

AN EMPIRICAL INVESTIGATION OF THE NEUROTIC
CHARACTER CONSTRUCTS OF KAREN HORNEY

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GILBERT WALTER SCHMIDT

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Gilbert W. Schmidt

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William W. Zarguher
William E. Hinds

Major professor

Date 2/25/77



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ABSTRACT

AN EMPIRICAL INVESTIGATION OF THE NEUROTIC CHARACTER CONSTRUCTS OF KAREN HORNEY

By

Gilbert Walter Schmidt

This study was designed to accomplish two basic objectives: (1) to develop a psychometric instrument based on Karen Horney's neurotic character constructs specified in her theory of neurosis, and (2) to apply this instrument to the investigation of the validity of Horney's three neurotic character types of "moving towards," "away from," and "against others."

Two psychometric instruments were employed in the study. The Inventory of Current Status (ICS) was used as a screening device to refine the sample by screening out individuals suspected of being psychotic, sociopathic, highly inconsistent or lying. The ICS also included the Eysenck Personality Inventory-Neuroticism scale which was used to place subjects on a neuroticism continuum. Neuroticism was used as the criterion variable in the study.

The second instrument used in the study was the Inventory of Adjustment Styles (IAS). This instrument was constructed from Horney's writings describing the three neurotic modes of interaction. Test items were assigned, by content, to either the Compliance scale (C) reflecting Horney's "moving towards others" type, or the

Aggression scale (A) reflecting the "moving against others" type, or the Detachment scale (D) or "moving away from others" type. After administration, this 174-item inventory was refined and shortened to 85 items using an item-total correlation technique.

The ICS and IAS were both administered to adult subject volunteers from the general population. Two hundred ninety-five of the 360 subjects were included in the study. Although this sample did not specifically represent any known population, they were diverse in terms of age, education, occupation, sex, and marital status.

Three research hypotheses were stated. Hypotheses 1 and 2 were postulated to examine the relationship of the C, A and D scales to the criterion variable neuroticism as measured by the EPI-N. Hypothesis 1 relates to whether there was a linear relationship between the C, A and D scales and neuroticism. Hypothesis 2 was used to examine the relationship of variability among the C, A and D scales and neuroticism to assess whether scale patterns of one high and two low scale scores were predictive of neuroticism as suggested by Horneyan theory. Regression analysis was used to test Hypotheses 1 and 2.

A third hypothesis was postulated to determine whether an empirically derived structure of items would match Horney's neurotic character constructs. A factor analytic approach specifying a three-principal-components rotation was used to test Hypothesis 3. Further explorations involved rotations of 2, 3, 10 and eigenvalue greater than 1.00.

Results indicated that while scale variance was significantly related to neuroticism as predicted by Horneyan theory, by far the strongest relationship was between the Compliance scale alone and neuroticism (22% variance explained). Sample bias may have contributed to this outcome.

Results of the three-factor rotation produced one factor composed of C scale items, one factor composed of predominantly A scale items with some mixture of D scale items, and a third factor of only three items loading over .39 (two D scale, one A scale). Chi-square results indicated strong patterning corresponding to Horney's three constructs. A ten-factor rotation showed eight factors corresponding to ten of Horney's original neurotic needs. A lower bounds (eigenvalue 1.0) rotation resulted in 25 factors, most composed of items from one scale.

It was concluded that (1) the EPI-N scale may be based on a unifactorial concept of neurosis similar to Horney's compliant type, (2) factorial analysis evidence suggest a multifactorial concept of neurosis, (3) results largely favored the Compliance and Aggression concepts (Detachment will require further research). Implications for future research were discussed.

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To my wife Dagnija
and my parents,
Walter and Lillian

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CHAPTER I

THE PROBLEM

Need

Current psychological and social sciences literature contains a wealth of references to the theories and concepts of Karen Horney. Her position in the mainstream of current psychological and psychoanalytic thought is emphasized by the inclusion of reviews of her theories in most texts on personality and counseling theories or psychoanalytic schools. Horney's writings have gained new importance today because they represent neither a simple nor a single theory. Her works, in reality, encompass many theories, including theories of motivation, personality development and organization, and human behavior, both normal and pathological. Her writings also include broad principles of therapeutic technique which still influence psychoanalysis and psychotherapy training today. The Association for the Advancement of Psychoanalysis, an organization founded by Horney and a few of her colleagues and students, still reflects her influence, as does the American Institute for Psychoanalysis.¹ Many current widely accepted views of psychic functioning can be traced to Horney's earlier works and were, in the words of Clara Thompson, "things which Horney shouted from the rooftops for years."

¹Jack L. Rubins, Developments in Horney Psychoanalysis (Huntington: Robert E. Krieger Publishing Co., Inc., 1972), pp. 2-4.

More recently, Horney has been recognized by elements of the feminist movement for her early objections to the male centeredness of Freudian theory. Her early papers on feminine psychology were intended to disprove the biologically and genetically given secondary status of women in favor of socio-cultural determinants which could, therefore, be modified.²

It has been over 25 years since the publication of Horney's last book. We are now entering another psychiatric revolution, community psychiatry, which focuses on social conditions which may underlie individual psychopathology in both the family and society. While she could not foresee today's emphasis on social influences, Horney's work bridged the gap between the earlier psycho-biological concepts of man and the socio-cultural concepts of the 1970s.

Horney's concepts may prove increasingly useful as greater emphasis is placed on application of psychotherapy to broad ranges of personal problems across diverse sub-cultural and social classes. Many of the trends recognized by Horney near their inceptions in the 1940s and '50s, such as the lessening influence of religion and family and a heightened sense of personal unimportance in modern society, are even more marked today. Horney's works may prove increasingly useful as a basis for understanding such influences on individuals.

An extensive search of current and past psychological literature uncovered only one empirical study of Horneyan concepts. This

²Pat Thompson (unpublished dissertation proposal, Michigan State University, 1976), p. 32; Rubins, p. 21.

lack of empirical support for a major psychoanalytic theory of neurosis amply justifies the need for this study. In addition, the development of a psychological instrument based on Horneyan theory of neurosis could prove valuable in psychopathology and psychotherapy research.

Purpose

This study will serve two major purposes. First, an attempt will be made to construct a new psychological instrument based on Karen Horney's three neurotic character trends as postulated in her psychoanalytic theory of neurosis.³ More specifically, the instrument will reflect her "moving towards others" or compliant character trend, "moving against others" or aggressive character trend, and "moving away from others" or detached character trend, and sort neurotic individuals into these three categories. The second purpose or objective of this study will be to provide much needed empirical investigation of the three major constructs of Horney's theory of neurosis.

Hypotheses

The basic assumption underlying this study was that neurotic individuals hold different conceptions about themselves and their environment than do non-neurotic individuals. It was further assumed, based on Horneyan theory, that there are three basic types of neurotic character structure with their corresponding style or mode

³Karen Horney, Our Inner Conflicts (New York: W. W. Norton & Co., 1945); Karen Horney, Neurosis and Human Growth (New York: W. W. Norton & Co., 1950).

of interaction and that neurotic individuals will fall predominantly into one of the three types.

The following hypotheses tested in this study are stated in general form.

Hypothesis 1: Markedly neurotic individuals will score higher on the Horneyan neurotic style measures than more normal individuals.

Hypothesis 2: Markedly neurotic individuals will show a particular pattern of scores on the three Horneyan neurotic style measures showing one high and two low scale scores while more normal individuals will not.

Hypothesis 3: A factorial analysis of the items which comprise the three Horneyan neurotic style scales will form a structure which matches Horney's neurotic character constructs.

The above hypotheses will be restated in testable form in Chapter III.

Review of the Literature

A review of the literature resulted in only one empirical study related to the work of Karen Horney. In that study, Wilkins⁴ investigated the three interpersonal trends, moving towards, away from, and against others, described in Horney's writings. Wilkins developed a set of forced choice scales which were then used to select 12 men and 12 women subjects from 75 couples living in

⁴James W. Wilkins, "An Experimental Investigation of Certain Aspects of the Personality Theory of Karen Horney" (Ph.D. dissertation, Michigan State University, 1956).

married student housing. These 24 subjects (the four highest scorers of each sex on each of the three Horneyan scale dimensions) were then used in a verbal participation experiment to determine whether they would respond in accordance with Horneyan theory. High scores in the towards or against others categories were found to be predictive at the $p = .05$ level of compliant or aggressive behavior, respectively. High scores on the away from others category was not found predictive of detachment verbal behavior at the .05 level. It was observed that males favored the aggressive style while females favored the compliant style. Wilkins concluded that two of Horney's neurotic character constructs, towards and against, were confirmed by the results. The third, detachment, was not.

The Wilkins study suggests normal people (i.e., married people living in married student housing with one or no children at Michigan State University in 1955) were found to be approximately normally distributed in scores reflecting two of Horney's three trends; there was no attempt to relate these findings to neuroticism. Horneyan theory specifically indicated that these trends are predominantly neurotic in nature; therefore, a more adequate test of Horneyan theory might include comparison of a neurotic population with a non-neurotic population. Now, more than 20 years have passed since the Wilkins study and it is possible, since psychopathology is often culturally related,⁵ that neurosis may have changed with changes in

⁵Benjamin D. Paul, "Mental Disorder and Self-Regulating Process in Culture," Personalities and Cultures, ed. Robert Hunt (Garden City: The Natural History Press, 1967), pp. 150-66.

our culture.⁶ Another weakness of the Wilkins study concerns the narrow population from which is sample was drawn. In the present study neuroticism will be included as a variable under study. A larger, more general population in terms of age, education, marital status, occupation and geographic region will be used for the study.

In Chapter II, Karen Horney's psychoanalytic theory of neuroses will be reviewed. In Chapter III, the design of the study will be discussed while the results of the analysis will be set forth in Chapter IV. In Chapter V, the study will conclude with a discussion and interpretation of the results followed by a summary.

⁶Rubins, pp. 293-329.

CHAPTER II

THEORY

Horneyan theory embodies the ideas developed by Karen Horney over the last fifteen years of her life, from 1937 to her death in 1952. While her works are considered a major psychoanalytic theory of personality and behavior, it should be noted that she never directly wrote about personality theory. Her writings and work almost exclusively concerned aspects of neurotic behavior. However, in developing her theories of neurosis, she developed viable concepts and rationale for explaining human behavior beyond the confines of neurotic behavior. Thus, Horney's theory of personality was constructed by others from her formulations on the psychopathology of neurosis.¹

Horney's theories, like those of Freud, underwent constant revision and change throughout her lifetime. Like most analytic theorists, she based her theories on observations from her clinical practice. Hypotheses from her observations influenced her clinical practice which led in turn to new observations and, eventually, new

¹Ledford J. Bischoff, Interpreting Personality Theories (New York: Harper & Row, 1964), p. 310.

theoretical changes. Horney was constantly responsive to this clinical psychoanalytic approach to theory building.²

Horney's works, beginning with her 1937 publication of The Neurotic Personality of our Time,³ show an evolutionary progression of her theory and conceptions of neurosis. Each book is clearly based upon the previous works with additions to and reformulations of previous concepts. The progression is apparent in all but her last book, Neurosis and Human Growth (1950), which appeared to be a recapitulation of her previous works. A cursory review of Horney's books is helpful in following this progression. In The Neurotic Personality of Our Time, Horney sets forth several revolutionary ideas marking the beginning of her major life work on the theory of neurosis. The book was written following her arrival in the United States when she observed that many of the problems she saw with American clients were not adequately explained by classical Freudian theory. Many of the concepts and techniques in her work, such as resistance, transference, free association, the unconscious, and so forth, did not deviate from Freud.⁴ Horney's major contribution in The Neurotic Personality of Our Time was to state that neurosis was a response to cultural and interpersonal factors rather than biological and physiological-chemical factors as specified by Freud. Horney

²Harold Kelman, Advances in Psychoanalysis (New York: W. W. Norton & Co., 1964), p. 9.

³Karen Horney, The Neurotic Personality of Our Time (New York: W. W. Norton & Co., 1937).

⁴Kelman, p. 11.

saw compulsive drives as neurotic in nature and a result of isolation, helplessness, fear and anxiety. She specified that humans' reactions were toward safety rather than sexual fulfillment.⁵

New Ways in Psychoanalysis,⁶ Horney's second major work, essentially involved a revision of basic Freudian concepts in her own terms. This reappraisal of Freudian concepts more clearly and concisely sets forth her position relative to Freud. Horney's intent was not to criticize psychoanalysis, but to eliminate some of its more questionable elements, to allow psychoanalysis greater potential for development. Horney challenged Freud on several major issues. She denied the dependence of personality development on unchangeable instinctual forces; the omnipotence of sexual factors in personality development; the validity of the Oedipus theory and the hypothesis that neurotic patterns stem from repetitional patterns formed in early childhood.⁷ Basically, Horney shifted the focus of psychoanalysis from id to ego. Her theoretical reformulations largely denied libido theory, a basic construct of classical Freudian theory. New Ways in Psychoanalysis brought Horney both great acclaim and great criticism.⁸

⁵Bischoff, p. 314; Horney, Neurotic Personality, pp. 81-85; Kelman, p. 12.

⁶Karen Horney, New Ways in Psychoanalysis (New York: W. W. Norton & Co., 1939).

⁷Bischoff, p. 314.

⁸Benjamin Wolman, "Psychoanalysis without Libido," American Journal of Psychotherapy 8 (1954): 21-31.

Self Analysis⁹ was rejected by many classical analysts as a do-it-yourself manual of psychoanalysis for neurotics. Horney countered this criticism by pointing out that persons basically had to help themselves, since even with the help of a skilled professional, the patients were the only ones who could resolve their neuroses. Horney continued her elaboration of a theory of neurosis by (1) listing ten neurotic needs which drive neurotics, (2) elaborating her ideas of neurotic trends, and (3) defining the concept of incompatible attitudes forming the basic core neurosis.¹⁰

Our Inner Conflicts,¹¹ Horney's fourth book, is considered by many to be her greatest work containing her theory of neurosis.¹²

Horney argued that there are three ways persons respond to life situations--moving towards people, against people, or away from people. Neurotic individuals were described as using predominantly one mode, whereas normal persons use all three appropriately to the situation.

Horney's fifth and final work, Neurosis and Human Growth, is seen by a few as her magnum opus,¹³ but most writers agree that this book is essentially an elaboration of her previous work, Our Inner Conflicts, and does not really add anything of significance to her

⁹Karen Horney, Self Analysis (New York: W. W. Norton & Co., 1942).

¹⁰Kelman, p. 15.

¹¹Horney, Our Inner Conflicts, 1945.

¹²Bishoff, p. 310; Donald H. Ford and Hugh B. Urban, Systems of Psychotherapy (New York: John Wiley & Sons, Inc., 1963), p. 485.

¹³Rubins, pp. 2-8.

theory. The major contribution of this work appears to be elaboration of the "central inner conflict"--the conflict between the real and ideal selves. Horney also developed more explicitly her ideas on a "morality of evolution" in which she sees man's striving toward self-realization as both a "prime moral obligation" and a "prime moral privilege." Horney moved further into areas often considered ethics, philosophy or religion.¹⁴ Her emphasis on such areas brought her severe criticism from some quarters.¹⁵

Throughout her life and work, Karen Horney regarded herself as a Freudian disciple who accepted unconditionally many of the basic principles of classical psychoanalysis. She conceived of her ideas as falling within the framework of Freudian psychology rather than as a new or radically different approach to the understanding of neurosis and human behavior. Horney viewed her work as an attempt to free psychoanalysis from its roots in the biological, mechanistic and instinctual framework laid down by Freud.¹⁶

Horney accepted many of the principles of classic psychoanalysis. She believed in absolute causality; there is no coincidence in mental life; everything that occurs has a definite cause and, in turn, produces an effect. Horney unconditionally accepted the concept of unconscious motivation, the assumption that many's behavior may be guided by factors which are unknown to himself. Horney also

¹⁴Kelman, p. 16.

¹⁵Keith Sword, "Review of Horney," Journal of Abnormal and Social Psychology 46 (1951): 609-10.

¹⁶Horney, New Ways In Psychoanalysis, p. 8.

accepted the doctrine that man is a non-rational animal, that emotions are the primary driving mechanisms of his behavior. Horney, although she added her own particular emphasis, basically accepted the ego defense mechanisms much as they were laid down by Freud. Both Horney and Freud were non-reductionists, in that neither postulated actual physio-chemical correlates of behavior. Freud felt that it was safer, at that time, to build a non-reductionist theory but expressed a hope that physio-chemical basis for behavior would eventually win out.¹⁷ Horney, on the other hand, while praising Freud for explaining in psychological terms what had been attributed to organic stimuli, criticized him for his tendency to regard manifestations as based on chemical-physiological forces. She firmly ascribed psychic phenomena to cultural-environmental influences.¹⁸

Horney challenged Freud's position on several major issues. She denied that personality development depended on instinctual and relatively unchangeable forces. She shifted the emphasis from an intra-psychic focus to an interpersonal-cultural focus. This position led Horney to a rejection of libido theory, the concept of psychic energy underlying classical psychoanalytic personality development. Many orthodox analysts considered the discarding of libido tantamount to denial of the very essence of psychoanalysis itself. Libido was seen as one of the most important and basic

¹⁷Wolman, pp. 21-22.

¹⁸Horney, New Ways in Psychoanalysis, p. 22.

logical constructs in Freudian theory from which many other constructs were derived. According to Freud, libido was the core of personality from which the ego and superego are developed and serves as the framework for the psychoanalytic interpretation of human behavior.¹⁹

Horney also rejected Freud's theory of developmental stages and the assumption that the Oedipus complex is universal. Such theories derived from Freud's biological orientation with which Horney was in basic disagreement.²⁰ Horney viewed sexual problems as a symptom rather than a cause of neurotic adjustment and generally de-emphasized the importance of sexual drives. She saw the need for safety or security as the most fundamental motivating force. Horney made clear her view that the need for safety is socially created.

Although Horney agreed with Freud on the importance of early childhood experiences, she varied on several fundamental issues. She contended that how a child developed did not depend upon stages of development, with various possible fixations and regressions, but on how the child was treated in a broad composite sense. From the Horneyan viewpoint, individual events are seen as relatively unimportant in development. The way a child learned to react to and cope with his environment formed the structure of his personality. On this basis, Horney took issue with Freud's observations on repetition compulsion. Horney saw individuals reacting to anxiety situations out of character structure which he learned about earlier in

¹⁹Wolman, pp. 22-23.

²⁰Horney, Neurotic Personality, p. 39.

life rather than through repetition of infantile behaviors. Horney promotes a more optimistic view of man's ability to change and overcome neurotic problems later in life. Horney sees man's personality structure as more flexible and changeable in adult life than does Freud. This optimism stems from her denial of instinctual forces and belief in environmental or cultural causation as well as her belief in a human tendency toward growth and constructiveness.²¹

While Horney valued many of the techniques and concepts of analysis such as free association, transference, and dream analysis which were introduced by Freud, her emphasis in therapy differed from that of Freud. She felt that the revival and illumination of infantile experiences did not eliminate neurotic behavior in the adult. Therefore, her emphasis in therapy was clearly on the clarification of current distorted patterns of living and their role in the neurosis. Although she believed the early years were important in personality formation, Horney considered them much less important in therapy. To Horney, the past was important only insofar as it could be used to illuminate the present.²²

Despite Karen Horney's marked differences with more orthodox analytic theory, it was apparent that she had many more similarities than differences with Freud. Horney's theory of neurosis is today

²¹Wolman, pp. 26-30.

²²Leon Salzman, M.D., Developments in Psychoanalysis (New York: Grune & Stratton, Inc., 1962), pp. 61-62.

considered a major neo-analytic theory with wide applications in both group therapy²³ and individual therapy settings.²⁴

Theoretical Basis of the Present Study

The construction of the scale was based on Horney's psycho-analytic theory of neurosis. More specifically, it will reflect her concept of modes of neurotic interaction and character structure described in her 1945 publication, Our Inner Conflicts. The following is a brief overview of Horney's theory.

Horney's Theory of Neurosis

Every neurosis, regardless of the symptomatology, is a character neurosis which as developed from early feelings of "basic anxiety." This anxiety is a reaction to feelings of isolation and helplessness in a hostile environment. The intensity of these feelings varies greatly across individuals, the more intense feelings producing the greater degree of neurotic conflict and anxiety. Anxiety has a wide range of possible external causes including direct or indirect domination, indifference, erratic inconsistent behavior, lack of love or warmth, isolation from other children, overprotection and, most important, a feeling that the parents' love and charity is only hypocritic pretense.

²³I. Yalom, The Theory and Practice of Group Psychotherapy (New York: Grune & Stratton, Inc., 1962), pp. 61-62; Sidney Rose, "Application of Karen Horney's Theories to Group Analysis," International Journal of Group Psychotherapy 3 (1953): 270-79.

²⁴Harold Kelman, Helping People (New York: Science House, 1971).

The child attempts to cope with the disturbing conditions by developing a number of tactics for manipulating the environment. Many of the tactics are shaped by unconscious processes which begin lasting character traits. The traits often lead to development of neurotic trends in the personality.

Neurotic trends may at first appear chaotic but, over time, they tend to crystallize into three basic types of interaction with others: (1) the moving toward others or compliant type, (2) the moving against others or aggressive type, and (3) the moving away from others or detached type. All three types are typified by a predominance of particular attitudes, beliefs and behaviors. The elements are compulsive and indiscriminant in character and frequently lead to frustration and despondence when thwarted. All the needs and strivings in each type are aimed at satisfying the underlying need to feel safe.²⁵

The Moving Toward Others or Compliant Type

The compliant types stress congeniality and interests in common with others, while disregarding separating factors. The real nature of others is unimportant to them, except for very aggressive persons. Since aggressive persons are frightening to them, they feel it most necessary to seek their approval.

