Dissertations, Theses, and Masters Projects   Theses, Dissertations, & Master Projects

2011

An analysis of the validity of the Enneagram

Sara Ann Scott

William & Mary - School of Education

Follow this and additional works at: https://scholarworks.wm.edu/etd

Part of the Educational Assessment, Evaluation, and Research Commons, Personality and Social Contexts Commons, Quantitative Psychology Commons, and the Student Counseling and Personnel Services Commons

AN ANALYSIS OF THE VALIDITY OF THE ENNEAGRAM

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

by

Sara Ann Scott

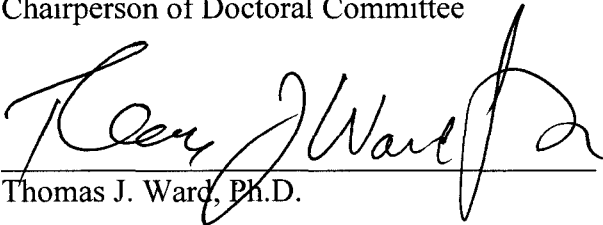April 2011

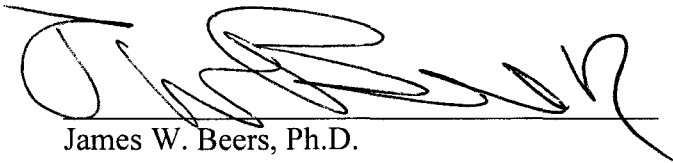# AN ANALYSIS OF THE VALIDITY OF THE ENNEAGRAM

by

Sara Ann Scott

Approved May 2011 by

Charles F. Gressard, Ph.D.
Chairperson of Doctoral Committee

Thomas J. Ward, Ph.D.

James W. Beers, Ph.D.

Table of Contents

List of Tables

An Analysis of the Validity of the Enneagram

Abstract

The Enneagram, a personality typology, was validated by this factor analytic study which produced the first and only empirical evidence of nine personality types as proposed by the Enneagram typology. The RHETI, Version 2.5 was re-written to conform to accepted standards of scale instrument design. The revised instrument, a six-point Likert scale, was piloted as an internet web-based survey. Results were used to refine the instrument which was used to collect data for the main study, again via an internet web-based survey. Data from 6401 subjects were collected with the final 124-item instrument. The data were split in half to allow validation of the results of factor analysis of the first half of the dataset by application of the refined factor solution to the second half of the dataset. The data factored into nine distinct factors each of which was a clear description of one of the nine Enneagram personality types. Values of Cronbach's coefficient alpha for each of the factors established that each was an internally consistent measure. Internal consistency of the factors was not affected by whether or not subjects had prior knowledge of their Enneagram types, nor by their gender. Although six of the nine factors were further reducible to two factors, in all six cases those factors were sufficiently correlated for the factors to be interpreted as single factors. These results from the first half of the dataset were upheld with the second half, providing strong support for the Enneagram typology.

Scott, Sara Ann, Ph.D.
The College of William and Mary in Virginia, 2011. 190 pp.
Chairperson: Professor Charles F. Gressard

AN ANALYSIS OF THE VALIDITY OF THE ENNEAGRAM

CHAPTER ONE

Introduction

The observation that there are different types of personalities is ancient and probably universal. Attempts through the ages to explain and predict the development of different types of personality traits have tended to be unsuccessful, although some assessments have been successful at categorizing types of people for some specific uses (Aiken, 1989; DeRaad & Perugini, 2002).

Personality typing has multiple uses. It is used clinically, in schools, governments, businesses, career counseling, and by individuals for their personal psychological and spiritual growth. Multiple personality assessments have been constructed in various ways and are currently in use (Aiken, 1989; Archer & Smith, 2008; DeRaad & Perugini, 2002; Weiner & Greene, 2008). In the counseling professions, personality typing models provide vocabularies and descriptions that normalize and affirm differences among people. To say that someone is a "type" implies that they belong to a recognized group of like individuals, which, in turn, implies that their "type" is acceptable, and contained within a community. Myers (1995, p. xiv) reports the satisfaction among clients hearing their types described: "What a relief to find out that it is all right to be me!"

