1990

The Relationship Between Needs and Interpersonal Problems of Women in Four Interpersonal Categories

Valarie Elaine Sikes-Nova
Old Dominion University

THE RELATIONSHIP BETWEEN NEEDS AND INTERPERSONAL PROBLEMS OF WOMEN IN FOUR INTERPERSONAL CATEGORIES

by

Valarie Elaine Sikes-Nova
B.S.Ed., May 1980, Western Carolina University

A Dissertation Presented to the Faculties of
The College of William and Mary
Eastern Virginia Medical School
Norfolk State University
Old Dominion University
in Partial Fulfillment of the Requirements
for the Degree of

DOCTOR OF PSYCHOLOGY

CLINICAL PSYCHOLOGY

VIRGINIA CONSORTIUM FOR PROFESSIONAL PSYCHOLOGY

Approved by:

Jay L. Chambers, W&M
Director

Donald J. Kiesler, VCU

Neill Watson, W&M

Janis Sanchez-Hucles, ODU

Ronald A. Giannetti, EVMS

DEDICATION

To my husband, Steven, for all his enthusiasm, support and willing assistance.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my committee chairperson, Dr. Jay Chambers and the clinicians of the Center for Personal Learning and Development at the College of William and Mary for their invaluable help in collecting the data necessary to this dissertation. Kathy Poynter deserves special thanks for her assistance in sorting and managing the barrage of data for this study.

Finally, I would like to acknowledge my husband, Steve, who has been a steady support system through all the stages of completion of this dissertation. His ready willingness to be actively involved and his firm commitment to my individual and professional growth have enabled me to attain this, of many goals.

TABLE OF CONTENTS

Page

Page

LIST OF TABLES

Table Page

Table Page

LIST OF FIGURES

Figure Page

ABSTRACT

The Relationship Between Needs and Interpersonal Problems of Women in Four Interpersonal Categories

Valarie Sikes-Nova

Virginia Consortium for Professional Psychology, 1989

Director: Dr. Jay Chambers

This study empirically assessed the relationship between needs structure and interpersonal presentation in women. Proposed indices for selective attention were assessed as to their ability to detect pathology. The relationship between interpersonal presentation and interpersonal problems were also studied. The measures used were The Picture Identification Test (Chambers, 1976), The Interpersonal Adjective Scales-Revised (Wiggins, 1985), The Inventory for Interpersonal Problems (Horowitz, 1986), and The Marlowe-Crowne Social-Desirability Scale (1964). Seventy-five female clients in four Virginia University Counseling centers and twenty-two counselors participated in this study. Female clients ranged in age from 18-46 years ($\underline{M}$=23.3). The twenty-two counselors ranged in age from 25-65 years ($\underline{M}$=41.5), with twelve males and ten females. The counselors reported a range of 2-34 years of experience ($\underline{M}$=12.4 years).

Subjects were assigned to one of four interpersonal categories (Friendly-Dominant, Friendly-Submissive, Hostile-Dominant, Hostile-Submissive) on the basis of their self-reported IAS-R and one category on the basis of their counselor-reported IAS-R scores. Subjects were further divided into three groups (High, Medium, Low) on the basis of the discrepancy between self- vs. counselor-reported IAS-R octant or category scores (Discrepancy Angle) and by the discrepancy between self vs. counselor IAS-R Vector or Intensity Scores (Discrepancy Vector).

Multivariate analyses of variance, Analyses of Variance, discriminant analysis, T-tests, Duncan's Multiple Range Tests, Chi-Square analysis and Pearson's Product Moment correlations were used to test three hypotheses. Due to the small sample size, results of hypothesis one are inconclusive. Results at overall and individual analysis levels did not differentiate differences in motivational structure between the four interpersonal groups on the basis of self-report IAS-R. Differences were tentatively suggested, however, between the four groups in their attitudes and values toward personal needs when utilizing therapist IAS-R reports on individual PIT needs. Of the therapist-reported groups, trends supported the suggestion that the Hostile groups tended to display the most problematic attitudes and values toward needs. Of these two, the Hostile-Submissive group seemed to demonstrate the most problematic attitudes, particularly toward "assertive" needs and particularly when expressed by men. The Friendly-Submissive group seemed to display this pattern as well, but not at

the same level of intensity. The Friendly-Dominant group were relatively problem-free with regard to negative attitudes toward needs.

Two measures of selective-attention, discrepancy-angle and discrepancy vector were tested as potential indices to assess pathology in motivational structure. The Discrepancy Angle scores detected few pathological differences in motivational structure between the three groups. The Discrepancy Vector scores however, revealed several significant pathological scores in motivational structure as assessed by the PIT. The Discrepancy Vector score then can be viewed as a salient index of dysfunctional attitudes and beliefs toward self and others which coincide with high selective attention. Significant results and consistent non-significant patterns support the suggestion that the Hostile-Dominant and Friendly-Submissive groups comprised the largest proportions of the high Discrepancy Angle and Discrepancy Vector scores. Selective attention (Discrepancy Angle, Discrepancy Vector) and social desirability as assessed by the Marlowe-Crowne were not found to be related. Post-hoc comparisons of the IAS-R client-vector scores, therapist-vector scores and Discrepancy Vector scores revealed the Discrepancy Vector score to be the best detector of pathological differences in motivational structure.

Regarding the relationship between objectively rated interpersonal presentation and self-reported interpersonal problems, results must be viewed with caution due to the small number of subjects in each category. Results support the suggestion that the endorsement of interpersonal problems are

significantly related to interpersonal category. A distinct pattern of endorsement of the problem-items (agree-disagree) emerged between two of the four groups. The Friendly-Dominant group reported the fewest problems, while the Hostile-Submissive group reported the greatest number of problems.

Results, both conclusive and tentative, were discussed in terms of their support for the tenets of interpersonal theory. That is, interpersonal dimensions can saliently discriminate individual differences in belief systems about how we satisfy interpersonal needs (Golding, 1982; Carson, 1979). This was suggested in the trends observed in motivational structure between the four therapist-assessed groups and in the differences between interpersonal problems between these four groups.

The study also offered empirical support for Leary's (1957) operationalized definition of selection attention as the discrepancy between self and other viewpoint which corresponds to pathology. However, only the discrepancy between client and therapist vector scores (discrepancy vector) was found to detect pathology in motivational structures. These findings are consistent with Wiggins' (1985) results that extreme vector scores alone are not indicative of psychopathology. Results of this study were also discussed in terms of implications for future research.

Chapter 1

Introduction

Almost thirty years after Timothy Leary's (1957) seminal treatise on interpersonal diagnosis, Wiggins (1982) observed that the interpersonal approach has "not been accorded as prominent a place in the mainstream of clinical thought as its proponents would desire." Kiesler (1983) cited several reasons for this limited impact, among them, the observation that current bodies of empirical work are "neither theoretically nor empirically comprehensive or precise enough to validly test central propositions of interpersonal theory or to guide concrete applications to assessment and therapy for abnormal behavior." Anchin (1982) suggested that this "comprehensiveness" may be achieved through integration of the interpersonal point-of-view with other theories.

Early efforts in the field focused on clarifying an interpersonal taxonomy and on validating the psychometric structure for interpersonal behavior (Wiggins, 1984). Currently, with refined circumplex measures which can precisely classify interpersonal behavior, many interpersonalists feel that an important task for theory construction and application is to establish systematic relationships between characteristic classes of covert and overt interpersonal behavior as documented on the circumplex (Kiesler, 1983; Anchin, 1982; Orford, 1986).

Additionally, Anchin (1982) cited the need to discern correlates of a particular interpersonal style, such as their resulting relationship problems. Linking overt style, covert processes and resultant relationship problems for a particular interpersonal category would not only expand the comprehensiveness of interpersonal theory, but would also have specific implications for targeting interventions for psychotherapy with particular interpersonal styles (Anchin, 1982; Kiesler, 1985).

The work of Leonard Horowitz and colleagues (1986) has identified categories of interpersonal problems that may coincide with a particular style, but a review of the literature revealed little empirical research to document covert processes. Notable exceptions to this rule were found in the work of Benjamin (1982), Carson (1979), and Golding, Valone and Foster (1980). Golding's research particularly has attempted to link specific modes of cognitive appraisal and construal to interpersonal variables. This research highlighted the important role of motives in encoding interpersonal stimuli. Wachtel (1977) also suggested that covert processes may be explored through inquiry into motivational systems. A review of the literature in this area however revealed few attempts to establish the relationship between motivational structure and specific interpersonal style.

The return to linking needs structure and interpersonal behavior seems ironic in view of the fact that this was the perspective initially intended by Leary

(1957) and the Kaiser Group when they developed the "Tripartite Division of Personality" (Freedman, 1985). Freedman described the Kaiser Group goal: "...we were concerned to relate in systemic fashion interpersonal behavior with intrapsychic processes..." Existing research on the relationship between motivational structure and interpersonal style has been general, with the goal of determining the common dimensions that underlie Leary's (1957) comprehensive levels of personality: the Public (observer rated), the Conscious (self-report) and the Private (projective data) (LaForge et al., 1954; Terrill, 1961; Golding & Knudson, 1975; Truckenmiller & Schaie, 1977; Solomon, 1981; Wiggins & Broughton, 1984). Overall, current thinking proposed a common underlying structure to public, self-appraisal and covert motivational interpersonal variables (Wiggins & Broughton, 1984; Truckenmiller & Schaie, 1981). These studies have not empirically linked a specific motivational structure with specific interpersonal presentations.

Purpose

The primary goal for this study is to obtain a comprehensive picture of specific interpersonal categories. It will examine the relationship between motivational structure and specific interpersonal styles. This focus reflects the assumption that antecedent, unconscious motives shape and direct one's perception and ultimately influence behavior (Murray, 1953). It also reflects an

assumption of interpersonal theory: that a person with a maladaptive interpersonal style (as documented on the circumplex by an extreme position) will construe and act upon the world in a selective and limited way in an effort to validate their motivational or cognitive belief structure. For the most part, such people have selective attention or lack of awareness of the negative impacts of their behavior on others. They are keenly aware, however, of the actions of others which validate their self-attributions and needs. Theoretically, this validation provides security and predictability to the self-system, is reinforcing, and therefore repeated.

The first objective of this study is to analyze the motivational structure of specific interpersonal categories to determine the motivational patterns which differentiate them. The Interpersonal Adjective Scales-Revised (Wiggins, 1984) was chosen to classify behavior into interpersonal categories due to its excellent psychometric structure (Wiggins, 1982, 1985; Kiesler, 1983; Weinstock-Savoy, 1986). Other circumplex measures have structural difficulties, or were designed more specifically to document interpersonal interaction and complementarity (Wiggins, 1982; Kiesler, 1983; Orford, 1986; Weinstock-Savoy, 1986).

The Picture Identification Test (PIT) (Chambers, 1976) was chosen to assess covert motivational structure for several reasons. The PIT permits a complex analysis of the relationship and organization of the motivational

elements. It is a semi-projective measure with objective scoring. It identifies patterns of need structures which may facilitate or inhibit effective expression of a need in a particular context. Additionally, it can provide analysis of the cognitive perceptual judgments of persons in specific interpersonal categories.

The second objective of this study is to analyze how persons with specific interpersonal styles may view themselves in comparison to an observer's rating to assess for selective inattention. Thus, a discrepancy in the adjectives chosen on the Interpersonal Adjective Scales-Revised between a subject and an observer may provide insight into this assumption of interpersonal theory. The possible mediating effect of social desirability on the endorsement of adjectives by subjects will be assessed by the inclusion of the Marlowe-Crowne Social Desirability Rating Scale. Therapists, as raters, have been found to be free of the effects of social desirability when rating subjects and are assumed to provide objective ratings (Lorr & McNair, 1963). It is also hypothesized that more discrepant subjects will show the greatest deviancy in their motivational structures assessed by the PIT.

A third objective of this study is to examine the empirical relationships between those classified in specified interpersonal categories and their professed interpersonal problems. The self-report Inventory of Interpersonal Problems (IIP) (Horowitz, 1986) will be used in conjunction with the Interpersonal

Adjective Scales-Revised (Wiggins, 1985) to determine such possible relationships.

Clinical Importance and Utility

A call has been issued from interpersonal theorists citing the need for documentation of the links between overt and covert processes and their interpersonal correlates for specific interpersonal styles (Kiesler, 1983, 1984, 1985; Anchin, 1982; Orford, 1986). The present study aims to investigate and describe such possible links.

This study aims to extend documentation of the motivational structure of individuals with a particular interpersonal style. It will also examine the hypothesis of "selective attention" between self and observer reports, considering the role of social desirability. The integration of this multi-level data for an interpersonal category will expand the comprehensiveness of interpersonal theory and allow for integration of psychodynamic and cognitive theories with the interpersonal approach (Anchin, 1982; Wachtel, 1977; Goldfried, 1980). Finally, as Anchin (1982) noted, documentation of the covert and overt interactional components of a specific maladaptive style allows for more precise targeting of therapeutic interventions.

Chapter II

Literature Review

The Interpersonal Conceptualization of Personality

The current interpersonal field developed from diverse disciplines. The first clinician to systematically conceptualize interpersonal phenomenon was Harry Stack Sullivan (1953). Sullivan described personality as, "the relatively enduring pattern of recurrent interpersonal situations which characterize a human life." Sullivan conceptualized personality as an energy system whose purpose was to perform activities that reduced either the biological needs of the organism or its anxiety. This process occurs through "dynamisms" which are habitual patterns of behavior. He felt all persons have the same basic dynamisms but the mode of expression may vary in accordance with situations and life experiences of the individual (Hall & Lindsey, 1978).

One of the most important dynamisms in considering the origin of maladaptive behavior is the "self-system." Sullivan felt that the self-system arises as a consequence of the infant's interaction with the mother according to his "theorem of reciprocal emotions." That is, "An interpersonal situation is a reciprocal process in which l) complementary needs are resolved or aggravated; 2) reciprocal patterns of activity are developed or disintegrated; and 3) foresight

of satisfaction or rebuff, of similar needs is facilitated." Applying the theorem of reciprocal emotions to the developing self system then, the mother responds to an infant out of a sense of empathy with its need. Also the infant can empathetically sense anxiety or comfort in the mother. Any anxiety sensed by the infant in this way is experienced as aversive and unmanageable to the infant since it will have no capacity to control the caretaker who fulfills its every need. The self-system forms, then, to reduce the infant's anxiety and to create a sense of security. The self-system does this, according to Sullivan, by exercising control over the infant or child's behavior, or it may screen from awareness certain knowledge to reduce anxiety. The self-system is held in high esteem and protected from criticism. Its contribution to maladaptive behavior occurs since it screens out contradictions between self-beliefs and interpersonal reality. Through selective attention, individuals are unaware of negative self-behavior, and so may repeatedly experience poor interpersonal relations because they fail to accurately assess the impact their behavior has on others. According to Sullivan, to the extent that individuals have been influenced by anxiety in their early relations, their current interpersonal relations and communications will be disturbed through selective attention. In summary, although this mechanism developed to reduce anxiety and increase security, it negatively impacts ability to observe and modify interpersonal behavior and to learn from experience (Hall & Lindsey,

1978).

Although Sullivan provided a theoretical framework for the interpersonal perspective, describing both overt and covert processes, he did not present an empirical methodology for observing or documenting these interpersonal phenomenon.

Development of the Interpersonal Circle and Theories

The validation of Sullivan's concepts required an explicit classification system for interpersonal behavior. The Kaiser Foundation Research Group of Freedman, Leary, Ossorio, and Coffey (1952) established this system. Their system, the "Tripartite Division of Personality," is remarkable in its precise objectification of Sullivanian theory and its purpose as a conceptual map linking diverse and unobservable personality variables. The Kaiser Group sought to design a framework to document the interrelationships between covert and overt interpersonal traits and mechanisms on three Levels: the Public, Conscious and Private levels (Freedman et. al., 1952; 1985). Each level was tapped by ratings of interpersonal variables on the corresponding measures of Public (observer) report, Conscious (self) report, and Private or projective-unconscious data. The Kaiser Group formulated 16 interpersonal traits and mechanisms hypothesized to be bipolar blends of the two dimensions of love (friendly vs. hostile) and control (dominance vs submissiveness). Given the two dimensional origin of these 16

blends and their bipolar nature, the Kaiser Group decided their model could be best represented as a circumplex. They developed an interpersonal measure called the Interpersonal Check List (LaForge & Suczek, 1955) to measure these 16 interpersonal variables. The ICL scores, and a metric interpretation of the circular arrangement of these 16 variables within a Euclidean space, provided mathematical estimates of the contributions of dominance and love. Trigonomic formulas could therefore summarize an individual's interpersonal profile as falling within one of eight or, on a more precise level, 16 interpersonal categories.

Insert Figure 1 about here

The circular ordering of these interpersonal variables was arranged according to the principle that correlations between adjacent categories on the circle would be high, while those on the opposite side of the circle would be negatively correlated. The assumption of variable bipolarity is important when diagnosing an individual through geometric typologies as used to obtain the ICL summary profile (Wiggins, 1982). Strengths and weaknesses of the Leary or Kaiser Group model using the ICL will be discussed further in the section on interpersonal measures.

Timothy Leary's Interpersonal Diagnosis of Personality (1957) synthesized the work of the Kaiser Group. Utilizing the interpersonal circle segments, Leary operationalized Sullivan's theory of reciprocal emotions. According to Leary, people tended to relate in favored, repetitive patterns called reflexes. These reflexes or patterns may be defined as the individual's ICL profile point on the circumplex. Leary believed that each reflex tended to invite a reciprocal response from another person, which confirms and therefore leads to a repetition of the original reflex. Leary documented this process on the circumplex. For example, docile and dependent behaviors (JK segment) pull for managing responsible behavior (LM & NO segments) from the opposite side of the circumplex. Although Leary and the Kaiser group sought to define the mechanism underlying all behavior, it was Leary (1957) who interpersonally defined abnormal behavior. That is, the disordered person "tends to overdevelop a narrow range of one or two interpersonal responses." "They are expressed intensely and often whether appropriate to the situation or not...The more extreme and rigid the person, the greater his interpersonal 'pull'-the stronger his ability to shape the relationship with others." (p.126).

Ernst Beier (1966) developed a communications model of psychotherapy based on Sullivan and Leary's formulations. According to Beier, a disordered individual unconsciously introduces social cues or "evoking messages" into the

social environment to evoke certain types of responses from others. People do this to disguise their vulnerability, while predicting and controlling the behavior of others, thereby creating security. Beier, like Sullivan, believed these evoking messages were unconscious, so that patients do not see the role they play in producing their own unhappy circumstances. The task of the therapist, according to Beier, is to interpret the patient's evoking messages and disengage from the patient's expected reciprocal response. Finally the therapist will enact a new "asocial" response and provide the patient with feedback about their unconscious messages so he or she can begin to satisfy needs in more productive ways.

Carson (1969, 1979) was among the first interpersonal theorists to integrate social psychology and interpersonal theory. According to Carson, interpersonal style evolves out of learned successful attempts to satisfy the needs of affiliation and control (Leary's two dimensions). Influenced by Sullivan's "theorem of reciprocal emotions," Carson (1969) believed that complementary interactions involve needs satisfaction for both parties. On the circumplex, both participants will occupy the same position on the affiliation axis (both friendly or both hostile), but will be opposite or reciprocal on the dominance or status axis (one dominant, one submissive). Anticomplementary interactions are those in which participants occupy the same position on the dominance axis (both dominant or submissive) and are reciprocal or opposite on the affiliation axis

(one friendly, one hostile). Anticomplementary interactions leave participants anxious and with unsatisfied needs. Carson, like Beier, maintained that an individual's chosen style to satisfy needs is largely an unconscious choice designed to maintain the integrity of their self-definition. Negative feedback is largely ignored as a result of perceptual selective attention and selective enhancement of interpersonal cues.

Kiesler (1983, 1985) developed an interpersonal model extending Carson's (1969) social exchange model and Beier's (1966) communications model. Building on the above models of interpersonal dynamics, Kiesler provided a more molecular description of selective attention and maladaptive interpersonal interaction with both covert and overt variables. Kiesler (1985) called this the "Maladaptive Transactional Cycle."