The compliant types harbor strong needs to be liked, wanted, desired, loved, accepted, approved of, appreciated and needed as

²⁵Horney, Our Inner Conflicts, pp. 41-42.

much and as often as possible. They feel they must be of paramount importance to at least one other person; to be helped, protected, guided and taken care of by that person. To them, anything which is not shared is meaningless. Love is seen as the only goal worth striving for--the goal that will meet all needs.

The compliant types automatically try to live up to the needs and expectations of others. They may do this to the extent of losing sight of their own feelings. They become unselfish, self-sacrificing and undemanding except in their desires for affection from others. From their viewpoint, they like everyone, and all others are seen as "nice."

The compliant types avoid any kind of competition or quarrels with others. They prefer to subordinate themselves and take second place while appearing appeasing and conciliatory. No matter what others may do to them, they bear no conscious grudge. They repress any wishes for vengeance or triumph. They show a strong inhibition against any kind of direct aggressive or assertive behavior; therefore, strivings to be assertive, critical, ambitious, demanding or making an impression on others are blocked. Such inhibitions often prevent them from enjoying themselves and attaining goals.

The attitude of the compliant types toward themselves is one fraught with pervasive feelings of weakness and helplessness, feelings that are in part real because of their avoidance of competition. They further assume that others are superior to them in all ways. This is especially true when they find themselves in the presence of arrogant people. They may underestimate even such concrete things

as their own material wealth and possessions. Essentially, then, they rate themselves largely by how they feel others rate them.

The compliant types, as with the other neurotic character types, attempt to solve the neurotic conflict by submerging all discrepant elements. The compliant types become even more compliant under stress in order to maintain their unity. If rage or hostility does appear, it is likely to come in the form of a blind rage or fury. They are, however, more likely to convert anger to somatic symptoms such as headaches or stomach disorders.

The compliant types cannot tolerate isolation or being alone since to them it represents their failure in being accepted and acceptable to others. Such a failure is felt as the ultimate blow to their self-worth.²⁶

The Moving Against or Aggressive Type

The aggressive types view the world in the Darwinian sense of survival of the fittest. They assume that the world is a hostile place full of hostile people out for their own best interests. They refuse to admit that this is not always the case. They may cover their constant struggle with others in a veneer of polite fairness and good fellowship although this appearance often represents only expediency on their part. They can afford to be benevolent as long as there is no question of who's in charge.

The component of fear is never admitted or displayed; the aggressive types' outward appearances are geared toward being and

²⁶Horney, Our Inner Conflicts, Chap. 3, pp. 48-62.

appearing tough. They regard feelings, either their own or those of others, as sloppy sentimentality and something to be avoided. Their primary needs lie in the direction of controlling others either directly or through manipulation or obligation. They must constantly strive to achieve success, prestige and recognition in any form. Such strivings are power-oriented in that success and prestige often lead to power. They attain a subjective feeling of strength through their need to outsmart and exploit others which leads to outside acclaim so necessary to their supremacy needs. The aggressive types feel that everyone operates in this manner and therefore they must do it best in order to excel.

Love is relatively negligible to the aggressive types. They may choose a mate based on the mate's ability to enhance their own prestige. They frequently show little or no consideration for others, including the mate, since their dominant attitude is one of "let others look out for themselves." Saving one's own skin takes precedence over all others--by the aggressive type's standard, anything else would be pure stupidity.

The aggressives consider themselves the ultimate realists. They never naively overlook the possible malice and greed of others. They appraise every situation by balancing their own chances of domination against adverse powers and pitfalls. This approach spills over into all areas of functioning including work. They find little enjoyment in any endeavor because of their absence of emotions which might interfere with their well-oiled opportunistic approach.

The aggressive types appear to have few, if any, inhibitions since they readily display anger and aggression. Their inhibitions, however, are found in the less apparent affectional areas. Anything which is nonproductive, even if enjoyable, is considered a waste of time.

The self-concept of the aggressive types centers about feelings of strength and power. Ruthlessness is seen as strength, lack of consideration as honesty, callous pursuit of self-interest is realism, and so forth. The law of the jungle reigns supreme in the aggressive type's continual battle with life.²⁷

The Moving Away From Others or Detached Type

Many non-neurotic persons seek periods of isolation from others. Detachment is considered neurotic when there is an intolerable strain connected with associating with others and the isolation is used as an escape from this strain.

The detached neurotics exhibit trends found to some degree in all neurotics. They feel a general estrangement from themselves, a numbness in their emotional lives, uncertainty about their identities, preferences, hopes, fears and beliefs. They may function like normal people, but they are essentially lifeless, particularly in the emotional realm. The greatest need of the detached types is the need for utter independence from others. This need underlies their conscious and unconscious wish to avoid close interpersonal

²⁷Horney, Our Inner Conflicts, Chap. 4, pp. 63-72.

involvement. For the detached types all needs are directed toward non-involvement; no one can be allowed close enough to become so important as to be indispensable. They will often eat, sleep and work alone, often finding sharing experiences with others a disturbing experience.

This need for independence, which is both compulsive and indiscriminate, carries an essentially negative orientation--an orientation toward not being influenced or obligated to anyone or anything. They fear anything which might be binding on them. Simple advice may be rejected as domination even when it coincides with their own wishes. Although the detached types may outwardly conform to rules or conventions, such things are seen as intrusive and repellent.

Associated with the detachment is a strong need to feel superior. The detached types abhor competition; therefore, they do not wish to excel through consistent achievement and effort. Instead, they wish to be appreciated for the treasure within them which they expect others to recognize without effort on their part.

This feeling of superiority also embraces a feeling of uniqueness which they constantly guard against contamination from outside influence. When this superior feeling is threatened, the detached types may, for short periods, reach frantically toward others.

While the emotional life of the detached persons may not follow as strict a pattern as for the other types, they have a general tendency to suppress and deny all feelings of both love and hate--

neither being strongly felt. Outside relationships are frequently curtailed because it is difficult to suppress one area alone. The more the detached types suppress emotion, the more they emphasize intelligence. They harbor a strong belief in the power of reason (i.e., knowledge of one's problem is sufficient to cure it).

The detached types, if they become involved with others at all, usually turn to another detached person or to someone who is willing to put up with their distance. Such relationships, while possibly intense, are usually brittle and short-lived. Sexual relationships are a bridge to others, but are usually transitory and therefore unlikely to interfere with their lives.

Although detachment has high costs, it also has certain real advantages such as preservation of integrity and serenity, allowance for original thinking and the expression of creativity, if any is present. Should this circle of detachment be broken, panic ensues because the detached types have not developed adequate techniques for coping with life. The panic comes from feelings of being exposed as worthless or a fake, fear of insanity and, worst of all, a fear of losing their uniqueness.

While detachment is part of the basic conflict, it is also used as a defense against it. It is a defense against the other two modes of moving toward and moving against others. The use of the detached mode is essentially a solution by evasion.²⁸

²⁸Horney, Our Inner Conflicts, Chap. 5, pp. 73-95.

The scale items were drawn from Horney's descriptions of each neurotic adjustment style as described above. Horney's provocative writings about neurosis appear to have utility and content validity from a clinical standpoint. If empirical investigation substantiates the value of her three major neurotic style constructs of moving towards, against and away from others, then refinement into a usable clinical and/or research scale could prove useful.

CHAPTER III

DESIGN OF THE STUDY

This study was designed to meet two basic objectives: (1) to develop a neurotic style inventory based on Horney's psychoanalytic theory of neurosis and (2) to test whether markedly neurotic individuals would be categorized under any one of Horney's three theoretical neurotic character types. To accomplish the objectives of the study, a repeated measure correlational design was employed.

Each subject was screened for inclusion in the sample in order to remove the responses of individuals suspected of being sociopathic, psychotic or highly inconsistent using four of the subscales of the Inventory of Current Status (ICS). The Neuroticism scale from the Eysenck Personality Inventory (EPI-N) administered as a subscale of the ICS was used as the criterion variable in the study. Each subject also completed the Inventory of Adjustment Styles (IAS), an inventory composed of three scales (Compliant, Aggressive and Detached) generated to reflect Horney's three neurotic character styles--the toward, against and away-from-others types.

Instrumentation

Two instruments were used in the study. The first, called the Inventory of Current Status (ICS), was assembled to identify respondents who would likely respond invalidly and to measure the

subjects' degree of neuroticism. The second instrument, the Inventory of Adjustment Styles (IAS), was constructed especially for this study to investigate the three Horneyan neurotic style constructs of moving towards, against, and away from people.

Inventory of Current Status (ICS)

The ICS was assembled, in part, as a screening device to eliminate subjects with certain pathological signs from the sample. Horney's constructs investigated in the study relate specifically to neurosis; therefore, an appropriate sample would consist of persons distributed along a continuum of neurosis unconfounded by other major pathological groupings, particularly psychotic and sociopathic trends.

The 165 items of the ICS included the Lie scale (L), the Psychopathic Deviant scale (PD), and the Schizophrenia scale (Sc) from the Minnesota Multiphasic Personality Inventory (MMPI), the Neuroticism scale from the Eysenck Personality Inventory (EPI-N) and a short paired-item consistency scale developed for this study. These true-false items were placed in random order and assembled in a mimeographed booklet keyed to an IBM answer sheet (see Appendix A).

The MMPI, from which three of the above scales were drawn, was designed to assess characteristics relating to personal and social adjustment.¹ Although the complete MMPI consists of many scales, the use of the above three appeared warranted since each

¹William G. Dahlstrom, George S. Welsh, and Leona E. Dahlstrom, An MMPI Handbook, rev. ed. (Minneapolis: University of Minnesota Press, 1972), p. 63.

scale was initially constructed and validated independently. Rogers indicated:

Anyone scoring above 2 standard deviations (above score 70) from the normal mean could, with the usual 2 1/2 percent probability, be excluded from the null hypothesis of normality and could be classified as a schizophrenic, a hypomanic, a homoerotic invert, a hysteric or what have you. It is the cutting score that is important for this discrimination²

Rogers concluded that the MMPI is probably the best instrument available for screening psychopathology in a research population.³

Kuder Richardson formula 20 scale reliability estimates based upon the responses of individuals from this study were: Lie scale, .48; Psychopathic Deviant scale, .68; and Schizophrenia scale, .88.

The Eysenck Personality Inventory-Neuroticism scale (EPI-N) was used as a measure of neuroticism. All subjects were placed on a continuum using the EPI-N scale. These scores then became the criterion variable in the regression and repeated measures aspects of this study. The EPI-N was chosen because of its short length (24 items), relatively simple vocabulary which allows application to less educationally and intellectually sophisticated populations and its wide acceptance as a research tool.⁴ Fabian and Comrey⁵

²David A. Rogers, "MMPI Review," in Burros Seventh Mental Measurements Yearbook, ed. Oscar Kristen Burros (Highland Park: Gryphon Press, 1972), p. 247.

³Rogers, p. 246.

⁴Richard I. Lanyon, "Eysenck Personality Inventory," in Burros Seventh Mental Measurements Yearbook, ed. Oscar Kristen Burros (Highland Park: Gryphon Press, 1972), pp. 163-65.

⁵Judith J. Fabian and Andrew L. Comrey, "Construct Validation of Factored Neuroticism Scales," Multivariate Behavioral Research 6 (July 1971): 287-99.

correlated 15 scales from four inventories purporting to measure neuroticism with two neuroticism criteria groups (31 outpatient neurotics, 68 inpatient neurotics and 69 normals) and with each other. The Comrey and Eysenck Neuroticism scales gave the highest validity coefficients, .53 and .50, respectively, and correlated .764 with each other, the highest correlation of any pair of tests studied. The EPI-N was used because it could be administered in 10 minutes compared to 30-60 minutes for the Comrey. Although the EPI-N's use as a clinical instrument has been questioned, it is "as good as any" test for research purposes.⁶ Kuder Richardson formula 20 yielded an EPI-N reliability estimate of .85 for respondents in this study.

Eight consistency items divided into four matched pairs were generated and included in the ICS. This set of items was used to sort out subject test data that were highly inconsistent. The underlying assumption was that individuals who contradicted themselves on three or four of the pairs of items would not have responded with sufficient consistency to warrant inclusion of their scores in subsequent analyses. Each pair of items was similar in content so they should have been answered in a similar manner. For example, the following two items comprise one pair:

Item 9. I like seafood.

Item 91. I enjoy eating at seafood restaurants.

A subject who is consistent would answer both items True or False, particularly if they marked Item 91 true. Basically, what

⁶Lanyon, p. 164.

these four pairs of questions measured was the respondent's ability to read the tests.

Inventory of Adjustment Styles (IAS)

A basic component of this study was the construction of an inventory to measure the central constructs of Karen Horney's psychoanalytic theory of neurosis. The instrument developed for this purpose was named the Inventory of Adjustment Styles.

Horney's descriptive writings, particularly those found in Our Inner Conflicts (1945), concerning her three basic modes of neurotic interaction, were used as a basis for item content of the inventory. Descriptive statements about the behaviors and attitudes of each neurotic character type, the towards, against and away-from-others types, were written. These passages were then re-worded into a pool of test items and scaled to a four-point scale: (1) Always, (2) Sometimes, (3) Seldom, and (4) Never. Three persons, two experts in psychometrics and one psychotherapist, read all items. Those items marked as unclear or difficult by any of the three readers were either rewritten for clarification or dropped from the item pool. After several revisions these procedures resulted in a total of 174 items. Of the 174 items, 57 were designated as the Compliant scale which corresponded to Horney's "moving towards others" type, 65 items were designated as the Aggressive scale which corresponded to her "moving against others" type, and 52 items were assigned to the Detached scale which reflected Horney's "moving away from others" neurotic character type. Each item was generated from one of

Horney's neurotic character style descriptions on the basis of content. Different items were phrased positively and negatively to avoid subject response bias. The 174 items comprising the three scales were placed in random order and numbered 1 through 174. Examples of items from each of the a priori classified scales are as follows:

- 52. I worry about whether other people like to be with me (Compliant scale).
- 105. The world is full of hostile people (Aggressive scale).
- 165. I do not like to depend on others (Detached scale).

One page containing instructions was written to be concise and understandable to a broad range of reader levels. The entire inventory, including instructions and title page, was stapled together into 11-page booklets (see Appendix B). IBM answer sheets were provided to facilitate recording responses.

Refinement of the Inventory of Adjustment Styles

A homogeneity-of-items reliability model employing both Cronbach's reliability estimate and an item-total correlation technique⁷ were used to refine the three scales of the IAS--the Compliant scale (C), the Aggressive scale (A) and the Detached scale (D). The alpha statistic and an item-total correlation were used to

⁷Lee J. Cronbach, "Coefficient Alpha and the Internal Structure of Tests," in Principles of Educational and Psychological Measurement, ed. W. A. Mehrens and R. L. Ebel (Chicago: Rand McNally, 1964), pp. 133-65.

- (1) increase scale homogeneity for each scale (C, A and D) and
- (2) to reduce the total number of items which composed the IAS.

As 174 scale items were generated from the writings of Karen Horney, each item was placed on the Compliant scale, the Aggressive scale or the Detached scale, according to item content. Coefficient alpha, an estimate of test homogeneity, was calculated for each scale. Alpha is a measure of general and group factors rather than item specific factors, reflected in the test score. Items which reduced the overall scale alpha were deleted to reduce the total number of items on the inventory and to increase the homogeneity of each scale. The final item composition of the three refined scales resulted in each scale being composed of the most homogeneous items from the original scale item pool. Allowance was made for reasonable scale length on the detached scale. More specifically, the reliability analysis for each scale was used to delete items whose (1) corrected item-total correlation fell below .30 (.29 and lower was used for deletion of the Detached scale items to allow for sufficient scale length) and (2) raised the overall scale alpha if the item was deleted. This process resulted in a reduction of IAS items from 174 to 85 and raised alpha coefficients for all three scales as presented in Table 3.1. (See Appendix C for item-total correlation and alpha if item deleted.)

The reduction of the total number of items on the IAS was necessary to (1) increase scale homogeneity, (2) reduce the number of item variables below 100 to allow factor analysis in a later phase of the study (practical problems of cost and computer central

TABLE 3.1.--Scale Alpha and Total Items.

	<u>Compliance</u>		<u>Aggression</u>		<u>Detachment</u>	
	Alpha	Items	Alpha	Items	Alpha	Items
Initial	.88	57	.86	65	.74	51
Final	.89	32	.88	32	.77	21

memory requirements prohibit factor analysis in excess of 100 variables), and (3) to streamline the inventory for possible future applications. (See Appendix D for each scale--initial and final items.)

Administration of the Instruments

The subjects used in the study were given test booklets, the Inventory of Current Status and the Inventory of Adjustment Styles. Each was also given corresponding IBM answer sheets. Information on age, sex, marital status, years of education completed and occupation was requested on the first answer sheet. IBM answer sheets were used to facilitate machine scoring. Instructions on the cover of each test booklet indicated which answer sheet was to be used for that inventory.

The test materials were given out to adults 18 years old and older who expressed a willingness to participate in the study. Subjects who readily agreed to collect test data from among their friends and relatives were given extra sets of tests. Anyone showing hesitation to take the tests was not encouraged to participate in the study.

Roughly one-fourth of the data was collected from clients of the Eaton County Counseling Center. All subjects were told before participation in the study that no individual test results or feedback would be possible because (1) individual identifying information was not requested and (2) the validity of the instrument was not established; therefore, there were no means of adequately interpreting individual scores. Few persons refused to participate because of this absence of individual feedback.

Subjects who finished the entire task did so in one to two hours. Length of time between passing out the materials and having the completed answer sheets returned ranged from a few hours to several months. Repeated reminders to complete and return materials were required for many subjects before they finished the task. Of the 10 to 15 persons who refused to participate, a majority were men, most of whom could not read. Approximately 60% of those persons receiving materials returned them in completed form.

Scoring the Scales

The total scale scores for the C, A and D scales were obtained by computing the sum of item scores for the scales. The final 85 items of the IAS consisted of items scaled (1) Always, (2) Sometimes, (3) Seldom, and (4) Never. The 85 items were worded such that answering (1) Always or (2) Sometimes would be scored in the direction hypothesized as neurotic according to Horneyan theory while (3) Seldom and (4) Never would be in the direction of health. Scores of zero, one, two, and three were assigned to the above

responses, respectively. A zero value would represent the most neurotic; the three would represent least neurotic. Therefore, a high scale score would be interpreted as non-neurotic while a low scale score would be interpreted as more neurotic. Scale variances used in the analysis were obtained by computing the variances among the three scale scores for each subject; the scale mean values were obtained by summing the three scale scores for each subject and computing the mean.

Sample

Three hundred sixty subjects returned completed test answer sheets. Scales of the ICS, described above, were used as screening devices to eliminate test data from respondents suspected of being unsuitable. Subjects who attained a score greater than two standard deviations above the mean (MMPI standard score 70) on either one or more of the L, PD or Sc scales were dropped from the sample. Data from subjects who gave inconsistent answers on three or four of the four-paired item consistency scale were also excluded from the test data pool. In all, data from 65 subjects were eliminated from the sample using the above four scales of the ICS. The 295 subjects remaining in the sample are described below.

The 295 subjects whose test data were used in the study consisted of persons found in the general adult population, aged 18 and older. Although this sample did not systematically represent any specified population, an attempt was made to gather a diverse sample in terms of age, sex, education, marital status and occupation.

Geographic area: Approximately half of the subjects lived in parts of Eaton County, Michigan. The majority of remaining subjects came from other out-state areas of Michigan as presented in Table 3.2.

TABLE 3.2.--Geographic Distribution of Sample.

Area	n	%
Michigan		
Eaton County	143	49
Alpena	30	10
Rogers City	20	7
Lansing	25	8
Kalamazoo	20	7
Port Huron	15	5
Other Michigan	10	3
Other		
San Francisco, Calif.	18	6
Akron, Ohio	14	5
	295	100%

The figures found in Table 3.2 above are estimates derived from rough tallies kept when data was returned. Accuracy may not be exact because place of residents was not requested from subjects.

Age distribution: Of the 295, 303 or 69% were women ranging in age from 18 to 73 years, 92 or 31% were men ranging in age from

8 to 79 years. The mean age for women was 34.2; the mean age for men was 35.3. Comparison of sample to 1970 Michigan census figures indicates the study sample is generally younger than the Michigan population. The age distribution of the samples may be found in Table 3.3.

TABLE 3.3.--Age Range of Sample.

Age	Female		Male		Total		Mich. 1970 Census %
	n	%	n	%	n	%	
18-24	37	18.2	15	16.3	52	17.6	11.7
25-34	91	44.8	39	42.4	130	44.1	30.0
35-44	38	18.7	19	20.7	57	19.3	16.7
45-54	19	9.4	12	13.0	31	10.5	16.7
55-64	10	4.9	3	3.3	13	4.4	12.4
65-over	<u>8</u>	<u>4.0</u>	<u>4</u>	<u>4.3</u>	<u>12</u>	<u>4.1</u>	<u>12.5</u>
	203	100.0	92	100.0	295	100.0	100.0

Compared to national statistics which indicate 48.8% of the adult population are male and 51.2% are female, the study sample proportionally contains more females (69%) and fewer males (31%) than the general United States population in 1970.

Marital status: Of the 203 women in the sample, 133 or 55% were married. Seventy or 45% of the women indicated they were unmarried. Of these, 35 or 17% indicated that they were single, 21 or 10% were divorced, 8 or 4% were separated and 6 or 3% were widowed.

Of the 92 men, 66 or 72% indicated they were married while 26 or 28% indicated they were unmarried. If these 26 unmarried men, 20 or 22% indicated they were single and 6 or 7% indicated they were divorced.