The Enneagram is one system of personality typing that has become popular and used by hundreds of thousands of people since it was introduced to Western culture in the 1970's. It was developed without scientific, empirical evidence (Jervis, 2007), and yet it has been reported by medical and mental health professionals to be not just an accurate and reliable method of "holding up the mirror" to individuals, but one that directs them toward a process of personal growth as well (Daniels & Price, 2009; Maitri, 2000;

Palmer, 1988; Riso, 1996; Riso & Hudson, 1999). For the counseling relationship, it is reported to be a valuable tool for understanding clients (Palmer, 1988) and to assist clients in "personality transformations" and with cognitive and behavioral changes (Tapp & Engebretson, 2010). Johnson & Mutschelknaus (2001) report on using the Enneagram to develop self-knowledge and empathy among tutors at a university writing center. Maitri (2000), Riso & Hudson (1999) and Rohr & Ebert (2001) are among the many authors that believe that study of the Enneagram promotes intellectual and spiritual growth. It has been used in the field of consulting to promote self-understanding among teachers (Luckock, 2007). Levine (1995, 1999) advocates its use among educators, to customize teaching for different types of learners. Several major U.S. businesses have used it in various ways (Riso & Hudson, 2003). Riso & Hudson (2003) further report that they have worked with people from every inhabited continent, and from every major religious background, and they remain impressed by the universality and practicality of the Enneagram.

Ultimately, the Enneagram typology is to be used to "set the personality aside" (Palmer, 1988, p. 5). Setting the personality aside has been the aim of Western psychotherapy since its inception and of Eastern and Western contemplative traditions for thousands of years, with the premise that by taking a perspective on your habits, you can overcome them (Deikman, 1982; Kegan, 1982). If the Enneagram typology is universal, as claimed, then promotion of its understanding and clarification of its types holds out the promise of being a valuable contribution to people of all cultures.

Statement of the Problem

In spite of its international popularity, the Enneagram typology has not been empirically validated. There are various (and all speculative) accounts of its origins (Jervis, 2007; Riso & Hudson, 1999). It was, reportedly, developed as a synthesis of ancient schema of the universe (Ichazo, 1991; Jervis, 2007; Riso & Hudson, 1999), religious notions from the Middle Ages of seven deadly sins (with a couple of "passions" added on later, to achieve the required nine types) (Levine, 1999, p. 12; Riso & Hudson, 1999), and modern interviews of individuals whom the interviewers trusted as having superior self-understanding and/or who "knew" their Enneagram types (Jervis, 2007). The fact that it shares some points in common with traditional, religious systems of Judaism, Christianity, and Sufism (Levine, 1999; Riso & Hudson, 1999), each with its own similar diagram, seems to have an appeal, and to lend an appearance of validation. The system was re-synthesized in the early 1970's by Naranjo, to align the Enneagram typology with modern diagnostic criteria of mental illnesses (Levine, 1999, p. 12). According to one of Naranjo's students, Sandra Maitri (2000), he led the first Enneagram study group in the United States. Maitri (2000) reports on Naranjo's development of the Enneagram typology as a synthesis of his own psychiatric training, the ideas of his teacher, Ichazo, and those of Fritz Perls and Karen Horney.

Regardless of the Enneagram's roots, the system remains unproved, except in the minds of a growing number of enthusiasts who insist that because many individuals recognize themselves in the type descriptions, the types are true (Daniels & Price, 2009; Palmer, 1988). Riso & Hudson (2000, p. viii) make the following point:

...for better or for worse, there is not (and never has been) any such thing as a universally agreed-on interpretation of the Enneagram – there is only an evolving understanding of this extraordinary map of the soul. Likewise, there are only individual Enneagram teachers who approach the nine types from a wide variety of viewpoints, backgrounds, biases, and levels of understanding.

