.
544. I feel tired a good deal of the time.
545. Sometimes I have the same dream over and over.
546. I like to read about history.
547. I like parties and socials.
548. I never attend a sexy show if I can avoid it.
549. I shrink from facing a crisis or difficulty.
550. I like repairing a door latch.
551. Sometimes I am sure that other people can tell what I am thinking.
552. I like to read about science.
553. I am afraid of being alone in a wide-open place.
554. If I were an artist I would like to draw children.
555. I sometimes feel that I am about to go to pieces.

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556. I am very careful about my manner of dress.
557. I would like to be a private secretary.
558. A large number of people are guilty of bad sexual conduct.
559. I have often been frightened in the middle of the night.
560. I am greatly bothered by forgetting where I put things.
561. I very much like horseback riding.
562. The one to whom I was most attached and whom I most admired as a child was a woman. (Mother, sister, aunt, or other woman.)
563. I like adventure stories better than romantic stories.
564. I am apt to pass up something I want to do when others feel that it isn't worth doing.
565. I feel like jumping off when I am on a high place.
566. I like movie love scenes.



APPENDIX E

FIRO-B INSTRUCTIONS AND FORM

FIRO-B

WILLIAM C. SCHUTZ, Ph.D

DIRECTIONS: This questionnaire is designed to explore the typical ways you interact with people. There are, of course, no right or wrong answers; each person has his own ways of behaving.

Sometimes people are tempted to answer questions like these in terms of what they think a person *should* do. This is *not* what is wanted here. We would like to know how you actually behave.

Some items may seem similar to others. However, each item is different so please answer each one without regard to the others. There is no time limit, but do not debate long over any item.

NAME

GROUP

DATE AGE

MALE FEMALE

	I	C	A
e			
w			



CONSULTING PSYCHOLOGISTS PRESS, INC.
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For each statement below, decide which of the following answers best applies to you. Place the number of the answer in the box at the left of the statement. Please be as honest as you can.

1. usually 2. often 3. sometimes 4. occasionally 5. rarely 6. never

- | | |
|---|---|
| <input type="checkbox"/> 1. I try to be with people. | <input type="checkbox"/> 9. I try to include other people in my plans. |
| <input type="checkbox"/> 2. I let other people decide what to do. | <input type="checkbox"/> 10. I let other people control my actions. |
| <input type="checkbox"/> 3. I join social groups. | <input type="checkbox"/> 11. I try to have people around me. |
| <input type="checkbox"/> 4. I try to have close relationships with people. | <input type="checkbox"/> 12. I try to get close and personal with people. |
| <input type="checkbox"/> 5. I tend to join social organizations when I have an opportunity. | <input type="checkbox"/> 13. When people are doing things together I tend to join them. |
| <input type="checkbox"/> 6. I let other people strongly influence my actions. | <input type="checkbox"/> 14. I am easily led by people. |
| <input type="checkbox"/> 7. I try to be included in informal social activities. | <input type="checkbox"/> 15. I try to avoid being alone. |
| <input type="checkbox"/> 8. I try to have close, personal relationships with people. | <input type="checkbox"/> 16. I try to participate in group activities. |

For each of the next group of statements, choose one of the following answers:

1. most people 2. many people 3. some people 4. a few people 5. one or two people 6. nobody

- | | |
|--|---|
| <input type="checkbox"/> 17. I try to be friendly to people. | <input type="checkbox"/> 23. I try to get close and personal with people. |
| <input type="checkbox"/> 18. I let other people decide what to do. | <input type="checkbox"/> 24. I let other people control my actions. |
| <input type="checkbox"/> 19. My personal relations with people are cool and distant. | <input type="checkbox"/> 25. I act cool and distant with people. |
| <input type="checkbox"/> 20. I let other people take charge of things. | <input type="checkbox"/> 26. I am easily led by people. |
| <input type="checkbox"/> 21. I try to have close relationships with people. | <input type="checkbox"/> 27. I try to have close, personal relationships with people. |
| <input type="checkbox"/> 22. I let other people strongly influence my actions. | |

For each of the next group of statements, choose one of the following answers:

1. most people 2. many people 3. some people 4. a few people 5. one or two people 6. nobody

- | | |
|--|---|
| <input type="checkbox"/> 28. I like people to invite me to things. | <input type="checkbox"/> 35. I like people to act cool and distant toward me. |
| <input type="checkbox"/> 29. I like people to act close and personal with me. | <input type="checkbox"/> 36. I try to have other people do things the way I want them done. |
| <input type="checkbox"/> 30. I try to influence strongly other people's actions. | <input type="checkbox"/> 37. I like people to ask me to participate in their discussions. |
| <input type="checkbox"/> 31. I like people to invite me to join in their activities. | <input type="checkbox"/> 38. I like people to act friendly toward me. |
| <input type="checkbox"/> 32. I like people to act close toward me. | <input type="checkbox"/> 39. I like people to invite me to participate in their activities. |
| <input type="checkbox"/> 33. I try to take charge of things when I am with people. | <input type="checkbox"/> 40. I like people to act distant toward me. |
| <input type="checkbox"/> 34. I like people to include me in their activities. | |

For each of the next group of statements, choose one of the following answers:

1. usually 2. often 3. sometimes 4. occasionally 5. rarely 6. never

- | | |
|---|---|
| <input type="checkbox"/> 41. I try to be the dominant person when I am with people. | <input type="checkbox"/> 48. I like people to include me in their activities. |
| <input type="checkbox"/> 42. I like people to invite me to things. | <input type="checkbox"/> 49. I like people to act close and personal with me. |
| <input type="checkbox"/> 43. I like people to act close toward me. | <input type="checkbox"/> 50. I try to take charge of things when I'm with people. |
| <input type="checkbox"/> 44. I try to have other people do things I want done. | <input type="checkbox"/> 51. I like people to invite me to participate in their activities. |
| <input type="checkbox"/> 45. I like people to invite me to join their activities. | <input type="checkbox"/> 52. I like people to act distant toward me. |
| <input type="checkbox"/> 46. I like people to act cool and distant toward me. | <input type="checkbox"/> 53. I try to have other people do things the way I want them done. |
| <input type="checkbox"/> 47. I try to influence strongly other people's actions. | <input type="checkbox"/> 54. I take charge of things when I'm with people. |

VITA γ

Michael Dean Simpkins

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