Insert Figure 2 about here

According to Kiesler, if measures of both interactants' behaviors were taken at intervals over an evolving relationship (Stages 1 & 2), a conceptual map describing the key steps (covert and overt) of a patient's self-defeating transactions can be illuminated for intervention. Person A represents the

disordered individual, while Person B represents a significant other. The arrows signify the direction of influence between A and B, the actions, reactions and their causal interrelatedness. The major effect of B's reactions to A is to confirm or validate B's covert experiences (expectancies, cognitions, emotions, self-system) which, in turn, leads A to repeat extreme and rigid original behaviors (Stage 2). Kiesler, like Carson, assumed this vicious cycle is the result of selective attention which helps the disordered individual maintain his style. In Stage one, Person B is "pulled" or evoked into a specific response by Person A's behavior, which will confirm Person A's covert experiences. With this confirmation, provided by a complementary response, participant A will continue with more of the same original behaviors to satisfy needs and maintain security. In Stage 2, however, Participant B begins to weary of the constricted behavioral range and experiences Person A's evoking "force field" as aversive.

If possible, Person B will attempt to avoid Person A. When this is not possible, Person B's mixed feelings will begin to "leak" in their interaction. Person A will become anxious as a result of this mixed message and will further escalate the original behavior to greater extremes. This stage represents the impasse, according to Kiesler, of the maladaptive client's self-fulfilling prophecy.

Kiesler (1983, 1984, 1985) and Anchin (1982) recommended further research to document the overt and covert components of the maladaptive cycle

for specific interpersonal categories, as this will extend our knowledge on interpersonal prototypes and serve as a conceptual guide for interventions in psychotherapy. Kiesler (1985) cited examples of studies which delineate the overt and covert components of clinical or interpersonal prototypes (Andrews, 1984; Lemert, 1962; Klerman et. al., 1984; Kiesler, 1982; Plutchik & Platman, 1977). With few studies existing, Kiesler (1985) and Anchin (1982) observed that much work remains for interpersonal theorists.

Development of Interpersonal Measures

The Kaiser Group (Freedman et.al., 1952; LaForge & Suczek, 1955; Leary, 1957) were the first to operationalize Sullivan's theory into a taxonomy and assessment device. As mentioned earlier, they developed the first interpersonal circumplex, a circular continuum of blends of the two axes of Love and Dominance. This model represented the belief that participants are constantly negotiating these two variables in interaction. With the development of the ICL (LaForge & Suczek, 1955) to measure the 16 axis blends and the geometric interpretation of the circle, the mathematical estimates of Love and Dominance traits in an individual could be summarized as falling on single point within one of eight or, at a more specific level, 16 categories. The center of the circle represented the mean standard score of the normative population for each of the 16 variables. An individual's profile is expressed as a single point located

in one category, with the distance from the circle's center, or mean, representing the intensity of the variable. The Kaiser Group used their taxonomy for multi-level personality assessment. Level one, the Public Level, could be assessed by observer-ratings of the subject on the interpersonal ICL adjectives. Level II, the Conscious Level, could be assessed by self-report on the ICL, and Level III, the Unconscious, could be assessed through placing the subject's TAT descriptions on the interpersonal circle. Discrepancies between levels were understood to reveal defense mechanisms such as repression (Laforge & Suczek, 1954). Leary (1957) used this system to demonstrate the application of the circumplex as a universal model for personality variables and even added two other Levels. Wiggins (1982) asserted that calculation of discrepancies among "levels," as measured by these different methods, would require an empirical justification. That is, the same metric assumptions involved in calculating vector scores are appropriate for all assessment methods. Leary (1957) however, left the empirical validation of this model to the work of others. Recent analyses of the structure of the three levels suggested conformity, at least for the structure of Murray's (1953) needs system (Truckenmiller & Schaie, 1979; Wiggins & Broughton, 1984).

Validation of Leary's model also required mathematical evidence of proper ordering and correspondence for his 16 variables. This would require a

factor analysis to confirm that Leary's two axes did, in fact, account for the majority of the variance in the factors. Secondly, a mathematically circular ordering of the intercorrelations would need to be proven through matrix analyses. Foa (1961), using Guttman's (1954) facet analysis method, performed this work and concluded that Dominance and Love factors did underlie the variables. Additionally, he found that a circular order did emerge from the intercorrelations, with a few exceptions. The structural qualities and shortcomings of the ICL taxonomy include gaps between segments in the upper-right and lower-left quadrants that indicate a lack of true bipolarity in Leary's taxonomy (Lorr & McNair, 1965; Stern, 1970; Wiggins, 1979). Comparisons between the measures/models will be described further on.

An abundance of interpersonal models and measures began to emerge shortly after Leary's (1957) work. In his excellent review of this literature, (Wiggins, 1982) cited the systems of Schaefer (1957), Schutz (1958), Stern (1958), and Chance (1959) as representing different traditions in the personality literature.

Lorr and McNair (1963, 1965, 1966), based on the work of Leary (1957); Stern (1958); Schaefer (1959) and Foa (1961), built a 15 variable circumplex of behavioral, rather than adjective traits called the Interpersonal Behavior Inventory (IBI). According to Wiggins (1982), while Lorr and McNair did refine

Leary's descriptors in the segment 'D' category, their revisions of categories N and O were "weaker than Leary's." Additionally, they were only able to confirm 15 rather than 16 scales.

Lorna Benjamin (1979) developed an elaborate and clinically rich circumplex model consisting of three levels, including an intrapsychic plane. Her instrument, called the Structural Analysis of Social Behavior (SASB), places clients on three circumplex planes using axes of affiliation and interdependency. SASB data is collected through client interviews and questionnaires about perception of self and others. This model is currently being tested in an NIMH study (Benjamin, 1982) and, due to its complexity, is difficult to evaluate "with any degree of certainty." (Wiggins, 1982).

In 1979 Kiesler and associates developed the Impact Message Inventory (IMI). Items from the 15 scales of Lorr and McNair's IBI were used to generate paragraph descriptions of the overt behaviors of the 15 interpersonal categories. These vignettes were given to associates with the directions to describe how this person "...makes me feel..." The result, after refinement, consists of 30 items describing direct feelings, action tendencies, and evoking messages, which are the "impacts" of interacting with one of the 15 interpersonal types. According to Perkins et al. (1979), the IMI Form II did not exhibit a clear circumplex structure. A lack of distinctiveness between segments is suggested by the fact

that 12 of the 15 scale's intercorrelations exceeded .80. Principal components analysis among the scales revealed three approximately equal-sized variables accounting for 85% of the variance. Wiggins (1982) stated this is, in part, because the submissiveness pole appears as a separate third component. Therefore, the configuration of the scales around the first two circumplex components is not circular. This could pose a problem if IMI profiles were interpreted in terms of the purported correspondence with the IBI since the two reveal a different structure.

Wiggins (1979) assigned Goldberg's (1977) pool of biophysical traits to Leary's 16 variables, seeking to build a taxonomy of interpersonal adjectives to serve as precise markers for use in comparing interpersonal measures. When the structural quality of the resultant item pool was examined, it was found that the model possessed the same shortcomings as the Leary model, namely a gap between PA-NO octants and a reversal of segments NO and LM (Wiggins, 1982). Wiggins and colleagues redefined these semantic markers, thus creating true bipolarity between items. When these 128 items were scored as octants, Wiggins remarked, "They revealed the clearest circumplex structure in the literature to date." (Wiggins et al., 1981). Facet analysis of the intercorrelation matrix yielded absolute difference scores (between a hypothetically ideal and the actual matrix) with a high index of circumplexity (as measured by Wilson-Hilferty

deviate index and goodness of fit). The two underlying components accounted for 67% to 76% of the total variance. Internal consistency was high, ranging between .80 to .89. Wiggins (1979) administered his Interpersonal Adjective Scales to four sample groups, including college populations, and concluded that the ordering obtained is generalizable across relatively diverse samples of subjects. The IAS has clear patterns of sex differences, which Wiggins (1979) attributed to sex role differences. Additionally, he noted social desirability patterns in the endorsement of items (Edwards, 1957). He suggested inclusion of social desirability scales to assess influence, and stressed the use of referenced norms instead of altering scores.

Kiesler, in 1982, devised an interpersonal circle which integrates and expands the existing models of Wiggins (1979), Laforge and Suczek (1955), and Lorr and McNair (1965). His model consisted of 16 segments, 128 subclasses and 350 bipolar items. This model and items comprised the structure for the Checklist for Interpersonal Transactions (CLOIT) and the Checklist for Psychotherapy Transactions (CLOPT). Items are stated as brief behavioral descriptions. Kiesler stated that Wiggins' IAS interpersonal circle was a guide for development of his own circle in that it served to semantically document segment location and definitions. Kiesler's circle expanded the number of items and further divided each segment into 4 subclasses with two levels of intensity.

Insert Figure 3 about here

Kiesler (1983) defined 12 features necessary for an interpersonal circumplex, if it is to serve as a comprehensive, methodologically sound, and heuristically valid model. Kiesler pointed out the qualities of his model, most specifically, were to explore the principles of complementarity in interactions.

Kiesler asserted that, of the four existing models previously described, only his model and Wiggins' (1979) model contained true bipolar semantic opposites necessary to derive precise predictions of interpersonal transactions. His comparisons demonstrated that the 1982 circle and Wiggins' (1979) model show perfect overlap with the exception of four segments: B, P, and their bipolar opposites J and H. Wiggins (1979) model placed Ambitious at P, and Arrogant at B, while the 1982 circle reverses this placement. Accordingly then, their corresponding bipolar opposites, J-Unassuming and H-Lazy, are reversed. Kiesler argued convincingly that these placements seem more logically valid in that they correspond more precisely to the mathematical weights of the segments. For example, "Confident" is more precisely characterized by +1 Friendly, +3 Dominant weights, while "Ambitious" is best characterized by -1 Friendly, +3 Dominant weights.

Insert Figure 4 about here

Kiesler also categorized his adjectives by level of intensity, while Wiggins has not. Kiesler explained that this accounts for the misplacement in the Wiggins model. He noted that Wiggins' P segment adjectives were all in the mild-moderate intensity level, and his B segment adjectives were all in the severe level. Kiesler's decision to rearrange his segment placements differently than the Wiggins' model was done "with some trepidation" because the Wiggins' evidence for "circular order is impressive." He stated the major shortcoming of Wiggins' model is that it does not provide systemic assessment of levels (mild vs. extreme) and, in fact, mixes intensity levels. The result is that the Wiggins' model mostly measures the mild-moderate range (with the exception of segment B). A further major difference between the two is that the Wiggins measure is composed of adjectives, while Kiesler's model described overt behaviors as well. Kiesler (1983) believed this feature was superior to adjectives in that it is unambiguous and has direct reference to an "act-in-context." For these reasons, he felt his model was superior, particularly in testing and documenting complementarity in transactions. An excellent review by Orford (1986) compared the interpersonal measures/models in predicting complementarity, and found that Kiesler's model

most accurately accounted for transactional predictions. All models, however, were found to have poor predictability on the hostile side of the circle. Further, Orford explicitly stated that from his evidence, interpersonal responses were not "automatic reflexes as predicted by interpersonal theory, but are mediated by emotional and cognitive processes." These covert processes have not been currently accounted for by the interpersonal models. Evaluation of complementarity by models will not be discussed further, as it is not the focus of this study.

In Wiggins (1984) released a paper describing the psychometric and diagnostic characteristics of a short form of his Interpersonal Adjective Scales (IAS). Wiggins documented adjustment of his model in accordance with the accumulating evidence of segment misplacements (Kiesler, 1983) and his own reanalysis using a new computerized program by Phillips (1985) on previously collected data. On the basis of this evidence, Wiggins revised his items in Segment P (renamed the PA scale "Assured-Dominant") and revised his HI scale to reflect "Unassured-Submissive" values. Additionally, he refined the DE scales to reflect "Cold-hearted" values rather than "Cold-Quarrelsome," since those items reflected higher communality or "interpersonal value." He noted that these item revisions were meant to increase structural fidelity and shorten item length.

Insert Figure 5 about here

Wiggins reported greater internal consistency on this revised form (IAS-R) on the HI scale (from .816 to .829) and a decrease in the remaining scales of .045. Wiggins found the two principle components accounted for 74.3% of the total variance in 9 samples of 1161 subjects. The amount of variability accounted for by the principle components was small in magnitude and produced a better circumplex structure, in some cases, than his original model (1979). Wiggins concluded that his new instrument, the IAS-R, was structurally improved, and had highly satisfactory circumplex properties even in relatively small samples. Additionally, the amount of variance accounted for by each principle component (Affiliation and Dominance) was approximately the same. Wiggins believed this to be an important fact in that large discrepancies between the roots would yield an elliptical rather than a circular structure.

To evaluate the theoretical and empirical qualities of a circumplex model/measure, one must consider the criteria suggested in the literature (Kiesler, 1983; Wiggins, 1979, 1982). First, precise circular ordering of variables should be demonstrated through analysis of an intercorrelational matrix (Guttman, 1954), with equal spacing and clear bipolarity among opposite

segments as assessed through goodness of fit (deviate index compared to a hypothetical model). Second, theoretical validity must be demonstrated by the principal components of control and affiliation accounting for the largest proportion of variance (Berzins, 1977; Carson, 1969; Foa, 1961; Wiggins, 1982). Three, internal consistency (specificity) should be satisfactory for each variable measured. Four, inter-rater reliability should be high. Five, there should be documented norms to demonstrate generalizability to samples. Six, structural analyses should reveal no gaps, therefore comprehensiveness in accounting for the universe of interpersonal variables. Seven, the measures should be continuous to quantify intensity or "deviance" for each variable measured. Eight, the instrument and model should apply to both observer and subject ratings to be truly interpersonal.

Leary's model, the ICL (LaForge & Suczek, 1955), has documented structural problems. It has a lack of equal spacing between variables, producing gaps in the upper-right and lower-left quadrant (Foa, 1961; Lorr & McNair, 1965; Wiggins, 1979). Additionally, Wiggins (1982) stated these problems stem from a lack of bipolarity among the variables.

Lorr and McNair's (1965) IBI model was designed as a three dimensional model, accounting for dependency and detachment, as well as control and affiliation, as principle components. This model has confirmed only 15 categories

and has two gaps between categories in the top-left and bottom-right quadrants, reflecting possible lack of bipolarity and/or a lack of content items required to assess those areas (Kiesler, 1983). Content items examined revealed weak or minimally measured traits (Wiggins, 1982; Kiesler, 1983). It also does not meet criteria adequately. Since it is based on the IBI, the IMI (Kiesler et al., 1976) contains the same flaws (Wiggins, 1982).

This leaves for comparison only the two models of Wiggins, the IAS and IAS-R (1979, 1984) and Kiesler's 1982 circle (CLOIT, CLOPT). A comparison of these models has been made in two studies by Weinstock-Savoy (1986). She concluded that, structurally, Kiesler's model, at the octant level for the most part exhibited a circumplex pattern. Comparatively, she found that Wiggins' IAS model conformed to a better circular ordering and "was easier to administer." Regarding the two principle components, Weinstock-Savoy reported 62-65% of the variance was accounted for by the Kiesler model while Wiggins' model accounted for 77-90% of the variance. Internal consistency for Kiesler's measures has been reported at moderate to moderately high levels (Cronbach's alpha ranged from .43-.81) for his 16 scales, while Wiggins reported a range of .749-.857 for his IAS-R octant scales. As both these instruments may be used by observer or subject for evaluation, inter-rater reliability can be important. Weinstock-Savoy (1986) found moderate levels of reliability for Kiesler's CLOPT

on axis scores (.62), and variable reliability for both quadrants with a range of .15-.73 and octants with a range of .00-.72. As the same pattern was found for IAS octants, judge-by-target interaction effects were suspected since only two judges were used. In her first study however, Weinstock-Savoy concluded that both the CLOPT and the IAS significantly differentiated four role-played therapy interactions. No further data exists for comparisons of reliability between these two measures.

Regarding generalizability, only Wiggins provided norms for several populations on the IAS. He concluded the IAS was generalizable across a variety of populations (Wiggins, 1982). Additionally, he presented normative data for the IAS-R (1984).

Comprehensiveness of items may be examined through goodness-of-fit analysis and visual inspection of the intercorrelational matrix of the variables. Gaps between segments indicate content areas poorly tapped or inadequately accounted for. Kiesler (1983) reported several reversals in Wiggins' IAS that seemed illogical or incorrectly weighted with different level adjectives. Wiggins (1984), to some extent, has agreed with Kiesler's evidence and has refined items in Segment PA and HI, with a resulting increase in internal consistency on the IAS-R. Weinstock-Savoy (1986) reported that Kiesler's model may more accurately assess hostile behavior. The Wiggins (1984) model may account most

accurately for the mild-moderate range of interpersonal variables (Kiesler, 1983). This feature is not considered to be a problem for the present study however, in that a college population was used. Additionally, Wiggins included norms for his populations that may be used to compute standard scores. He also included formulas (1984) for assessing intensity or "deviance" in interpersonal segments, with some data on vector characteristics of IAS-R profiles.

Although Kiesler described increased accuracy in discriminating interpersonal variables through behavioral descriptors (CLOPT, CLOIT), no data is available to confirm this. Additionally Weinstock-Savoy's (1986) study revealed moderate to high levels of correlations for octants (.46 to .80) and quadrants (.62 to .81) between the IAS and the CLOPT as rated by judges. Only two octants (BC and JK) were not significantly correlated across measures. These data may be interpreted to demonstrate highly equivalent categorical placement despite adjective vs. behavioral items.

Finally, both measures have been utilized by observing raters and subjects for self-evaluation (Weinstock-Savoy, 1986). The limited reliability data described above and the close correlations of categorical placement by raters using the two measures seem to imply little difference between self vs. rater evaluation for placing subjects in interpersonal categories (Weinstock-Savoy, 1986).

In conclusion, since the purpose of the measure used in this study was to document interpersonal behavior which falls in the mild-moderate range (college population), and, given its clearer circumplex structure and norms, Wiggins' model seemed the better choice. Additionally, given that raters in this study would be busy therapists, the short form IAS-R (1984) was expected to provide greater compliance.

Current Needs in Interpersonal Theory

The advantages and utility of the interpersonal model and measures for application in the fields of abnormality, personality and psychotherapy have been proclaimed by many (Wiggins, 1982, 1984; Anchin, 1982; Wachtel, 1982; Kiesler, 1983, 1985). Despite its "unlimited potential," however, the model has not been accorded "as prominent a place in the mainstream of clinical thought as its advocates would like." (Wiggins, 1982, 1984). Kiesler (1983) stated that one of the most important tasks to help expand the knowledge and utility of the model is to specify the cognitive or covert events which mediate interpersonal behavior. Even the rules of complementarity have been determined to be mediated by "emotional and cognitive processes...susceptible to individual expectations, interpretations, set, and intentions." (Orford, 1986).

Anchin (1982) agreed with Kiesler (1983) that the "overarching task guiding systematic construction and empirical hypothesis testing" of interpersonal

theory is to begin to establish systematic relationships between characteristic classes of interpersonal-situational input, with the behavioral styles elicited, and the relationship between these styles and cognitive, affective or covert factors. Anchin (1982) described the interplay between the overt-behavioral and the covert-internal processes as "rapidly firing, complex"...a series of action-reaction chains. Yet to fully understand social interaction requires "capturing as much of this inner world as possible." Anchin (1982) pointed out that although much person-perception work exists, little of it has been applicable or specific. He noted the work of Carson (1979) and Golding (1977, 1980) as exceptional in this regard, providing detailed information about construal styles.

The relationship between characteristic classes of covert processes and overt interpersonal behavior has been largely unexplored. Knowledge of these relationships would not only expand the comprehensiveness of interpersonal theory, but would also have specific implications for targeting therapy interventions with particular classes of interpersonal styles (Kiesler, 1985).

In summary, the development, theories, and measures of various interpersonal models have been presented. A circumplex model and a measuring instrument has been selected due to its applicability for the population under study. A description of the current limitations and needs in the interpersonal field have been presented. Among the needs cited by

interpersonalists for expansion and research, a call has been issued for specification and linking of covert variables which affect interpersonal behavior. The present study will attempt to address this need in that it will assess motivational structure for specific interpersonal styles within a clinical setting.

Covert Variables: An Interpersonal Perspective

As described earlier in Kiesler's (1985) maladaptive cycle, the interpersonal model views both internal and external variables as operative in human behavior (Anchin, 1982). According to Anchin, the external variables are other people, and the internal covert variables should have an interpersonal nature (e.g. person-perception, trait attribution, interpersonal expectancies, and interpersonal construal).

As both Anchin (1982) and Kiesler (1985) note, internal processes act reciprocally with behavior. Thus, one's belief can cause one to act in such a way as to create (and then perceive) an environment confirming one's beliefs. Anchin stated that internal processes regulate, the nature of sequential behavioral exchanges, the symbolic storage of self-other perceptions and beliefs, and the goal or purpose for a repetitive type of interpersonal behavior.