Research on the Enneagram typology has focused on validation of instruments to measure it rather than validate what have been assumed to be valid constructs of already defined nine personality types. Efforts to develop an instrument to diagnose Enneagram types have resulted in instruments that are moderately reliable but which offer minimal support for the Enneagram typology itself. Two studies (Sharp, 1994; Newgent, 2001) included factor analyses of data collected with instruments designed from a theoretical-rational approach. In both cases, they failed to corroborate the nine personality types asserted by the Enneagram theory.

Palmer (1988) and Daniels (2009) endorse what Palmer calls the "narrative tradition," referring to the tradition of identifying one's own type by listening to the narratives of representatives of "known" types. They believe that in this way a person will recognize themselves in others through exposure that is rich in information not confined to written descriptions but which includes non-verbal facial expressions, gestures, tone, direction of attention, etc. However, Gamard's 1986 study warns against confidence that even Enneagram experts are able to recognize a type by observing an interview. Riso (1993) points out that there are contradictions among various published descriptions of the Enneagram which produce confusion. There is no one, authoritative source of information on what constitutes any one of the nine types.

Levine (1999), an advocate of the Enneagram, describes how her personal uses of the typology have been effective, and states that the system has been proved, but does not offer the proofs. In spite of the absence of the Enneagram typology's validation, promoters of the Enneagram make sweeping claims for it. For example, Levine states: "The Enneagram cuts through race, sex, socioeconomic, ethnic, and national differences (p. 5). . . . fully accounting for individual differences" (p. 9). Descriptions by Levine (1999), Palmer (1988; 1995), Riso & Hudson (1999), Rohr & Ebert (2001) of how the Enneagram has been used for personal growth and relationship-building are, implicitly, the "proofs," but these popular standards of proof are mere anecdotes that leave open questions such as: Did subjects, in fact, experience the relevant effects from their studies of the Enneagram that they perceived themselves to have experienced? Was the perceived effectiveness of the Enneagram due to the information it offers, or rather to the process it instigates? I.e., if it has, in fact, been useful, is that because of the specific information it offers about types of personalities, or merely because it prompts individuals to engage in a process of detached observation of themselves?

At the foundation of problems with the Enneagram is the absence of validated descriptions of any of the nine types. We don't know that the nine Enneagram personality types exist; if they do, we do not know what defines each of the nine types. If the nine supposed types do exist as such, we do not know that they comprehensively describe all personality types; might there be ten or more types that, if defined, would more comprehensively describe human personality types? Popular acceptance of the Enneagram typology is largely unquestioning in its use of what emerged 40 years ago as

a curiously fully formed package with broad claims for its ability to describe all possible personalities in detail and to direct personal and spiritual growth.

Purpose of the Study

The purpose of this study was to give the Enneagram typology a shot at proving itself. Specifically, it was to examine the "fit" of the data with the Enneagram model. A scale instrument was developed, administered, and refined in accordance with empirically based principles of scale development, as recommended by Fishman & Galguera (2003), Kline (1993), Pett, Lackey & Sullivan (2003), and Spector (1992). The purpose of the instrument developed for this study was to collect data to be examined by Exploratory Factor Analysis. This would allow the factors that emerged from the factor analyses to be compared to the personality types of the Enneagram.

Factor analyses of Sharp (1994) and Newgent (2001) call into question the hypothetical nine Enneagram types. However, those researchers used instruments that were created not based on theory of scale development and the psychometric properties of which do not lend themselves to factor analysis. For instance, Sharp conducted factor analyses of data collected with the Cohen-Palmer Enneagram Inventory (CPEI), Zinkle's, and Wagner's inventories. The first two of these instruments are comprised of dichotomous-response items. Newgent used the RHETI (Version 2.5), also a dichotomous-response instrument, for her dissertation study. Additionally, the sample size used by Sharp in his study was inadequate for the numbers of variables being factor analyzed.

It was believed that an instrument designed in accordance with theories of scale development might provide a data-driven description of personality types as opposed to the theoretically driven one currently in use. Kline (1993, p. 37) explains that the advantage of factor analytically defined concepts compared to concepts developed through thought or reasoning is that the latter may be of little value. He gives the example of *phlogiston*, which, though ingenious, is not explanatory of anything. As he points out, a factor explains variance and is, therefore, necessarily a useful concept. In summary, even though the Enneagram may be ingenious, that, in itself, does not tell us whether or not it is true.