According to national census statistics, 65% of males and 62.3% of females in the general United States population are married while 28.5% of the men and 22.9% of the women are single, and 5.6% of men and 14.8% of women are widowed or divorced.⁸ The study sample includes proportionally fewer married women and proportionally more married men.

Educational distribution: Women's years of education ranged from 9 to 20 years with a mean educational level of 13.4. Men's education ranged from 7 to 21 years of education with a mean educational level of 14.5 years. In both men and women, the median educational level was completion of twelfth grade. A total of 101 or 34% of the total sample had completed high school and no more. Michigan census statistics indicate a median educational level of 12 years, the same as found in the study sample. However, the study sample had a higher mean years of education (national average is 12.2 for men and 12.3 for women).⁹

Occupational range: An effort was made to obtain subjects with diverse occupational backgrounds. Although the sample appears

⁸U.S. Bureau of Census, Census of the Population, 1970, Detailed Characteristics, Michigan, Part 24, V. 1 (Washington: U.S. Government Printing Office, 1973), p. 68.

⁹U.S. Census, p. 70.

skewed toward the upper occupational range, compared particularly with males, the subjects represent a wide range of jobs across occupational categories (see Appendix E).

Hypotheses

Regression Hypotheses

A major interest of the study was to examine the relationship of the three Horneyan neurotic style constructs and neurosis. The IAS, which consisted of three a priori defined scales composed of items reflecting each Horneyan construct (C, A and D scales) was compared to the EPI-N scale using a traditional regression method.¹⁰ This method consisted of summing scale scores C, A and D for each subject and entering them into a multiple regression equation as predictor variables against EPI-N scale scores used as the criterion variable to test research hypothesis 1:

- H₀1: There will be no linear relationship between neuroticism and the three neurotic style measures.
- H₁1: There will be a linear relationship between neuroticism and the three neurotic style measures.

Horney suggested in her theory that neuroticism was related to a particular pattern of one high and two low scores among the three neurotic style measures because neurotics use one mode of interaction predominantly and indiscriminately while repressing the other two modes. Therefore, to test this assumption, variance

¹⁰Norman Die, Dale Bent, and C. Hadlai Hull, Statistical Package for the Social Sciences (New York: McGraw-Hill, 1970), pp. 320-41.

scores across the neurotic style scales were calculated for each subject and compared with the neuroticism score. The second research hypothesis tested was:

- H_02 : There will be no linear relationship between neuroticism and variability across the three neurotic style measures.
- H_12 : There will be a linear relationship between neuroticism and variability across the three neurotic style measures.

Factor Structure Hypothesis

The third research hypothesis was based on examination of the results of a number of specified factor rotations to determine whether the empirically derived factors were interpretable within the framework of Horneyan theory.

- H_03 : There will be no relationship between factorial analysis of neurotic scale items and Horney's neurotic character constructs.
- H_13 : A factorial analysis of items of the Horneyan neurotic style measures will form a structure which matches Horneyan neurotic character constructs.

Analysis of Data

Because the study involved both validation of a new scale or inventory and the empirical investigation of the three neurotic character styles described by Karen Horney, two distinct methods of analysis were employed--multiple regression and factor analysis. Multiple regression analysis was then used to explore the relationship between the three neurotic style scales and neuroticism.

The second method of analysis employed the factor analytic model to determine whether the items composing the Compliant, Aggressive and Detached scale empirically clustered to form a structure which approximated Horney's neurotic character constructs.

Regression Model

Multiple regression analysis, a statistical technique for exploring the relationship between a single criterion variable and a set of predictor variables, was used to examine research hypothesis 1. In this instance multiple regression was used as a descriptive statistical procedure to test the relationship between the EPI-N neuroticism scale and the three Horneyan neurotic character scales.

The second research hypothesis was examined using multiple regression analysis in examining the relationship between variability across the three Horneyan scales and neuroticism. According to Horneyan theory, neurotic individuals should show a particular pattern of one high and two low scales on the three neurotic style scales.

Certain assumptions are made in applying the multiple regression model. The assumptions are the same as those required in applying the product moment correlation or related correlation coefficients upon which both techniques are based. (1) There must be a linear relationship between the criterion variable, neuroticism, and the predictor variables, scale score for compliance scale, aggressive scale and detached scale; (2) each of the variables must be normally distributed; and (3) the relationship among predictor variables must be homoscedastic (i.e., variance about the best-fitting straight line is approximately the same at all levels).

The degree to which any one of the three basic assumptions is not met, probability statements about the correlation might not be exactly correct. However, unless one or more assumptions are violated in the extreme, no real problem in accuracy of interpretation is likely.¹¹

Factor Structure

The items remaining in the Compliant, Aggressive and Detached scales about refinement via the item-total statistics method (alpha delete) were then factor analyzed to determine whether factors, empirically derived, would reflect Horney's neurotic character constructs. The principal components factor analysis (1.00 in diagonal) with orthogonal rotation was used. Five separate rotations using different N factor solutions were performed using a varimax criterion with Kaiser normalization: all factors with an Eigenvalue in excess of 1.00 were rotated as well as fixed factor rotations specifying N = 2, 3, 4 and 10 factors.

Where appropriate, a chi-square statistic was applied to the resulting factor solution to test whether scale items grouped in patterns are consistent with their a priori categorization.

The assumptions required for use of factor analysis are the same as those for coefficient alpha, as stated above.

¹¹Jum C. Nunnally, Psychometric Theory (New York: McGraw-Hill Book Co., 1967), pp. 125-26.

¹²William Hayes, Statistics (New York: Holt, Rinehart & Winston, Inc., 1963), p. 336.

Summary

This study was designed to accomplish two basic objectives: (1) to develop a psychometric instrument based on Karen Horney's neurotic character constructs specified in her theory of neurosis, and (2) to apply this instrument to the investigation of the validity of Horney's three neurotic character types of "moving towards," "away from," and "against others."

Two psychometric instruments were employed in the study. The Inventory of Current Status (ICS) was used as a screening device to refine the sample by screening out individuals suspected of being psychotic, sociopathic, highly inconsistent or lying. The ICS also included EPI-Neuroticism scale which was used to place subjects on a neuroticism continuum. Neuroticism was used as the criterion variable in the study.

The second instrument used in the study was the Inventory of Adjustment Styles. This instrument was constructed from Horney's writings describing the three neurotic modes of interaction. Test items were generated from Horney's writings, fitted to a four-point scale and assigned, by content, to either the Compliance scale (C) reflecting Horney's "moving towards others" type or the Aggression scale (A) reflecting the "moving against others" type or the Detachment scale (D) or "moving away from others" type. After administration, this 174-item inventory was refined and shortened using an item-total correlation technique. Reduction of items was necessary (1) to allow factor analysis procedures at a later point, (2) to

increase homogeneity of the three scales, and (3) to shorten the total inventory for more practical future applications.

The ICS and the IAS were both administered to adult subjects from the general population. All subject participation was voluntary. Of the 360 test results which were returned and screened, 295 were used for this study. Although this sample did not specifically represent any known population, they were diverse in terms of age, education, occupation and marital status. Women were over-represented, comprising 69% of the total sample.

Three research hypotheses were stated. Hypotheses 1 and 2 were postulated to examine the relationship of the C, A and D scales to the criterion variable neuroticism as measured by the EPI-N. Hypothesis 1 relates to whether there was a linear relationship between the C, A and D scales of neuroticism. Hypothesis 2 was used to examine the relationship of variability among the C, A and D scales and neuroticism to assess whether scale patterns of one high and two low scale scores were predictive of neuroticism as suggested by Horneyan theory. Horneyan theory would be supported by acceptance of H_01 and rejection of H_02 . Regression analysis was used to test Hypotheses 1 and 2.

A third hypothesis was postulated to determine whether an empirically derived structure of items would match Horney's neurotic character constructs. A factor analytic approach specifying a three principal components rotation was used to provide data to test Hypothesis 3. A chi-square test of goodness of fit of the

factor analytic results to an a priori categorization provided the test of Hypothesis 3. Further explorations involved rotations of 2, 3, 10 and eigenvalue greater than 1.00.

CHAPTER IV

ANALYSIS OF DATA

The analysis of data is presented in this chapter. Each research hypothesis is presented followed by the analysis of the results.

Five predictor variables were used in several combinations in a multiple regression analysis to test research Hypotheses 1 and 2. The intercorrelations of the predictor variables are presented in Table 4.1.

TABLE 4.1.--Correlation Between Variables.

	Compliant	Aggres.	Detached	Sc Mn	Sc Var	Neurot.
Aggres.	.52	--				
Detached	.50	.74	--			
Scale Mn	.79	.89	.87	--		
Scale Var	-.28	.31	.21	.10	--	
Neurot.	-.46	-.23	-.31	-.40	.20	--

Horney's theory of neurosis states that neurosis is a matter of degree for any given individual. Her works further propose that persons who are markedly neurotic respond to their environment in one of three modes as described in Chapter II. A regression model

which entered variables to estimate a criterion variable was deemed most appropriate for investigating the relationship between the three modes of Horney's theory and neuroticism.

Relationship of IAS to Neuroticism

Traditionally, new scales are tested against a criterion by (1) computing zero-order correlation coefficients between each scale and a criterion and (2) interpreting by inspection or by computing least squares regression solutions based on beta weights, or (3) by using the multiple correlation to measure overall relationship between the new scales and the criterion. Horneyan theory does not exactly fit this traditional model. Horney postulates that it is the patterning of scores and the variance among scales which predicts neuroticism, rather than an elevation of a score on a particular scale or on the three scales together. Therefore, multiple regression was used as the statistic for both a traditional analysis and a pattern analysis employing scale variance. However, in the test of Hypothesis 1, the predictors were the C, A and D scales themselves, while in Hypothesis 2, the predictor was the variance among scales.

Traditional Approach

The traditional method of relating scales to a criterion involved entering the predictor variables to explore the linear relationship between the new scales and the criterion variable in a regression equation. In the regression model used for analysis of the data, the predictor variables were the scores on the C, A and D

scales constructed using Horney's theory. The criterion variable was the EPI-N score, a measure of neuroticism. Horneyan theory suggested that there would not be a strong linear relationship between these three scores and neuroticism. Her theory rests on an assumption about a pattern of the theoretical modes, not the additive quality of one mode to another.

The research hypothesis tested employing three neurotic style scale scores against the neuroticism score in the traditional regression method was as follows:

H_0 : There will be no linear relationship between neuroticism as measured by the EPI-N and the three neurotic style measures.

H_1 : There will be a linear relationship between neuroticism as measured by the EPI-N and the three neurotic style measures.

The test of this hypothesis was accomplished using a multiple regression approach. Each scale score was entered into the equation with the score accounting for the greatest amount of variance entered first, the next greatest second, and so forth, in descending order. An alpha of .05 was set for overall significance of the prediction equation. The results of the multiple regression entering, C, A and D scores are presented in Table 4.2.

The Compliant (C) scale variable was entered first on step 1 at a significance of $p = .0001$. Compliant scale was the variable most highly correlated with neuroticism in the zero-order correlation matrix ($r = .47$) accounting for 22% of the variance in the Neuroticism score. The second variable entered into the multiple regression equation, Detached scale, produced an improvement at the $p = .06$

TABLE 4.2.--Summary Table for Multiple Regression for Compliant, Detached and Aggressive Variables Entered Against Neuroticism.

Step	Variable Entered	F to Enter or Remove*	Sig.	Mult. R	R ²	R ² Chg.	Simple R
1	Toward	82.49	.000	.47	.22	.22	-.47
2	Away	3.57	.06	.48	.23	.01	-.32
3	Against	3.17	.08	.49	.24	.01	-.24

*Enter.

level. Compliant and Detached, taken together, correlated .48 with Neuroticism accounting for 23% of the variance in neuroticism. Thus Detachment variable contributed an additional 1% of the variance. The Against scale variable was included in the equation at step 3 accounting for an additional 1% of the variance in neuroticism at a significance of $p = .08$. All three variables entered together in the equation account for 24% of the variance in Neuroticism with Aggression accounting for 1% of the variance.

The significance of the overall regression equation at step 3 with $F = 82.5$ ($df = 3$) with only the Compliant score variable entered is greater than the $p = .0001$ level. Therefore, the null hypothesis was rejected. Post hoc inspection found the Detached and Aggressive variables singly or in combination made no significant improvement in the prediction of neuroticism scores. The second and third variables entered into the equation, Detached and Aggressive, were not significant at the $p = .05$ level. The Compliance variable was, in fact, the best predictor of neuroticism, with the Detachment

and Aggression variables adding little beyond that accounted for by Compliance.

Pattern Approach

According to Horneyan theory of neurosis, a particular pattern among the three neurotic style measures would be related to neuroticism. Horney suggested that persons who are highly neurotic would react in one, and only one, of the three neurotic styles postulated in her writings. The other two modes of interaction would be repressed and, therefore, neurotic individuals would produce a score pattern of one high and two low scores on the three neurotic style measures, C, A and D.

In order to test this proposition, variance scores were calculated across the C, A and D scale scores and compared with EPI-N (neuroticism) in the regression equation. Horneyan theory suggested that there would be a linear relationship between neuroticism and the variance among the three neurotic style measures.

The research hypothesis tested was as follows:

- H_0 : There will be no linear relationship between neuroticism and variability across the three neurotic style measures.
- H_1 : There will be a linear relationship between neuroticism and variability across the three neurotic style measures.

The results of this regression equation for H_2 are summarized in Table 4.3.

The variable scale variance was entered at a significance level of less than $p = .001$. Scale variance alone was correlated .21

TABLE 4.3.--Summary Table for Regression with Scale Variance Regressed Against Neuroticism.

Step	Variable Entered	F to Enter	Sig.	Mult. R	R ²	R ² Chg.	Simple R
1	Scale var.	13.27	.001	.21	.04	.04	.21

with neuroticism and accounted for 4.4% of the variance. The significance of the equation comparing scale variance to neuroticism was less than $p = .001$ ($F = 13.27$, $df = 1$). The null hypothesis of no linear relationship between neuroticism and scale variance was rejected. There was a linear relationship between scale variance and neuroticism.

Two additional regression equations were used to further explore Hypothesis 2. In the first equation, scale variance and scale mean were entered as predictor variables against the criterion variable, neuroticism. This analysis was performed to test variance while controlling for overall score magnitude. In the second regression equation, scale variance was entered with C, A and D scale scores to control for score magnitude on individual scales.

The results of the additional regression equation entering both scale variance and scale mean to test Hypothesis 2 are shown in Table 4.4.

The scale mean variable was entered in the equation first on step 1 at a significance of $p = .001$. The scale mean was the variable most highly correlated with neuroticism in the zero-order correlation matrix ($p = -.40$) accounting for 16% of the variance in the

TABLE 4.4.--Summary Table for Multiple Regression Including Variables Scale Mean and Scale Variance.

Step	Variable Entered	F to Enter	Sig.	Mult. R	R ²	R ² Chg.	Simple R
1	Scale mean	55.88	.001	.40	.16	.16	-.40
2	Scale variance	23.23	.001	.47	.22	.06	.21

neuroticism score. The variable scale variance entered the equation second on step 2 with a significance of $p = .001$ scale mean and scale variance, taken together, correlated .47 with neuroticism accounting for 22% of the variance in neuroticism. The variable score variance accounted for an additional 6% of the variance. The significance of the regression equation at step 1 with only the scale mean variable entered was significant beyond the $p = .001$ level ($F = 55.88$).

With both variables scale mean and scale variance entered at step two, the equation was still significant beyond the $p = .001$ level ($F = 23.23$, $df = 2$). Thus the null hypothesis of no association between neuroticism and scale mean and scale variance was rejected. Both variables scale mean and scale variance entered into the equation were significant beyond the $p = .05$ level.

The results of the regression equation entering variables C, A, D and scale variance as predictor variables against neuroticism to further explore Hypothesis 2 are presented in Table 4.5.

The compliance variable entered the regression equation first on step 1 with a significance of $p = .0001$. The compliance scale was the variable most highly correlated with neuroticism in the zero-order

TABLE 4.5.--Summary Table for Multiple Regression Including Variables Compliance, Detachment, Aggression, and Scale Variance.

Step	Variable Entered	F to Enter	Sig.	Mult. R	R ²	R ² Chg.	Simple R
1	Compliance	82.49	.0001	.47	.22	.22	-.47
2	Detachment	3.57	.060	.48	.23	.009	-.32
3	Scale var.	6.83	.009	.50	.25	.018	.20
4	Aggression	.57	.45	.50	.25	.001	-.23

correlation matrix ($r = -.47$) accounting for 22% of the variance neuroticism. The second variable entered into the equation (step 2) was the detached scale which showed an improvement at the $p = .06$ level. Compliance and Detachment taken together correlated .48 with neuroticism accounting for 23% of the variance in neuroticism. Thus, Detachment contributed an additional 1% of the variance in neuroticism. Scale variance was the variable entered at step 3 with a significance level of $p = .009$. Compliance, Detachment and Scale variance entered in the equation together correlated .50 with neuroticism beyond that contributed by the first two variables C and D. The aggression scale was the fourth variable entered into the equation at step 4 at a significance level of $p = .45$. All four variables entered into the equation correlate .50 with neuroticism and together account for 25% of the total variance in neuroticism. The aggression scale contributes an additional .1% to the variance in neuroticism.

Post hoc examination indicated the significance of the C scale variable entered at step 1 ($F = 82.49$, $df = 4$) exceeded the $p = .001$ level. The Scale variance, entered at step 3 after inclusion of Compliance and Detachment, was significant at the $p = .009$ level ($F = 6.83$, $df = 4$). The other two variables entered on steps 2 and 4. Detachment and Aggression are not significant at the $p = .05$ level.

Factor Structure of the IAS

A second type of approach to the investigation of Horney's neurotic character constructs involved the use of factorial analysis of items on the C, A and D scales of the IAS. Examination of specified rotations were examined by comparison to the a priori scheme to determine whether empirically derived factors would match Horney's theoretical constructs (for 85 item-by-item correlation matrix, see Appendix F).

Research Hypothesis 3 was as follows:

H_1 3: The three-factorial rotation will match Horney's three neurotic style constructs.

H_0 3: There will be no interpretable relationship between results of the three-factor factorial analyses of Horneyan neurotic scale items and Horney's three neurotic style constructs.

Hypothesis 3 was tested by performing principal components factor analysis followed by rotation to varimax criterion of the first three principal component factors. In addition, both two-factor and four-factor solutions were rotated to help illuminate the results of the test of Hypothesis 3. The test of the null hypothesis

was the chi square for the match between the empirical classification of items by factor analysis and the a priori classification of items (for three-factor correlation matrix see Appendix G).

THREE-FACTOR SOLUTION
Factor 1

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
64.	A	.66	Everyone is out to get everyone else.
82.	A	.55	Since everyone is out for themselves, I must be best at looking out for myself.
136.	A	.51	The world is geared to survival of the fittest.
158.	A	.51	Everyone approaches situations with an eye for what's in it for them.
58.	A	.50	Others will take advantage of me if they get the chance.
96.	D	.49	I fear that becoming involved with others will stifle my creativity.
77.	A	.47	I look for dangers and pitfalls in situations where I am involved with others.
168.	A	.47	I despise softness in others.
106.	D	.47	If others get close to me, I fear I might lose my creativity.
46.	A	.46	I believe life is a continual struggle of everybody against everybody else.
159.	A	.46	No price is too high for my success.
135.	A	.45	It is important to control those around me.
156.	A	.45	It is important to appear tough regardless of how you might really feel.
119.	D	.45	Keeping others at a distance helps me to retain my original thinking.
166.	A	.44	People are tools to be manipulated.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
7.	A	.44	I show fear.
134.	D	.44	I am uncomfortable about becoming emotionally attached to another person.
22.	A	.42	Too many people are out for themselves and don't really care for others.
28.	A	.42	The most important part of any game is winning.
57.	A	.42	I never admit a mistake unless it is absolutely necessary.
90.	A	.42	I really don't know who I can count on.
47.	D	.41	I do not feel involved with others.
60.	A	.40	Only a naive person underestimates the malice and greed of others.
35.	D	.40	No one really understands me.

Factor 2

120.	C	.65	It worries me to think that some of the people I know may not like me.
163.	C	.58	I worry about how well I get along with other people.
52.	C	.57	I worry about whether other people like to be with me.
81.	C	.57	I feel inferior to most of the people I know.
127.	C	.57	It is important that others approve of me.
63.	C	.56	When someone criticizes me, I feel low and worthless.
23.	C	.55	What others think of me is very important.
140.	C	.54	I like to be protected and guided by another person.
165.	C	.53	I like to know that I am not too different from others.
113.	C	.52	What I think of myself depends on what others think of me.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
20.	C	.51	I like to know I belong.
14.	C	.49	It is necessary for me to feel needed by others.
164.	C	.45	I want other people to like me.
67.	D	.44	I live too much by other people's standards.
118.	C	.43	Everything will be all right if someone loves me.
153.	C	.43	I feel weak and helpless.
141.	C	.42	I would rather give in than quarrel with someone.
54.	C	.41	I do what others expect of me even when it's not what I really want to do.
174.	C	.41	It is important to me to be popular with persons my own age.
19.	C	.40	Most people are stronger emotionally than I am.
38.	C	.39	I question my own worth as a person.
112.	C	.39	I find it difficult to be defiant.
170.	C	.39	I feel weak and worthless around arrogant people.

Factor 3

111.	A	.48	I am a poor loser.
137.	D	.48	I dislike conforming to rules and regulations.
106.	D	.40	If others get close to me, I fear I might lose my uniqueness.

The three-factor solution was performed to test Hypothesis 3. Hypothesis 3 would be supported if the factors each contained items of one of the three scales. Chi square in support of Hypothesis 3 would show high contribution to the chi-square value and positive values for (frequency observed - frequency expected) and high

contribution to the chi-square value and negative values for (frequency observed - frequency expected) off the diagonal. Chi-square Table 4.6 displays the content of each factor by scale.