Benjamin (1982) operationalized the interplay of covert and overt interpersonal variables. She referred to the internal variables as psychoanalytic "introjects." Her SASB model contained three circumplexes for self, other and

introjects. Her axes consisted of affiliation-disaffiliation and interdependency-autonomy. The model documented a client's conceptualization of self-other action and their internal representation. For example, if the "other" attempts to manage and control (Other Circle, Segment PA), the "self" may react complementarily by yielding or submitting (Self Circle, Segment JK), or may internalize the reaction (Introject Circle, Segment PA) and engage in "self-control." Client data for the SASB model is collected through loosely structured interviews to gather information about the client's relationship with significant others and the phenomenological meaning of symptoms. Additionally, SASB questionnaires assess perception of self and other and generate a self-descriptive statement about the client's introjects. Currently, this model is being tested in an NIMH study examining the relationship of the SASB data with DSM III diagnoses (Benjamin, 1982).

The work of Carson (1979) is largely theoretical and springs from social exchange theory (Foa & Foa, 1974) and Sullivanian theory (1953). Carson conceptualized internal variables as cognitive categories of interpersonal expectancies developed in early life and out of conscious awareness. He drew on the research of Golding (1977) to support his hypotheses about expectancies. According to Carson, distinctive behavior is derived from distinctive expectancies carried by the individual. These beliefs are related to the way we satisfy our

needs for love and status (Leary's dimensions). Carson believed we have a preferred mode designed to maximize outcome for satisfaction of these needs. The four styles: Hostile-Dominant, Hostile-Submissive, Friendly-Dominant, and Friendly-Submissive each imply beliefs about others in the world and a preferred style for satisfying needs. For example, Hostile-Dominant people tend to act in accordance with their view of others as "winners or losers." Their interpersonal behavior tends to evoke Hostile-Submissive behavior from others. Thus, a self-fulfilling prophecy is repetitively enacted. Carson drew on Golding's (1977) attribution study in which (complementarily to their style) Friendly-Submissives over-attributed traits of Dominance and Hostility and Friendliness to others, while Hostile-Dominant persons tended to over-attribute Hostility and Submissiveness. Friendly-Dominant and Hostile-Submissives exhibited no clear construal sets. Thus, persons acting on their beliefs about satisfying the needs of love and status with others demonstrated an attributional style (expectancies) and behavior in a style consistent with those beliefs.

Golding and colleagues (1977, 1979, 1980) attempted to define covert variables as "psychological organizing principles" of perception. Golding (1980) believed that construal is a dynamic process of active interpretation using selected cues that individuals repeat in a characteristic fashion. Construal, according to Golding (1980), takes place in three stages. First, selective attention

focuses on specific salient cues. Second, encoding these cues, directed by motives or goals. Third, cognitive representation of these variables in terms of affect or linguistic codes occurs, to represent the traits, judgments, intentions or motives observed. In a review of his research, Golding (1980) concluded that subjects differ in the dimensions they use to evaluate others. He stated that although some research exists to relate construal style to personality correlates or motivational states, he found that this is often difficult to replicate, possibly due to restricted population, methodology or simplistic theories about construal. In his 1977 experiment described earlier by Carson (1979), Golding demonstrated that attribution or construal style is, to some extent, consistent with interpersonal self-definition as measured by Leary's ICL four quadrant patterns of Hostile-Dominant, Hostile-Submissive, Friendly-Dominant, and Friendly-Submissive. As Carson described, individuals tend to perceive the world in a manner that confirms or justifies their self-definition. Both Carson (1979) and Golding (1980) delineated gratification of interpersonal needs or motivational states as one of the many important variables related to characteristic styles of perception.

Wachtel (1977), in delineating covert processes, spoke of "unconscious motives or fantasies..." He stressed that the "organizing effect of motivational variables are treated as real and powerful, leading to particular behavioral choices in response to stimulus conditions..." Ironically then, the interpersonal

field appears to have come full circle back to Leary and the Kaiser Group's original definition of motivational variables in Level III interpersonal diagnosis. The Kaiser group was initially influenced by Lewin, Sullivan and the motivational variables of Henry Murray (LaForge et al., 1955). In fact, Level III was intended to be measured by projective assessment of the motivational system using the TAT. Discrepancies between circumplex levels of the self, observer, and projective data implied pathology or defense mechanisms such as repression (LaForge et al., 1954). Initially, this discrepancy method was believed to be methodologically invalid due to lack of empirical evidence for the circumplex structure of Murray's needs (Wiggins, 1982). However, current evidence demonstrated structural conformity for the motivational variables on a variety of assessment devices (Stern, 1970, Truckenmiller & Schaie, 1979; Solomon, 1981; Golding & Knudson, 1975; Wiggins & Broughton, 1984). From the research presented here, evidence suggested that needs may influence the construal style of an individual and ultimately predict the preferred interpersonal behavior which satisfies those needs.

Personal Needs Systems

Motives (needs) are not conceptualized to be deficits within the personality but are considered to be movers or initiators of action. According to motivational theory, all behavior may be viewed as attempts toward satisfying a

need or combination of needs (Murray, 1953). All needs or motives aim to increase satisfaction and decrease dissatisfaction.

Needs are covert, internal constructs and are inferred from behavior. For some needs, a distinct action may imply a specific need, but generally, a single action may satisfy several needs or a single need may be satisfied by several different behaviors. Therefore, assessment of the presence of a specific need is difficult.

Motivational concepts have evolved historically from both philosophical and religious roots (Edwards, 1972). Greek philosophers described the nature of humanity as a struggle between the "motives" of reason and emotion. In medieval times, philosophy and theology were concerned with the nature of the human will and the motivation of good and evil desires. Freud (1910) used the motivational concepts of sex and aggression to describe the energy system within personality, demonstrating how these factors may work unconsciously toward satisfaction. Subsequently, psychoanalysts, personality theorists and clinicians broadened motivational concepts to include other interpersonal needs such as achievement, and affiliation.

Murray (1953) was the first theorist to apply a systems approach to motivational constructs. He and his colleagues collected and described the most comprehensive motivational classification system to date. It included 44 "latent

variables," 20 manifest needs, 8 latent needs, 4 inner states, and 12 general traits. Murray described the relationships between needs and felt that they may be either conscious or unconscious. He defined a need as "a construct which stands for a force in the brain which organizes perception, apperception, intellection and action in such a way as to transform in a certain direction an existing satisfying situation." (p.123). Murray believed needs are evoked by internal physical processes or by the press (directional pull) of the environment or the anticipation of it. His concept of "beta-press" is particularly important for the interpersonal model in that it describes the origin and process of interpersonal construal and accounts for complementary responses in interpersonal transactions. According to Murray, the organization, frequency, intensity and behavioral patterns for meeting needs are largely influenced by the history of how those needs were addressed, satisfied or frustrated in childhood. Each individual's unique needs system will lead that organism to approach, avoid or "apperceive" the environment and respond in a certain way under certain conditions. For example, depending on the way its needs are organized, a child will construe an apple as either food or as a weapon to throw at an antagonist. Murray also suggested that people, by their unique characteristics in appearance or behavior, have a "cathexis," or evoke certain kinds of reactions (press) from others. This notion corresponds to Carson (1969); Beier (1966); and Leary's

(1957) concepts of interpersonal complementarity and "interpersonal evoking messages." It was Murray also who spoke of "actones" or repetitive action patterns that comprise "personality." This view is similar to Sullivan's (1953) definition. Indeed, it was Murray's taxonomy of needs that provided the variables for the Kaiser Group's interpersonal circumplex model of personality (Freedman, 1985). Murray's theory of needs, particularly Dominance (Status) and Affiliation (Love), have been identified as the underlying dimensions and primary motivational factors around which we perceive, interpret and act upon the interpersonal environment (Leary, 1957; Foa & Foa, 1974; Foa 1961; Schutz, 1957; Golding, 1980; Carson, 1969, 1979; Wiggins, 1982). Yet, because Murray did not integrate his 28 needs into a system with an organizing principle, his system has not been used to delineate an internal interpersonal organization which guides an individual's actions.

With the exception of Leary's multi-level diagnosis using TAT data on Level III, no interpersonalist to date has related how Murray's interpersonal needs may systematically organize within the individual to support, enhance, facilitate or inhibit their specific behavioral style.

Historical attempts to systemically organize needs have included Maslow's (1970) hierarchy of needs. But it was Bertalanffy (1968) who described the systems approach. He described how multiple variables interact and organize in

constellations to influence behavior. This "systems perspective" was in opposition to a linear cause-effect view of how variables influence behavior. It forced clinicians to look for complex interactions among systemically organized variables to search for explanations for behavior.

In general, assessment methods for needs such as the TAT and standardized self-report tests (e.g. Adjective Checklist, Edwards Personal Preference Schedule, Personality Research Form) do not describe the systemic organization of needs or their interrelated functioning. Chambers (1980) elaborated on the inadequacies of these procedures, most notably the lack of a temporal factor. This deficit creates confusion and lack of specificity with regard to results. For example, data may show a strong need to express defendence and harm avoidance. Given that these needs are somewhat inhibitive of each other, a clinician will not be able to determine if or when both needs are expressed simultaneously (conflictive) or whether one is inhibited while the other is expressed, or whether it is appropriate in specific situations. Chambers (1976) devised a motivational assessment device called the Picture Identification Test (PIT) to permit measures of simultaneous interaction of 22 Murray based needs. The PIT collects ratings of the expression of the 22 needs for 12 different facial photographs, each of which represents a motivational state at a particular point in time. The PIT yields arrangements of the needs structure for three

dimensions labeled the combative, personal and competitive dimensions or arenas (Chambers & Surma, 1979). Two of these dimensions closely resemble the two interpersonal dimensions of affiliation and dominance, and the third resembles a third dimension often found by other theorists (Golding & Knudson, 1975; Schutz, 1958; Leary, 1957; Foa, 1961; Truckenmiller & Schaie, 1979; Huba and Hamilton, 1976; Wiggins and Broughton, 1984). Examination of the needs constellations on each of these dimensions permits a much more specific and comprehensive understanding of an individual's needs system than any other test of motivation factors.

On the PIT, each of the three dimensions functionally defines a set of motivational objectives. For example, in the Combative Dimension, the needs structure will support the goal of ego assertion, dominance and power, or the opposite goal of submission and deference. In the Personal Dimension, the needs structure supports intimate personal and social interactions at one end of the dimension and rational conflict resolution at the other end. The Competitive Dimension promotes mastery, competence and achievement goals.

According to Chambers' model, the 22 needs will take up approximately the same amount of space in each of the three dimensions. Consequently, when an individual's motivational system is balanced, each dimension will contribute approximately the same weight to the overall dimension structure.

According to PIT theory, and the results of clinical applications of the PIT, the weight a subject attributes to a particular dimension indicates the significance of that dimension to the individual. Weight also indicates the degree of need differentiation in each dimension. Individuals with healthy, balanced motivational systems will not emphasize one dimension at the expense of another. Healthy individuals will also be able to clearly recognize each distinct dimension and shift from one dimension to another according to situational demands. This type of flexibility maximizes need satisfaction. PIT Dimension Weights help demonstrate attributional styles or tendencies in judgment between individuals in perceiving the three dimensions. Additionally, each dimension has a unique optimal organization of the 22 needs, reflecting a series of checks and balances that facilitate needs satisfaction in the interpersonal situation-specific dimension. Present evidence indicated that individuals with emotional and mental disorders tend to deviate from this normal structure (Chambers, 1980). Comparison of an individual against these norms will delineate problem areas in the needs structure and will provide information about need differentiation, judgment, and construal. PIT Judgment scores can compare how much the individual perceives the same needs in the same facial expressions as the normative healthy population, and indicates perceptual accuracy of need expressions.

Needs may be problematic for many reasons. They may be repressed, denied, experienced as overwhelming or overemphasized if they are deemed undesirable or construed as contradictory to one's acknowledged self-concept (Murray, 1953). The PIT assesses which needs are specifically problematic for the above reasons in its Cenper Deviation score. This score tells whether a need is located too closely (overemphasized and conflicting) or too peripherally (denied or repressed) for optimal needs satisfaction. The PIT Ego Need score will assess whether specific needs for self-assertion are too closely or too distantly associated for optimal supportive interaction. The PIT Association Deviation score will assess for overall constellation deviation from the normal population. Finally, the PIT Problem Need score is a weighted composite of several of the above scores and is the best overall indicator of how effectively a specific need operates in the individual's motivational system. The higher the Problem Need score, the greater the possibilities of conflicts and frustrations pertaining to the specific need.

Among many other needs assessment devices, the PIT was chosen to assess and differentiate the characteristics of needs structures for individuals with specific interpersonal presentations (as delineated by the IAS-R). The PIT was chosen because it provides multivariate systemic measures at a particular point in time, and provides information about success and failure of needs satisfaction. It

is semi-projective and assumed to reach unconscious levels more effectively than self-rating inventories (Chambers, 1980). Additionally, its dimensions are similar to the interpersonal dimensions and suggest situation-specific contexts for an individual's needs structure from which one may predict beliefs, conflicts and behaviors. The situation-specific aspect of interpersonal assessment has been emphasized by various interpersonalists (Orford, 1986; Kiesler, 1983; Anchin, 1982). As noted by Golding (1980), further research in elucidating construal and its influencing variables (such as motives) will need to utilize actual interpersonal stimuli and have the ability to delineate individual differences. Both criteria are satisfied by the PIT.

In summary, the PIT will discriminate individual differences in the motivational system (Organizing Principle score, Association Deviation score, Cenper Deviation score) of individuals with different interpersonal presentations. It will provide information on the accuracy of the individual's perceptual judgment and on the appropriateness of need expression in certain situations (Judgment score). Finally, it will assess overall needs satisfaction, attitudes toward needs, and delineate specific problematic needs (Problem need score, Attitude score, Ego score). This information will be assessed for individuals with different interpersonal presentations as documented on the Wiggins' IAS-R and for subjects with different levels of selective attention.

Prior Research on Needs and Interpersonal Presentation

Of the nine existing studies investigating the relationship between needs and interpersonal presentation, four studies simply used group data to document the convergence between the underlying structure of Murray's needs and the subject's interpersonal presentation. These studies did not provide a description of the motivational structure of specific interpersonal categories (Terrill, 1961; Golding & Knudson, 1975; Truckenmiller & Schaie, 1979; Wiggins & Broughton, 1984). These studies all administered various needs assessment instruments (TAT, PRF, EPPS) with various interpersonal measures (ICL, IAS, Bales Dimensions-SYMLOG). They found structural similarity in the circumplex structure of the needs dimensions and the interpersonal overt dimensions (often referred to as Leary's Levels I, II, III). The documentation of the well-established underlying dimensions of affiliation and control and similar circumplex structure of these levels need not be elaborated further.

The remaining five studies provided limited data on the predominant needs of individuals with specific interpersonal presentations. They did not provide a systemic motivational measure, nor did they provide information that may be applied to predict responses of these individuals in different situations.

Gynther et al. (1962) cited two of his studies which demonstrated significant correlation patterns of self-reported needs (EPPS) with self-reported

behaviors on the ICL for 36 undergraduate students. He found positive correlations between the N-Autonomy and the Competitive-Narcissistic category, N-Aggression and the Blunt-Aggressive category, N-Affiliation and the Cooperative-Overconventional category, N-Nurturance and the Responsible-Overgenerous category. In his second study with 95 male psychology undergraduates, he used self-report ICL data to derive four Leary circumplex scores of Dominance, Love, Responsibility, and Competitiveness for comparison with EPPS needs data. He found that Interpersonal Competitiveness was significantly related to N-Autonomy, N-Dominance, and N-Aggression; and that it was significantly negatively related to the needs for Affiliation, Succorance, Abasement and Nurturance. He found that Interpersonal Dominance was significantly related to N-Dominance and Exhibition, and was negatively related to N-Succorance. He found Interpersonal Responsibility to be significantly negatively related to N-Aggression and N-Autonomy. Interpersonal Love was found to be positively correlated to N-Abasement, N-Affiliation and N-Nurturance; and to be significantly negatively related to N-Autonomy and N-Aggression.

Gynther cautioned over-interpretation of his findings on the grounds that all data was self-report without proper controls for social desirability and was lacking objective raters to validate interpersonal variables. Also, he believed that

since the data was all self-report, it tapped very nearly the same level of behavior, as opposed to Leary's notions of needs as representing a deeper level of unconscious self-data.

Knudson and Golding (1974) sought to understand the predictive validity of several inventories across peer and self-ratings including PRF, ICL and objective criteria such as organizations joined, number of dates, and leadership positions for 64 High school subjects. They found the largest coefficients for the PRF in predicting seven peer ratings on interpersonal characteristics. The ICL (self-rating) came in second best as predicting peer ratings. A possible confound exists however in that PRF items were used to construct the seven descriptive statements for peer ratings. Therefore, the high ability of the PRF to predict peer interpersonal ratings may be due solely to similarity in items. According to the data presented by the authors, peer-rated Abasement behavior significantly negatively correlated with the PRF self-rated N-Dominance and with the ICL self-rating in the Dominance segment. Peer-rated affiliative behavior positively correlated with N-Affiliation on the PRF, and with self-ratings on the ICL Cooperative-Overconventional category (LM). Peer-rated aggressive behavior positively correlated to N-Defendence (PRF), and the ICL self-rating in category Competitive-Exploitive. Peer-rated dominant behavior significantly related to N-Dominance (PRF) and the ICL Managerial-Autocratic category (PA). Nurturant

behavior as rated by peers was positively correlated to N-Succorance, negatively correlated with N-Autonomy (PRF), and positively correlated with ICL Responsible-Overgenerous category (NO). Peer-rated social recognition was correlated with N-Recognition and ICL Category (PA). Succorant behavior (peer-rating) correlated positively with N-Succorance, negatively with N-Autonomy on self-ratings (PRF), and negatively with ICL self-ratings in segment (DE) Blunt-Aggressive. Peers did not assign subjects to ICL categories, so objective ratings of interpersonal presentation on the circumplex were not available for comparison ratings.

Manson Solomon (1981) administered the Jackson PRF and an interpersonal rating form of the Bales Space (R.F. Bales, 1970), which included Dominance-Submission, Friendliness-Hostility, and Task-Orientedness-Expressivity. He compared peer-ratings (during class group projects) with self-ratings on the PRF using 55 psychology undergraduates. Significant correlations between PRF scales and the Bales Dimensions demonstrated construct convergence between the two models (needs and interpersonal dimensions). Additionally, separate dimension data were provided. N-Abasement, N-Affiliation, N-Nurturance, and N-Succorance were found to be significantly positively related to peer ratings of the Friendly dimensions, while N-Aggression was significantly negatively related. N-Dominance and N-Exhibition were

positively correlated to peer ratings on Dominance. N-Dominance was significantly correlated to task-orientedness, while N-Play was significantly negatively correlated. Manson interpreted his data as evidence of convergent validity for the Bales Space dimensions in that they provide the cognitive constructs we use to judge and interpret interpersonal data.

Wiggins and Broughton (1984) gave 152 subjects five inventories of Murray's needs (Stern's AI, Campbell NS, EPPS, Gough ACC and Jackson PRF), along with the Interpersonal Adjective Scales (IAS). Wiggins demonstrated through zero-order intercorrelational analysis of this data, that Murray's needs are dimensional correlates of the IAS.

Insert Figure 6 about here

Additionally, he reported the needs correlating with each circumplex segment. For segment (PA) "Ambitious-Dominant," Murray's need for Dominance was significantly correlated, while both N-Succorance and N-Abasement were negatively correlated. For segment (BC), "Arrogant-Calculating," the need for Aggression and N-Defendence were significantly correlated. In segment (DE), "Cold-Quarrelsome," the N-Autonomy was highly

correlated, the N-Aggression was moderately correlated, and the N-Nurturance was negatively correlated. In segment (FG), "Aloof-Introverted," the N-Rejection was positively correlated, while the N-Affiliation was negatively correlated. In segment (HI) "Lazy-Submissive," positive correlations were found with N-Succorance and N-Abasement while negative correlations were found with N-Dominance and N-Achievement. Interpersonal variable (JK), "Unassuming-Ingenuous," was positively correlated with N-Deference and negatively correlated with N-Aggression and Defendence. Interpersonal category (LM) "Warm-Agreeable" was positively correlated with Murray's N-Nurturance and negatively correlated with N-Autonomy. Finally, variable (NO) "Gregarious-Extraverted" was positively correlated with N-Affiliation and N-Exhibition. Wiggins noted that it is clear from the studies of the needs inventories and the zero-order correlations that the structure of self-reported Murray's needs "could easily be made isomorphic with the structure of the interpersonal circumplex." Wiggins believed this analysis to have revealed a broader range of disposition and acts as indexed by the IAS variables. The zero-order analyses and item factors suggested relations among the diverse areas of Murray's needs, psychopathology and temperament. The need descriptors extended the psychological correlates and enriched our knowledge of the 8 interpersonal spaces.