Importantly, and unique to this study, over half of the data collected are from subjects who had not been previously typed by the Enneagram. Prior studies have predominantly used subjects whose opinions on their types and knowledge of the Enneagram may have biased their responses to support their beliefs and understanding of the Enneagram. Additionally, studies of the Enneagram to date have used demographically restricted samples. This study's pilot (N = 100) was administered to respondents in the United States whose demographics were representative of the United States population in regard to age, race, and gender, and who were Enneagram naïve. The sample for the main part of the study, while not representative of the general world population, did include subjects from 90 countries and/or regions of the world, across seven races, a broad range of ages, and over half of whom were Enneagram naïve.

Research Questions

Does the Enneagram typology accurately and comprehensively describe personality types? If so, what are the distinctive and defining traits of each of the types?

Is there equal consistency of expression of the different types between those who do and those who do not know what types they are? Are the genders equally consistent in their expressions of the different personality types?

CHAPTER TWO

Review of Current Literature

Zinkle (1974) created an instrument for the purpose of providing a reliable and valid way to type people according to Enneagram theory and to determine if the Enneagram typology itself is a valid description of types of personalities. His criteria for typing subjects and for validating the theory were non-statistical, arbitrarily established "cut-off" values of the scores on his instrument. Based on these arbitrary criteria, he typed 52% of subjects and those were with seven of the nine expected types.

Zinkle's study (1974) consisted of piloting, refining, and administering an instrument, analysis of its ability to type subjects, and a validation study in which he used the "known" types of subjects as an external criterion of validity to compare to the scores produced by his instrument. The first iteration of his instrument consisted of 360 true-false items (40 for each type), based on Enneagram theory as Zinkle understood it. He refined it to 225 (25 per type) items through an iterative process: two pilot tests; items of each sub-scales were deleted or added so that means of the sub-scales were approximately equal; pilot administration to 146 subjects. For his analysis of the data from these 146 subjects, Zinkle arbitrarily decided a subject was a type if his highest sub-scale score was 3 or more units greater than his second highest sub-scale score. Discrimination power of each item was calculated as the difference between the percentage of subjects of the type for which the item was supposed to be diagnostic, and the percentage of all other types who endorsed the item. Zinkle retained the 25 items per subscale that were most discriminatory.

Zinkle's final instrument of 225 items was administered to 176 subjects. They were evening college students in southern California, predominantly White, middle class, and between the ages of 21 and 40. They were arbitrarily considered to have been typed by the instrument if their highest sub-scale score was at least 1 standard deviation above the mean of the sample of 146 on whom the instrument was piloted, and at least 2 units greater than the second highest sub-scale score. A type was considered to have been validated if at least 10 subjects were typed as such. Based on these criteria, 52% of subjects were typed and seven of the nine Enneagram types were detected.

For the validation portion of his study, there were 54 subjects who had been previously typed in Enneagram study groups, through a process that involved typings by themselves, the "expert" group leader, and other group members. Most were White, middle class, Catholic seminarians, highly educated males, between the ages of 25 and 35. A respondent was considered to be typed as a particular type by Zinkle's instrument if the score of a sub-scale fell at least 1 standard deviation above the mean for the sample of 146 subjects tested in the pilot study (described above), and was at least 2 units greater than the second highest sub-score. Validity of the instrument was assessed by comparing each typing obtained by it to the typings that had been previously assigned in the subjects' Enneagram study groups. According to these criteria, 56% of subjects were typed the same type as they had been in their Sufi groups. Nine percent were typed differently than they had been by their Sufi groups and 35% were not typed.

The primary limitation of Zinkle's (1974) study was that its criterion of external validity (subjects' "known types"), used for the validation portion of his study was, itself, not validated. Additional limitations were the arbitrary, non-statistical criteria for

deciding if the instrument typed a particular subject and if, overall, a particular type was validated among the sample. His use of dichotomous items restricted the variance of the data collected. Because of these limitations, Zinkle's study allows few conclusions to be drawn about either the validity of his instrument or of the Enneagram typology.