TABLE 4.6.--Chi-Square Table for Three-Factor Solution.

	Factor 1	Factor 2	Factor 3	
A scale	1	2	3	32
	x = 12 ob 29 (15.4)	x = -12 ob 0 (12)	x = -.5 ob 3 (4.5)	
C scale	4	5	6	32
	x = -15.4 ob 0 (15.4)	x = 27 ob 30 (12)	x = -1.4 ob 2 (4.5)	
D scale	7	8	9	21
	x = .4 ob 12 (10.1)	x = 4.4 ob 2 (7.9)	x = 5.3 ob 7 (3.0)	
	41	32	12	85

ob = observed cell frequency.
 () = expected cell frequency.
 x = cell contribution to chi-square value; + or - denotes
 (O - E) value sign.

The chi-square statistic with 4 df for the three-factor solution was 78.4 which is significant beyond the $p = .001$ level, indicating a correspondence between empirical factors and a priori

categories. Examination of cell chi-square contribution reveals that the diagonal cells contain the largest positive values while the off-diagonal cells contain smaller and/or negative values. Therefore, H_{03} was rejected. There is a significant three-factor structure which matches Horneyan neurotic style constructs. However, the mixing of items from more than one a priori scale category on the same factor weakens support of H_{13} . Observation of cell frequencies suggests that factor 2 is clearly composed of the C scale. Factor 1 appears to be composed predominantly of the A scale, but shows strong content of the D scale as well. Factor 3 contains elements of all three scales, but the D scale is clearly represented above expectancy. However, most of the items from scale D which appear on factor 3 have loadings below .39. Thus it was concluded that a factor structure matching Horney's three neurotic character constructs did appear, although scale three reflecting Horney's "away from others" mode was relatively weak.

The two-factor rotation was performed to help illuminate the three-factor results by determining whether a strong pattern exists in the two-factor solution.

TWO FACTOR SOLUTION Factor 1

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
64.	A	.63	Everyone is out to get everyone else.
46.	A	.59	I believe life is a continual struggle of everyone against everyone else.
106.	A	.46	If others get close to me I fear I might lose my uniqueness.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
96.	D	.57	I fear that becoming involved with others will stifle my creativity.
168.	A	.55	I despise softness in others.
135.	A	.53	It is important to control those around me.
160.	A	.53	If I didn't have such bad luck I'd accomplish much more than I have.
166.	A	.53	People are tools to be manipulated.
156.	A	.52	It is important to appear tough regardless of how you might really feel.
28.	A	.49	The most important part of any game is winning.
82.	A	.49	Since everyone is out for themselves, I must be best at looking out for myself.
58.	A	.48	Others will take advantage of me if they get the chance.
136.	A	.48	The world is geared to survival of the fittest.
119.	D	.48	Keeping others at a distance helps me to retain my original thinking.
134.	D	.48	I am uncomfortable about becoming emotionally attached to another person.
77.	A	.47	I look for dangers and pitfalls in situations where I am involved with others.
158.	A	.46	Everyone approaches situations with an eye for what's in it for them.
131.	A	.45	I find displays of affection revolting.
57.	A	.42	I never admit a mistake unless it is absolutely necessary.
159.	A	.42	No price is too high for my success.
47.	D	.42	I do not feel involved with others.
78.	A	.41	I will go out of my way to prove to others that I am right.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
105.	A	.41	The world is full of hostile people.
35.	D	.41	No one really understands me.
53.	C	.40	I can't take it if someone criticizes me.
16.	A	.39	To me feelings are sloppy sentimentality that get in the way of winning.
144.	D	.39	I must strive for my independence in every situation.

Factor 2

120.	C	.64	It worries me to think that some of the people I know may dislike me.
81.	C	.58	I feel inferior to most of the people I know.
164.	C	.58	I want other people to like me.
52.	C	.56	I worry whether other people like to be with me.
63.	C	.56	When someone criticizes me, I feel low and worthless.
127.	C	.56	it is important that others approve of me.
140.	C	.55	I like to be protected and guided by another person.
23.	C	.54	What others think of me is very important.
165.	C	.54	I like to know that I am not too different from others.
113.	C	.52	What I think of myself depends on what others think of me.
20.	C	.51	I like to know I belong.
14.	C	.48	It is necessary for me to feel needed by others.
141.	C	.45	I would rather give in than quarrel with someone.
163.	C	.45	I worry about how well I get along with other people.
67.	D	.44	I live too much by other people's standards.
118.	C	.43	Everything will be all right if someone loves me.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
54.	C	.42	I do what I think others expect of me even when it's not what I really want to do.
153.	C	.42	I feel weak and helpless.
19.	C	.41	Most people are stronger emotionally than I am.
4.	C	.40	I would rather subordinate myself to someone than to create friction with them.
112.	C	.40	I find it difficult to be defiant.
170.	C	.39	I feel weak and worthless around arrogant people.
174.	C	.39	It is important to me to be popular with persons my own age.

The two-factor rotation resulted in factor 2 clearly composed of C scale items (30 C scale, 1 A scale and 2 D scale items). The A and D scale items were compressed on Factor 1 (31 A items, 19 D items, 2 C items). Table 4.7 presents the chi square for the two factor solution.

TABLE 4.7.--Two-Factor Chi-Square Table.

	Factor 1		Factor 2		
Scale C	1 ob 2	(19.6)	2 ob 30	(12.4)	32
Scale A	3 ob 31	(19.6)	4 ob 1	(12.4)	32
Scale D	5 ob 19	(12.8)	6 ob 2	(8.2)	21
	52		33		85

ob = observed frequency; () = expected cell frequency.

The chi square of 66.2 with 2 df calculated for the two-factor solution was significant beyond $p = .001$, indicating the presence of patterning in the data. Examination of cell frequency data indicated that Factor 2 was predominantly composed of the Compliant scale. Factor 1 was overwhelmingly composed of the Aggressive and Detached Scales (A scale, 31 of 32; D scale, 19 of 21).

The following four-factor solution was rotated to determine whether an additional factor might more clearly separate A and D scale items.

FOUR-FACTOR SOLUTION
Factor 1

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
64.	A	.61	Everyone is out to get everyone else.
46.	A	.57	I believe life is a continual struggle of everybody against everybody else.
136.	A	.57	The world is geared to the survival of the fittest.
82.	A	.55	Since everyone is out for themselves, I must be best at looking out for myself.
158.	A	.51	Everyone approaches situations with an eye for what's in it for them.
77.	A	.49	I look for dangers and pitfalls in situations where I am involved with others.
156.	A	.47	It is important to appear tough regardless of how you might really feel.
71.	D	.47	One must guard against dependence on others.
119.	D	.47	Keeping others at a distance helps me to retain my original thinking.
65.	A	.46	I appraise every situation for chances of controlling it.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
135.	A	.46	It is important to control those around me.
160. much	A	.46	If I didn't have such bad luck, I'd accomplish much more than I have.
96.	D	.46	I feel that becoming involved with others will stifle my creativity.
168.	A	.45	I despise softness in others.
28.	A	.44	The most important part of any game is winning.
58.	A	.44	Others will take advantage of me if they get the chance.
159.	A	.44	No price is too high for my success.
57.	A	.42	I never admit a mistake unless it is absolutely necessary.
78.	A	.42	I will go out of my way to prove to others that I am right.
134.	D	.41	I am uncomfortable about becoming emotionally attached to another person.
9.	A	.40	There is little pleasure in work, only in achievement.
22.	A	.40	Too many people are out for themselves and don't really care for others.
60.	A	.40	Only a naive person underestimates the greed and malice of others.
105.	A	.39	The world is full of hostile people.
144.	D	.39	I must strive for my independence in every situation.

Factor 2

52.	C	.64	I worry about whether other people like to be with me.
153.	C	.62	I feel weak and helpless.
63.	C	.60	When someone criticizes me, I feel low and worthless.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
81.	C	.60	I feel inferior to most of the people I know.
38.	C	.57	I question my worth as a person.
163.	C	.55	I worry about how well I get along with other people.
120.	C	.54	It worries me to think that some of the people I know may dislike me.
113.	C	.49	What I think of myself depends on what others think of me.
128.	C	.48	I become discouraged when so many people do things so well.
53.	C	.47	I can't take it if someone criticizes me.
170.	C	.45	I feel weak and worthless around arrogant people.
106.	D	.45	If others get close to me, I fear I might lose my uniqueness.
84.	C	.42	I would like to find someone who would tell me how to solve my personal problems.
47.	D	.40	I do not feel involved with others.
140.	C	.39	I like to be protected and guided by another person.

Factor 3

20.	C	.61	I like to know I belong.
127.	C	.60	It is important that others approve of me.
164.	C	.60	I want other people to like me.
23.	C	.58	What others think of me is very important
14.	C	.56	It is necessary for me to feel needed by others.
165.	C	.55	I like to know that I am not too different.
174.	C	.52	It is important to me to be popular with persons my own age.
120.	C	.42	It worries me to think that some of the people I know may dislike me.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
118.	C	.41	Everything will be all right if someone loves me.
150.	C	.41	I would rather do things with others than by myself.

Factor 4

137.	D	.48	I dislike conforming to rules and regulations.
111.	A	.40	I am a poor loser.

A four-factor solution was rotated in an attempt to further clarify the three-factor rotation, particularly if a strong D scale factor appeared. Again, there was decisive patterning of the C scale items on Factor 3 (10 C scale items alone) and Factor 2 (13 C scale items, 2 D scale items). Factor 1 showed a mixture of A and D scale items with A scale items predominating (20 A scale items and 5 D scale items). Factor 4 was a weak factor with only two items above a loading of +.39, one D scale item (Load .48) and one A scale item (load .40) and four items loading -.39 or below. All of the negatively loading items were C scale items. A chi-square table was not generated because expected frequencies would have been below acceptable level. However, examination of scale composition of factors indicates definite patterning, but again there was a mixture of A and D with A predominating. D scale had few items loading .39 or above; no factor was composed heavily of D items.

Ten Factor Structure

In her earlier writings,¹ Horney set forth ten neurotic needs which she, in later works,² condensed into her three neurotic styles investigated in this study. As a further exploration a 10-factor solution was rotated to see whether the resulting ten factors would match Horney's original ten neurotic needs.

Factor 1

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
52.	C	.66	I worry whether people like to be with me.
38.	C	.64	I question my worth as a person.
81.	C	.61	I feel inferior to most of the people I know.
63.	C	.58	When someone criticizes me, I feel low and worthless.
163.	C	.58	I worry about how well I get along with other people.
120.	C	.57	It worries me to think that some of the people I know may dislike me.
153.	C	.53	I feel weak and helpless.
84.	C	.52	I would like to find someone who would tell me how to solve my personal problems.
113.	C	.49	What I think of myself depends on what others think of me.
128.	C	.44	I become discouraged when so many people do things well.
53.	C	.42	I can't take it if someone criticizes me.
67.	D	.41	I live too much by other people's standards.
170.	C	.40	I feel weak and worthless around arrogant people.

¹Horney, Self Analysis, 1939.

²Horney, Our Inner Conflicts, 1945.

Factor 2

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
96.	D	.59	I fear that becoming involved with others will stifle my creativity.
135.	A	.47	It is important to control those around me.
166.	A	.47	People are tools to be manipulated.
106.	D	.53	If others get close to me, I fear I might lose my uniqueness.
28.	A	.52	The most important part of any game is winning.
168.	A	.52	I despise softness in others.
131.	A	.51	I find displays of affection revolting.
159.	A	.51	No price is too high for my success.
160.	A	.50	If I didn't have such bad luck, I'd accomplish much more than I have.
156.	A	.47	It is important to appear tough regardless of how you might really feel.
16.	D	.44	To me feelings are sloppy sentimentality that get in the way of winning.
65.	A	.42	I appraise every situation for chances of controlling it.
72.	A	.42	Doing things only for enjoyment is a waste of time.
57.	A	.41	I never admit a mistake unless it is absolutely necessary.
64.	A	.40	Everyone is out to get everyone else.
144.	D	.40	I must strive for my independence in every situation.

Factor 3

174.	C	.65	It is important to me to be popular with persons my own age.
23.	C	.63	What others think of me is very important.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
127.	C	.59	It is important that others approve of me.
164.	C	.53	I want other people to like me.
14.	C	.52	It is necessary for me to feel needed by others.
165.	C	.47	I like to know that I am not too different from others.
20.	C	.46	I like to know I belong.
150.	C	.40	I would rather do things with others than with myself.

Factor 4

141.	C	.66	I would rather give in than quarrel with someone.
4.	C	.61	I would rather subordinate myself to someone than to create friction with them.
112.	C	.53	I find it difficult to be defiant.
132.	C	.47	I prefer to sacrifice my own wishes to please others.
140.	C	.45	I like to be protected and guided by another person.

Factor 5

71.	D	.59	One must guard against dependence on others.
77.	A	.56	I look for dangers and pitfalls in situations where I am involved with others.
80.	D	.48	It is best never to become so attached to someone that they become indispensable to you.
79.	D	.39	Independence is of great value in itself, regardless of the situation.

Factor 6

99.	A	.54	The little people in the world, like myself, have little chance against the big guys.
147.	A	.53	Work is only a means to an end.

<u>Item</u>	<u>Sc</u>	<u>Load</u>
-------------	-----------	-------------

- | | | | |
|-----|---|-----|---|
| 51. | A | .49 | Success is more dependent on luck than on any real ability or effort. |
| 24. | A | .44 | It is foolish to believe that you can really influence what happens in our society. |

Factor 7

- | | | | |
|------|---|-----|--|
| 60. | A | .57 | Only a naive person underestimates the malice and greed of others. |
| 105. | A | .42 | The world is full of hostile people. |
| 85. | C | .41 | It is torture for me to be alone. |

Factor 8

- | | | | |
|------|---|-----|---|
| 16. | A | .47 | To me, feelings are sloppy sentimentality that get in the way of winning. |
| 121. | A | .47 | Everyone likes a winner. |
| 18. | A | .46 | I take pride in excelling over others. |

Factor 9

- | | | | |
|------|---|-----|--|
| 137. | D | .53 | I dislike conforming to rules and regulations. |
| 157. | D | .51 | I resent people giving me advice. |
| 101. | D | .50 | I am sensitive to control by those around me. |
| 138. | D | .44 | I do not take others' advice, even when it may be what I want to do. |
| 98. | D | .41 | I resent it when I have to keep a schedule. |

Factor 10

- | | | | |
|-----|---|-----|--|
| 11. | D | .61 | My peace of mind is preserved by keeping distance from others. |
| 61. | D | .56 | My relationships with others tend to be superficial. |

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
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103.	D	.50	I have a strong need for privacy.
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37.	D	.44	I prefer eating alone to eating with others.
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The ten factors above showed some correspondence to Horney's original ten neurotic needs. Eight of the ten factors above appears related to six of the ten neurotic needs. Factors 1 and 3 seemed related to the "need for affection and approval"; Factor 4 and, to a lesser degree, Factor 1, appeared related to the "need for a partner who will take over one's life." Factor 6 was related to the "need for power." Factor 2 seemed related to the "need to exploit others," and Factor 8 was related to "ambition for personal achievement." Both Factors 9 and 10 were related to the "need for perfection and unassailability." No factors appeared closely related to the "need to restrict one's life in narrow borders," the "need for prestige," the "need for personal admiration," or the need for perfection and unassailability. Thus, it appears that while the overlap between the results of the ten-factor rotation and Horney's ten neurotic needs is not complete, there was, nevertheless, some overlap. Three factors were predominantly C scale, three were D scale, and four were A scale.

Lower Bounds Rotation

An eigenvalue threshold of 1.00 was used to determine the number of factors to rotate. This solution was performed to determine the possible range of factors. Twenty-five factors were rotated as follows:

LOWER BOUND ROTATION
Factor 1

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
52.	C	.69	I worry about whether other people like to be with me.
63.	C	.66	When someone criticizes me, I feel low and worthless.
120.	C	.65	It worries me to think that some of the people I know may dislike me.
163.	C	.59	I worry about how well I get along with other people.
38.	C	.57	I question my worth as a person.
81.	C	.56	I feel inferior to most of the people I know.
113.	C	.48	What I think of myself depends on what others think of me.
84.	C	.42	I would like to find someone who would tell me how to solve my personal problems.
128.	C	.40	I become discouraged when so many people do things well.
170.	C	.39	I feel weak and worthless around arrogant people.
111.	A	.39	I am a poor loser.
67.	D	.39	I live too much by other people's standards.

Factor 2

46.	A	.64	I believe life is a continual struggle of everybody against everybody else.
64.	A	.62	Everyone is out to get everyone else.
82.	A.	.62	Since everyone is out for themselves, I must be best at looking out for myself.
160.	A	.59	If I didn't have such bad luck, I'd accomplish much more than I have.
96.	D	.52	I fear that becoming involved with others will stifle my creativity.

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
166.	A	.48	People are tools to be manipulated.
159.	A	.47	No price is too high for my success.
105.	A	.43	The world is full of hostile people.
106.	D	.43	If others get close to me, I fear I might lose my uniqueness.
158.	A	.40	Everyone approaches situations with an eye for what's in it for them.
60.	A	.39	Only a naive person underestimates the malice and greed of others.

Factor 3

164.	C	.73	I want other people to like me.
127.	C	.67	It is important that others approve of me.
23.	C	.58	What others think of me is very important.
165.	C	.51	I like to know that I am not too different from others.
174.	C	.50	It is important to me to be popular with persons my own age.
20.	C	.48	I like to know I belong.

Factor 4

141.	C	.75	I would rather give in than quarrel with someone.
112.	C	.55	I find it difficult to be defiant.
140.	C	.53	I like to be protected and guided by another person.
4.	C	.52	I would rather subordinate myself to someone than to create friction with others.

Factor 5

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
79.	D	.74	Independence is of great value in itself, regardless of the situation.
144.	D	.55	I must strive for my independence in every situation.
80.	D	.42	It is best to never become so attached to someone that they become indispensable to you.

Factor 6

147.	A	.68	Work is only a means to an end.
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Factor 7

157.	D	.75	I resent people giving me advice.
138.	D	.53	I do not take others' advice, even when it may be what I want to do.
57.	A	.40	I never admit a mistake unless it is absolutely necessary.

Factor 8

16.	A	.70	To me, feelings are sloppy sentimentality that get in the way of winning.
168.	A	.57	I despise softness in others.
131.	A	.52	I find displays of affection revolting.
28.	A	.44	The most important part of any game is winning.

Factor 9

11.	D	.76	My peace of mind is preserved by keeping distance from others.
119.	D	.46	Keeping others at a distance helps me to retain my original thinking.
61.	D	.42	My relationships to others tend to be superficial.

Factor 10

(Factor 10 contained no items loading .39 or above on the factor.)

Factor 11

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
35.	D	.72	No one really understands me.
90.	A	.42	I really don't know who I can count on.
47.	D	.41	I do not feel involved with others.

Factor 12

118.	C	.59	Everything will be all right if someone loves me.
150.	C	.59	I would rather do things with others than by myself.
37.	D	.65	I prefer eating alone to eating with others.

Factor 13

121.	A	.60	Everyone likes a winner.
19.	C	.59	Most people are stronger emotionally than I am.

Factor 14

78.	D	.52	I will go out of my way to prove to others that I am right.
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Factor 15

101.	D	.75	I am sensitive to control by those around me.
103.	D	.41	I have a strong need for privacy.

Factor 16

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
85.	C	.67	It is torture for me to be alone.
14.	C	.53	It is necessary for me to feel needed by others.
23.	C	.44	What others think of me is very important.

Factor 17

98.	D	.78	I resent it when I have to keep a schedule.
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Factor 18

71.	C	.73	One must guard against dependence on others.
136.	A	.44	The world is geared to a survival of the fittest.
77.	A	.41	I look for dangers and pitfalls in situations where I am involved with others.

Factor 19

24	A	.70	It is foolish to believe that you can really influence what happens in our society.
99.	A	.40	The little people in the world, like myself, have little chance against the big guys.

Factor 20

(Factor 20 contained no items with a loading of .39 or over.)

Factor 21

10.	D	.60	My emotions are the enemy within me.
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Factor 22

134.	D	.65	I am uncomfortable about becoming emotionally attached to another person.
70.	C	.41	I feel weak and worthless around arrogant people.

Factor 23

<u>Item</u>	<u>Sc</u>	<u>Load</u>	
22.	A	.65	Too many people are out for themselves and don't really care for others.
105.	A	.45	The world is full of hostile people.
4.	C	.39	I would rather subordinate myself to someone than to create friction with them.

Factor 24

142.	C	.64	I tend to be what people expect me to be.
54.	C	.50	I do what others expect of me even when it's not what I really want to do.

Factor 25

49.	A	.70	I believe it's up to others to look out for themselves.
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Twenty-five factors were generated on the eigenvalue greater than one rotation. Twenty-one of the factors were entirely or predominantly composed of items from one scale, two factors (13 and 22) were composed of two items, each from a different scale and two factors (10 and 20) contained no items with loadings of .39 or above. This factorial analysis did not clearly support either the 3- or 10-factor analysis.

Summary

The results of the analysis of data relevant to the three major hypotheses tested were presented in Chapter IV.

Five predictor variables--C, D, and A scales, scale variance and scale mean--were used as in several combinations against the criterion variable, neuroticism, to test Hypotheses 1 and 2. Four multiple regression equations were used to test the first two hypotheses.

H₁1: There is a linear relationship between the three neurotic style scales C, A and D and neuroticism as measured by the EPI-N.

To test this, C, A and D scale variables were regressed against neuroticism. It was concluded that there was a significant linear relationship between C, A and D and neuroticism ($p = .001$). It was found in post hoc examination that the C variable entered first explained most of the variations in neuroticism (22%) while the other two variables, D and A, contributed less than 1% each to the explanation of variance above that contributed by C.