Overall, these studies suggested that individual differences in motivational

structure accompany and correspond to differences in interpersonal presentations. Thus, research into motivational variables may provide valuable information about individual differences in perception and behavior for specific styles of interpersonal presentation (Carson, 1979; Orford, 1986; Wachtel, 1977; Golding, 1980). Of the existing studies, only Wiggins and Broughton's studies (1984) utilized empirically validated interpersonal measures, while the other studies used the ICL, which has documented structural difficulties. Additionally, of the other studies presented, only two studies, Solomon (1981) and Knudson and Golding (1974) used peer raters (instead of self-report) to document interpersonal presentation. According to Leary's theory, all three levels (Public, Conscious, Private) are necessary to fully describe interpersonal diagnosis (LaForge et al., 1954). Self-report interpersonal data alone has documented influences from social desirability (Wiggins, 1979) and is believed to be biased due to selective attention for self-protection (Carson, 1979).

Social-desirability measures, such as the Marlowe-Crowne Social Desirability Scales, have only been found to marginally relate to endorsement patterns on the ICL (Golding & Knudson, 1975). These authors believed that the Marlowe-Crowne appeared to tap a different dimension of personality than the ICL, and stated that there can be "no uniform use of the term social desirability." Lorr and McNair (1963), however, found a significant difference

between social desirability and item endorsement in college students (Edwards, 1957), and between their subject's self-ratings and the therapist's ratings. Given this finding, as Leary believed, it seems that "public" or observer ratings are necessary to fully describe interpersonal traits that may not be "owned" by the self, or may be unconsciously denied through selective attention. Interpersonal ratings by therapists have been found to be unbiased and free of social desirability (Lorr & McNair, 1963). Therefore, when attempting to provide a valid, comprehensive description of interpersonal presentation, it seemed necessary to include unbiased raters, as well as self-descriptions, and possibly social desirability measures as covariates.

The Hypotheses of this Study

This study was designed to extend clinically relevant knowledge about specific interpersonal categories. It examined the relationship between the covert variables of motivational structure (PIT) and a client's interpersonal presentation (IAS-R) in a clinical setting. It explored the interpersonal hypothesis of selective attention through comparison of therapist vs. client interpersonal descriptions (IAS-R). It explored the relationship of the IAS-R discrepancies to psychopathology in motivational structure and to social desirability. Finally, this study attempted to gather correlates of objectively-rated interpersonal categories through study of problems endorsed on the Inventory of Interpersonal Problems

(IIP) (Horowitz, 1982, 1986).

This study addressed the methodological shortcomings of the previous studies described above, such as lack of observer ratings, lack of accounting for sex-differences in endorsement patterns, lack of clinically relevant setting, lack of utilization of appropriately validated measures, and lack of a truly projective needs measure to retrieve "unconscious" data.

This study, in keeping with Kiesler's (1966) "Uniformity Myth," examined specific interpersonal presentation, specific sex, specific setting, with specific role demands, and with a constant level of familiarity between subject and rater. Only female clients were included in this study, given the pattern of sex-differences known to exist on the IAS and IAS-R self-descriptions (Wiggins, 1979, 1984).

Therapists, given their empirical validation as unbiased raters, were utilized as observer-raters in this study (Lorr & McNair, 1963). The setting was that of the Clinical Intake sessions where the level of familiarity between client and therapist was limited to 50-100 minutes. The interpersonal measure utilized (IAS-R) (Wiggins, 1984) was empirically validated as to structural fidelity, and is generalizable for use with the population under study. The PIT (Chambers, 1976) provided projective multidimensional measures of an individual's needs system. This study included a social desirability measure, the Marlowe-Crowne

SDS (1964) to investigate self vs. observer interpersonal discrepancy. Finally, it included an interpersonal measure of problems (IIP) (Horowitz, 1986) that were empirically derived from clinical data of client complaints, and with items found to correspond to IAS structure.

The first hypothesis concerned the relationship between the four interpersonal categories (Friendly-Dominant, Friendly-Submissive, Hostile-Dominant, Hostile-Submissive as assessed by self and therapist ratings) and their motivational structure. It was predicted that the motivational structure as measured by PIT Deviation scores (Problem, Ego, Judgment, Deviation association, Cenper-deviation score, Deviation-Attitude score), and PIT Attitude-Value scores (Attitude scores, male and female, Organizational Principle score) would differ between the four interpersonal categories, and as a function of self vs. therapist-ratings.

The second hypothesis concerned the concept of selective-attention, and its relationship to pathology as predicted by interpersonal theory. As described by Sullivan (1953), selective attention is the process whereby the individual is unaware of their negative behavior and its impact on others. Individuals with high levels of selective attention may be said to have the highest level of "pathology," and dysfunctional relationships. Two measures of selective attention which are consistent with interpersonal theory are similar to Leary's multi-level

system of interpersonal diagnosis. That is, the discrepancy or mathematical difference between the subject's octant score on the interpersonal circle (IAS-R) and the therapist's octant placement of the subject (IAS-R) is one measure of selective attention, called The Discrepancy Angle Score in this study. The second selective attention measure is the discrepancy between the subject's vector or intensity score on the interpersonal circle (IAS-R) and the therapist's vector score for the subject (IAS-R). This score was called The Discrepancy Vector score. It was predicted that subjects with the highest selective attention scores (Discrepancy Vector scores and Discrepancy Angle scores) would demonstrate the greatest pathology on the PIT Deviancy scores, the highest social-desirability scores on the Marlowe-Crowne, and an over-representation of subjects in the hostile interpersonal categories (by therapist's IAS-R ratings).

The third hypothesis concerned the relationship between the four interpersonal categories (by therapist IAS-R ratings) and their self-reported interpersonal problems on the IIP (Horowitz, 1986). It was predicted that endorsement of interpersonal problems on the IIP would differ as a function of interpersonal category.

Finally, due to the exploratory nature of this study, the above hypotheses were stated generally rather than specifically, and any directional tendencies in the results are described in detail.

Chapter III

Method

Subjects

Subjects were 75 female undergraduate students seeking counseling at four university counseling centers. They voluntarily agreed to participate in the study.

The age range of the student participants was 18-46 years with a mean of 23.3. Over half (N=41) of the subjects reported prior counseling. Eighty-three percent (N=62) were single, seventy-two were white, two clients were Black and one client was Asian.

Therapists included counselors at the four university counseling centers who volunteered to participate. The age range for the counselors was 25-65, with a mean of 41.5 years. There were 10 females and 12 males. Nineteen therapists were white, two were Black and one was Indian. Degrees held ranged from Ph.D. to B.A. with an average of 4.9 years education beyond undergraduate degree. The range of experience as a therapist ranged from 2-34 years with a mean of 12.4 years. Participation was completely voluntary, anonymous and involved no financial remuneration. Permission to conduct this study was granted by the Human Subjects' committees of College of William and Mary, Old Dominion University, University of Richmond, and James Madison University.

Procedure

When the clients arrived at the center for their intake or initial appointment, they were invited to participate in the study by their counselor (standardized invitation, Appendix A). Interested clients were given the information sheet/consent form to read and sign (Appendix A). Counselors signed a consent form as well for each subject.

The session then proceeded as customary for that center. At the conclusion of the session, the counselor gave the client the package of randomly-ordered inventories (data sheet, PIT, IIP, IAS-R) and read standardized instructions directing them to complete the inventories as soon after the session as possible, to seal them in the enclosed envelope, and to return them at the next appointment. They also asked if the client desired test results for interpretation (IIP, PIT). If desired, clients were shown where to mark a special box on the PIT and IIP instructing the researcher to return test results. The counselor then placed the signed consent form in the client's confidential center folder to identify the returned test results. Clients were informed of this process by the counselor and their consent forms.

After the client's departure, the counselor completed the IAS-R on the client's observed behavior. The counselor then immediately placed the form in the client's file and added it to the client data envelope when it was returned.

Data were mailed to the Center for Psychological Services, College of William and Mary to be scored. The client test results were scored as soon as received and mailed back to the center coded by subject number. At no time did the client or counselor view the other's responses.

Feedback from participant counselors indicated non-compliance in distinguishing whether data was collected from the client following the first or the second session. Additionally, the low number of subjects participating necessitated data to be collected over a two-year time period.

Instruments

A general data sheet was filled out by clients requesting age, race, and prior therapy. A general data sheet was filled out by all counselors requesting age, sex, race, education level, and level of experience. These data were used for descriptive purposes alone and were not associated with individual responses.

The Picture Identification Test

The Picture Identification Test (PIT) is a computer scored and interpreted, semi-projective personality test which measures attitudes toward and associative distances among needs derived from the Murray need system (Murray, 1953). The PIT provides a multidimensional structural view of the need system and a need-by-need analysis of the effectiveness of each of the 22

needs in the system. Two types of PIT scores were analyzed: Deviation scores (Problem Need score, Judgment score, Association Deviation score, Cenper Deviation score, Ego Need score) and Attitude-Values scores (Attitude scores, Attitude-male, Attitude-female).

The 1976 version of the PIT was used (Chambers, 1976). The PIT provides subjects with a page of facial photographs of 12 college students, six male and six female, between the ages of 18 and 22. The black and white photographs are arranged in four rows of three photographs each, alternating between males and females. They present a wide range of facial expressions. In Part I of the PIT, subjects are asked to rate how strongly they feel the expression on each photo reveals the positive or negative qualities of the person. The scale ranges from 1 (very positive) to 5 (very negative), with a midpoint of 3 (neutral or undecided). Part II is accompanied by a list of 22 need definitions derived from the Murray need system. The subject is asked to rate each photograph as to how strongly the person seems to express each of the needs. The subject is requested to complete the entire set of ratings for one picture before proceeding to the next. The PIT is usually completed in 45 to 60 minutes.

Scoring reliability is 100%; there is no test-retest reliability data on this version. Repeated administrations over time in a clinical setting suggests that the

motivational structure and overall pattern of needs in an individual remain stable, but does reflect the positive effects of clinical interventions.

The PIT has been shown to differentiate clinical from normal groups on the basis of need structures (Chambers & Surma, 1979; Chambers & Ventis, 1975) as well as perceptual differences in judgment scores (Chambers & Lieberman, 1965).

The Inventory of Intepersonal Problems

The Inventory of Interpersonal Problems (IIP) is an 87 item self-report inventory designed by Leonard Horowitz and colleagues at Stanford University. The IIP is designed to measure 12 areas of interpersonal difficulties such as dependence, assertion and aggression. It is based on interpersonal theory which assumes that interpersonal problems form the basis of symptoms and represents the most logical goal for intervention. Items were derived from analyses of presenting complaints in clinical interviews. On the IIP, subjects are asked to rate how distressing each item has been with respect to any significant person in their lives. A Likert-type scale is used which ranges from 0 (not at all) to 2 (moderately) to 4 (extremely). Part I asks the subject to rate "things that are hard to do" while Part II lists "things one may do too much." Multidimensional scaling reveals three dimensions similar to those found underlying other interpersonal measures (Foa, 1961; Leary, 1957; Wiggins, 1979). Hierarchical

clustering shows five major clusters: Intimacy, Aggression, Compliance, Independence, and Socializing. Internal consistency (correlations for problems within a cluster) was significant for each combination at the .01 level. Test-retest reliability (two month period) produced Pearsons r's with a median of .85, and a mode of .90. Thus, reasonable stability over a two month period is suggested. Initial criterion validity is encouraging, showing that subjects' self-reported problems on the IIP correlate with observed behavioral idiosyncracies (Horowitz, 1986).

The Interpersonal Adjective Scales-Revised

The Interpersonal Adjective Scales-Revised (IAS-R) is a 64 item adjective checklist with an 8 point Likert-type scale. The IAS was developed by Wiggins in 1979 to refine the Kaiser Groups' circumplex model (Freedman et al., 1952; LaForge & Suczek, 1955; Leary, 1957). The IAS-R was revised by Wiggins in 1984 to account for accumulating evidence by Kiesler (1983) and his own reanalyses that his adjective intensities were mixed and required refinement. Additionally, the IAS-R cut the original adjective checklist of 128 items in half. The IAS-R offers an empirically based, internally consistent taxonomy for classification of interpersonal behavior in its normal and abnormal ranges. The domain of interpersonal behavior is organized around the two axes of Control and Affiliation, the two factors that individuals negotiate in their social behavior

(Foa, 1961; Leary, 1957). Wiggins' circumplex defines an array of 16 categories (labeled A to P) representing distinct classes of interpersonal actions. Each segment is a blend of the two axis dimensions reflecting mathematically weighted combinations of Control and Affiliation.

The IAS-R asks subjects to indicate how accurately each adjective on the list describes them. Ratings range from 1 (extremely inaccurate) to 4 (slightly accurate) to 8 (extremely accurate). The IAS-R offers semantic and behavioral markers for any interpersonal behavior and is therefore also applicable for raters to use in observing the behavior of others.

Goodness of fit tests (Wilson-Hilferty deviate index) for the IAS exhibit clear circularity (equal spacing), indicating the clearest circumplex structure to date (Wiggins et al., 1981). Wiggins (1979) has indicated the generalizability of the IAS scales for classification based on testing diverse subject populations in different contexts. Internal consistency for these scales meet a stringent requirement: Cronbach's alpha = .80. Wiggins indicates the IAS-R (1984) meets these requirements as well and demonstrates even clearer circumplexity. Test-retest reliability data is not available.

Wiggins (1984) includes formulas for obtaining an interpersonal segment scores. Raw octant scores are combined with sine and cosine weights to generate two scores: Love and Dominance. The Love score yields the subject's

placement on the horizontal axis of the circumplex represented by point B of figure 6. The Dominance score yields the subject's placement on the vertical axis of the circumplex represented by point B in figure 6. Point C, the point of intercept between points A and B, defines the angle and, therefore, the subject's octant placement. Vector length, or intensity of the variable, is the distance from the circle center to the subject's intercept point C (Wiggins, 1984).

Insert Figure 7 about here

IAS-R classification does indicate a pattern of sex differences, which Wiggins (1979) considers to reflect stereotypes of North American society. This pattern is not so uniform with samples of university students. However, to avoid the possibility of this bias confounding the data analysis of this study, the sample population was limited by sex.

Patterns of social desirability may also be reflected in these data (Wiggins, 1979). However, rather than altering data with adjustment scales, these patterns are of interest to the goals of this study and can be examined in comparisons of self and counselor responses.

The Marlowe-Crowne Social Desirability Scale

The Marlowe-Crowne Social Desirability Scale was included as a covariance measure to determine bias in self-reported interpersonal descriptions. The Marlowe-Crowne SDS consists of 33 items. Two types of responses are represented, first, a response which is socially desirable but highly unlikely to occur (e.g., "No matter who I am talking to, I am always a good listener") and a socially undesirable response which is very likely to occur (e.g., "I like to gossip at times"). The higher the score, the more the subjects are trying to represent themselves in the most desirable manner possible. Test-retest reliability of the Marlowe-Crowne are reported at .88 with internal consistency values of .88 for the final form of the scales (Crowne & Marlowe, 1964).

Chapter 4

Results

Four scores were derived from IAS-R instruments. Raw scores from each of the eight interpersonal categories were converted to standard scores using IAS-R norms. Standard octant scores were then multiplied by sine and cosine weights (of ideal angle placements for each octant) and summed to provide a LOV and DOM coordinate for each axis.

The arctan of DOM divided by LOV produced the angle or octant placement. Vector length was calculated by computing the square root of the sum of DOM squared and LOV squared (Wiggins, 1984).

Interpersonal Angle (octant categories) and Vector Scores

Subjects were placed into one of four interpersonal categories based on their angle scores on the IAS-R: Friendly-Dominant (F-D) O°-9O°, Friendly-Submissive (F-S) 27O°-36O°, Hostile-Dominant (H-D) 9O°-18O°, and Hostile Submissive (H-S) 18O°-27O°. Subjects were assigned to two categories, one for their IAS-R therapist report and one for IAS-R self-report. The frequencies for each category are listed in Table one.

Insert Table one about here

Vector scores were computed for subjects for their own IAS-R self-report and IAS-R therapist report. Vector scores by therapist report ranged from .40 to 3.40 with a mean of 1.49 and s.d. of .61. Vector scores by client self-report ranged from -.20 to 3.80 with a mean of 1.39 and a s.d. of .69. Each group of vector scores was further divided into thirds, based on the shape of each distribution.

Selective Attention Scores (Discrepancy Angle and Discrepancy Vector

Discrepancy angle scores were computed by calculating the shortest distance between the angle assigned by the therapist and the angle reported by the client. Discrepancy angle scores ranged from 4°-178°, with a mean of 68.97° and a s.d. of 51.13°. Three groups were created (high, medium, low) based on the shape of the distribution. The frequencies for these three groups are listed in Table two.

Insert Table two about here

Discrepancy vector scores were calculated by subtracting the client's vector score from the therapist's assigned vector score. Discrepancy vector scores ranged from -2.10 to 2.90 with a mean of .09 and a s.d. of .86. Discrepancy vector scores were also divided into thirds (high, medium, low) based on the shape of the distribution. The frequencies for these three groups are listed in Table three.

Insert Table three about here

Scores for the Inventory of Interpersonal Problems (IIP)

The client's raw score for each of the twelve problem categories were converted into standard scores using the IIP norms provided for a normative, non-psychiatric college student population.

Results of Hypotheses

Hypothesis 1: Differences in Motivational Structure (PIT scores) between Interpersonal Categories (IAS-R angles)

Multivariate analyses of variance (MANOVA) were used to test the hypothesis that overall differences existed between the four interpersonal categories on the 22 PIT needs for each of the nine PIT scores analyzed (Deviation Scores: Problem, Ego, Judgment, Cenper-Deviation, Deviation-Attitude; Attitude/Value Scores: Organizational Principle, Attitude, Attitude-Female, Attitude-Male). Analysis of variance (ANOVA) was used to test for differences between the four interpersonal groups for each of the 22 PIT needs on each of the nine PIT scores. Differences between group means were determined by Tukey's HSD or Duncan's multiple range test and T-tests (Bray & Maxwell, 1985). Due to increased possibility of Type II error, trends at the ANOVA level (with non-significant MANOVA) were reported.

1a. Differences in Motivational Structure using Client Angle (IAS-R) Problem Scores

A multivariate analysis of variance (MANOVA) was used to test the hypothesis that the four interpersonal groups (by client IAS-R) differed overall on the 22 PIT needs in the Problem score. The multivariate test of significance

failed to support this prediction, F(66,135,23)=.65, ns.

Ego Score

The multivariate analyses of variance (MANOVA) test of significance failed to support overall differences between the four groups, F(66,135,23)=1.01, ns.

Judgment Score

The multivariate analyses of variance (MANOVA) found significant differences between the four groups, F(66,135,23)=1.61, p <.01. The result of the individual ANOVA analyses on the 22 needs revealed significant differences on the Gratitude Need, F(3,66)=5.18, p<.002. T-tests between group means found the Friendly-Dominant group to have the lowest mean score, t=-3.22, p < .004. Results of the Judgment Score are depicted in Table four.

Insert Table four about here

Cenper-Deviation Score

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis of differences between the four groups,

F(66,135,23)=1.23, ns.

Deviation-Attitude Score

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis of differences between the four groups, F(66,135,23)=1.02, ns.

Organizational Principle Score

The multivariate analyses of variance (MANOVA) failed to support the hypotheses, F(88,188,23)=1.20, ns.

Attitude Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,135,23)=.96, ns.

Attitude-Female

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,135,23)=.90, ns.

Attitude-Male

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,135,23)=1.15, ns.

1b. Differences in Motivation Structure using Therapist's Angle (IAS-R)

Problem Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,132,25)=1.31, ns.

Ego Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,132,25)=.88, ns.

Judgment Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(63,135,17)=1.17, ns.

Cenper-Deviation Scores

The multivariate analyses of variance (MANOVA) results indicated significant differences between the four groups on this measure; F(66,132,25)=1.87, p<.001. Analyses of variance (ANOVA) noted significant differences between the four groups on the Autonomy need, F(3,65) =2.96, p<.03; and the Blame Avoidance Need, F(3,65)=3.43, p<.02. T-tests between groups on the Autonomy Need resulted in significant differences between the Hostile Dominant and Friendly-Submissive groups, t=-2.11, p<.05. For the Blame Avoidance need, T-tests resulted in significant differences between

Friendly-Dominant and Hostile-Dominant groups, t=2.61, p<.01. Results are listed in Table five.

Insert Table five about here

Deviation Attitude Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,132,25)=.99, ns.

Organizational Principle Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(88,200,19)=.94, ns.