Randall (1979) conducted a study to develop and validate an Enneagram typing instrument. He produced 229 5-point Likert scale items, which he administered to subjects of "known" Enneagram types as well as to those who did not know their types. The instrument had impressive results with those who were familiar with the Enneagram system, but not with Enneagram-naïve subjects.

An original 535 items, written by a student of Naranjo, were culled through an iterative process of item elimination by "known" representatives of each type. It was further refined by administration to 35 subjects of known type (white, middle class, San Francisco Bay area, college students and graduates, ages 19-64, with an average age of 36 years). Items were eliminated if no two Type groups had a difference of mean scores greater than 1. This produced his refined instrument of 229 items, with at least 20 items per subscale. The refined instrument was administered to 92 subjects, again of "known" types (57 subjects, combined with the first group of 35), approximately 10 subjects per type, ages 14-64.

A one-way ANOVA was done and items that had F-values less than or equal to .10 were selected to produce 95 items; t-tests determined that the discriminating power for each pair of subscales was statistically significant. To devise a scoring system, 9 jack-knifed stepwise discriminant functions were done which resulted in scores from the

instrument assigning the same types as what had been previously diagnosed as types to 99.2% of the 92 subjects.

A cross-validation study was conducted with 30 subjects of unknown type with demographics similar to those of the 92 subjects previously administered the test. Of these, the instrument diagnosed 23.3% the same type as an expert subsequently typed them. Allowing for wings to be a "hit", 53.3% were correctly typed.

The primary limitation of Randall's (1979) study, as for Zinkle's (1974), was that the construction of his instrument assumed that representatives of known types were, in fact, representative of their identified types and that they understood their types well enough to identify the items that described them as "types." Further, with only 10 representatives of each type, there was too small a sample to allow confidence that the items they endorsed were descriptive of the population of those types. The criterion of external validity for Randall's instrument was not validated. I.e. no inter-rater reliability analysis of the experts that diagnosed the types of the first group or the cross-validation group was done. Additionally, a threat to the instrument's internal validity was posed by the bias introduced by subjects' familiarity with the theory underlying the test construction; it might be expected that they would endorse the items that transparently diagnosed the types they believed themselves to be. Furthermore, the 92 subjects of the major portion of this study included the 35 subjects who had participated in the pilot study that helped refine the instrument. No conclusions about reliability of the test can be drawn as there was no collection of test-retest data.

Overall, this study highlights a concern for all of the studies that use subjects who are familiar with the Enneagram typology: do the subjects who know their types merely

report on what the typology has told them about themselves, thus reporting not on

themselves so much as on the theory, or do they have knowledge of themselves that the

test validly and reliably taps? In either case, the questions remain: are the nine types valid

constructs and how can they be diagnosed among subjects who are inexperienced in self-

observation?

Wagner (1981) created an instrument of 135 5-point Likert scale items. The

subscale on which a subject scored highest determined the subject's type. He compared

the typings by his instrument to subjects' self-typings which they provided either before

or after, or before and after completing the instrument. The instrument was fair to

moderate at predicting self-typings. As in Zinkle's (1974) and Randall's (1979) studies,

the ability of his instrument to match self-typings was correlated to subjects' familiarity

with the Enneagram.

Wagner's items were created based on his understanding of the Enneagram

typology, and with the help of representatives of each of the nine types, who were

identified by Wagner as "thoroughly familiar with the Enneagram system" (Wagner,

1981, p. 158). His subjects were predominantly (80%) female and most were members

of Catholic religious orders, of ages 19-81. Their self-typings were done after reading

descriptions of each type, instruction, discussion, and feedback from instructor and peers.

Subjects' exposures to the Enneagram ranged from 9 years of working knowledge to that

of a weekend workshop.

Comparisons of self-typings with the instrument's typings were done with

calculations of Cohen's kappa values which ranged from .28 (fair) among subjects who

took the instrument before learning about the Enneagram and .40 (moderate) among those who had learned about the Enneagram prior to completing the instrument.