Hypothesis 2 was tested to examine the relationship between scale patterning among the C, A and D scales and neuroticism. Therefore, scale variance was regressed against neuroticism.

H₁2: There will be a linear relationship between neuroticism and variability across the three neurotic style measures.

The null hypothesis was rejected ($p = .001$). There was a significant relationship between scale variance and neuroticism. Scale variance alone accounted for 4.4% of the variance in neuroticism.

A second regression equation used to examine Hypothesis 2 entered scale mean and scale variance against neuroticism. Scale mean entered at a significance level of $p = .001$ and accounted for 16% of the variance in neuroticism. Scale variance entered second, also with

a $p = .001$ significance and added another 6% to the explanation of variance. Together they accounted for 22% of the variance in neuroticism.

The third regression equation used to test Hypothesis 2 entered C, A and D scale variance against neuroticism as the criterion variable. The equation was highly significant with a $p = .0001$ with Compliance entering on step 1. The next three variables entered in order--Detachment, scale variance and Aggression. Together they added only an additional 3% to the explained variance over that accounted for by Compliance. Scale variance, entering third, was significant at the $p = .009$ level, explaining 1.8% of variance. Detachment and Aggression were not significant at the $p = .05$ level in this equation.

The third hypothesis was employed to determine whether empirically derived factors would match Horney's theoretical constructs.

H₁₃: The three factorial rotation will match Horney's three neurotic style constructs.

Factor analysis specifying a three-factor rotation was used to test this hypothesis. A chi square was used to examine the resulting three factors. The chi-square statistic for the three-factor rotation was highly significant ($p = .001$). The empirically derived factor did match the Horneyan neurotic character constructs. Two- and four-factor rotations were specified to help illuminate the results of the three-factor rotation. Both showed definite patterns and were considered supportive of Hypothesis 3.

As a further exploration ten factors were rotated to determine whether ten empirically derived factors would match Horney's original ten neurotic needs. Eight of the ten factors were similar to six of the neurotic needs. This result indicated some support for the Horneyan ten neurotic needs.

Finally, an eigenvalue threshold of 1.00 solution was used to determine the possible range of factors that could occur. Twenty-five factors were rotated; most of these factors were clearly and predominantly of one scale.

CHAPTER V

SUMMARY AND CONCLUSIONS

Chapter V consists of an overall summary of the study including a restatement of the hypotheses and associated results. The conclusions are then discussed in the following section. The major conclusions of the study are restated followed by a listing of implications.

Summary

The purpose of the present study was twofold: (1) to develop a psychometric instrument based on Karen Horney's three neurotic character trends specified in her theoretical works, and (2) to provide much needed empirical investigation of the three major constructs of her theory of neurosis.

A summary emphasizing the three major aspects of Karen Horney's psychoanalytic theory of neurosis was presented in Chapter II. These aspects were the three neurotic character trends or modes of adjustment, the "moving towards others" or compliant type, the "moving against others" or aggressive type, and the "moving away from others" or detached type. Each neurotic character type has its associated sets of beliefs, attitudes and behaviors described by Horney.

Two psychometric instruments were employed in the study. The Inventory of Current Status (ICS) was assembled using several

scales from other instruments. The ICS was used as a screening device to refine the sample by screening out individuals suspected of being psychotic, sociopathic, highly inconsistent or of lying. The ICS included the EPI-Neuroticism scale used to place subjects on a continuum of neuroticism. Neuroticism was the criterion variable in the study.

The second instrument used in the study was the Inventory of Adjustment Styles, an inventory constructed from Horney's descriptive writings about her three neurotic character types. Test items were generated from Horney's descriptions, scaled, and assigned to the scale corresponding to the mode from which the item was drawn. The Compliance scale (C) represented the "moving toward others" type; the Aggression scale (A), the "moving against others" type; and the Detachment scale (D), the "moving away from others" type. The ICS scale was refined by administering the 174 items to the sample, shortening it to 85 items by use of a combination of item-total correlation statistics and the alpha delete technique. These procedures increased the homogeneity of the scales and reduced the number of items for more convenient use as well as for application of factor analysis (which, for practical reasons, requires under 100 variables).

The IAS and ICS were administered to each subject drawn from the general adult population. Subject participation was entirely voluntary. Subjects were aware that no individual test results would be available. Of the 360 test results which were returned and screened, 295 were found acceptable for this study. The sample did

not specifically represent the characteristics of any known population, but were diverse in terms of age, education, occupation, and marital status. Women were overrepresented in the sample compared to the general adult population.

The hypotheses tested in the study are stated in general form as follows:

- Hypothesis 1: Markedly neurotic individuals will score higher on the neurotic style measures than less neurotic individuals.
- Hypothesis 2: Markedly neurotic individuals will show a particular pattern of scores on the neurotic style measures of one high and two low scores while less neurotic persons will not.
- Hypothesis 3: A three-rotation factorial analysis of the items comprising the three neurotic style measures C, A and D will form a structure which matches Horney's three neurotic character constructs.

Hypothesis 1 and 2 were postulated to examine the relationship of the C, A and D scales to the criterion variable neuroticism as measured by the EPI-N. Hypothesis 1 was used to focus on the possibility of a linear relationship between the C, A and D scales and neuroticism. Hypothesis 2 was postulated to assess whether a score pattern of one high and two low scores would be related to neuroticism. Regression analysis was employed to test Hypotheses 1 and 2. It would be predicted from Horneyan theory that H_{01} would be accepted and H_{02} rejected.

Hypothesis 3 was used to explore whether an empirically derived structure of items would match Horneyan neurotic character constructs. A factor analytic approach specifying a three-principal-components rotation was used to test Hypothesis 3. Explorations

specifying two, four, ten and eigenvalue greater than 1.00 solutions were also rotated.

To summarize the results, each hypothesis was restated and followed by major conclusions.

H_{01} : There will be no linear relationship between neuroticism as measured by the EPI-N and the three neurotic style measures.

H_{11} : There will be a linear relationship between neuroticism as measured by the EPI-N and the three neurotic style measures.

Regression analysis led to the conclusion that there was, in fact, a linear relationship between the C, A and D scales and neuroticism. However, post hoc examination led to the more specific conclusion that the first scale entered in the regression equation, the Compliance scale, accounted for a large share (22%) of the explained variance in neuroticism. The Detached and Aggression scales add little ($p < .05$; 1% each) beyond that explained by Compliance; therefore, it was concluded that the Compliance scale was the best predictor of neuroticism, accounting for the significance of the regression equation.

H_{02} : There will be no linear relationship between neuroticism and variability across the three neurotic style measures.

H_{12} : There will be a linear relationship between neuroticism and variability across the three neurotic styles.

The regression equation related to Hypothesis 2 consisted of entering variance among the C, A and D scales against the neuroticism scale. It was concluded that there was, in fact, a significant linear relationship between variability across scales and neuroticism. However,

though this relationship was highly significant ($p = .001$), only 4% of the variance in neuroticism was explained by variability across scales (Table 4.3). Further explorations were performed in relation to Hypothesis 2 by entering scale mean and scale variance in a regression equation, thus controlling for overall score magnitude. The results indicated there was a significant relationship between neuroticism and scale mean and scale variance together (22% variance explained, see Table 4.4). A further exploration entering C, A, D and scale variance against neuroticism showed significance for C at Step 1 and scale variance at Step 3. This suggests that the D scale variable acted as a suppressor variable when entered with C, which then allowed scale variance at a $p = .009$ level of significance. However, scale variance added only 1.8% (see Table 4.5) to the explanation of variance in neuroticism. The conclusion was again that the Compliance scale alone explains the greatest amount of variance in neuroticism.

$H_1 3$: Rotation of the first three principal components to varimax criterion will produce factors which will match Horney's three neurotic style constructs.

$H_0 3$: There will be no interpretable relationship between factor analyses of Horneyan neurotic scale items and Horney's neurotic style constructs on the three-factor rotation.

The three-factor rotation yielded one factor clearly composed of C scale items, another factor predominantly composed of A scale items with some mixture with D scale items, and a third factor with few high loading items composed of A and D scale items. A chi-square statistic indicated presence of a pattern at $p = .001$ level of

significance. Examination of chi-square structure clearly supported rejection of the H_0 and acceptance of H_1 . The observed factor structure showed some similarity to Horney's neurotic character structure scheme, however, the Detachment scale was weak and needed further refinement. Additional two- and four-factor rotations tended to support factor structure patterned among the three scales, again with Detachment showing the greatest weakness.

An additional ten-factor solution was rotated to determine whether a structure matched Horney's ten neurotic needs described in an earlier work. Although there was some similarity between six of her needs and eight of the ten factors, the correspondence was not exact. Four of Horney's ten neurotic needs were not reflected in the factor rotation results.

Lower bounds rotation: Another analysis was performed allowing the eigenvalue threshold (1.00) to determine the number of factors rotated. The first 25 factors yielded eigenvalues greater than 1.00 and thus were selected for rotation to varimax criteria. Most of the 25 factors were composed wholly or predominantly of items from only one of the three neurotic style scales.

Discussion

Horney's theory asserts independence among A, C, and D scales. However, the intercorrelations of variables shown in Table 4.1 indicate that the three scales which developed a high degree of reliability were highly correlated with one another. Detachment and Aggression were correlated .50 and .52, respectively, with Compliance, and .74 with each other.

High correlation among the scales reduces variability among an individual's scale scores and reduces the range of pattern scores (variance among scales) resulting in restricted variability in the pattern measure. This reduced variability necessarily reduces the degree to which the pattern measures can be correlated with any other measure, in this case, with neuroticism. Because of the particular scaling used with test items (1 through 4 with 1 being most neurotic and 4 being least neurotic by Horneyan standards), many of the correlations with neuroticism in Table 4.1 appear negative. In reality, these negative correlations actually reflect positive correlation between the N scale and the A, C and D scales reflecting Horney's neurotic styles.

The high intercorrelations between the C, A and D scales suggest several possibilities. One possible interpretation is that Horneyan theory, in fact, lacks validity. Instead of three modes of neurotic character structure, there may be only a unifactorial style of neurosis closely paralleling Horney's compliant type. This interpretation, however, is not consistent with the empirically derived results of the factorial approach. Although the C scale appears most consistent and clear-cut throughout the various factor rotations, the A and D scales appeared clearly separate from C and more clearly delineated from one another as the factor rotation number increases (see Appendix H for diagram of factor rotation comparisons). Although the factor rotations are not linked in any direct way with measure of neuroticism, the subject sample upon which the rotations are based does show a high incidence of neuroticism

measured by the EPI-N. The mean for N in the sample was over 12 of 24 N scale items, whereas 8 to 10 of 24 is considered high. Therefore, the factor rotations may, in fact, have more validity for casting doubt on the regression analysis results and a unifactorial concept of neurosis. The separation of scale items into factors as factor number increases may suggest a multifactorial concept of neurosis as opposed to that of Eysenck and others.¹ The fact that the factorial rotations factored out the A and D scales as different from C and on larger number rotations from each other suggests that the three scales and underlying constructs are, in fact, different. The A and, more so, the D scale require further work.

Another possible design problem which may have biased the results towards the Compliance scale concerns the criterion variable neuroticism as defined by the EPI-N. Examination of content of the 24 EPI-N items reveals that eight items reflect somatic complaints such as headaches, dizzy spells, short breath, and tiredness. Of the three Horneyan neurotic character types, the Compliant types are most prone to somaticization. Of the remaining 16 items, at least four appear to relate closely to Compliance. For example, two of the questions are: (1) Do you need someone friendly to talk to when you are annoyed? and (2) Are you self-conscious with superiors? Of the remaining eight items, two each may relate to Detachment and Aggression. Remaining items are not distinguishable as necessarily representing any one of the three modes. Therefore, the results favoring

¹Fabian and Comprey, p. 296.

a single mode of neurosis may, in part at least, be attributable to a strong bias on the criterion variable measurement, the EPI-N, which seems to heavily favor the Compliant mode. There was little on the A and D scales which would appear to relate to the EPI-N items.

Selection bias in the sample may also have influenced the outcome of the regression. While a divergent group was sought in terms of age, education, marital status and employment, the subjects were all volunteers. According to Horneyan theory, persons strongly inclined toward the Detached mode would be expected to interpret the testing as an infringement on their privacy, and refuse, either actively or passively, to cooperate. There was some evidence that the Detached subjects may have done this. Five persons who, clinically, were seen as Detached types, were asked, after all data was in, if they had completed and returned the tests. Four of the five indicated that they had not done so. The Aggressive types could also, according to Horneyan theory, be expected to be less cooperative because of their particular self-centered, negativistic attitudes. The Compliant types, however, by definition try to please and appease others and would, therefore, be found highly cooperative. A subject selection bias such as this would, obviously, favor overrepresentation of compliant persons in the sample which could, in turn, influence the outcome of the study towards the Compliance scale.

Another sample bias which could help explain the strength of the relationship between the Compliance scale and neuroticism can be related to the sex bias found in the sample. Wilkins² found

²Wilkins, p. 62.

compliant traits related more to women than to men in the sample used in his study. Over 69% of the subjects used in this study were women. The mean age of these women was 34.2 years, with mean years of education 13.4. (It was this high largely because of a number of women teachers in the sample.) Therefore, these women might be expected to hold more traditional role attitudes favoring compliance than would younger, more college-oriented women. This sex bias may be a significant factor contributing to results favoring the Compliance scale. (Grand means for the sample were 38 for C and 45 and 48 for A and D, respectively. Low scale score is more neurotic on the Horneyan scales.)

Wilkins' results lend support to the possible sex bias toward compliance. Wilkins found evidence for the Detached type largely absent in women. Those women scoring higher on Aggression, in fact, tended to exhibit Detached behavior, while not responding to the detached mode on his forced-choice scales.

The obvious overlap of D and A items on factors in several rotations suggests a relationship between these modes. This could be related to both being reactions to threat. Both can also be related to the handling of anger ("fight or flight" phenomena, paralleling aggression and detachment, respectively).

One further sample bias which may help explain the strength of the relationship between the Compliance scale and neuroticism was the use of counseling center clients. Approximately one-quarter to one-third of the sample subjects were persons undergoing counseling. Many of these persons were clinically classified as neurotic before

they were asked to participate in the study. Persons who voluntarily seek counseling at a community counseling center would very likely be more compliant than the general population or those who would not seek such services. The lack of identifying information precludes investigation of this possibility.

Problems other than those related to sample bias may also have contributed to the outcome of this study. The noted weakness of the Detachment scale may be related to the difficulty in defining this particular character type. Horney herself indicated that the Detached types were the most difficult to define since only a limited number of tendencies intrinsic to them could be formulated. Individual variations in the Detached types are greater in that, in contrast to the other two types whose trends are directed toward goals, the Detached types' goals are negative--to not be involved, to not need others, to not be influenced, and so forth.³ Detachment scale items for the scale in this study were more difficult to write because Horney's writings about the detached mode were more sparse and less definitive than the other two modes. Thus the Detached scale was initially composed of fewer items. After scale refinement, only 21 items remained in the D scale compared to 32 items for both the A and C scales. (Only 19 of the D scale items attained item-total correlations over .30.) Therefore, the Detached character type may require further study in order to refine the D scale to a level which would justify further use. Further definition

³Horney, Our Inner Conflicts, p. 81.

of characteristics of the Detached type may have to come from other sources than Horney's writings. The schizoid personality described in psychiatric literature,⁴ for instance, appears to have many characteristics similar to Horney's Detached type. Study of syndromes or categories such as this may be helpful in studying the Detached type.

Conclusions

Although the results of this study cannot be interpreted as conclusively supporting or refuting the three major Horneyan constructs under investigation, certain conclusions can be drawn.

1. A three-scale inventory based on Horney's three neurotic character styles was developed to a high level of reliability. Support was found for the Compliance scale and the Aggressive scale. Adequate validation of the Detachment scale will require further study.

2. The results of the regression analysis suggests that the EPI-N scale may reflect a unifactorial concept of neurosis similar to Horney's Compliant type.

3. Factorial analysis procedures lent empirical support to a multifactorial concept of neurosis. The Compliant and Aggressive scales were strongly supported by the three-factor rotation. The Detached scale was lent some support but not enough to conclude that it is valid in its present form.

⁴Committee on Nomenclature and Statistics, Diagnostic and Statistical Manual of Mental Disorders (Washington, D.C.: American Psychiatric Association, 1968), p. 42.

4. Horney's earlier concept of ten neurotic needs was partially supported by the ten-factor rotation. (Eight factors appeared related to six of the ten needs.)

Implications

A number of implications for future research were suggested by the results of this study.

1. The content of the criterion variable used in this study, the Neuroticism scale from the Eysenck Personality Inventory, appeared to be highly related to traits associated with the compliant type. Therefore, some other criteria for distinguishing neurosis should be employed. Clinical judgment alone or used in conjunction with other methods such as self-report checklists might be useful in distinguishing subjects who appear to be neurotic and similar to any one of Horney's constructs.

2. A second implication for future studies concerns the use of volunteer subjects. In order to counterbalance possible effects of volunteerism which may strongly correlate with the compliant type, pools of "captive" subjects should be included in the sample.

3. The Detached scale is the one most in need of further study and refinement. Two separate modes of exploration are suggested by the results of this study: (1) continued generation and refinement of scale items based on exploration of characteristics of persons such as those falling within the schizoid personality category; (2) extensive testing of the scale by administering it to samples suspected of containing large numbers of individuals with Detachment

characteristics, such as groups of engineering or computer science students or professionals.

4. The factorial analyses suggest lengthening the D scale by selecting items which do not appear to mix with the A scale items. Such items could be used as a basis for exploring domains which are suggested by their content for other related item content.

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APPENDICES

APPENDIX A

INVENTORY OF CURRENT STATUS

INVENTORY OF CURRENT STATUS

USE

ANSWER SHEET

Copyright applied for, 1975
Gilbert W. Schmidt
William W. Farquhar
East Lansing, Michigan

Directions:

Please answer the following statements as honestly as you can. The statements were designed to measure how you view yourself and life. Try to indicate your beliefs - not what you think you should respond.

Work quickly, not spending too much time on any one item. There are no right or wrong answers to these questions. Only your judgements are important.

Read each statement. If it is true or mostly true as applied to you blacken the space under T. If the statement is false or mostly false, blacken the space under F in pencil. Try to answer all the statements.

Example: People should save money.

1.

	T	F				
	☒		B	C	D	E

This person marked the space under T for True indicating that, in their opinion, saving money is important.

Turn the page and begin.