Attitude Scores

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis of overall differences, F(66,132,25)=.92, ns. Five analyses of variance (ANOVA) did reveal differences but these did not surpass the .002 level required to exceed chance for a non-significant MANOVA. T-tests on the five analyses (ANOVA) resulted in highly significant group mean differences with comparative trends. Results of the Attitude scores are listed in

Table six.

Insert Table six about here

Attitude-Female

The multivariate analyses of variance (MANOVA) test of significance failed to support the hypothesis, F(66,132,25)=.85, ns.

Attitude-Male

The multivariate analyses of variance (MANOVA) test of significance failed to find the overall differences between the 22 needs on this score, F(66,132,25)=1.10, ns. The Understanding need did reach the .002 significance level required to exceed chance, F(3,65)=5.21, $p<.002$. Three other analysis of variance (ANOVA) tests did not exceed the .002 level of chance required for non-significant MANOVA. T-tests for group means revealed three significant differences between the groups. Results are listed in Table seven.

Insert Table seven about here

Hypothesis 2: Personality Variables and Selective Attention (Discrepancy Angle and Discrepancy Vector Scores)

High Selective Attention Scores and PIT Deviation Scores

2a. Discrepancy Angle Group Analyses (High, Medium, Low)

A multivariate analysis of variance (MANOVA) was used to test the hypothesis that subjects with high Discrepancy Angle scores would show significantly higher PIT scores overall than the subjects with medium or low Discrepancy Angle scores. Multivariate analyses of variance and ANOVA were used to test for differences between the three Discrepancy Angle groups for each of the 22 PIT needs on each of the nine PIT scores. Differences between group means were determined by T-tests, Tukey's HSD, or Duncan's multiple range test (Bray & Maxwell, 1985). Due to the increased possibility of Type II error, trends at the ANOVA level (with non-significant MANOVA) were reported.

Problems Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis for this score, $F(44,92)=.93$, ns.

Ego Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis for this score, $F(44,92)=.68$, ns.

Judgment Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis for this score, F(44,92)=1.10, ns.

Organizational Principle Score

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of differences between the three groups on this score. However a tendency toward significance is suggested, F(44,92)=1.42, $p<.08$. The result of the individual ANOVA tests on the individual needs revealed three significant differences, none exceeding the .002 level. Results of the Organizational Principle score are listed in Table eight.

Insert Table eight about here

Deviation Attitude Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis on this score, F(44,92)=1.07, ns. The result of the individual ANOVA test on the 22 individual PIT needs revealed four significant differences for the three groups, however, none exceeded the .002

level. Results are listed in Table nine.

Insert Table nine about here

Cenper-Deviation Score

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis on this score, F(44,92)=1.29, ns.

Attitude Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis on this score, F(44,92)=1.03, ns.

Attitude-Female

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis overall on this score, F(44,92)=1.28, ns. The result of individual tests (ANOVA) on each of the 22 needs found three significant differences between the three groups, but these did not exceed the .002 level required. Results are illustrated in Table ten.

Insert Table ten about here

Attitude-Male

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis for this score, F(44,92)=1.05, ns.

2b. Discrepancy Vector Group Analyses (High, Medium, Low)

Problem Scores

The multivariate analysis of variance (MANOVA) test of significance found significant differences between groups overall for this score, F(44,92)=2.09, p<.002. Individual analyses (ANOVA) for each of the 22 needs on this score found four significant differences. For the Aggression need, F(2,67)=3.40, p<.04. For the Dominance need, F(2,67)=4.14, p<.02. For the Rejection need, F(2,67)=5.24, p<.007. For the Sex need, F(2,67)=3.26, p<.04. T-tests between group means found significant differences between groups in the direction predicted. Results are listed in Table eleven.

Insert Table eleven about here

Ego Scores

The multivariate analysis of variance (MANOVA) test of significance found significant differences between the three groups overall on this score, $F(44,92)=1.85$, $p<.04$. The result of individual analyses (ANOVA) on each of the 22 needs revealed three significant differences. For the Autonomy need, $F(2,67)=6.35$, $p<.003$. For the Dominance need, $F(2,67)=6.25$, $p<.003$. For the Rejection need, $F(2,67)=5.47$, $p<.006$. T-tests between group means revealed significant differences in the direction predicted. Results of the Ego scores are listed in Table twelve.

Insert Table twelve about here

Judgment Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis for this score, $F(44,92)=1.36$, ns. Tests of significance (ANOVA) on the individual needs for this score revealed three significant differences which did not exceed .002 level of significance required. Results are listed in Table thirteen.

Insert Table thirteen about here

Organizational Principle Score

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of differences between groups overall on this score, F(66,144,19)=.70, ns.

Deviation Attitude Score

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of differences between groups overall on this score, F(44,92)=.70, ns.

Cenper-Deviation Score

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of differences between the three groups overall on this score, F(44,92)=1.05, ns.

Attitude Scores

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of differences between groups overall on this

score, F(44,92)=.64, ns.

Attitude-Female

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of group differences overall on this score, F(44,92)=.64, ns.

Attitude-Male

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of group differences overall on this score, F(44,92)=.81, ns.

2c. Selective Attention Scores and The Marlowe-Crowne

A Pearson product moment correlation was performed to assess the relationship between social desirability and selective attention (discrepancy angle and vector scores). Results indicated no relationship between these variables. For discrepancy angle, r=.14, p=10, ns. For discrepancy vector, r=.02, p=.43, ns.

Nonlinear relationships were assessed by a (3x3) chi-square. The chi-square analysis revealed no relationship between the three variables. For discrepancy vector, X^2 = 6.39, df=4, p<.17, ns. For discrepancy angle, X^2 = 2.27, df=4, p<.68, ns.

An analysis of variance (ANOVA) was used to test the hypothesis that social desirability (Marlowe-Crowne) was significantly related to a specific interpersonal category (by therapists IAS-R). This hypothesis was not supported F(3,69)=.10, ns.

2d. The Relationship Between High Selective Attention Scores (discrepancy angle and vector scores) and Hostile Interpersonal Categories

Discrepancy Angle Scores using Therapists IAS-R Placement

An analysis of variance was used to test the hypothesis that higher discrepancy angle scores would occur in the Hostile interpersonal categories. The results were significant, F(3,69)=3.35, p<.02, supporting the hypothesis of differences between the groups. A Duncan's multiple range test between means verified the Hostile Dominant group as different from the other groups in the direction predicted at the .05 level. Results are listed in Table fourteen.

Insert Table fourteen about here

Discrepancy Angle Scores using Client IAS-R Placement

An analysis of variance was used to test the hypothesis that higher discrepancy angle scores would be found in the Hostile interpersonal categories.

The results were not significant, F(3,71)=1.08, ns. The Duncan's multiple range test did not detect significant differences between group means.

Discrepancy Vector Scores using Therapists IAS-R Placement

An analysis of variance (ANOVA) was used to test the hypothesis that highest discrepancy vector scores would occur in the Hostile categories. This hypothesis was not supported, F(3,69)=.67, ns. A Duncan multiple range test verified no differences between groups for this variable by therapists IAS-R assignment.

Discrepancy Vector Scores using Client IAS-R Placement

An analysis of variance (ANOVA) was used to test the hypothesis that highest discrepancy vector scores would be found in the Hostile categories. The result did not support this hypothesis, F(3,71)=1.83, ns. A Duncan multiple range test of group mean differences verified this result.

Hypothesis 3: The Relationship between Interpersonal Problems (IIP Scores) and Interpersonal Presentation (IAS-R Category)

A discriminant analysis was used to test the hypothesis that the four interpersonal categories (Friendly-Dominant, Friendly-Submissive, Hostile-Dominant and Hostile-Submissive) would endorse different types of problems on the twelve different problem variables on the Inventory for Interpersonal

Problems (IIP). These results should be treated as exploratory due to the small number of subjects (n=73) in relationship to the number of variables (12). The analysis was able to correctly classify 47.95% of the four interpersonal groups using the IIP items. This exceeds the probability predicted by chance which was 25%. Forty-five percent (n=10) of the Friendly-Dominant group were correctly classified; forty percent of the Friendly-Submissive group (n=10) were correctly classified; fifty percent of the Hostile-Dominant group (n=5) were correctly classified; and sixty-two percent of the Hostile-Submissive group (n=10) were correctly classified. Results of the discriminant analysis are listed in Table fifteen.

Insert Table fifteen about here

An item discriminant analysis of the IIP 12 problem variables revealed different patterns of endorsement between the four groups. Percentages correctly classified by each of the IIP variables was inconsistent. Results of the discriminant analysis by IIP items is listed in Table sixteen.

Insert Table sixteen about here

A chi-square was used to test the hypothesis that a pattern of positive (agree) vs. negative (disagree) endorsement of the 12 IIP problems variables occurred between the four groups. The chi-square was significant, $\underline{X}^2 = 21.60$, df = 3, $p<.001$. Post-hoc analysis determined that the Friendly-Dominant and Hostile-Submissive groups were significantly different from the others.

A chi-square was used to determine if correct classification distributed by discriminant analysis exceed chance. $\underline{X}^2 = 23.24$, df = 3, $p < .001$.

Hypothesis 4: Unpredicted but Significant Results

Motivational Structure (PIT) using Therapist (IAS-R) Placement

In addition to significant differences between the four interpersonal groups (F-D, F-S, H-D, H-S) on Cenper-Deviation scores, Attitude scores and Attitude-Male scores, one other score produced significant results.

DIFDVM

The multivariate analysis of variance (MANOVA) test of significance failed to support the hypothesis of overall differences on this score, $\underline{F}(66,132,25)=1.31$, ns. Four tests of significance (ANOVA) on individual PIT

needs revealed significance levels that did not exceed .002. Results are listed in Table seventeen.

Insert Table seventeen about here

4b. Selective Attention Scores (Discrepancy Angle) and Motivational Structure (PIT)

Two additional PIT deviation scores not predicted were found significant when exploring the hypothesis of high selective attention scores and their relationship to PIT deviation scores: SUMS-F and DIVDVF.

SUMS-F

The multivariate analysis of variance (MANOVA) test of significance was significant, $F(44,92)=1.58$, $p<.03$ supporting the hypothesis of differences between the four groups overall on this score. Two analyses of variance (ANOVA) found significant differences on two PIT needs. The Inferiority Avoidance Need was significant, $F(2,67)=3.22$, $p<.04$. For the Play Need, $F(2,67)=4.57$, $p<.01$. T-tests between groups revealed significant differences. Results of the SUMS_F scores are listed in Table eighteen.

Insert Table eighteen about here

DIFDVF

The multivariate analysis of variance (MANOVA) detected significant differences between the four groups overall on this score, $F(44,92)=1.57$, $p<.03$. Individual analyses of variance (ANOVA) on the individual needs found three significant differences. For the Autonomy Need, $F(2,67)=3.70$, $p<.03$. For the Inferiority Avoidance Need, $F(2,67)=4.10$, $p<.02$. For the Play Need, $F(2,67)=5.03$, $p<.009$. T-tests between group means found significant differences between groups. Results are listed in Table nineteen.

Insert Table nineteen about here

Selective Attention (Discrepancy Vector) and Motivational Structure (PIT)

In addition to the other significant PIT deviation scores (Problem, Ego) found in the Discrepancy Vector groups, the SUMSA score was found to be highly significant.

SUMSA

The multivariate analysis of variance (MANOVA) test of significance supported the hypothesis of differences between the four groups overall on this score, $F(44,92)=1.87$, $p<.006$. Analysis on the individual PIT needs (ANOVA) revealed three significant differences. For the Aggression Need, $F(2,67)=3.81$, $p<.03$. For the Autonomy Need, $F(2,67)=3.80$, $p<.03$. For the Dominance Need, $F(2,67)=3.09$, $p<.05$. For the Rejection Need, $F(2,67) =6.94$, $p<.002$. T-tests between group means detected significant differences in the direction predicted. Results are listed in Table twenty.

Insert Table twenty about here

Comparison of PIT Deviation Scores on Client Vector and Therapist Vector Scores

Due to the highly significant findings of the Discrepancy Vector Scores in revealing deviation as predicted in PIT Deviation Scores, statistics were run to compare this pattern to other vector scores: Client Vector and Therapist Vector.

PIT Deviation Scores by Client Vector Classification

Problem Scores

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, F(44,92)=.85, ns.

Ego Scores

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, F(44,92)=.54, ns.

Judgment Scores

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, F(44,92)=1.07, ns. Analyses of individual PIT needs (ANOVA) found the Defendence Need showed significance, F(2,67)=3.55, p<.03. T-tests between group means found the medium group to have the lowest score, t=-2.39, p<.02.

Cenper-Deviation Score

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, F(44,92)=.82, ns. One analysis of individual PIT needs (ANOVA) did not exceed the .002 significance level required, but showed an F(2,67)=3.93, p<.03 for the Gratitude need. T-tests between group means found significant differences between the medium and high vector group, t=-2.51, p<.01; the high

vector group had the highest score.

Deviation-Attitude Score

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, $F(44,92)=1.21$, ns. One analysis of variance, for the Dominance need did not exceed the .002 level required, but showed $F(2,67)=3.54$, $p<.03$. A T-test between group means on this need found the low group to be higher than the medium group, $t=2.86$, $p<.006$.

PIT Deviation Scores by Therapist Vector Classification

Problem Scores

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, $F(44,92)=1.08$, ns. For the Affiliation Need (ANOVA), $F(2,67) = 3.39$, $p<.04$, the low group had the highest score. For the Aggression Need, $F(2,67)=5.14$, $p<.008$, the high group had the highest score; both T-tests between group means found significant differences between the groups. Results of the Problem scores are listed in Table twenty-one.

Insert Table twenty-one about here

Ego Scores

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, F(44,92)=.91, ns.

Judgment Scores

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, F(44,92)=1.30, ns. In an ANOVA for the Blame Avoidance Need, F(2,67)=3.48, p<.04. For the Deference Need, F(2,67)=6.75, p<.002. For the Nurturance Need, F(2,67)=3.61, p<.03. T-tests between group means on these needs found the high vector group to have the lowest scores. This is in the direction predicted. Results for the Judgment scores are listed in Table twenty-two.

Insert Table twenty-two about here

Cenper-Deviation Scores

The multivariate analysis of variance (MANOVA) found overall significant differences between the three groups on this score, F(44,92)=1.78, p<.01. Two analyses of individual PIT needs (ANOVA) were also significant. For the Aggression Need, F(2,67)=4.33, p<.02. For the Gratitude Need, F(2,67)=5.22,

$p<.007$. T-tests between group means for these needs revealed significant differences with the highest vector group maintaining the highest means; for the Aggression Need, $t=-2.72$, $p<.009$. For the Gratitude Need, $t=-3.12$, $p<.003$.

Deviation Attitude Score

The multivariate analysis of variance (MANOVA) failed to support the hypothesis, $F(44,92)=.58$, ns. Overall comparison of the three vector measures may be viewed in table twenty-three.

Insert Table twenty-three about here

Chapter 5

Discussion

There were four objectives of this study: a. to examine the motivational structure of interpersonal categories from the viewpoint of self and other; b. to explore potential interpersonal indices for selective attention and their relationship to pathology as predicted by interpersonal theory; c. to explore social desirability and its relationship to self and other viewpoint, and selective attention measures as predicted by interpersonal theory; d. the final objective was to explore the relationship between self-reported interpersonal problems and interpersonal presentation. While all four objectives were explored, results must be regarded as exploratory and preliminary due to the small number of subjects, variation in the client-therapist contact time (50 vs. 100 minutes) and the extended period of time required for data collection.

The statistical methods for this data were the most conservative possible. With the small number of subjects, the possibility of Type II error for the MANOVA was great. That is, given the low power of the MANOVA test, it was more likely that the test rejected trends in the data that were significant. The possibility for this occurring increases when additionally using the Bonferroni alpha level of .002 for accepting ANOVA results as significant beyond a non-

significant MANOVA. Therefore, any trends in the ANOVA results that suggested patterns or clusters of scores were included for discussion, but will be discussed as "possible relationships" to be examined in further research with a larger subject number and thus more powerful and sensitive statistics.

Motivational Structure (PIT) and Interpersonal Categories (IAS-R)

When examining the motivational structure of clients using their self-report category on the IAS-R, little significant data emerged on the PIT. It was expected that overall differences as measured by the MANOVA would be difficult to obtain, given the low power of the test, and the diversity of the 22 needs included in each PIT score (intercorrelations = .18). However, even the subsequent analyses of variance (ANOVAs) on each one of the 22 needs for each of the nine PIT scores were non-significant, with the exception of the Gratitude need on the Judgment score. Differences between groups on this score revealed that the Friendly-Dominant group had a lower Judgment score on this need than the Hostile-Submissive group. Therefore, the F-D group reported having the most difficulty in accurately perceiving when and in what situation the need for Gratitude is appropriate for expression.

The other eight PIT score analyses using self-report classification did not reveal differences between the four groups. There could be several reasons for this result. The first possibility is the low power of the MANOVA to detect

differences. However, significant differences at the ANOVA level did not exist as well. The second possibility is that the IAS-R self-report data has questionable validity. This may be true because the client lacks insight or awareness into their own presentation (IAS-R) and the interpretation of others (PIT photography format). Wiggins (1979) noted social desirability patterns in the endorsement of the IAS, which he felt should be accounted for by inclusion of a social desirability measure. The client may therefore withhold information about their difficulties, perceptions, thoughts or beliefs in order to preserve a positive self-confirmation. The validity of self-report data has long been held in question for these reasons and tends to confirm Leary's concept of the need for multi-level interpersonal diagnosis, accessing levels of the personality beyond the conscious self-report.

Another possibility which also concerns accessing "levels" of personality is the methodological differences in the IAS-R self-report and the PIT. The IAS-R in this example was used as a self-report inventory, while the PIT is a projective test. Chambers (1980) observed that, "if a need functions differently at different consciousness levels, the measures that tap different levels may not agree even if they are valid for the particular stratum they measure." An example of this is the studies which have attempted to measure Murray's needs with different instruments and have found low correlations (Fiske, 1973; Megargee & Parker,

1968).

In contrast to the dearth of significant information presented when examining the PIT scores by client IAS-R self-report, the analyses of the PIT by therapist placement yielded some significant data. As mentioned previously, given the low power of the MANOVA, and the diversity of the 22 needs, obtaining overall significance with MANOVA analyses was not likely. Both significant results and non-significant but interesting patterns will be discussed.

Overall significance (MANOVA) was found for only one of the scores, The Cenper-Deviation Score. Subsequent analyses on the individual PIT needs for this score revealed the Hostile-Dominant group to have a higher CPD score on Autonomy need than the Friendly-Submissive group. This means the H-D group located the Autonomy need more deviantly on the central peripheral dimension in their motivational system, so that it may be denied, suppressed and subject to infrequent and extreme forms of expression or expressed in a confused and conflicted way. For the CPD Blame Avoidance need, the Friendly-Dominant group score was significantly higher than the Hostile-Dominant group, therefore the F-D group located the Blame-Avoidance need deviantly in their motivational system, keeping it from awareness, and subject to extreme and infrequent or confused and conflicted expression.

Three PIT scores that produced interesting, but non-significant results

were the Attitude scores, Attitude-Male scores, and the unpredicted Differential-Deviation-Male scores. All of these scores were not significant overall between groups (MANOVA). However, their ANOVA results reveal patterns which are informative about the hypotheses of interpersonal theory. Further study with a larger subject sample would be needed to confirm this trend. These particular PIT scores refer to differences in attitudes towards the needs and their expression.

For the Attitude score, the Hostile-Submissive group accounted for five differences on individual PIT needs while the Friendly-Submissive group accounted for three differences. Both Submissive interpersonal groups had higher scores on the Autonomy, Dominance, Play, Rejection, and Understanding Needs than the Hostile-Dominant or Friendly-Dominant groups. Higher Attitude scores on these needs may indicate that the Friendly-Submissive and Hostile-Submissive groups hold significantly greater negative attitudes toward strong expression of these mostly assertive needs than the Hostile and Friendly Dominant groups. Given the "submissive" characteristics of these groups, attitudinal conflict over assertive needs may be expected.

Specificity of the nature of these negative attitudes for the Friendly-Submissive and Hostile-Submissive groups was revealed by the significance of the Attitude-Male Score, also non-significant at MANOVA level of analysis. Again,

the F-S and H-S groups accounted for the highest ATTM scores on the Autonomy, Rejection and Understanding Needs as compared to the F-D and H-D groups. This seems to indicate that for these three needs, the F-S and H-S groups may hold significantly greater negative attitudes toward strong expression of these needs in men, as opposed to both men and women. One explanation for this, may have to do with the sensitivity and therefore greater interpersonal attribution the Submissive groups may have for the dimensions of power and dominance. In this case, the Submissive groups may be reflecting conflicts they have toward the traditional male-female sex roles of dominance and submissiveness.