	<u>T</u>	<u>F</u>
1. I am afraid of using a knife or anything very sharp or pointed.	A	B
2. Most of the time I feel blue.	A	B
3. I worry over money and business.	A	B
4. Do you have dizzy spells?	A	B
5. I dream frequently about things that are best kept to myself.	A	B
6. I have difficulty in starting to do things.	A	B
7. I have had attacks in which I could not control my movements or speech but in which I knew what was going on around me.	A	B
8. Do you ever get short of breath without having done heavy work?	A	B
9. I often feel as if things were not real.	A	B
10. Life is a strain for me much of the time.	A	B
11. I get all the sympathy I should.	A	B
12. I have had blank spells in which my activities were interrupted and I did not know what was going on around me.	A	B
13. I like seafood.	A	B
14. My memory seems to be all right.	A	B
15. My sex life is satisfactory.	A	B
16. My table manners are not quite as good at home as when I am out in company.	A	B
17. My family does not like the work I have chosen (or intend to choose) for my life work.	A	B
18. Most of the time I would rather sit and daydream than do anything else.	A	B
19. I have used alcohol excessively.	A	B
20. I prefer to pass by school friends or people I know but have not seen for a long time, unless they speak to me first.	A	B

	<u>T</u>	<u>F</u>
21. Do you often think of your past?	A	B
22. I cannot understand what I read as well as I used to.	A	B
23. I have more trouble concentrating than other people seem to have.	A	B
24. I have never been in trouble with the law.	A	B
25. Do you often get butterflies in your stomach before an important occasion?	A	B
26. I do not often notice my ears ringing or buzzing.	A	B
27. I am sure I am being talked about.	A	B
28. I have had no difficulty in keeping my balance in walking.	A	B
29. I have little or no trouble with my muscles twitching or jumping.	A	B
30. At times I hear so well it bothers me.	A	B
31. I liked school.	A	B
32. Do you get very bad headaches?	A	B
33. Once a week or oftener I become very excited.	A	B
34. I do many things which I regret afterwards.	A	B
35. The things that some of my family have done have frightened me.	A	B
36. I am afraid of losing my mind.	A	B
37. I wish I were not bothered by thoughts about sex.	A	B
38. My hardest battles are with myself.	A	B
39. Have you often lost sleep over your worries?	A	B
40. At times I have a strong urge to do something harmful or shocking.	A	B
41. Sometimes without any reason or even when things are going wrong, I feel excitedly happy "on top of the world."	A	B

	<u>T</u>	<u>F</u>
42. Are you touchy about some things?	A	B
43. I have never been in love with anyone.	A	B
44. I believe I am being plotted against.	A	B
45. My daily life is full of things that keep me interested.	A	B
46. Once a week or oftener I feel suddenly hot all over, without apparent cause.	A	B
47. I believe that my home life is as pleasant as that of most people I know.	A	B
48. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.	A	B
49. My speech is the same as always (not faster or slower, or slurring; no hoarseness).	A	B
50. Once in a while I laugh at a dirty joke.	A	B
51. I find it hard to keep my mind on a task or job.	A	B
52. I like to visit places where I have never been before.	A	B
53. Have you often felt listless and tired for no good reason?	A	B
54. Once in a while I think of things too bad to talk about.	A	B
55. I have periods in which I feel unusually cheerful without any special reason.	A	B
56. I hear strange things when I am alone.	A	B
57. Everything tastes the same.	A	B
58. I am against giving money to beggars.	A	B
59. There was very little love and companionship in my family compared to other homes.	A	B
60. My daily life is full of things that keep me interested.	A	B

	<u>T</u>	<u>F</u>
61. Do you often feel fed up?	A	B
62. I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going".	A	B
63. I am so touchy on some subjects that I can't talk about them.	A	B
64. I feel I have often been punished without cause.	A	B
65. I have been quite independent and free from family rule.	A	B
66. People say insulting and vulgar things about me.	A	B
67. If I could get into a movie without paying and be sure I was not seen I would probably do it.	A	B
68. These days I find it hard to not give up hope of amounting to something.	A	B
69. I get angry sometimes.	A	B
70. Have you often got a restless feeling that you want something to do, but do not know what?	A	B
71. My people treat me more like a child than a grown-up.	A	B
72. Much of the time I feel as if I have done something wrong or evil.	A	B
73. Once in a while I put off until tomorrow what I ought to do today.	A	B
74. I am sure I get a raw deal from life.	A	B
75. At times my thoughts have raced ahead faster than I could speak them.	A	B
76. My parents have often objected to the kind of people I went around with.	A	B
77. My way of doing things is apt to be misunderstood by others.	A	B
78. If people had not had it in for me I would have been much more successful.	A	B

	<u>T</u>	<u>F</u>
79. Sometimes I enjoy hurting persons I love.	A	B
80. My conduct is largely controlled by the customs of those about me.	A	B
81. Sometimes my voice leaves me or changes even though I have no cold.	A	B
82. I am always disgusted with the law when a criminal is freed through the arguments of a smart lawyer.	A	B
83. I loved my mother.	A	B
84. I refuse to play some games because I am not good at them.	A	B
85. Do you sometimes get so restless that you cannot sit long in a chair?	A	B
86. In school I was sometimes sent to the principal for cutting up.	A	B
87. Do you worry too long after an embarrassing experience?	A	B
88. I am easily downed in an argument.	A	B
89. I have had very peculiar and strange experiences.	A	B
90. Does your mind often wander when you are trying to attend closely to something?	A	B
91. I would enjoy eating at seafood restaurants.	A	B
92. I do not read every editorial in the newspaper every day.	A	B
93. Many of my dreams are about sex matters.	A	B
94. There is something wrong with my mind.	A	B
95. Almost every day something happens to frighten me.	A	B
96. Do you find it hard to fall asleep at bedtime?	A	B
97. My father was a good man.	A	B
98. I have been afraid of things or people that I knew could not hurt me.	A	B

	<u>T</u>	<u>F</u>
99. I do not always tell the truth.	A	B
100. I enjoy riding a bicycle.	A	B
101. What others think of me does not bother me.	A	B
102. Even when I am with people I feel lonely much of the time.	A	B
103. I cannot keep my mind on one thing.	A	B
104. Peculiar odors come to me at times.	A	B
105. At times I have fits of laughing or crying that I cannot control.	A	B
106. I wish I were not so shy.	A	B
107. Do you ever suffer from nerves?	A	B
108. My relatives are nearly all in sympathy with me.	A	B
109. I have never been paralyzed or had any unusual weakness of any of my muscles.	A	B
110. At times I have very much wanted to leave home.	A	B
111. I like to talk about sex.	A	B
112. I enjoy the woods.	A	B
113. Sometimes at elections I vote for men about whom I know very little.	A	B
114. My mother was a good woman.	A	B
115. I like to know some important people because it makes me feel important.	A	B
116. I believe I am a condemned person.	A	B
117. I would like to own a bicycle.	A	B
118. I don't seem to care what happens to me.	A	B
119. I have strange and peculiar thoughts.	A	B
120. I do not like everyone I know.	A	B

	<u>T</u>	<u>F</u>
121. I have never been in trouble because of my sex behavior.	A	B
122. Are you often "lost in thought"?	A	B
123. Once in a while I think of things too bad to talk about.	A	B
124. I seem to make friends about as quickly as others do.	A	B
125. Do you often get into a jam because you do things without thinking?	A	B
126. Most of the time I wish I were dead.	A	B
127. Someone has it in for me.	A	B
128. I would rather win than lose in a game.	A	B
129. When you get annoyed, do you need someone friendly to talk to about it?	A	B
130. I have been disappointed in love.	A	B
131. Do you ever get nervous in places like elevators, trains or tunnels?	A	B
132. When in a group of people, I have trouble thinking of the right things to talk about.	A	B
133. Do you sometimes sulk?	A	B
134. I have periods of such great restlessness that I cannot sit long in a chair.	A	B
135. I have not lived the right kind of life.	A	B
136. I am worried about sex matters.	A	B
137. I have very few quarrels with members of my family.	A	B
138. At one or more times in my life I felt that someone was making me do things by hypnotizing me.	A	B
139. No one seems to understand me.	A	B
140. Do you sometimes feel happy, sometimes sad, without any real reason.	A	B

	<u>T</u>	<u>F</u>
141. I find it hard to make talk when I meet new people.	A	B
142. I have had periods in which I carried on activities without knowing later what I had been doing.	A	B
143. I like nature study.	A	B
144. I enjoy children.	A	B
145. During one period when I was a youngster I engaged in petty thievery.	A	B
146. I like to travel.	A	B
147. Are you moody?	A	B
148. I do not mind being made fun of.	A	B
149. My hands have not become clumsy or awkward.	A	B
150. I loved my father.	A	B
151. I am neither gaining nor losing weight.	A	B
152. I am happy most of the time.	A	B
153. I enjoy going to travel movies.	A	B
154. Do you often make up your mind too late?	A	B
155. Sometimes when I am not feeling well I am cross.	A	B
156. At times I feel like swearing.	A	B
157. Do you often feel self-conscious when you are with superiors?	A	B
158. I know who is responsible for most of my troubles.	A	B
159. I have numbness in one or more regions of my skin.	A	B
160. I dislike having people about me.	A	B
161. Once in a while I feel hate toward members of my family whom I usually love.	A	B

	<u>T</u>	<u>F</u>
162. I gossip a little at times.	A	B
163. I have very few fears compared to my friends.	A	B
164. My parents and family find more fault with me than they should.	A	B
165. I wish I could be as happy as others seem to be.	A	B

APPENDIX B

INVENTORY OF ADJUSTMENT STYLES

INVENTORY OF ADJUSTMENT STYLES

Copyright applied for 1975
Gilbert W. Schmidt
William W. Farquhar
East Lansing, Michigan

Please rate the following statements as honestly as you can. The statements were designed to measure how you view yourself and life. Try to indicate your beliefs - not what you think you should respond.

Work quickly, not spending too much time on any one item. There are no right or wrong answers to these questions. Only your judgements are important.

Example: 1. People should save money.

	Always	Sometimes	Seldom	Never
☒	2	3	4	

This person marked the space under always indicating that, in their opinion, saving money is always important.

Turn the page and begin. If a statement or a word is not clear ask the person administering the inventory to help you.

	Always	Sometimes	Seldom	Never
1. Everything can be solved by the power of reason.	1	2	3	4
2. Intelligence should rule over the emotions.	1	2	3	4
3. I am realistic.	1	2	3	4
4. I would rather subordinate myself to someone than to create friction with them.	1	2	3	4
5. I believe might makes right.	1	2	3	4
6. Everyone should have someone in their life whose happiness means as much as their own.	1	2	3	4
7. I show fear.	1	2	3	4
8. I am sensitive to the needs of others.	1	2	3	4
9. There is little pleasure in work, only in achievement.	1	2	3	4
10. My emotions are the enemy within me.	1	2	3	4
11. My peace of mind is preserved by keeping distance from others.	1	2	3	4
12. I have no need to prove my superiority by competing with others.	1	2	3	4
13. I am stronger than others.	1	2	3	4
14. It is necessary for me to feel needed by others.	1	2	3	4
15. I resent being bossed.	1	2	3	4
16. To me feelings are sloppy sentimentality that get in the way of winning.	1	2	3	4
17. Being able to understand one's personal problem is sufficient to deal with it.	1	2	3	4
18. I take pride in excelling over others.	1	2	3	4
19. Most people are stronger emotionally than I am.	1	2	3	4
20. I like to know I belong.	1	2	3	4
21. Many people care for others and not just themselves.	1	2	3	4
22. Too many people are out for themselves and don't really care for others.	1	2	3	4

	<i>Always</i>	<i>Sometimes</i>	<i>Seldom</i>	<i>Nv.</i>
23. What others think of me is very important.	1	2	3	4
24. It is foolish to believe that you can really influence what happens in our society.	1	2	3	4
25. People who do things for others are really doing it for themselves.	1	2	3	4
26. What other people think about me doesn't really matter.	1	2	3	4
27. Those who are alone have failed with others.	1	2	3	4
28. The most important part of any game is winning.	1	2	3	4
29. People do not have to have a selfish nature in order to help someone else.	1	2	3	4
30. I like to share my experiences with others.	1	2	3	4
31. I clench my teeth alot.	1	2	3	4
32. It is important for me to face and overcome all fear.	1	2	3	4
33. I enjoy long close relationships.	1	2	3	4
34. I have as much ability as most others.	1	2	3	4
35. No one really understands me.	1	2	3	4
36. Losing need not be taken too seriously.	1	2	3	4
37. I prefer eating alone to eating with others.	1	2	3	4
38. I question my worth as a person.	1	2	3	4
39. It is best to tell your superiors what you really think, even if it's something they do not want to hear.	1	2	3	4
40. I prefer relationships with persons with whom I can become closely involved.	1	2	3	4
41. I prefer to leave the limelight to others.	1	2	3	4
42. When I have something to say, I say it.	1	2	3	4
43. I do not feel a need to outsmart others.	1	2	3	4

	<i>Always</i>	<i>Sometimes</i>	<i>Seldom</i>	<i>Never</i>
44. Anyone who is sensitive can recognize my inner strengths.	1	2	3	4
45. I am grateful when someone does me a favor.	1	2	3	4
46. I believe life is a continual struggle of everybody against everybody else.	1	2	3	4
47. I do not feel involved with others.	1	2	3	4
48. My feelings are a drawback to efficiently moving toward a goal.	1	2	3	4
49. I believe that it's up to others to look out for themselves.	1	2	3	4
50. I do not mind discussing my personal life with persons close to me.	1	2	3	4
51. Success is more dependent on luck than on any real ability or effort.	1	2	3	4
52. I worry about whether other people like to be with me.	1	2	3	4
53. I can't take it if someone criticizes me.	1	2	3	4
54. I do what I think others expect of me even when it's not what I really want to do.	1	2	3	4
55. I grind my teeth at night.	1	2	3	4
56. Although I have problems that I would like to get rid of, I do not want to basically change myself.	1	2	3	4
57. I never admit error a mistake unless it is absolutely necessary.	1	2	3	4
58. Others will take advantage of me if they get the chance.	1	2	3	4
59. There is great strength in being alone.	1	2	3	4
60. Only a naive person underestimates the malice and greed of others.	1	2	3	4
61. My relationships with others tend to be superficial.	1	2	3	4
62. I have real inner strength in handling things.	1	2	3	4
63. When someone criticizes me, I feel low and worthless.	1	2	3	4
64. Everyone is out to get everyone else.	1	2	3	4

	Always	Sometimes	Seldom	Never
65. I appraise every situation for chances of controlling it.	1	2	3	4
66. It doesn't matter to me whether new people I meet like me.	1	2	3	4
67. I live too much by other people's standards.	1	2	3	4
68. I never harbor resentment for long.	1	2	3	4
69. Recognition for what I accomplish makes me feel stronger as a person.	1	2	3	4
70. I blame myself rather than others when things go wrong.	1	2	3	4
71. One must guard against dependence on others.	1	2	3	4
72. Doing things only for enjoyment is a waste of time.	1	2	3	4
73. I have a lot in common with most people I meet.	1	2	3	4
74. I enjoy living alone.	1	2	3	4
75. Others should recognize that I am unique without being told.	1	2	3	4
76. It is important to me to have a spouse who is seen as desirable by others.	1	2	3	4
77. I look for dangers and pitfalls in situations where I am involved with others.	1	2	3	4
78. I will go out of my way to prove to others that I am right.	1	2	3	4
79. Independence is of great value in itself, regardless of the situation.	1	2	3	4
80. It is best to never become so attached to someone that they become indispensable to you.	1	2	3	4
81. I feel inferior to most of the people I know.	1	2	3	4
82. Since everyone is out for themselves, I must be best at looking out for myself.	1	2	3	4

	<i>Always</i>	<i>Sometimes</i>	<i>Seldom</i>	<i>Never</i>
83. I do not ask for directions when I am lost.	1	2	3	4
84. I would like to find someone who would tell me how to solve my personal problems.	1	2	3	4
85. It is torture for me to be alone.	1	2	3	4
86. The world is full of friendly people.	1	2	3	4
87. I am able to interpret dreams accurately.	1	2	3	4
88. I enjoy being around people.	1	2	3	4
89. I do not have as intense emotional experiences as others.	1	2	3	4
90. I really don't know who I can count on.	1	2	3	4
91. I feel more and more helpless about what's happening in the world today.	1	2	3	4
92. I ask others for help when I need it.	1	2	3	4
93. I make commitments which I carry through.	1	2	3	4
94. I do everything I can to be a good fighter.	1	2	3	4
95. I am a very unselfish person.	1	2	3	4
96. I fear that becoming involved with others will stifle my creativity.	1	2	3	4
97. I am easy to get along with whether I'm in charge or not.	1	2	3	4
98. I resent it when I have to keep a schedule.	1	2	3	4
99. The little people in the world, like myself, have little chance against the big guys.	1	2	3	4
100. I dislike the use of coercion.	1	2	3	4
101. I am sensitive to control by those around me.	1	2	3	4
102. I am at my best when I have my back to the wall.	1	2	3	4
103. I have a strong need for privacy.	1	2	3	4

	Always	Sometimes	Seldom	Never
104. I am uncertain about what I like and dislike.	1	2	3	4
105. The world is full of hostile people.	1	2	3	4
106. If others get close to me, I fear I might lose my uniqueness.	1	2	3	4
107. People may do things unselfishly for others.	1	2	3	4
108. I do not bear grudges.	1	2	3	4
109. My relationships tend to be short lived and intense.	1	2	3	4
110. I give in easily.	1	2	3	4
111. I am a poor loser.	1	2	3	4
112. I find it difficult to be defiant.	1	2	3	4
113. What I think of myself depends on what others think of me.	1	2	3	4
114. I do not like to give orders.	1	2	3	4
115. The only goal in life is to succeed.	1	2	3	4
116. I am popular with people my own age.	1	2	3	4
117. People are important to me whether they can help me or not.	1	2	3	4
118. Everything will be alright if someone loves me.	1	2	3	4
119. Keeping others at a distance helps me to retain my original thinking.	1	2	3	4
120. It worries me to think that some of the people I know may dislike me.	1	2	3	4
121. Everyone likes a winner.	1	2	3	4
122. I can view what goes on within me quite objectively.	1	2	3	4
123. People are generally trustworthy.	1	2	3	4
124. I dislike competing with others.	1	2	3	4

	<i>Always</i>	<i>Sometimes</i>	<i>Seldom</i>	<i>Never</i>
125. I feel that others do not appreciate how much I do for them.	1	2	3	4
126. I can be anything that I want to be.	1	2	3	4
127. It is important that others approve of me.	1	2	3	4
128. I become discouraged when so many people do things well.	1	2	3	4
129. I express my opinion whether or not others agree with me.	1	2	3	4
130. It is important to me to be recognized for my successes.	1	2	3	4
131. I find displays of affection revolting.	1	2	3	4
132. I prefer to sacrifice my own wishes to please others.	1	2	3	4
133. I can easily forgive others when they behave badly towards me.	1	2	3	4
134. I am uncomfortable about becoming emotionally attached to another person.	1	2	3	4
135. It is important to control those around me.	1	2	3	4
136. The world is geared to the survival of the fittest.	1	2	3	4
137. I dislike conforming to rules and regulations.	1	2	3	4
138. I do not take others advice, wven when it may be what I want to do.	1	2	3	4
139. I have little influence on the fact that this world is run by the few people in power.	1	2	3	4
140. I like to be protected and guided by another person.	1	2	3	4
141. I would rather give in than quarrel with someone.	1	2	3	4
142. I tend to be what people expect me to be.	1	2	3	4
143. I am an aggressive person.	1	2	3	4
144. I must strive for my independence in every situation.	1	2	3	4

	<i>Always</i>	<i>Sometimes</i>	<i>Seldom</i>	<i>Never</i>
145. I take defeat lightly.	1	2	3	4
146. I feel uneasy or afraid when I am enclosed in a small space like an elevator.	1	2	3	4
147. Work is only a means to an end.	1	2	3	4
148. Being in love adds the greatest zest to my life.	1	2	3	4
149. I trust other people to treat me fairly.	1	2	3	4
150. I would rather do things with others than by myself.	1	2	3	4
151. I can count on other people to help me when I need them.	1	2	3	4
152. I dislike being critical of others.	1	2	3	4
153. I feel weak and helpless.	1	2	3	4
154. Even when others question my worth as a person, I do not.	1	2	3	4
155. I am very considerate of other people.	1	2	3	4
156. It is important to appear tough regardless of how you might really feel.	1	2	3	4
157. I resent people giving me advice.	1	2	3	4
158. Everyone approaches situations with an eye for what's in it for them.	1	2	3	4
159. No price is too high for my success.	1	2	3	4
160. If I didn't have such bad luck, I'd accomplish much more than I have.	1	2	3	4
161. I feel I am as capable as most of the people I know.	1	2	3	4
162. I feel I am as worthwhile as my friends.	1	2	3	4
163. I worry about how well I get along with other people.	1	2	3	4
164. I want other people to like me.	1	2	3	4
165. I like to know that I am not too different from others.	1	2	3	4
166. People are tools to be manipulated.	1	2	3	4
167. I do not like to depend on others.	1	2	3	4

168. I despise softness in others.	1	2	3	4
169. I change my opinions to please others.	1	2	3	4
170. I feel weak and worthless around arrogant people.	1	2	3	4
171. I would never go to a movie alone.	1	2	3	4
172. I am quite different from my friends and acquaintances.	1	2	3	4
173. I feel there are many things that I can do well.	1	2	3	4
174. It is important to me to be popular with persons my own age.	1	2	3	4

APPENDIX C

SCALE RELIABILITY ANALYSES

APPENDIX D

SCALE ITEM POOLS

Item Pool for Horney's Three
Major Construct Scales

Moving Toward or Compliance Scale

- * 4. I would rather subordinate myself to someone than to create friction with them.
- 6. Everyone should have someone in their life whose happiness means as much as their own.
- 8. I am sensitive to the needs of others.
- * 14. It is necessary for me to feel needed by others.
- * 19. Most people are stronger emotionally than I am.
- * 20. I like to know I belong.
- * 23. What others think of me is very important.
- 27. Those who are alone have failed with others.
- 34. I have as much ability as most others.
- * 38. I question my worth as a person.
- 41. I prefer to leave the limelight to others.
- 45. I am grateful when someone does me a favor.
- * 52. I worry about whether other people like to be with me.
- * 53. I can't take it if someone criticizes me.
- * 54. I do what I think others expect of me even when it's not what I really want to do.
- * 63. When someone criticizes me I feel low and worthless.
- 68. I never harbor resentment for long.
- 70. I blame myself rather than others when things go wrong.
- 73. I have a lot in common with most people I meet.
- * 81. I feel inferior to most of the people I know.
- * 84. I would like to find someone who would tell me how to solve my personal problems.
- * 85. It is torture for me to be alone.

91. I feel more and more helpless about what's happening in the world today.
95. I am a very unselfish person.
108. I do not bear grudges.
- * 110. I give in easily.
- * 112. I find it difficult to be defiant.
- * 113. What I think of myself depends on what others think of me.
114. I do not like to give orders.
116. I am popular with people my own age.
- * 118. Everything will be alright if someone loves me.
- * 120. It worries me to think that some of the people I know may dislike me.
123. People are generally trustworthy.
124. I dislike competing with others.
125. I feel that others do not appreciate how much I do for them.
- * 127. It is important that others approve of me.
- * 128. I become discouraged when so many people do things well.
- * 132. I prefer to sacrifice my own wishes to please others.
133. I can easily forgive others when they behave badly towards me.
- * 140. I like to be protected and guided by another person.
- * 141. I would rather give in than quarrel with another someone.
- * 142. I tend to be what people expect me to be.
148. Being in love adds the greatest zest to my life.
- * 150. I would rather do things with others than by myself.
- * 152. I dislike being critical of others.
- * 153. I feel weak and helpless.

155. I am very considerate of other people.
161. I feel I am as worthwhile as my friends.
- * 163. I worry about how well I get along with other people.
- * 164. I want other people to like me.
- * 165. I like to know that I am not too different from others.
169. I change my opinions to please others.
- * 170. I feel weak and worthless around arrogant people.
171. I would never go to a movie alone.
173. I feel there are many things that I can do well.
- * 174. It is important to me to be popular with persons my own age.

*Items remaining in final scale.

129
Detachment Scale

1. Everything can be solved by the power of reason.
2. Intelligence should rule over the emotion.
- * 10. My emotions are the enemy within me.
- * 11. My peace of mind is preserved by keeping distance from others.
12. I have no need to prove my superiority by competing with others.
15. I resent being bossed.
17. Being able to understand one's personal problems is sufficient to deal with it.
26. What other people think of me doesn't really matter.
30. I like to share my experiences with others.
33. I enjoy long close relationships.
- * 35. No one really understands me.
- * 37. I prefer eating alone to eating with others.
40. I prefer relationships with persons with whom I can become closely involved.
44. Anyone who is sensitive can recognize my inner strengths.
- * 47. I do not feel involved with others.
50. I do not mind discussing my personal life with persons close to me.
56. Although I have problems that I would like to get rid of, I do not want to basically change myself.
59. There is great strength in being alone.
- * 61. My relationships with others tend to be superficial.
62. I have real inner strength in handling things.
66. It doesn't matter to me whether new people I meet like me.
- * 67. I live too much by other peoples standards.