Differential unusual beliefs about male expression of needs were again suggested by the unpredicted ANOVA trends in the Differential-Deviation-Male scores. While the MANOVA was non-significant for this score, ANOVA trends suggested the Hostile-Submissive group and the Hostile-Dominant group had the higher scores. The H-S group accounted for the highest scores on Abasement, Counteraction, and Exhibition needs. The Hostile-Dominant group had the highest DIFDVM score for the Rejection need. All Hostile group DIFDVM scores were higher than the Friendly-Dominant and Friendly-Submissive groups. High DIFDVM scores on these needs may indicate unusual or deviant beliefs in the H-S and H-D groups about how males express and satisfy these needs.

Overall, when taking ANOVA-level trends into consideration, examination of the motivational structure of interpersonal groups tended to be most informative when utilizing therapist IAS-R description rather than self-report. These tentative findings confirm Golding's (1982) construal study, that is, there are individual differences in the belief systems about how we satisfy our needs with others.

The tentative trends suggested in the data may indicate that of the therapist-reported groups, the Hostile groups tended to report the more problematic motivational structure. Further research with a larger subject sample will need to confirm these tentative observations. The H-D group reported a tendency to suppress the need for Autonomy, possibly indicating conflict around expression of this need, with the possibility for extreme and infrequent expression. The H-D group also seemed to report unusual beliefs about how males express and satisfy the need for Rejection. The H-S group seemed to report the greatest proportion of any of the four groups of significantly negative attitudes toward assertive needs such as Autonomy, Dominance, and Rejection. The H-S groups appeared to demonstrate the most significantly negative attitudes toward the expression of these needs by males as compared to any other group and the most unusual or deviant beliefs about how males express and satisfy the Abasement, Counteraction, and Exhibition needs.

The F-S groups also seemed to demonstrate more negative attitudes toward the strong expression of the Autonomy, Play and Rejection needs as compared to the Dominant groups, however their scores were still lower (not as negative) than the H-S groups. The F-S groups also seemed to reveal more negative attitudes toward the expression of Autonomy and Rejection needs in men as opposed to men and women. The Friendly-Dominant group, by contrast, demonstrated only one PIT score by therapist IAS-R placement.

These findings on the motivational structure of the interpersonal groups support Carson's (1979) observations about interpersonal construal and attributions in the four groups. Carson interpreted a study by Golding et al. (1977), noting that the Friendly-Dominant group showed little evidence of a generalized attributional set (perceptual expectancies) while the Hostile-Dominant and Friendly-Submissive groups over-attributed the dominance-submissive dimension or the love-hate dimensions respectively. Unfortunately, Golding did not discover a clear Hostile-Submissive group in his subject pool; however, Carson believes these individuals do distort, perceiving that they live "in a jungle...in which besides himself, there are only winners." Data trends in this study suggest differences would exist between the groups in motivational structure was supported and is consistent with Carson's (1979) observations about styles of interpersonal construal. However, little significant data emerged from

the rigorous statistical procedures that would enable support for the hypothesis. Further, study is needed to confirm the trends observed.

One other interesting observation about the patterns of the PIT scores was the lack of differences between groups in the PIT Deviation scores (Problem, Ego, Judgment, Devatt). However, this finding is consistent with Wiggins' (1986) investigation of deviance or psychopathology in IAS-R category scores. He noted that he found no relationship between psychopathology and either interpersonal disposition (category) or vector length scores alone. However, when the vector length was considered within interpersonal dispositional types (category), significant correlations were obtained. Investigation into interpersonal deviancy or psychopathology indices will be considered next.

Selective Attention Scores and Deviation in Motivational Structure (PIT)

It was hypothesized that the High Discrepancy Angle group would be the group with the greatest selective attention, and therefore, would demonstrate the highest PIT Deviation scores (Problem, Ego, Judgment, Devatt). This selective attention index, Discrepancy Angle, did reveal two significant PIT scores, which were unpredicted, but supportive of non-significant trends. Further study with a larger sample size would be required to confirm these trends.

The Deviation-Attitude score is an overall index of deviation from an

optimal attitude toward a need to facilitate appropriate expression and satisfaction. While this PIT deviation score was not significant overall, a trend appears to exist. The Medium DisAng group seemed to report the most deviant values toward the Defendence, Deference and Nurturance needs, while the High DisAng group seemed to report the most deviant value for the Understanding Need. This pattern of scores may indicate the Medium group tended to overvalue the Defendence need, undervalue the Deference need and undervalue the Nurturance need as compared to the High group. The High group may have undervalued the Understanding need as compared to the medium group. Overall, the Medium and High DisAng groups seemed to account for the under- or over-valuing of needs, rather than the Low group.

The Organizational Principle score demonstrated a trend toward overall significance and also suggested differences between the DisAng levels on the Gratitude, Harm Avoidance and Sex needs. The High and Medium DisAng groups seemed to account for the highest absolute Organizational Principle scores on these needs. This seemed to indicate that these two groups tended to overemphasize or organize their perceptions more with these specific needs. Overemphasis on a need may indicate conflict or sensitivity regarding a certain need and therefore inhibit its appropriate expression or satisfaction.

For the Attitude-Female PIT score, the medium DisAng group seemed to

negatively rate the expression of the Deference need by women more than the Low group, while the High DisAng group appeared to rate the expression of the Succorance and Understanding needs by women more negatively than the Low and Medium groups. Again, in a consistent trend, the Medium and High groups seemed to account for the differences among groups.

The overall analysis of the Sums-Female score (MANOVA) was significant and seems to support the trend of problematic beliefs that the DisAng groups held specifically toward women. Results revealed the High DisAng group to have the higher score for the Inferiority Avoidance Need than the Low DisAng group, while the Low DisAng group held the most significantly high SUMS-F score for the Play need as compared to the High DisAng group. These results indicate that the High group demonstrated unusual beliefs about the way women express and satisfy the Inferiority Avoidance need, and the Low group demonstrated unusual beliefs about the way women express and satisfy the Play need.

The overall analysis for the Differential-Deviation-Female Score (MANOVA) was also significant and further supports deviation among DisAng groups regarding beliefs about how needs are combined by women. Again, the High DisAng group accounted for the highest score for the DIFDVF Autonomy need as compared to the Medium group. The High DisAng group also

accounted for the highest score for the Inferiority Avoidance need as compared to the Low group. The Low DisAng group held the highest score for the Play need as compared to the High DisAng group. These results indicate that the High group showed more unusual beliefs about the way women meet and express the Autonomy and Inferiority Avoidance needs, while the Low group held unusual and unrealistic beliefs about the way women meet the Play need.

Through analyses of Discrepancy Angle and interpersonal category, it was found that the subjects in the High Discrepancy Angle group were largely in the Hostile-Dominant group (by Therapists' IAS-R). Since no relationship was found between Discrepancy Angle and other interpersonal groups, it is difficult to speculate on the problematic attitudes and beliefs about expression of needs in women held by the subjects in the High and Medium categories.

Overall, results and trends suggested that the Medium and High groups accounted for the highest scores in the PIT data. However, in considering all the trends and results, the PIT scores that demonstrated differences in the Discrepancy Angle Classifications fell in the Attitude and Values spectrum of the PIT scores, and deviation scores (unpredicted) pertaining to expression of needs by women. Significant differences were not found in the most "pathological" and predicted PIT deviation scores. Additionally, the Medium and High groups were fairly evenly split in terms of the most problematic scores with little

differentiation between the two. The Discrepancy Angle classification as a measure of selective attention then did not clearly yield support for the hypothesis. That is, the hypothesis that High Discrepancy Angle scores (selective attention index) would account for the greatest pathology (deviancy) on the PIT was not clearly supported.

The second index for selective attention was the Discrepancy Vector score. It was hypothesized that the High Discrepancy Vector score group would account for the highest deviation scores on the PIT (Problem, Ego, Judgment, Devatt scores). Using the Discrepancy Vector levels, two of the predicted Deviation Scores were significant overall between groups (MANOVA). Additionally, an unpredicted PIT deviation measure was found to be significant overall between groups. A third predicted Deviation measure was not found to have overall significance but was found to be significant for four individual PIT needs, confirming the overall trend suggested from the other significant DisVect comparisons.

For the Problem score, which was found to be significant overall between the three groups, the High DisVect group accounted for the greatest scores in all four of the PIT needs of Aggression, Dominance, Rejection and Sex.

The Ego score, also found to be significant overall, showed the same trend, with the High DisVect group accounting for the greatest scores for the

PIT needs of Autonomy, Dominance and Rejection as compared to the Medium and Low DisVect groups. This trend is highly clinically significant, as the Problem need score has been found to be the best overall indicator of how effectively a need is operating in the motivational system.

Additionally, the Problem needs identified as significant are four of the PIT Ego needs. Deviation of associations on the PIT Ego needs has been found to indicate psychopathology. Chambers (1979) found that high association deviation scores on the Ego needs, (or the assertive needs) of Aggression, Defendence, Sex, Autonomy, Exhibition, Dominance and Play tended to differentiate between pathological and normal groups. The ego needs, according to PIT theory must be close enough to one another in the motivational structure to support one another, yet distant enough to provide variety of action. The ego needs system then operates as a system of checks and balances to assert basic desires and to motivate vital survival-oriented actions. The High deviation scores on the Problem and Ego scores by the High DisVect group indicated that this High selective attention group has significant difficulty carrying out these important Ego need functions (Aggression, Autonomy, Dominance, Rejection, Sex) due to the too distant placement of these needs from other supportive ego needs.

In addition to these two Deviation scores, the Sum of the Absolute Deviation Dyads Score (SUMSA) was unpredicted, but reached overall

significance (MANOVA). The SUMSA score also revealed significant differences on four PIT Ego needs: Aggression, Autonomy, Dominance and Rejection. Results shows that again the High DisVect group accounted for all the greatest (most deviant) scores on these needs. These results indicate unusual or unrealistic beliefs about how these assertive needs are expressed and satisfied.

Finally, the Judgment score, also a Deviation score, did not reach overall significance but did confirm the significant differences found in the other three PIT scores. For the Judgment score Inferiority Avoidance need, the Medium DisVect group seemed to have the lowest (most deviant) score, while for the Rejection and Sex needs, the High DisVect group seemed to have the lowest scores. These trends tend to confirm the findings of the other significant Deviation scores. With the exception of the one low score in the Medium group, the High group again accounted for the most pathological scores. These trends in the Judgment score may indicate that the High DisVect group lacks the ability to perceive accurately the situational factors indicating when and where the Rejection and Sex needs are appropriate for expression.

Overall, the High DisVect group accounted for fifteen of sixteen comparisons in the most clinically significant PIT Deviation scores. Therefore, the hypothesis that the Discrepancy Vector Index, as a measure of selective attention which reveals interpersonal psychopathology was supported. This

conclusion verifies one of the basic tenets of interpersonal theory set forth by theorists as early as Harry Stack Sullivan. That is, through the self-system's protective measure of selective attention, individuals are unaware of negative self-behavior (negative assumptions and beliefs) and so may repeatedly experience poor interpersonal relations.

The Discrepancy Vector measure assessed the differences between the viewpoint of the therapist and the viewpoint of the client on the client's intensity of interpersonal presentation. This particular measure of selective attention (ability to objectively assess one's own behavior) confirmed the faulty judgment, perception and assumptions (covert variables) that lead to the negative, rigid or dysfunctional interpersonal behavior. Use of the Discrepancy Vector scores as an index may then indicate the description and specification of pathological personality variables existing in the subject's motivational structure. The Discrepancy Vector index may thus be considered an index of dysfunctional attitudes and beliefs toward self and others which coincided with high selective attention.

Selective Attention and Social Desirability (Marlowe-Crowne)

It was hypothesized that subjects with the highest selective attention scores (Discrepancy Angle and Discrepancy Vector) would demonstrate the highest social desirability scores on the Marlowe-Crowne. Analyses for both linear and

non-linear relationships between the Marlowe-Crowne and either Discrepancy Vector or Discrepancy Angle were not significant. Therefore, this hypothesis was not supported.

It was also hypothesized that subjects in the Therapist's-labeled Hostile categories would account for the highest social desirability scores. This hypothesis was proposed because it was reasonable to assume that subjects in the therapist-reported Hostile category would not be likely to be aware of or report undesirable characteristics. Therefore the Hostile categories would be assumed to have the highest selective attention score and also the highest social desirability scores. The analysis of variance revealed that social desirability scores were not significantly related to any specific interpersonal category.

Therefore, the Marlowe-Crowne Social Desirability Scale was not found to be related to interpersonal category or selective attention measures. Golding and Knudson (1975) noted that three different measures of social desirability appear to measure different dimensions. The Marlowe-Crowne Social Desirability Scale in their study was found to correlate -.23 with the Interpersonal Checklist categories. These authors further cite Wiggins' (1968) observation that various social desirability measures appear to tap different dimensions; with the Marlowe-Crowne tapping into a "social desirability role-playing dimension." Wiggins called into question the meaningfulness of any one uniform use of the

term social desirability. In this study, then, one explanation for the unsupported hypothesis may be that the Marlowe-Crowne did not tap into the same dimensions as the IAS-R category or the Discrepancy Vector and Angle scores.

Selection Attention Scores and Interpersonal Category

It was hypothesized that high selective attention scores of Discrepancy Angle and Discrepancy Vector would be related significantly to specific interpersonal categories and not to others.

Subjects in High Discrepancy Angle categories were subjects who rated themselves in interpersonal categories that were very distant to the category they were placed in by their therapist. It was hypothesized that the greatest proportion of subjects in the High Discrepancy Angle group would be from the Hostile interpersonal categories. Results examining the relationship between Discrepancy Angle Category and the therapist-reported interpersonal categories support this hypothesis. Results demonstrated that the Hostile Dominant group had the highest Discrepancy Angle scores. No other category was sufficiently differentiated. Analyses of Discrepancy Angle scores and interpersonal category by subject self-report however, were not significant. Here again, evidence for the lack of validity of client self-report data emerges. Of the thirteen clients in the High Discrepancy Angle group, subjects in the Hostile-Dominant category account for 34% (n=5), while Friendly-Submissive subjects (n=4) account for

another 30%. Theses results are also consistent with the previously discussed observations of Carson (1979). He noted that the greatest attributional errors in interpersonal construal tended to occur in the Hostile-Dominant and Friendly-Submissive group (Golding et al., 1977). These groups tended to over-attribute interpersonal characteristics to others that helped to reflect and maintain their own interpersonal self-definition. The lack of significant results for the relationship of the Discrepancy Angle to self-report may be construed to support Carson's conclusion as well. That is, objectively categorized Hostile-Dominant and Friendly-Submissive subjects accounted for the greatest selective attention scores when using Discrepancy Angle as an index. Given high selective attention scores, it would not be expected that these subjects would self-report these undesirable characteristics. In conclusion, this hypothesis for the selective measure of Discrepancy Angle was supported; Hostile-Dominant category had the greatest self-evaluation errors.

The second selective attention measure, Discrepancy Vector scores demonstrated an absence of significant relatedness to any one interpersonal category. This was found to be true when using either subject self-report category or therapist-report. The same trend as noted for Discrepancy Angle

was found with Discrepancy Vector, but was not found to be statistically significant. However, interesting and subtle trends in the high Discrepancy Vector group and the low Discrepancy Vector group were found. Due to the small number of subjects, and the lack of significance with analysis of variance, however, this trend should be viewed with caution. Replication by a study with a larger sample size is needed to confirm these trends.

Subjects in the High DisVect group were subjects who rated their presentation as less extreme than their therapist. Subjects in the Low DisVect group were subjects who rated their presentation as more extreme than their therapist. When viewed from the perspective of the percentage of subjects representing these High and Low categories, mirror images of their interpersonal distribution emerge.

Insert Figure 8 about here

For the High Discrepancy Vector scores, we may hypothesize that subjects are using denial or suppression of awareness of their negatively extreme presentation. In this group, when using therapist placement, the highest proportions of subjects fall in the Hostile-Dominant and Friendly-Submissive categories (same trend as DisAng index), while according to self-report IAS-R

placement these subjects fall in the Friendly-Dominant and Hostile-Submissive categories.

For the Low Discrepancy Vector group, we may hypothesize that these subjects are over-sensitized to the extremeness of their presentation and therefore rated themselves as more extreme than their therapist. Here we note the opposite of the trend in the High DisVect group. When using therapists' placement, the greatest proportion of subjects fall in the Friendly-Dominant and Hostile-Submissive categories; while for the subjects' placement, the greatest proportion of subjects fall in the Friendly-Submissive and Hostile-Dominant categories.

There are several possibilities for this result. First of all, the Discrepancy Vector index is a score derived from subject and therapists' vector reports. Wiggins (1986) explored the relationship between the vector length and interpersonal deviance. He found that 1161 subjects with both moderate and extreme vector scores correlated .99 with profile shape. Therefore, octant membership was found to be independent of vector length. Additionally, Wiggins found that 28 lag correlations between the vector length of each octant was .98. He found no significant correlations between vector length and octant categories although he noted a slight tendency, neither large nor consistent, for high vector scores to be correlated with undesirable octants. Vector length,

Wiggins concluded, in and of itself did not indicate psychopathology. However, when Wiggins considered extreme vector scores within undesirable categories, positive correlations were found. Lanyon's PSI discomfort scale correlated .68 with the extreme vector group in the FG (Hostile) category.

Due to the small number of subjects in this study (for example, in the High DisVect category, Hostile-Dominant subjects = 3), a within-category study of High DisVect scores was not possible. However, the trends noted by Wiggins regarding generally equivalent distribution of high vector scores among categories, with slight tendencies for high vector scores to fall in undesirable categories, is consistent with the finding for distribution of interpersonal categories by high and low DisVect scores. Additionally, the significant differences in the Deviation scores on the PIT by High DisVect subjects demonstrated the validity of Discrepancy Vector as a selective attention measure. The results noted here in the larger proportion of Hostile-Dominant and Friendly-Submissive subjects occurring in the High DisVect group tends to also confirm Wiggins' finding that high vector scores tend to fall in undesirable categories and that extreme vector scores (for example DisVect scores) when considered within a particular undesirable category correlate with measures of psychopathology, like the PIT Deviation Scores.

In conclusion, trends observed by Wiggins for Vector scores were also

supported by trends observed in this study for Discrepancy Vector scores. The mirror-image distribution of subjects by self-report, as compared to therapist report, serves to underscore the original concept as formulated by Leary (1957) for the need for multi-level interpersonal diagnosis.

Self-Reported Interpersonal Problems (IIP) and Interpersonal Category (therapist reported IAS-R)

It was hypothesized that the subjects would endorse patterns of interpersonal problems on the IIP that were consistent with their interpersonal presentation as assessed by the therapist. The results pertaining to this hypothesis are highly exploratory and should not be treated conclusively due to the small number of subjects utilized in the discriminant analysis. Results suggest a distinct pattern of endorsement of items (agree, disagree), demonstrated by positive and negative z-scores, which did differentiate the F-D group and the H-S group from the other groups. Both the discriminant analysis and chi-square results seemed to indicate that the F-D group appeared to report the fewest number of problems (all 12 problem categories had negative z-scores). The H-S category reported the largest number of problems (11 positive z-scores). These results also fit with Carson's (1979) description of the Friendly-Dominant group as having no generalized attributional set and therefore being the most free to respond in a healthy and appropriate manner to others.

The IIP authors (Horowitz et al., 1982, 1986) cite extensively from their interactional studies of depressed people and their symptoms. They describe the symptoms of submissiveness, helplessness, lack of assertiveness in their psychotherapy patients. Perhaps their diagnostic group of psychotherapy patients (on which the IIP was based) was mainly composed of depressed clients. This diagnostic sensitivity may then account for the extensive endorsement of items by the H-S group which may be viewed as a group with the characteristics the authors use to describe depressed individuals. These characteristics were also evident in the H-S group's endorsement of IIP items like Hard-to be independent, Hard to have self-worth, Hard to be sociable, Too hypersensitive, Too eager to please, and Too aggressive. These characteristics also described how the therapist-labeled H-S group may account for a large proportion of the low Discrepancy Vector scores which resulted from rating one's self as more extreme than the therapist. In conclusion, a pattern of endorsement for two of the interpersonal groups (Friendly-Dominant and Hostile-Submissive) was found as predicted. This pattern confirms other trends in the data for characteristics of Friendly-Dominant and Hostile-Submissive groups. However, due to the small number of subjects used in the discriminant analysis, replication with a larger sample size is necessary to confirm these observations.