- * 71. One must guard against dependence on others.
- 74. I enjoy living alone.
- 75. Others should recognize that I am unique without being told.
- * 79. Independence is of great value in itself, regardless of the situation.
- * 80. It is best to never become so attached to someone that they become indispensable to you.
- 83. I do not ask for directions when I am lost.
- 87. I am able to interpret dreams accurately.
- 88. I enjoy being around others.
- 89. I do not have as intense emotional experiences as others.
- 92. I ask others for help when I need it.
- 93. I make commitments which I carry through.
- * 96. I fear that becoming involved with others will stifle my creativity.
- 100. I dislike the use of coercion.
- * 101. I am sensitive to control by those around me.
- * 103. I have a strong need for privacy.
- 104. I am uncertain about what I like and dislike.
- * 106. If others get close to me, I fear I might lose my uniqueness.
- 109. My relationships tend to be short lived and intense.
- * 119. Keeping others at a distance helps me to retain my original thinking.
- 122. I can view what goes on within me quite objectively.
- * 134. I am uncomfortable about becoming emotionally attached to another person.
- * 137. I dislike conforming to rules and regulations.

- * 138. I do not take others advice even when it may be what I want to do.
- * 144. I must strive for my independence in every situation.
- 146. I feel uneasy or afraid when I am enclosed in a small space like an elevator.
- 154. Even when others question my worth as a person, I do not.
- * 157. I resent people giving me advice.
- 167. I do not like to depend on others.
- 172. I am quite different from my friends and acquaintances.

132
Aggression Scale

- 3. I am realistic.
- 5. I believe might makes right.
- 7. I show fear.
- * 9. There is little pleasure in work, only in achievement.
- 13. I am stronger than others.
- * 16. To me, feelings are sloppy sentimentality that get in the way of winning.
- 18. I take pride in excelling over others.
- 21. Many people care for others and not just for themselves.
- * 22. Too many people are out for themselves and don't really care for others.
- * 24. It is foolish to believe that you can really influence what happens in our society.
- 25. People who do things for others are really doing it for themselves.
- * 28. The most important part of any game is winning.
- 29. People do not have to have a selfish nature in order to help someone else.
- 31. I clench my teeth alot.
- 32. It is important for me to face and overcome all fear.
- 36. Losing need not be taken too seriously.
- 39. It is best to tell your superiors what you really think, even if it's something they do not want to hear.
- 42. When I have something to say, I say it.
- 43. I do not feel a need to outsmart others.
- * 46. I believe life is a continual struggle of everybody against everybody else.
- 48. My feelings are a drawback to efficiently moving toward a goal.
- * 49. I believe it is up to others to look out for themselves.

- * 51. Success is more dependent on luck than on any reability or effort.
- 55. I grind my teeth at night.
- * 57. I never admit a mistake unless it is absolutely necessary.
- * 58. Others will take advantage of me if they get the chance.
- * 60. Only a naive person under estimates the malice and greed of others.
- * 64. Everyone is out to get everyone else.
- * 65. I appraise every situation for chances of controlling it.
- 69. Recognition for what I accomplish makes me feel stronger as a person.
- * 72. Doing things only for enjoyment is a waste of time.
- 76. It is important to me to have a spouse who is seen as desirable by others.
- * 77. I look for dangers and pitfalls in situations where I am involved with others.
- * 78. I will go out of my way to prove to others that I am right.
- * 82. Since everyone is out for themselves, I must be best at looking out for myself.
- 86. The world is full of friendly people.
- * 90. I really don't know who I can count on.
- 94. I do everything I can to be a good fighter.
- 97. I am easy to get along with whether I am in charge or not.
- * 99. The little people in the world, like myself, have little chance against the big guys.
- 102. I am at my best when I have my back to the wall.
- * 105. The world is full of hostile people.
- 107. People may do things unselfishly for others.

- * 111. I am a poor loser.
- 115. The only goal in life is to succeed.
- 117. People are important to me whether they can help me or not.
- * 121. Everyone likes a winner.
- 126. I can be anything I want to be.
- 129. I express my opinion whether or not others agree with me.
- 130. It is important to me to be recognized for my successes.
- * 131. I find displays of affecting revolting.
- * 135. It is important to control those around me.
- * 136. The world is geared to the survival of the fittest.
- 139. I have little influence on the fact that this world is run by the few people in power.
- 143. I am an aggressive person.
- 145. I take defeat lightly.
- * 147. Work is only a means to an end.
- 149. I trust other people to treat me fairly.
- 151. I can count on other people to help me when I need them.
- * 156. It is important to appear tough regardless of how you might really feel.
- * 158. Everyone approaches situations with an eye for what's in it for them.
- * 159. No price is too high for my success.
- * 160. If I didn't have such bad luck, I'd accomplish much more than I have.
- * 166. People are tools to be manipulated.
- * 168. I despise softness in others.

APPENDIX E

OCCUPATIONAL CATEGORIES

BY SEX

APPENDIX E

OCCUPATIONAL CATEGORIES BY SEX

Occupational Categories with Specific Subject Occupations

- oc 1. Professional Managerial--high independent responsibility includes mental health director, plant manager, school principal, private practice dentist, nursing home director, local federal program director.
- oc 2. Professional Managerial--includes pharmacist; professional social workers; registered nurse; special education teacher; elementary, high school and junior college instructors; news reporter; branch bank manager.
- oc 3. Semi-Professional, Small Business--includes dental assistant, teacher's aide, designer, business persons, market manager, mental health paraprofessional, insurance agent, account representative, police officer, loan officer.
- oc 4. Skilled Labor--includes secretary, beautician, key-punch operator, abstract clerk, electrician, carpenter, auto mechanic, tailor, musician, truck driver, police dispatcher.
- oc 5. Semi-Skilled Labor--machine operator, typist, parts manager, salesman, insert operator.
- oc 6. Unskilled Labor--retail store clerk, hotel clerk, postal carrier, factor worker, farm hand.
- oc 7. Housewife.
- oc 8. Student--high school, college, trade or business school.
- oc 9. Unemployed.
- oc 0. Unknown--subject omitted response.

Occupational Categories by Sex.

Occupational Category	Female		Male		Total	
	n	%	n	%	n	%
oc 1	2	1.0	3	3.3	5	1.7
oc 2	34	16.7	23	25.0	57	19.4
oc 3	16	7.9	20	21.7	36	12.2
oc 4	27	13.3	15	16.3	42	14.3
oc 5	22	10.8	8	8.7	30	10.2
oc 6	14	6.9	11	12.0	25	8.5
oc 7	62	30.5	0	0.0	62	20.8
oc 8	15	7.4	7	7.6	22	7.5
oc 9	8	4.0	1	1.1	9	3.1
oc 0	3	1.5	4	4.3	7	2.3
Totals	203	100.0	92	100.0	295	100.0

APPENDIX F

ITEM-BY-ITEM CORRELATION MATRIX

[illegible]

[illegible]

1170	1174	119	116	122	124	128	146	149	151
09507	1195	024	16303	07269	13416	14273	23271	39007	19976
09508	1196	025	16304	07270	13417	14274	23272	39008	19977
09509	1197	026	16305	07271	13418	14275	23273	39009	19978
09510	1198	027	16306	07272	13419	14276	23274	39010	19979
09511	1199	028	16307	07273	13420	14277	23275	39011	19980
09512	1200	029	16308	07274	13421	14278	23276	39012	19981
09513	1201	030	16309	07275	13422	14279	23277	39013	19982
09514	1202	031	16310	07276	13423	14280	23278	39014	19983
09515	1203	032	16311	07277	13424	14281	23279	39015	19984
09516	1204	033	16312	07278	13425	14282	23280	39016	19985
09517	1205	034	16313	07279	13426	14283	23281	39017	19986
09518	1206	035	16314	07280	13427	14284	23282	39018	19987
09519	1207	036	16315	07281	13428	14285	23283	39019	19988
09520	1208	037	16316	07282	13429	14286	23284	39020	19989
09521	1209	038	16317	07283	13430	14287	23285	39021	19990
09522	1210	039	16318	07284	13431	14288	23286	39022	19991
09523	1211	040	16319	07285	13432	14289	23287	39023	19992
09524	1212	041	16320	07286	13433	14290	23288	39024	19993
09525	1213	042	16321	07287	13434	14291	23289	39025	19994
09526	1214	043	16322	07288	13435	14292	23290	39026	19995
09527	1215	044	16323	07289	13436	14293	23291	39027	19996
09528	1216	045	16324	07290	13437	14294	23292	39028	19997
09529	1217	046	16325	07291	13438	14295	23293	39029	19998
09530	1218	047	16326	07292	13439	14296	23294	39030	19999
09531	1219	048	16327	07293	13440	14297	23295	39031	20000
09532	1220	049	16328	07294	13441	14298	23296	39032	20001
09533	1221	050	16329	07295	13442	14299	23297	39033	20002
09534	1222	051	16330	07296	13443	14300	23298	39034	20003
09535	1223	052	16331	07297	13444	14301	23299	39035	20004
09536	1224	053	16332	07298	13445	14302	23300	39036	20005
09537	1225	054	16333	07299	13446	14303	23301	39037	20006
09538	1226	055	16334	07300	13447	14304	23302	39038	20007
09539	1227	056	16335	07301	13448	14305	23303	39039	20008
09540	1228	057	16336	07302	13449	14306	23304	39040	20009
09541	1229	058	16337	07303	13450	14307	23305	39041	20010
09542	1230	059	16338	07304	13451	14308	23306	39042	20011
09543	1231	060	16339	07305	13452	14309	23307	39043	20012
09544	1232	061	16340	07306	13453	14310	23308	39044	20013
09545	1233	062	16341	07307	13454	14311	23309	39045	20014
09546	1234	063	16342	07308	13455	14312	23310	39046	20015
09547	1235	064	16343	07309	13456	14313	23311	39047	20016
09548	1236	065	16344	07310	13457	14314	23312	39048	20017
09549	1237	066	16345	07311	13458	14315	23313	39049	20018
09550	1238	067	16346	07312	13459	14316	23314	39050	20019
09551	1239	068	16347	07313	13460	14317	23315	39051	20020
09552	1240	069	16348	07314	13461	14318	23316	39052	20021
09553	1241	070	16349	07315	13462	14319	23317	39053	20022
09554	1242	071	16350	07316	13463	14320	23318	39054	20023
09555	1243	072	16351	07317	13464	14321	23319	39055	20024
09556	1244	073	16352	07318	13465	14322	23320	39056	20025
09557	1245	074	16353	07319	13466	14323	23321	39057	20026
09558	1246	075	16354	07320	13467	14324	23322	39058	20027
09559	1247	076	16355	07321	13468	14325	23323	39059	20028
09560	1248	077	16356	07322	13469	14326	23324	39060	20029
09561	1249	078	16357	07323	13470	14327	23325	39061	20030
09562	1250	079	16358	07324	13471	14328	23326	39062	20031
09563	1251	080	16359	07325	13472	14329	23327	39063	20032
09564	1252	081	16360	07326	13473	14330	23328	39064	20033
09565	1253	082	16361	07327	13474	14331	23329	39065	20034
09566	1254	083	16362	07328	13475	14332	23330	39066	20035
09567	1255	084	16363	07329	13476	14333	23331	39067	20036
09568	1256	085	16364	07330	13477	14334	23332	39068	20037
09569	1257	086	16365	07331	13478	14335	23333	39069	20038
09570	1258	087	16366	07332	13479	14336	23334	39070	20039
09571	1259	088	16367	07333	13480	14337	23335	39071	20040
09572	1260	089	16368	07334	13481	14338	23336	39072	20041
09573	1261	090	16369	07335	13482	14339	23337	39073	20042
09574	1262	091	16370	07336	13483	14340	23338	39074	20043
09575	1263	092	16371	07337	13484	14341	23339	39075	20044
09576	1264	093	16372	07338	13485	14342	23340	39076	20045
09577	1265	094	16373	07339	13486	14343	23341	39077	20046
09578	1266	095	16374	07340	13487	14344	23342	39078	20047
09579	1267	096	16375	07341	13488	14345	23343	39079	20048
09580	1268	097	16376	07342	13489	14346	23344	39080	20049
09581	1269	098	16377	07343	13490	14347	23345	39081	20050
09582	1270	099	16378	07344	13491	14348	23346	39082	20051
09583	1271	100	16379	07345	13492	14349	23347	39083	20052
09584	1272	101	16380	07346	13493	14350	23348	39084	20053
09585	1273	102	16381	07347	13494	14351	23349	39085	20054
09586	1274	103	16382	07348	13495	14352	23350	39086	20055
09587	1275	104	16383	07349	13496	14353	23351	39087	20056
09588	1276	105	16384	07350	13497	14354	23352	39088	20057
09589	1277	106	16385	07351	13498	14355	23353	39089	20058
09590	1278	107	16386	07352	13499	14356	23354	39090	20059
09591	1279	108	16387	07353	13500	14357	23355	39091	20060
09592	1280	109	16388	07354	13501	14358	23356	39092	20061
09593	1281	110	16389	07355	13502	14359	23357	39093	20062
09594	1282	111	16390	07356	13503	14360	23358	39094	20063
09595	1283	112	16391	07357	13504	14361	23359	39095	20064
09596	1284	113	16392	07358	13505	14362	23360	39096	20065
09597	1285	114	16393	07359	13506	14363	23361	39097	20066
09598	1286	115	16394	07360	13507	14364	23362	39098	20067
09599	1287	116	16395	07361	13508	14365	23363	39099	20068
09600	1288	117	16396	07362	13509	14366	23364	39100	20069
09601	1289	118	16397	07363	13510	14367	23365	39101	20070
09602	1290	119	16398	07364	13511	14368	23366	39102	20071
09603	1291	120	16399	07365	13512	14369	23367	39103	20072
09604	1292	121	16400	07366	13513	14370	23368	39104	20073
09605	1293	122	16401	07367	13514	14371	23369	39105	20074
09606	1294	123	16402	07368	13515	14372	23370	39106	20075
09607	1295	124	16403	07369	13516	14373	23371	39107	20076
09608	1296	125	16404	07370	13517	14374	23372	39108	20077
09609	1297	126	16405	07371	13518	14375	23373	39109	20078
09610	1298	127	16406	07372	13519	14376	23374	39110	20079
09611	1299	128	16407	07373	13520	14377	23375	39111	20080
09612	1300	129	16408	07374	13521	14378	23376	39112	20081
09613	1301	130	16409	07375	13522	14379	23377	39113	20082
09614	1302	131	16410	07376	13523	14380	23378	39114	20083
09615	1303	132	16411	07377	13524	14381	23379	39115	20084
09616	1304	133	16412	07378	13525	14382	23380	39116	20085
09617	1305	134	16413	07379	13526	14383	23381	39117	20086
09618	1306	135	16414	07380	13527	14384	23382	39118	20087
09619	1307	136	16415	07381	13528	14385	23383	39119	20088
09620	1308	137	16416	07382	13529	14386	23384	39120	20089
09621	1309	138	16417	07383	13530	14387	23385	39121	20090
09622	1310	139	16418	07384	13531	14388	23386	39122	20091
09623	1311	140	16419	07385	13532	14389	23387	39123	20092
09624	1312	141	16420	07386	13533	14390	23388	39124	20093
09625	1313	142	16421	07387	13534	14391	23389		

1199
1105
1111
1121
1131
1135
1146
1147
1156
1158

APPENDIX G

ITEM-BY-FACTOR MATRICES

VARIMAX ROTATED FACTOR MATRIX
AFTER ROTATION WITH KAISER NORMALIZATION

	37 (F3-)	FACTOR 1	FACTOR 2	FACTOR 3	
14	.25179	-.37642	-.42145	164	.66992
114	-.16528	-.49614	.10419	165	.38006
119	.28738	-.40383	.00605	172	.22055
120	-.10614	.51015	-.14661	177	.47911
123	-.05553	-.55874	.21492	178	.32058
138	.16716	-.39425	-.30389	182	.55548
152	.06555	-.57388	-.32667	190	.42463
153	.29426	-.30889	-.33941	199	.38605
154	.28355	-.41281	-.00372	47847	.47847
163	.15816	-.56675	.19740	1105	.26494
181	.31018	-.57743	.12997	1111	.11556
184	.29638	-.35226	.11464	1121	.16468
185	.12057	-.35228	.12943	1131	.13644
1110	.27141	.3512	-.06345	1131	.1661
1112	.04268	-.39404	-.18744	1135	.36635
1113	.14570	-.52422	.20428	1135	.03178
1118	.09895	-.43035	-.24188	1136	.11802
1120	.10557	-.65346	.19899	1147	.24912
1127	.04062	-.57476	.17763	45987	.45987
1128	.25648	-.28183	.35722	1156	.04344
1132	.12121	.29218	.36509	1158	.51797
1140	.12032	-.54064	-.19262	1163	.11963
1141	.15873	-.42647	.38690	46096	.46096
1142	.24142	-.34053	-.07942	53135	.53135
1150	.11062	-.33585	-.17564	1160	.16696
1152	.10821	-.34394	-.23888	48715	.48715
1153	.25882	-.43263	.18354	47301	.47301
1163	.21614	-.58774	.22409		
1164	.02263	-.4538	-.09267		
1165	.13895	-.93506	-.05756		
1170	.12355	-.39870	.15258		
1174	.06259	-.41454	.26262		
19	.38368	.17502	-.06615		
116	.29080	.01316	.29851		
122	.42012	.17300	-.17976		
124	.33057	.22138	.13310		
128	.42063	-.08777	.25897		
146	.63431	.13347	.05934		
149	.33810	.06286	-.02771		
151	.27784	.11859	.15512		
157	.42935	.03608	.09041		
158	.50282	.09411	.06869		
160	.40737	.03419	.04999		

164	.66992	.12475	.07804
165	.38006	-.11029	.10176
172	.22055	.15283	.23985
177	.47911	.12642	.10414
178	.32058	-.01041	.29102
182	.55548	.12452	-.00447
190	.42463	.20282	.21135
199	.38605	.35796	-.07690
47847	.47847	.26494	-.11137
1105	.11556	.16468	.48582
1111	.13644	.13644	.03327
1121	.36635	.1661	.29224
1131	.03178	-.03178	.28754
1135	.11802	.11802	.05162
1136	.24912	.24912	.08091
1147	.04344	.04344	.25881
45987	.51797	.11963	-.00797
1156	.46096	.00745	.05438
1158	.53135	.16696	.14277
1160	.48715	-.07165	.28647
1163	.47301	-.10807	.29806

VARIMAX ROTATED FACTOR MATRIX
AFTER ROTATION WITH KAISER NORMALIZATION

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
14	.17518	.16946	.18893	-.54619
114	-.10037	.13781	-.15652	.716
119	.24832	.31211	.28032	-.13761
120	-.02956	.01664	-.61282	-.14526
123	-.00215	.25628	-.58602	.13669
138	.04953	.67840	.08653	.6001
152	-.02420	.64973	.26281	.6168
153	.22459	.17931	.09709	.14559
154	.25433	.29221	.28842	-.13851
163	.04216	.60782	.24772	-.6633
181	.19359	.63433	.25115	-.14177
184	.21004	.42919	.11506	-.792
185	.09519	.40413	.24450	.0915
1110	.17301	.56625	.10201	-.24687
1112	-.02714	.24306	.121617	-.31788
1113	.07835	.19519	.30674	.0296
1118	.12129	.15805	.14823	-.10921
1120	.04066	.54428	.42761	.2721
1127	.09590	.25619	.60073	.9382
1128	.17722	.46768	.15555	.16043
1132	.08656	.05598	.20200	-.42678
1140	.01001	.10947	.26016	.39835
1141	.06731	.22478	.20688	.53246
1142	.27255	.1079	.35088	.12776
1150	-.04367	.03365	.41657	.6942
1152	-.11514	.09332	.30785	-.27844
1153	.10671	.62030	.35343	.9617
1163	.14440	.55292	.34879	.0785
1164	.12433	.11735	.60264	.7377
1165	.18232	.16609	.55031	-.12644
1170	.03328	.45223	.15567	.4427
1174	.02664	.13911	.52797	.2440
119	.40218	.07174	.17198	.10737
116	.30861	.15001	.01291	.25552
122	.40737	.04378	.11331	-.24184
124	.27895	.31279	.0594	.0499
128	.44891	.08151	.36005	.24914
146	.57749	.28946	-.63457	.9351
149	.35551	.03133	.27184	.4813
151	.17984	.35556	.11411	.3663
157	.42565	.12614	-.03229	.334
158	.43746	.27289	-.7902	.6484
160	.40477	.10133	-.0106	.3093

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
164	-.6136	-.29637	-.04452	-.6796
165	-.46016	-.1687	.2383	.1603
170	.1772	.2974	.2141	.129
177	-.49819	.1896	.11524	.4599
178	-.42504	-.0272	.13195	-.33715
182	-.55219	.14172	.21151	-.785
190	-.36128	.28383	.02805	-.12888
199	-.32523	.3074	.17637	-.23241
1105	-.39745	-.34471	.04591	-.18349
1111	.12731	.29583	.13298	-.40006
1121	-.34929	.03766	.18639	.2105
1131	-.30553	-.35259	-.06456	.14522
1135	-.46375	.16602	-.2521	.23091
1136	-.57754	.03014	.19668	.4232
1147	-.26603	-.31471	.07983	-.5326
1156	-.47136	.18213	.01967	.19384
1158	-.51354	.13471	.06729	.7864
1159	-.44672	.12057	-.05092	.00596
1160	-.46614	-.34556	-.02072	.1591
1166	-.38019	.29221	-.24034	.16272
1168	-.45531	.18549	-.17379	.22864
110	.16233	-.35947	.13317	.10382
111	.19795	.16316	-.02973	.15187
135	.3318	-.34412	-.03770	.3299
137	.1294	-.30235	-.24291	.15652
147	.30813	-.41092	-.09705	.7453
161	.22441	-.31296	.00521	.19003
167	.1551	-.38259	.29453	.3359
171	.47181	-.02244	.08613	.15403
179	.34506	-.05723	.16427	.15981
180	.33189	.14486	.16951	.3683
196	.46062	.27015	-.12233	.16753
198	.2050	.17052	-.00493	.8797
1101	.07549	.17476	.25523	.24769
1103	.07176	.26684	.11193	.25934
1106	.37977	-.45403	-.17733	.21891
1119	-.47468	.15593	.09347	.11648
1134	-.41474	.21098	-.09864	.11783
1137	.08723	.18968	.09954	-.4853
1138	-.33771	.28299	.05985	.3879
1144	-.39805	-.0327	.19455	-.37576
1157	.12137	.21575	.05741	-.3032

TEN-FACTOR ROTATION

VARIABLE FACTOR MATRIX
AFTER ROTATION WITH KAISER-MERZLIG

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VARIMAX ROTATED FACTOR MATRIX
AFTER ROTATION WITH KAISER NORMALIZATION

25-FACTOR ROTATION

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9	FACTOR 10
14	.10051	.52559	.10939	-.52728	.07498	-.01881	.100373	-.03289	.02531	-.14878
114	.16343	-.06955	.23352	.00188	.14822	-.03670	.102686	.11432	.35838	-.04365
119	.2227	.08353	.18648	.12369	.03810	.01446	.102890	.03261	.03962	-.0592
120	.08862	-.11017	-.14868	.77903	.04857	-.16165	.105622	.11516	.09282	-.3676
123	.18481	-.02532	-.58373	.14881	.07995	.00208	.100810	.16145	.19126	-.0821
138	.57333	.13364	.10193	.10308	.00458	.05668	.105059	.16129	.05079	-.0847
152	.69518	.10771	.19762	.16144	.02768	.00191	.100054	.10054	.01469	-.0596
153	.35423	.21798	.16467	.13819	.04973	.04704	.131202	.02860	.00059	-.0883
154	.19255	.20933	.17854	.11296	.04783	.11859	.111835	.06799	.05977	-.1374
163	.63340	.02844	.11021	.24351	.02745	.07047	.114866	.10625	.07882	-.0644
181	.56982	.14068	.08080	.21043	.03447	.01772	.102808	.13269	.12582	-.0257
184	.42204	.29516	.10186	.14560	.04823	.22817	.100894	.07111	.24068	.0293
185	.24251	.09368	.10630	.00150	.05639	.12864	.104881	.03110	.07722	-.1188
111	.25009	.23171	.10485	-.33534	.14177	.02972	.109811	.08011	.15846	.18919
111	.48887	-.05697	.13729	.55254	.07774	.03612	.104215	.03327	.03327	-.1827
111	.10645	.05293	.11363	.10943	-.01881	.17613	.101197	.02891	.29716	-.0458
112	.64370	.11636	.10442	.23229	.05833	.05914	.11668	.06016	.03338	-.0534
112	.26183	-.00979	-.16757	.10905	.02377	.05378	.11954	.12420	.12049	-.10047
112	-.40691	.16105	-.09120	.14846	.13885	.04842	.13506	.06537	.11917	.1448
113	.09019	-.00044	.03078	.32123	.07881	-.06291	.109109	.07776	.01340	.18229
114	.24022	.08029	.10124	.53073	-.04750	.18264	.109359	.12869	.00433	-.09128
1141	.08363	.06873	.12768	.75551	.02177	.10232	.105104	.03744	.01890	-.02095
1142	.08057	.10819	.12197	.25027	.03425	.10238	-.05875	.03709	.05307	.2857
1150	.16538	-.09468	.11778	.3416	.07134	.17831	-.105855	.01182	.12056	-.04993
1152	.13413	-.03335	.08189	.18822	.00923	.04187	.101265	.03161	.02389	.67992
1153	.38286	.23942	.12319	.18727	.05728	.20778	.110304	.05240	.00053	-.0349
1163	-.59203	.15972	.15889	.4762	.09833	-.02553	.04215	.13252	.05831	-.0821
1164	.09959	.08314	-.17376	.10219	.06421	.07777	.101372	.13669	.04054	-.0882
1165	.23849	.19994	-.51788	.13227	.06419	-.00159	.103168	.06394	.04098	-.21376
1170	.39255	.04574	.10989	.26053	-.14682	.11925	.00438	.20356	.06264	.13781
1174	.26001	-.08429	.05037	.12997	.00967	.19384	.114188	.14703	.06309	.06309
19	.10329	.11548	.21575	.13614	.06237	.37078	.109977	.15791	.16810	-.16569
116	.08286	.06146	.13564	-.6953	.05859	.16659	-.02153	.28166	.03001	-.12877
122	.04327	.12339	.08377	.0492	.03417	.10798	.05772	.00002	.00002	-.09989
124	.16986	.16426	.02503	.6001	.03114	.10125	.101029	.18466	.11249	-.08336
128	.01461	.36927	.02563	.12591	.17319	.19161	.101648	.44634	.16092	-.02347
146	.15974	-.64874	.04004	-.11187	.11081	.05877	.107008	.16034	.01981	-.02176
149	.00493	.22914	.11764	-.2595	.10242	.02684	.05199	.06123	.02468	-.0278
151	.1639	-.30847	-.04463	-.6008	-.12818	.32156	.115099	.15194	.04185	-.02883
157	.00366	.25031	.10482	.11839	.12823	-.12199	.40612	.26883	.07398	-.18332
158	.20889	-.33993	.33719	.6305	-.02158	.16682	.103707	.00379	.14747	-.08833

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9	FACTOR 10
160	.13778	-.39953	.07382	-.1838	.07176	.21329	.12442	.09558	.15873	-.02774
164	.14861	-.62074	-.03450	-.2666	.13006	.13323	.11310	.18352	.33489	-.02339
165	-.01662	.20484	-.02910	.5258	.00042	-.08378	.08079	.19770	.03031	-.02333
172	.22024	.06886	-.10185	.1717	.10030	-.05366	.12774	.36398	.03223	-.00947
177	.15828	.26297	.11834	.6433	.13754	-.02098	.10224	.03336	.16803	.00843
178	.01054	.14551	.11577	.13337	.30171	.13237	.02607	.10101	.03050	.29726
182	.12645	-.62048	.08676	.0348	.11594	.10336	.115930	.00562	.09798	-.03421
190	.16407	.17581	-.13329	.10733	.04727	.02222	.124653	.00533	.08031	.01577
199	.15118	.28272	.10569	.20566	.14457	.07745	.00563	.05458	.06040	-.02140
1105	.25429	-.43726	-.00014	.8705	.13880	.08117	.10189	.11552	.11039	.10255
1111	-.39780	.08469	.28688	-.25618	.24473	.20667	.119629	.19782	.00867	.00994
1121	.09799	.14131	.10987	-.18009	.02224	.10108	.11381	.01042	.06184	-.08324
1131	.13715	.19757	-.12438	.8777	.00298	-.08203	.117691	.52143	.05207	.16303
1135	.07633	.28439	-.01741	.3913	.13298	.01362	-.135971	.22358	.44178	.24412
1136	-.07373	.1336	.10755	.0691	.15412	-.38459	.18265	.05754	.44178	.18084
1147	.17368	.25394	.10820	.1403	.14826	-.68219	.10550	.13784	.00823	-.01084
1156	.09088	-.37253	.05190	-.1133	.22838	.00661	.102129	.20751	.04878	.34999
1158	.06171	-.46598	.04430	.0718	-.02158	.17618	.12957	.01342	.11119	.04506
1159	.04816	-.47422	-.00666	.1755	.05558	-.11005	.07415	.15333	.02529	-.02903
1160	.12471	-.59238	.08568	.10300	-.04285	.09618	.124374	.19829	.00809	.04431
1166	.19592	-.48050	-.14263	.01998	.07162	.04469	.105125	.29429	.09861	.22891
1168	.00911	.29668	-.101619	.03991	-.00929	.01318	.07755	.57729	.05336	.17883
110	.24386	.08779	.45823	.04217	-.01804	.04968	.107396	.06189	.17177	.110495
111	.07165	.13431	.02067	-.5238	-.11274	.00638	-.01335	.03422	.76303	-.02784
135	.22494	.13439	-.104719	-.7045	.04098	.03442	.112803	.12166	.01166	-.01298
137	.18831	.03566	-.06528	.0114	.09466	.09227	.103533	.05353	.14014	.106774
147	.18366	.21993	.12276	.23806	-.01605	.08007	.107311	.23534	.03018	.13614
161	.17238	.10365	.10326	-.1420	.07195	.01677	.11131	.03225	.62132	.31190
167	.39911	.05277	.12339	.5211	-.04560	-.09053	-.01862	.09526	.07494	-.18450
171	.00823	.09341	-.10769	.9837	.12586	-.00514	-.102849	.11861	.09826	.14887
179	.01427	.12111	.04784	.00523	.174122	.08244	-.00019	.01950	.12148	.05296
180	.11205	.01898	.06128	.6812	.42854	.07197	.01172	.12332	.12332	.32898
196	.03977	.52138	.02517	.1417	.06836	-.17212	.27915	.22836	.12315	-.08438
198	.00501	.07532	-.07468	.2919	.02554	.04835	.11672	.00778	.05871	-.05436
1101	.12498	-.01498	.03259	.1413	.08321	.01709	.10290	.13335	.06379	-.03255
1103	.08829	.01181	.17258	.4297	.27253	.05402	.12394	.20070	.28978	.10997
1106	.35912	.43313	-.13147	.5674	.09849	-.04745	.08658	.27832	.02241	.13430
1119	.06422	.19323	-.02360	.9002	.21837	-.00747	.124124	.19828	.46767	-.04196
1134	.09023	.23796	-.11724	.1732	.13793	-.03381	.12373	.17828	.08241	.10910
1137	.09928	-.04175	-.00289	.29351	.24889	.20418	.23389	.08774	.03443	.13181
1138	.02534	.16743	-.42668	.17483	.00719	.15768	.23458	.13545	.01443	-.02458
1144	.02037	.2327	.58803	.14222	.00381	.00381	.11351	.11559	.11844	-.08833
1157	.06739	-.01347	.05368	-.11536	.01525	.05007	.473781	.00210	.06987	-.08928

	FACTOR 11	FACTOR 12	FACTOR 13	FACTOR 14	FACTOR 15	FACTOR 16	FACTOR 17	FACTOR 18	FACTOR 19	FACTOR 20
14	.0456	.5369	.0217	.3417	.1392	.10536	.03049	.01370	.2307	.1160
114	-.09521	.34117	.1609	-.8968	.1606	-.53525	.404012	.03014	.03202	.09626
119	.19386	-.06703	.59250	.6248	.1606	.03516	.13592	.05256	.06136	.09590
120	.02388	-.00574	.15651	.4161	.24217	.22722	.05591	.02556	.13504	.08635
123	.01864	.04939	.13006	-.13223	-.03250	-.44218	.02166	.15467	.05480	.02525
138	.18973	-.11277	.16746	-.27524	.13277	.11337	.03145	.16890	.02220	.07869
152	.12548	.07959	.02003	.1066	.13204	.15261	.04622	.07185	.12314	.15113
153	.17548	-.16624	.10266	.12887	.28145	-.05596	.14067	.02186	.05451	.14785
154	.26377	-.04209	.16372	.6576	.21725	.06197	.09966	.00169	.09016	.02335
163	.07893	.02827	.07693	.13566	-.04448	-.09512	.05083	.15881	.06154	.07101
181	.10564	.12272	.21254	.1347	-.00710	-.01202	.11334	.01881	.03259	.11339
184	.00704	.00501	.15690	.4512	-.05058	.01243	.09406	.03122	.05033	.00707
185	.10451	.08386	.13244	.13244	-.10364	-.07614	.02331	.06029	.02260	.07274
1110	.08824	-.11209	.12601	-.1697	.02735	.18610	.03149	.11405	.20742	.06836
1112	-.04552	-.05868	-.12332	.4025	.06500	.09669	-.04519	.14888	.08836	.02344
1113	.13846	.08616	.01712	-.10968	.02248	.18625	.03295	.05346	.08987	.14099
1118	.05573	.59807	.19502	.9120	.24150	.17911	.107006	.03399	.07836	.08577
1120	.01737	.10217	.06637	.4382	-.04821	.03750	.03060	.01154	.09849	.16928
1127	-.02945	-.02945	.00854	.03596	.07101	.15285	.00610	.02929	.02790	.08245
1128	-.15483	.00635	.73307	.4578	-.00811	.18660	.05177	.06037	.14085	.31242
1132	.05975	.68843	.13345	.3844	.02814	-.01841	.03787	.04827	.06710	.07734
1140	.05433	.17584	.13792	.05296	.15126	.15226	.125768	.01554	.12778	.04245
1141	.00631	.09496	-.03157	.17258	-.03189	-.04189	.04802	.04316	.05097	.13122
1142	.02715	.05992	.04339	.18538	.03272	.08124	.11305	.02506	.03489	.00393
1150	.08549	.09584	.01243	.58035	-.04316	.14602	.10275	.00970	.07695	.02235
1152	-.00801	.22336	-.03114	-.12303	.01828	.01563	.04608	.08335	.00295	.04635
1153	.09498	-.01765	.13067	.23727	.16784	.30541	.03956	.00508	.03206	.05596
1163	.11401	.02809	.00275	.06147	.09988	.28906	.135563	.07906	.06935	.19199
1164	.06153	.07437	-.02921	.05894	.06069	-.08962	.103267	.08792	.00466	.10573
1165	-.02526	.16248	.26125	-.03142	.07737	-.08866	.117665	.04537	.16274	.09867
1170	.12528	.07506	.26820	-.1357	.08971	.03432	.00413	.12501	.13769	.07322
1174	-.21149	.17532	.03933	.16774	.01922	.08603	.110092	.07730	.06249	.08551
119	.39496	-.05261	.16516	.24341	-.09321	.10258	.121870	.16673	.00537	.03254
116	.04666	.03151	.15515	.6597	.08546	-.05215	.02722	.08434	.00063	.04451
122	.05236	-.05742	.17689	.3096	.06169	-.00951	.02300	.26591	.07532	.07418
124	.02327	.01699	.04025	-.01963	-.01626	.02999	.03636	.26591	.70141	.10589
128	-.00991	-.09547	.28221	.11371	.14330	-.09357	.04636	.10073	.05740	.12813
146	.11013	-.11272	.12400	.4537	.07769	-.00368	.03454	.05493	.15082	.09819
149	.10647	.08030	.02882	.7247	.07710	-.02318	.40562	.10332	.02594	.09575
151	-.15941	.07402	.07402	.6795	-.00625	.01448	.15095	.16862	.24972	.18050
157	.06743	.03798	.03798	-.8256	-.07297	-.17424	.13337	.26427	.04865	.01352
158	-.06647	-.06773	-.06773	.12975	.01485	-.16068	.09945	.38762	.05126	.13768
160	.07839	.09079	-.03302	.9599	.14022	.23869	.09049	.04150	.03952	.09873

1113	.02837	-.14356	-.3466	.2333	.14253
1118	.10304	-.03813	-.00172	-.03899	.08987
1120	.03695	.03313	-.00172	.6521	.03856
1127	.10207	-.02691	-.00963	.2706	.12115
1128	.00357	.07771	.05298	-.2091	.07250
1132	.02955	.02533	.08086	.2757	.15783
1140	.13707	-.17356	.06191	-.1161	.04081
1141	.04148	.03517	-.07223	.0824	.06995
1142	.13673	-.05566	-.04766	.6448	.02714
1150	.21989	-.15652	-.02290	.18949	.13960
1152	.11447	-.12159	-.11956	-.08916	.02809
1153	.11014	.16952	-.08693	.4795	.00442
1163	.204654	.01082	.12787	.12964	.18116
1164	.201518	-.01453	.09273	.0913	.04637
1165	.09174	.25147	.02879	.4454	.02803
1170	.210863	.41262	.05634	-.2059	.03888
1174	.213614	.05814	-.18612	.2339	.04986
119	.21347	-.01737	.08949	.6283	.01396
116	.04268	.03326	-.08775	.3587	.07812
122	.10458	.04769	.65943	.11664	.14319
124	.03592	-.18777	.10832	.8518	.00304
128	.15531	-.05603	-.11435	.12663	.07198
146	.20774	.02267	.20835	.4452	.03293
149	.20330	-.01529	.13142	.1062	.70844
151	.204336	-.13980	.00625	.6593	.04806
157	.06421	-.15660	.06271	.9010	.07854
158	.06503	-.07568	.16465	.5909	.31696
160	.06516	.13282	.23494	-.27302	.20098
164	.07038	-.07947	.22187	.6628	.06116
165	.214094	.04278	-.12088	.4954	-.13411
172	.13151	-.25947	.01342	.13241	.04379
177	.203405	.02511	.12251	.13181	.19129
178	.14305	-.04838	.10570	.919	.06180
182	.00011	.08797	.05281	.4697	.24254
180	.212186	.08439	.08743	.1476	.03724
199	.212928	.04529	.7397	.926	.19330
1105	.001768	.04763	.45269	.7875	.05616
1111	.31602	-.02877	-.04631	.9579	.06146
1121	.03394	.15402	.6123	.5254	-.01556
1131	.04111	.19945	-.13738	.820	.01883
1135	.06207	-.05563	.14876	.8574	.03843
1136	.03435	.02168	.03695	.19603	.12342
1147	.02098	.03541	.09461	.448	.01763
1156	.208406	.09586	-.16369	.4368	.03176
1158	.238385	.09154	.09600	.18492	.03843
1159	.05637	-.0542	-.13519	.6410	.02164
1160	.11328	.13743	-.13511	.0426	.07335

1166	.01168	-.05706	-.15619	.17591	.02446
1168	.04485	.09758	.11033	.083	.08414
110	.60245	.06015	.13425	.13845	.08136
111	.05891	.04073	.00325	.5492	.00004
135	.01592	.03196	.02527	.11909	.06180
137	.04319	-.05615	-.02341	-.15414	.09604
147	.37607	.01700	.03465	-.28677	.08458
161	.04557	.04702	-.05491	-.2744	.20444
167	.04824	-.1198	.10390	.28368	.12473
171	.05956	.00641	.10461	-.0469	.06468
179	.05914	.03471	.09109	-.152	.13219
180	.01948	.28469	.03265	.15042	.03929
196	.00457	.15316	-.10539	.2512	.08346
198	.07732	.0029	-.02732	.1703	.06044
1101	.10048	.01399	.03472	.9487	.05292
1103	.01181	.09192	-.03807	.13209	.00700
1104	.0074	.12826	.06479	.6987	.03821
1119	.00079	.14633	.00438	.5454	.19610
1134	.06610	.64539	.03402	.9475	.00095
1137	.17477	-.02087	-.07049	.4630	.09352
1138	.04457	.06221	.14368	.1435	.00024
1144	.14502	.06063	-.19778	.0632	.14898
1157	.04061	.07866	-.03614	-.2916	.01059

VARIABLE	EST COMMUNALITY	FACTOR	EIGENVALUE	PCT OF VAR	CUM PCT
I14	1.0000	1	13.07003	85.4	15.4
I14	1.0000	2	9.11418	6.0	21.4
I19	1.0000	3	2.78244	3.3	24.7
I20	1.0000	4	2.62758	3.1	27.8
I23	1.0000	5	2.40352	2.6	30.6
I38	1.0000	6	2.21967	2.6	33.2
I52	1.0000	7	1.86785	2.2	35.4
I53	1.0000	8	1.76793	2.1	37.5
I54	1.0000	9	1.71343	2.0	39.5
I63	1.0000	1	1.63882	1.9	41.4
I81	1.0000	11	1.59586	1.9	43.3
I84	1.0000	12	1.55618	1.8	45.1
I85	1.0000	13	1.51777	1.8	46.9
I110	1.0000	14	1.44446	1.7	48.6
I112	1.0000	15	1.38688	1.6	50.2
I113	1.0000	16	1.30764	1.5	51.8
I118	1.0000	17	1.25430	1.5	53.3
I120	1.0000	18	1.22974	1.4	54.7
I127	1.0000	19	1.18573	1.4	56.1
I128	1.0000	2	1.18008	1.4	57.5
I132	1.0000	21	1.14126	1.3	58.8
I140	1.0000	22	1.11538	1.3	60.1
I141	1.0000	23	1.09914	1.3	61.4
I142	1.0000	24	1.07329	1.3	62.7
I150	1.0000	25	1.03128	1.2	63.9
I152	1.0000	26	.99695	1.2	65.1
I153	1.0000	27	.96411	1.1	66.2
I163	1.0000	28	.95589	1.1	67.3
I164	1.0000	29	.94594	1.1	68.5
I165	1.0000	3	.91073	1.1	69.5
I170	1.0000	31	.88021	1.0	70.6
I174	1.0000	32	.86767	1.0	71.6
I19	1.0000	33	.86079	1.0	72.6
I16	1.0000	34	.83551	1.0	73.6
I22	1.0000	35	.81660	.9	74.5
I24	1.0000	36	.79122	.9	75.5
I28	1.0000	37	.76424	.9	76.4

APPENDIX H

FACTOR ROTATION COMPARISONS

MICHIGAN STATE UNIV. LIBRARIES



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