Post-Hoc Analyses

In view of the success of the High Discrepancy Vector scores in serving as a selective attention index which coincided with psychopathology (PIT Deviation scores), other vector measures were extracted from the data for comparison. Client vector and therapist vector scores were analyzed on PIT Deviation scores for comparison as exhibited in table 23. Results show that on the six PIT Deviation scores, the Discrepancy Vector measure had overall significance on three. Additionally, two other PIT Deviation scores showed significance on individual PIT needs in the direction predicted.

For the Therapist-vector score, overall significance was achieved on only one PIT Deviation score, the Cenper-Deviation score. Two other PIT Deviation scores (Problem score and SUMSA score) demonstrated trends at the ANOVA level, but were not significant overall. On these scores, with one exception, the highest Vector group seemed to demonstrate the greatest pathology on the PIT Deviation scores.

For the Client-Vector scores, no PIT Deviation score was found to reach overall significance. Three scores (Judgment, Cenper-Deviation, Devatt scores) did suggest trends but not consistently in the direction predicted. The Judgment score Defendence need seemed to be the lowest for the Medium vector group, the Cenper-Deviation Gratitude need seemed greatest for the High vector group,

while the Devatt Dominance score seemed highest for the Low vector group.

From these exploratory results, it may be suggested that Discrepancy Vector scores seem to provide the most powerful and salient index of covert variables of psychopathology; that of unusual and unrealistic assumptions and beliefs about motivational variables.

Summary and Conclusions

Overall, the general objectives of this study were achieved in preliminary exploration of the motivational structure of different interpersonal categories, measures of selective attention and their relationship to psychopathology, the role of social desirability and the relationship between interpersonal problems and objectively rated interpersonal presentation. While many of the predictions were supported by the findings, the results point to the complex nature of the variables in this area. Additionally, the low power of the MANOVA analysis due to small sample size may have rejected significant trends. Although these trends were reported, they are inconclusive and require further replication with a larger sample size.

The results and trends observed suggest that subjects were found to differ in motivational structure in the different interpersonal categories only on the Therapist's IAS-R report. The self-report IAS-R data did not yield significant differences between the groups. The therapists' IAS-R placements of subjects

yielded several distinct patterns between the groups regarding attitudes toward expression of needs. Overall, it was suggested that the Hostile groups (Dominant and Submissive) and the Friendly-Submissive group accounted for the most problematic motivational structure.

It was suggested that the Hostile-Submissive group demonstrated the most significantly negative attitudes toward assertive needs and other needs concerning the dimensions of submissiveness and dominance. They also seemed to demonstrate the most negative attitude toward the expression of these needs by males than any other group. The Friendly-Submissive group seemed to demonstrate a similar trend however, with less extreme scores. The Hostile-Dominant group seemed to report a tendency to deny or suppress the need for Autonomy, suggesting infrequent and extreme expression and also demonstrated unusual and unrealistic beliefs about how men express and satisfy the Rejection need. The Friendly-Dominant group appeared relatively free from problematic motivation variables. These observations were consistent with Carson's (1979) observations regarding the attribution styles of the four interpersonal categories, which tend to confirm the beliefs and self-presentation of each category member.

Regarding measures of selective attention, it was found that the Discrepancy Vector index provided highly significant results on PIT Deviation or psychopathology measures. The subjects in the highest DisVect group had the

highest means on the PIT Deviation scores (found to significantly relate to psychopathology) (Chambers, 1979). The Discrepancy Angle score, by comparison, was significant on only one PIT Deviation score. On all DisAng analyses, little discrimination was made between high and medium subject groups. Significant DisAng analyses tended to fall in the PIT Attitude-Value scores instead. Therefore, the Discrepancy Angle score was not found to be an index of selective attention consistent with the assumptions of interpersonal theory, and this hypothesis was rejected.

The relationship between these selective attention measures and interpersonal category was complex. For Discrepancy Angle scores, the Hostile-Dominant category was found to account for a large proportion of the high scores, when using therapist placement. The next largest proportion was accounted for by the Friendly-Submissive Group, also by therapists' placement. Subject self-report placement did not yield any relationship to Discrepancy Angle scores. These results also confirm Carson's (1979) description of the interpersonal categories, in that the Hostile-Dominant and Friendly-Submissive groups tended to over-attribute interpersonal characteristics, thereby maintaining their own self-presentation and selective attention.

The Discrepancy Vector measure was not found to be significantly related to any one interpersonal category by either subject or therapist placement.

However, the same trend as demonstrated by the Discrepancy Angle Index emerged, with a greater proportion of subjects in the Friendly-Submissive and Hostile-Dominant categories accounting for the High DisVect scores (by therapists placement), and the greatest proportion of Friendly-Dominant and Hostile-Submissive categories accounting for the Low DisVect group. Mirror images (opposites) were found when comparing these therapists' placements to subject placement. These trends must be considered with caution due to the lack of statistical significance and the small number of subjects in each category. The trends for the high DisVect score are consistent with the findings of Wiggins (1986) who noted subtle tendencies for higher vector scores to fall in the undesirable groups, but found in general that vector length is equally distributed across interpersonal category. It is also consistent with his findings that extreme vector scores within an undesirable interpersonal category indicate dysfunctional or psychopathological members. Finally, the odd, mirror-image distribution of high and low DisVect subjects in interpersonal categories by therapist versus self-report seems to confirm Leary's (1957) call for multi-level interpersonal diagnosis to accurately assess personality.

The Marlowe-Crowne Social Desirability Scale was not found to be significantly related to either selective attention measure (Discrepancy Angle and Vector), nor any specific interpersonal category. Therefore, this measure of

social desirability did not support the hypothesis that social desirability may account for selective attention or underlie mostly Hostile interpersonal categories. This finding is consistent with Wiggins (1968) and Golding and Knudson (1975) who reported that different personality dimensions or levels are tapped by different social desirability measures.

Interesting results were found with regard to the Inventory of Interpersonal Problems, however, these must be viewed with caution and considered only exploratory due to the small number of subjects. Results suggested that a relationship between interpersonal presentation and self-reported interpersonal problems did exist. Friendly-Dominant and Hostile-Submissive subjects who were objectively-labeled (therapist placement) tended to endorse interpersonal problems which were consistent with their interpersonal categories. It was found that Friendly-Dominant subjects did not report any significant level of problems, while the Hostile-Submissive group significantly reported the most problems, in eleven of twelve problem categories. This pattern of fewer reported interpersonal difficulties is consistent with Carson's belief that since the F-D category does not have a rigid attributional set, they tend to be able to respond to others and situations more appropriately. One possibility for the Hostile-Submissive category's high endorsement of IIP items may be that the IIP authors tended to focus on depressed individuals (possibly

Hostile-Submissive category) when they developed the IIP.

Finally, the Discrepancy Vector index as a measure of psychopathology was compared to both Therapist- and Client-Vector score. As Wiggins (1986) found, Vector scores alone (for either client or therapist) are not a good index for psychopathology. The Discrepancy Vector measure held up in this comparison as the best predictor of psychopathology and also for selective attention.

Limitations of the study

Several methodological considerations are important to consider for subsequent research on the hypotheses that have been investigated in the present study. Recommendations include the following:

1. A larger sample size (several times the number of subjects in the present study) would be needed for conclusive results. A larger sample size particularly in the objectively rated Hostile categories would increase confidence in the findings.

2. Stricter controls over client-therapist contact could be improved by greater compliance to a one-session limit for data collection. This may be difficult to achieve in clinical settings, however.

3. The demand characteristics of the therapy situation may have affected presentation. Subjects may have been unusually submissive in their behavior in a

therapy situation, or they may have been more extreme or more constrained. This factor was accounted for as much as possible by limiting the situation to the therapy hour (one or two sessions) for evaluation of presentation by both therapist and client, and by maintaining this situational variable for all clients. However, this limitation was necessary to produce a study that truly had clinical relevance. Future researchers may want to examine this factor by having a friend or family member of the subject agree to assess the presentation of the client for comparison to the therapist's report.

4. A therapist's DSM III-R diagnostic impression of the client on Axis I and II levels would have been an additional measure for comparison to the interpersonal categories endorsed by client and therapist and to examine its relationship to self-reported interpersonal problems.

5. The present study was an exploratory investigation into the covert variables underlying interpersonal presentation. The small subject number severely restricted the confidence with which these results can be reported. Therefore, these results should be considered as tentative preliminary findings. Implications for directions in future research suggest the need to verify patterns seen in the motivational structure of the interpersonal categories, and selective attention measures. Much work remains to be done to examine the relationship between interpersonal problems and diagnosis, both interpersonal and psychiatric.

Future research will need to determine if one measure alone (Marlowe-Crowne Social Desirability Scale) can adequately assess mechanisms underlying selective attention, or whether the discrepancy between two viewpoints (Discrepancy Vector scores) may be the best indicator of pathology.

6. Finally, future research will need to examine these results with regard to sex-differences, as only female subjects were included in this study.

Trends and results of this study supported several assumptions of interpersonal theory with regard to a clinical population. That is, covert variables, or motivational structure, appeared to be specific and related appropriately to the characteristics of the different interpersonal categories. That is, motivational structure, like interpersonal construal, seems to be a covert interpersonal variable that relates to an individual's interpersonal behavior in various situations. Secondly, selective attention as described by interpersonal theorists such as Beier (1966), Carson (1979) and Sullivan (1953) was found to relate to dysfunctional variables or psychopathology as assessed by a semi-projective measure (PIT) designed to retrieve "unconscious" data when using Discrepancy Vector as an index. Additionally, the discrepancy method of assessment using levels originally suggested by Leary (1957) was found to retrieve significant and informative data beyond the level of conscious self-report in this study. Perhaps this may be one of the most fruitful areas for future

interpersonal research which will help to delineate interpersonal indices of pathology.

Finally, knowledge of the covert variables (motivational structure) in this study seems to relate meaningfully to interpersonal presentation, which can be used as Anchin (1982) suggested, in targeting specific clinical interventions with clients to modify dysfunctional interpersonal behavior and create greater interpersonal needs satisfaction. Patterns of PIT Attitude and Deviation scores suggested specific underlying cognitive assumptions which seemed to coincide with both interpersonal presentations and dysfunctional interpersonal behaviors. Use of these scores in conjunction with interpersonal feedback from the therapist may provide the client with both evidence of and alternatives to their behavior and beliefs about self and other.

References

Anchin, J.C. (1982). Sequence, pattern, and style: Integration and treatment implications of some interpersonal concepts. In Anchin, J.C. & Kiesler, D.J. (Eds.) Handbook of interpersonal psychotherapy. New York: Pergamon Press.

Andrews, J.D. (1984). Psychotherapy with the hysterical personality. Psychiatry, 47, 211.

Beier, E.G. (1966). The silent language of psychotherapy: Social reinforcement of unconscious processes. Chicago: Aldine.

Benjamin, L.S. (1982). Use of the Structural Analysis of Social Behavior (SASB) to guide intervention in psychotherapy. In Anchin, J. & Kiesler, D.J. (Eds.), Handbook of interpersonal psychotherapy. New York: Pergamon.

Bertalanffy, L. von. (1968). General System Theory. New York: Braziller.

Berzins, J.I. (1977). Therapist-patient matching. In A.S. Gurman and A.M. Razin (Eds.), Effective psychotherapy: A handbook of research. New York: Pergamon.

Bray, J.H. & S.E. Maxwell. (1985). Multivariate analysis of variance. Beverly Hills: Sage.

Carson, R.C. (1969). Interaction concepts of personality. Chicago: Aldine.

Carson, R.C. (1979). Personality and exchange in developing relationships. In R.L. Burgess & R.L. Houston (Eds.), Social exchange in developing relationships. New York: Academic Press.

Chambers, J.L. (1976). The Picture Identification Test manual. Unpublished manual. Williamsburg, VA: College of William & Mary. Center for Psychological Services.

Chambers, J.L. (1980). Personal needs systems. In R.H. Woody (Ed.), Encyclopedia of clinical assessment: Vol. 1, (pp. 390-399). San Francisco: Jossey-Bass.

Chambers, J.L., & Surma, M.B. (1979). Need associations and psychopathology. Journal of Personality Assessment., 41(4) 358-367.

Chance, E. (1959). Families in treatment: From the viewpoint of the patient, the clinician, and the researcher. New York: Basic Books.

Coyne, J.C. (1976). Toward an interactional description of depression. Psychiatry, 39, 28-40.

Crowne, D.J. and D. Marlowe. (1964). The approval motive: Students in evaluative dependence. New York: Wiley.

Edwards, A.L. (1957). Social desirability and probability of endorsement of items in the Interpersonal Check List. Journal of Abnormal and Social Psychology, 55, 394-396.

Edwards, P. (1972). (Ed.) Encyclopedia of philosophy. Vols. 5, 8. New York: MacMillan.

Fiske, D.W. (1973). Can a personality construct be validated empirically? Psychological Bulletin, 80, 69-72.

Foa, V.G. (1961). Convergences in the analysis of the structure of interpersonal behavior. Psychological Review, 68, 341-353.

Foa, V.G. and E.B. Foa. (1974). Societal structures of the mind. Springfield, IL: Charles C. Thomas.

Freedman, M.B. (1985). Symposium: Interpersonal circumplex models (1948-1983). Journal of Personality Assessment, 49, 622-625.

Freedman, M.B., Leary, T.F., Ossorio, A.G., and H.S. Coffey. (1952). The interpersonal dimension of personality. Journal of Personality, 20, 143-161.

Freud, S. (1910). General introduction to psychoanalysis. (J. Riviere, Trans.) New York: Doubleday.

Goldberg, L.R. (1977). Language and personality: Developing a taxonomy of trait-descriptive terms. Invited address to the Division of Evaluation and Measurement at the 86th Annual Convention of the American Psychological Association, San Francisco.

Goldfried, M.R. (1980). Toward the delineation of therapeutic principles. American Psychologist, 35, 991-999.

Golding, S. (1977). The problem of construal styles in the analysis of person-situation interactions. In D. Magnussen & N.S. Endler (Eds.), Personality at the crossroads: Current issues in interactional psychology. Hillsdale, NJ: Erlbaum.

Golding, S., and R. Knudson. (1975). Multivariate-multimethod convergence in the domain of interpersonal behavior. Multivariate Behavioral Research, 10, 425-498.

Golding, S.L., Valore, K., and S.W. Foster. (1980). Interpersonal construal: An individual differences framework. In N. Hirschberg (Ed.), Multivariate methods in the social sciences: Applications. Hillsdale, NJ: Erlbaum.

Guttman, L. (1954). A new approach to factor analysis: The radex. In P.R. Lazersfeld (Ed.), Mathematical thinking in the social sciences. Glencoe, IL: Free Press.

Gynther, M.D., Miller, F.T., and H.T. Davis. (1962). Relations between needs and behavior as measured by Edwards Personal Preference Schedule and Interpersonal Checklist. The Journal of Social Psychology, 57, 445-451.

Hall, C.S., and G. Lindzey. (1978). Theories of personality. New York: John Wiley & Sons.

Horowitz, L., and J. Vitkus. (1986). The interpersonal basis of psychiatric symptoms. Clinical Psychology Review, 6, 443-469.

Huba, G.J., and D.L. Hamilton. (1976). On the generality of trait relationships: Some analyses based on Fiske's paper. Psychological Bulletin, 83, 868-876.

Kiesler, D.J. (1966). Some myths of psychotherapy research and the search for a paradigm. Psychological Bulletin, 65, 11-136.

Kiesler, D.J. (1983). The 1982 interpersonal circle: A taxonomy for complementarity of human transactions. Psychological Review, 3, 185-214.

Kiesler, D.J. (1984). The 1982 interpersonal circle: An analysis of DSMIII Personality Disorders, In Millon, T. & Klerman, G. (Eds.), Contemporary issues in psychopathology. NY: Guilford.

Kiesler, D.J. (1985). Interpersonal methods of diagnosis and treatment. In Michels, R. & Cavener, J. (Eds.), Psychiatry. Philadelphia: Lippincott.

Klerman, G.L., Weissman, M.M., Rounsaville, B.J., and E.S. Chevron. (1984). Interpersonal psychotherapy of depression. NY: Basic Books.

Knudson, R. and S. Golding. (1974). Comparative validity of traditional versus S-R format inventories of interpersonal behavior. Journal of Research in Personality, 8, 111-127.

LaForge, R., Leary, T.F., Naboisek, H., Coffey, H.S., and M.B. Freedman. (1954). The interpersonal dimension of personality: II. An objective study of repression. Journal of Personality, 23, 129-153.

Leary, T. (1957). Interpersonal diagnosis of personality. NY: Ronald Press.

Levert, E.M. (1962). Paranoia and the dynamics of exclusion. Sociometry, 25, 2.

Lorr, M., and D.M. McNair. (1963). An interpersonal behavior circle. Journal of Abnormal & Social Psychology, 67, 68-75.

Maslow, A. (1970). Motivation and Personality. (2nd ed.). NY: Harper & Row.

Megargee, E.I. & Parker, F.V. (1968). An exploration of the equivalence of Murray needs as assessed by the Adjective Checklist, the T.A.T., and Edwards Personal Preference Schedule. Journal of Clinical Psychology, 24(1), 47-51.

Murray, H.A. (1938). Explorations in personality. NY: Oxford Univ. Press.

Oxford, J. (1986). The rules of interpersonal complementarity: Does hostility beget hostility and dominance, submission? Psychological Review, 3, 365-377.

Perkins, M.J., Kiesler, D.J., Archin, J.C., Chirico, B.M., Kyle, E.M., and E.J. Federman. (1979). The impact message inventory: A new measure of relationships in counseling/psychotherapy and other dyads. Journal of Counseling Psychology, 26, 363-367.

Phillips, N. (1983). Selection of items with circumplex properties. Unpublished manuscript. Vancouver, Canada: University of British Columbia.

Plutchik, R., and S.R. Platman. (1977). Personality connotations of psychiatric diagnoses: Implications for a similarity model. Journal of Nervous and Mental Disease, 165, 418-422.

Schaefer, E.S. (1957). Organizations of maternal behavior and attitudes within a two dimensional space: An application of Guttman's radex theory. American Psychologist, 59, 226-235.

Schutz, W.C. (1958). FIRO: A three dimensional theory of interpersonal behavior. NY: Rinehart.

Solomon, M. (1981). Dimensions of interpersonal behavior: A convergent validation within a cognitive interactionist framework. Journal of Personality, 49:1, 15-26.

Stern, G.G. (1958). Preliminary manual: Activities index-college characteristics. Syracuse, NY: Syracuse University Psychological Research Center.

Stern, G.G. (1970). People in context: Measuring person-environment congruence in education and industry. NY: Wiley.

Sullivan, H.S. (1953). The interpersonal theory of psychiatry. NY: Morton.

Terrill, J.M. (1961). The relationships between Level II and Level III in the interpersonal system of personality diagnosis. Dissertation Abstracts: LC Card No. MIC-61-1255, Stanford University.

Truckenmiller, J.L., and K.M. Schaie. (1979). Multilevel structural validation of Leary's Interpersonal Diagnosis System. JCCP, 6, 1030-1045.

Wachtel, P. (1977). Interaction cycles, unconscious processes, and the person-situation issue. In D. Magnussen and N. Endler (Eds.), Personality at the crossroads: Current issues in interactional psychology. Hillsdale: Erlbaum.

Wachtel, P.L. (1982). Interpersonal theory and active intervention. In J.C. Archin and D.J. Kiesler (Eds.), Handbook of interpersonal psychotherapy. NY: Pergamon.

Weinstock-Savoy, P.E. (1986). The relationship of therapist and patient interpersonal styles to outcome in brief dynamic psychotherapy. Doctoral dissertation, Boston University.

Wiggins, J.S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. Journal of Personality and Social Psychology, 37, 395-412.

Wiggins, J.S. (1982). Circumplex models of interpersonal behavior in clinical psychology. In P. C. Kendall and J.K. Butcher (Eds.), Handbook of research methods in clinical psychology. NY: Wiley.

Wiggins, J.S., and R. Broughton. (1985). The interpersonal circle: A structural model for the interpretation of personality research. In R. Hogan and W.H. Jones (Eds.), Perspectives in Personality: Theory, measurement, and interpersonal dynamics. Vol. 1, Greenwich, CT: JAI Press.

Wiggins, J.S. (1985). Symposium: Interpersonal circumplex models: 1948-1983 (commentary). Journal of Personality Assessment, 49, 626-631.

Wiggins, J.S., Phillips, N. & Trapnell, P. (1985). Psychometric and diagnostic characteristics of a short term version of the interpersonal adjective scales. Vancouver, Canada: University of British Columbia.

Wiggins, J. S., Steiger, J.H., and L. Gaelick. (1981). Evaluating circumplexity in personality data. Multivariate Behavioral Research, 16, 263-289.

Table 1

Frequencies of Subjects in Interpersonal Categories by Client IAS-R and Therapist IAS-R

Interpersonal Category	IAS-R Report	
	Therapist (N=75)	Client Self-Report (N=75)
Friendly-Dominant	22	21
Friendly-Submissive	27	33
Hostile-Dominant	10	8
Hostile-Submissive	16	13

Table 2

Frequencies of Subjects in Selective Attention (Discrepancy Angle) Categories

Discrepancy Angle Levels	Frequencies N
Low (below 35.5°)	27
Medium (35.5° - 119°)	35
High (above 119°)	13

Table 3

Frequencies of Subjects in Selective Attention (Discrepancy Vector) Categories

Discrepancy Vector Levels	Frequencies N
Low (below -.25)	21
Medium (-.25 - +.60)	39
High (above +.61)	15

Table 4

Analysis of Variance, Means, Standard-Deviations of Interpersonal Groups (by Client's IAS-R) on PIT Judgment Score

Judgment Needs	Interpersonal Groups							
	Group 1	M	Sd	Group 2	M	Sd	T	F
Gratitude	Fri-Dom	.53	.33	Hos-Sub	.79	.08	-3.22**	5.18**

* p<.05, **p<.01, ***p<.001

Table 5

Analysis of Variance, Means, Standard-Deviations of Interpersonal Groups (by Therapist's IAS-R) on PIT Cenper-Deviation Score Needs

Cenper-D Needs	Interpersonal Groups							
	Group 1	M	Sd	Group 2	M	Sd	T	F
Autonomy	H-D	1.01	.63	F-S	.56	.34	-2.11*	2.96*
Blame Avoidance	H-D	.54	.41	F-D	1.13	.81	2.61	3.43*

* p<.05, **p<.01, ***p<.001

Table 6

Analysis of Variance, Means, Standard-Deviations of Interpersonal Groups (by Therapist's IAS-R) on PIT Attitude Scores

Attitude Needs	Interpersonal Groups							
	Group 1	M	Sd	Group 2	M	Sd	T	F
Autonomy	F-S	1.22	.38	H-D	.83	.39	2.72**	3.99**
	H-D	.83	.39	H-S	1.26	.34	-2.90**	
Dominance	H-D	1.04	.46	H-S	1.45	.25	-2.58*	2.75*
Play	F-D	.60	.24	F-S	.83	.37	-2.54**	3.18*
	F-D	.60	.24	H-S	.86	.33	-2.64**	
Rejection	F-S	1.56	.39	H-D	1.08	.44	3.09**	3.89**
	H-S	1.53	.36	H-D	1.08	.44	-2.76**	
Understanding	F-D	.88	.39	H-S	1.22	.32	-2.74**	3.57*
	F-S	1.01	.31	H-S	1.22	.32	-2.03*	
	H-D	.86	.28	H-S	1.22	.32	-2.84**	

* p<.05, **p<.01, ***p<.001

Table 7

Analysis of Variance, Means, Standard-Deviations of Interpersonal Groups (by Therapist's IAS-R) on PIT Attitude-Male Scores

Attitude-Male Needs	Interpersonal Groups							
	Group 1	M	Sd	Group 2	M	Sd	T	F
Autonomy	H-D	.80	.27	H-S	1.23	.42	-2.87**	4.08**
	F-D	.88	.34	F-S	1.18	.52	-2.36*	
	F-D	.88	.34	H-S	1.23	.42	-2.79**	
Rejection	F-S	1.54	.51	H-S	1.05	.48	-2.57**	2.97*
Understanding	F-D	.90	.49	H-S	1.32	.41	-2.68**	5.21**
	F-S	.92	.31	H-S	1.32	.41	-3.48***	
	H-D	.75	.37	H-S	1.32	.41	-3.53***	

* p<.05, **p<.01, ***p<.001

Table 8

Analysis of Variance, Means, Standard-Deviations of Discrepancy Angle Groups (High, Medium, Low) on PIT Organizational-Principle Score

Organizational-Principle Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Gratitude	.33	.28	n.s.		.59	.20	-3.0**	5.05**
	n.s.		.33	.27	.59	.20	-3.06**	
Harm Avoidance	n.s.		-.25	.61	.17	.52	-2.10*	3.80*
Sex	.11	.48	n.s.		-.37	.37	3.02**	3.99*

* p<.05, **p<.01, ***p<.001

Table 9

Analysis of Variance, Means, Standard-Deviations of Discrepancy Angle Groups (High, Medium, Low) on PIT Deviation-Attitude Scores

Deviation-Attitude Needs	Discrepancy Angle Scores: Low		Medium		High			
	M	Sd	M	Sd	M	Sd	T	F
Defendence	n.s.		.46	.86	-.24	.54	3.24**	4.03*
Deference	n.s.		-.62	.61	-.03	.54	-2.94**	5.71**
Nurturance	n.s.		-.59	.63	-.12	.42	-2.43*	3.50*
Understanding	n.s.		-.05	.63	-.58	.63	2.55**	3.77*

* p<.05, **p<.01, ***p<.001

Table 10

Analysis of Variance, Means, Standard-Deviations of Discrepancy Angle Groups (High, Medium, Low) on PIT Attitude-Female Scores

Attitude-Female Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Deference	.94	.37	1.27	.42		n.s.	-3.15**	5.35**
Succorance	.94	.47		n.s.	1.28	.44	-2.09*	3.45*
Understanding	.95	.42		n.s.	1.36	.45	-2.73**	3.99*
		n.s.	.96	.47	1.36	.45	-2.52**	

* p<.05, **p<.01, ***p<.001

Table 11

Analysis of Variance, Means, Standard-Deviations of Discrepancy Vector Groups (High, Medium, Low) on PIT Problem Scores

Problem Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Aggression		n.s.	1.77	.98	2.52	.99	-2.35*	3.40*
Dominance	1.13	.73		n.s.	2.09	1.09	-2.74**	4.14*
Rejection		n.s.	2.05	.98	3.19	1.42	-2.67*	5.24**
Sex		n.s.	1.71	.87	2.41	.97	-2.36*	3.26*

* $p<.05$, **$p<.01$, ***$p<.001$

Table 12

Analysis of Variance, Means, Standard-Deviations of Discrepancy Vector Groups (High, Medium, Low) on PIT Ego Scores

Ego Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Autonomy		n.s.	.47	.55	1.09	.51	-3.49***	6.35**
Dominance	.44	.45		n.s.	1.06	.61	-3.43**	6.25**
		n.s.	.56	.54	1.06	.61	-2.80**	
Rejection	.57	.49		n.s.	1.01	.50	-2.52*	5.47**
		n.s.	.51	.48	1.01	.50	-3.19**	

* p<.05, **p<.01, ***p<.001

Table 13

Analysis of Variance, Means, Standard-Deviations of Discrepancy Vector Groups (High, Medium, Low) on PIT Judgment Scores

Judgment Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Inferiority Avoidance	.31	.37	.08	.32	n.s.		2.32*	3.32*
Rejection	n.s.		.41	.28	.09	.34	3.30**	5.92**
Sex	n.s.		.46	.21	.28	.22	2.60**	3.54*

* p<.05, **p<.01, ***p<.001

Table 14

Analysis of Variance, Means, Standard-Deviations of Discrepancy Angle Groups (High, Medium, Low) by Therapist IAS-R Rated Interpersonal Categories

Interpersonal Categories	Discrepancy Angle Scores					
		significant differences for				
	M	F-D	F-S	H-D	H-S	F
Friendly-Dominant (FD)	59.87			*		
Friendly-Submissive (FS)	58.44			*		
Hostile-Dominant (HD)	111.48	*	*		*	
Hostile-Submissive (HS)	69.20			*		

Note. All significant differences (*) were found by Duncan's multiple range test at .05 level.

Table 15

Discriminant Analysis of IIP by Interpersonal Categories (Therapist's Placement)

Interpersonal Category	Discriminant Analysis Classification Data			
	N Total	N Correctly Classified	% Predicted by Chance	% Correctly Classified
Friendly-Dominant (FD)	22	10	25%	47.95%
Friendly-Submissive (FS)	25	10	25%	40.0 %
Hostile-Dominant (HD)	10	5	25%	50.0 %
Hostile-Submissive (HS)	16	10	25%	62.5 %

Note Overall probability predicted = 25%. Overall correct by classification = 47.95%, $\underline{X}^2$ (based on theoretical prediction) = 23.24, p>.001.

Table 16

Discriminant Analysis of IIP Problem Variables, Hits(h), Misses(m), Z-score means(M), and % Correctly Classified for Each Interpersonal Group (by Therapist's Placement)

IIP variables	Interpersonal Groups: F-D				F-S				H-D				H-S			
	h	m	M	%	h	m	M	%	h	m	M	%	h	m	M	%
H-Intimate	14	7	-.09	63.6	11	13	.08	44	1	9	-.03	10	0	16	.02	0.0
H-Assertive	1	19	-.15	4.5	3	22	.07	12	4	6	-.26	40	7	9	.26	43.8
H-Aggressive	0	22	-.05	0.0	11	14	.16	44	5	5	-.18	50	0	16	-.06	0.0
H-Independent	10	12	-.19	45.5	11	14	.17	44	0	10	-.16	0	2	14	.11	12.5
H-Sociable	14	8	-.31	63.6	3	22	.13	12	1	9	-.008	10	7	9	.22	43.8
H-Self-worth	14	8	-.30	63.6	0	25	.10	0	2	8	.11	20	6	10	.19	37.5
H-Supportive	14	8	-.20	63.6	0	25	-.02	0	5	5	.48	50	1	15	.009	6.3
T-Giving	2	20	-.10	9.1	15	10	-.20	60	5	5	.33	50	1	15	.25	6.3
T-Aggressive	15	7	-.23	68.2	0	25	-.16	0	5	5	.68	50	4	12	.15	25.0
T-Hypersensitive	14	8	-.43	63.6	5	20	.008	20	1	9	.27	10	6	10	.41	37.5
T-Eager to Please	12	10	-.25	54.5	1	24	-.02	4	0	10	-.07	0	9	7	.41	56.3
T-Dependent	13	9	-.35	59.1	4	21	.07	16	4	6	.25	40	1	15	.22	6.3

Note. H items = "Hard to ..."; T items = "Too much ..."

Table 17

Analysis of Variance, Means, Standard-Deviations of Interpersonal Groups (by Therapist's IAS-R) on PIT DIFDVM Scores

DIFDVM Needs	Interpersonal Groups							
	Group 1	M	Sd	Group 2	M	Sd	T	F
Abasement	F-S	8.09	2.59	H-S	11.53	4.52	2.67**	3.58**
Counteraction	F-S	6.97	3.49	H-S	10.86	4.16	-3.15**	4.13**
Exhibition	F-S	6.98	2.19	H-S	9.02	2.53	-2.66**	2.91*
Rejection	F-S	9.31	4.24	H-D	12.83	4.02	-2.23*	3.03*

* p<.05, **p<.01, ***p<.001

Table 18

Analysis of Variance, Means, Standard-Deviations of Discrepancy-Angle Groups (High, Medium, Low) on PIT SUMS-F Score

SUMS-F Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Inferiority Avoidance	14.09	3.51	n.s.		17.50	4.16	-2.60**	3.26*
Play	15.60	4.80	n.s.		11.81	2.32	3.23**	4.57**

* p<.05, **p<.01, ***p<.001

Table 19

Analysis of Variance, Means, Standard-Deviations of Discrepancy-Angle Groups (High, Medium, Low) on PIT DIFDVF Score

DIFDVF Needs	Discrepancy Angle Scores: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Autonomy		n.s.	7.38	3.71	10.12	5.07	-1.98*	3.70*
Inferiority Avoidance	6.88	2.40		n.s.	9.47	2.38	-3.08**	4.10*
Play	8.19	3.40		n.s.	5.30	1.68	3.47***	5.03**

* p<.05, **p<.01, ***p<.001

Table 20

Analysis of Variance, Means, Standard-Deviations of Discrepancy-Vector Groups (High, Medium, Low) on PIT SUMSA Score

SUMSA Needs	Discrepancy Vector Groups: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Aggression		n.s.	.73	.19	.89	.18	-2.72**	3.81*
Autonomy		n.s.	.71	.21	.92	.31	-2.20*	3.80*
Dominance	.69	.22		n.s.	.90	.27	-2.47**	3.09*
Rejection		n.s.	.77	.23	1.09	.33	-3.17**	6.94**

* p<.05, **p<.01, ***p<.001

Table 21

Analysis of Variance, Means, Standard-Deviations of Therapist Vector Groups (High, Medium, Low) on PIT Problem Score

Problem Needs	Therapist Vector Groups: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Affiliation	.94	.58	.59	.50	n.s.		2.32*	3.39*
Aggression	n.s.		1.65	.82	2.62	1.12	-3.25**	5.14**

* p<.05, **p<.01, ***p<.001

Table 22

Analysis of Variance, Means, Standard-Deviations of Therapist Vector Groups (High, Medium, Low) on PIT Judgment Score

Judgment Needs	Therapist Vector Groups: Low M	Low Sd	Medium M	Medium Sd	High M	High Sd	T	F
Blame Avoidance		n.s.	.52	.26	.30	.26	2.58**	3.48
Deference		n.s.	.71	.16	.47	.31	2.59*	6.75**
Nurturance		n.s.	.70	.17	.54	.23	2.67**	3.61*

* p<.05, **p<.01, ***p<.001

Table 23

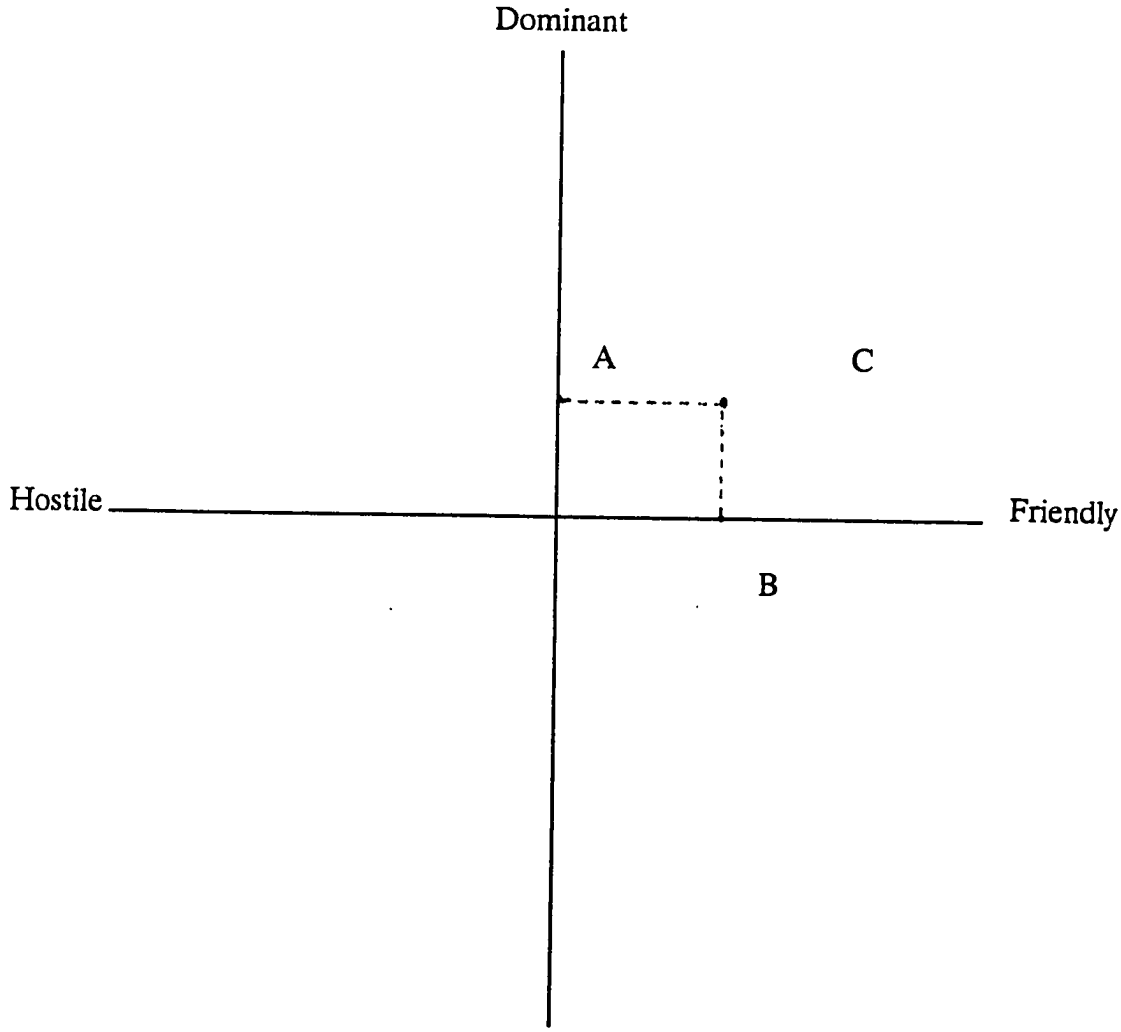
Comparison of Significance of PIT Scores by Client-Vector, Therapist-Vector & Discrepancy Vector Classification

PIT Needs	Vector Classifications					
	Client-Vector		Therapist-Vector		Discrepancy Vector	
	MANOVA	ANOVA	MANOVA	ANOVA	MANOVA	ANOVA
Deviation Scores						
Problem	n.s.	n.s.	n.s.	SEN**,AFF*,AGG**	1.07***	AGG*,DOM*,REJ**,SEX*
Ego	n.s.	n.s.	n.s.	n.s.	1.85*	AUT**,DOM**,REJ**
Judgment	n.s.	DFD*	n.s.	n.s.	PLAY**,SEN*	
CPD	n.s.	GRA*	1.78**	AGG**,GRA**,SEN*	n.s.	SUCC*
Devatt	n.s.	DOM*	n.s.	n.s.	n.s.	n.s.
SUMSA	n.s.	n.s.	n.s.	AFF*	1.87**	AGG*,AUT*,DOM*,REJ***

Table 23 cont.

PIT Needs	Vector Classifications					
	Client-Vector		Therapist-Vector		Discrepancy Vector	
	MANOVA	ANOVA	MANOVA	ANOVA	MANOVA	ANOVA
Attitude Scores						
Organizational Principle	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Attitude	n.s.	DOM**	n.s.	n.s.	n.s.	n.s.
ATTF	n.s.	SEX*,UND*	n.s.	AGG*	n.s.	n.s.
ATTM	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

* p<.05, **p<.01, ***p<.001



$$A = Dom = (.3) \sum_{i=1}^{8} Z_1 \sin O_i$$

$$B = Lov = (.3) \sum_{i=1}^{8} Z_1 \cos O_i$$

$$C = \text{Intercept of A and B (Angle Score)} \quad \arctan \frac{DOM}{LOV}$$

$$C = \text{Vector Length} \quad \sqrt{A_2 + B_2}$$

Figure 7. Interpersonal Indices from Circumplex Scores

High Discrepancy Vector Group

Therapist-Report

	D	S
F	18% N=4	22% N=6
H	30% N=3	13% N=2

Client-Report

	D	S
F	24% N=5	15% N=5
H	13% N=1	31% N=4

Low Discrepancy Vector Group

Therapist-Report

	D	S
F	36% N=8	15% N=4
H	30% N=3	31% N=5

Client-Report

	D	S
F	14% N=3	15% N=5
H	63% N=5	23% N=3

Figure 8. Distribution of Interpersonal Categories on High & Low Discrepancy Vector Scores by Client & Therapist IAS-R Report. Percentages are the Number Represented of Total for the Category.

AUTOBIOGRAPHICAL STATEMENT

Valarie Sikes-Nova was born in Jacksonville, Florida, on October 3, 1956. She was graduated summa cum laude from Western Carolina University in 1980 with a B.S. Ed. She is a member of the Phi Kappa Phi national honor society.

Prior to her acceptance into the Virginia Consortium of Professional Psychology doctoral program, she taught English and Art in grades K-12. Additionally, she was involved as a volunteer in Art Therapy to psychiatric hospitals, special education populations in the public schools, and sheltered workshops. From 1981-1982, she studied art psychotherapy in the M.S. program at Eastern Virginia Medical School, and entered the Virginia Consortium of Professional Psychology in 1983.

While in the Psy.D. program, she served as class representative to the Admissions and Financial Aid committee, and co-authored two publications. She completed an APA-approved internship at the Medical College of Virginia--Virginia Commonwealth University in Richmond, Virginia. Her concentration area is family systems and interpersonal psychology.

She is married to Steven Sikes-Nova, a specialist in learning disabilities and current graduate student of social work.