Intrascale reliability was measured for pre-instruction and post-instruction administrations of the instrument. Cronbach's coefficient alpha values for the subscales ranged from .37 (fair) to .78 (substantial) among the administrations done prior to subjects' exposures to the Enneagram; Cronbach's coefficient alpha values for the subscales ranged from .63 (substantial) to .82 (almost perfect) among the administrations done after subjects' exposures to the Enneagram.

This study was limited by its use of self-typings for the criterion of the instrument's external validity. The subjects' self-typings are suspect because they were done in some cases after only a weekend of training. Even among subjects with training of up to nine years, the validity of their self-typings was not assessed. Another limitation of the study is the researcher's use of "representative types" to construct test items. This is a problem in the rational-theoretical and the criterion-keyed methods of designing instruments when there are not foundations of empirical data that have been collected from representative samples – i.e. when the constructs being measured are not well defined. For instance, a representative of *Type-One* might eliminate an item typical of all *Type-Ones* because he does not recognize it in himself, or create an item that he feels *is* typical of him but which is not typical of all *Type-Ones*. Another limitation of the study is its restricted sampling.

Gamard (1986) assessed the inter-rater reliability of Enneagram typing experts. In his study of 31 experts, he found little better than chance agreement among them regarding their typings of others. Their test-retest reliability was moderate. Based on this

study, he concluded that the reliability and validity of the Enneagram types is questionable.

Gamard (1986) videotaped standardized interviews of recruited volunteers. He and Naranjo culled the videotapes so that there were 2 males and 2 females of each of the nine Types (based on their opinions). The videos began with a view of the interviewee's full body, then a closer view of above the waist to focus on gestures and postures, followed by a close-up view of the interviewee's face. The interview consisted of questions about the interviewee's personality. Expert judges were provided these videotapes and asked to type the interviewees.

Gamard (1986) grouped the expert judges into two groups. Fifteen were "more experienced." They had learned the Enneagram typology an average of 14 years before the study. The other group of 17 judges had learned it an average of 7 years before. All had been either trained by Naranjo himself or else by a student of Naranjo. The judges viewed the 36 interviews selected for being representative of the 9 types in addition to some that were added so that the judges would not be able to type the later interviews by a process of elimination.

The number of exact agreements was calculated for each possible pair of judges and for each type. Cohen's kappa values were calculated to assess the statistical significance of the agreement among the judges. Gamard found agreement on about half the interviews. This was approximately the same rate of agreement between each of the judges and Naranjo's judgments. Statistically, these results were "fair" for both the experienced and inexperienced judges, although the experienced judges had significantly

better agreement among themselves and with Naranjo. The majority of the agreements among the judges were for only three of the nine Types.

This rate of inter-rater agreement was approximately the same as when these same judges participated in Gamard's pilot for this study when he had had the judges look at photographs of faces, taken from *Time* magazine, and assign a type to each face. While he had expected greater agreement on the videotapes because they were information-rich compared to the photographs, this did not prove to be the case, either among the judges or between the judges and Naranjo.

In a study of test-retest reliability, the videos were shown to 7 of the expert judges 2.5 to 3 years after the initial testing. Reliabilities of the experienced judges were moderate (.598), and they were fair (.434) for the less experienced judges.

The judges provided information on how they made their assessments of types. Many said they trusted their first impressions and referred to a combination of analytic (attention to gestures, general body characteristics, memories of similar faces) and intuitive responses ("vibes," "gut feeling"). Gamard concluded that the assessment of types is a highly subjective process with a lack of objective criteria.

The limitations of this study were, according to Gamard (1986), primarily related to the various methods he used to calculate Cohen's kappa values, each of which had its drawbacks. Gamard's study calls into question the validity of expert opinions of the types, as well as the construct validity of Enneagram type descriptions themselves.

Thrasher (1994) used the *Wagner-Thresher Enneagram Scales (WTES)*, a revision of Wagner's *Enneagram Personality Inventory,* in her study of the scale's concurrent validity measured against the Myers-Briggs Type Indicator (MBTI), and to measure the

theoretical changes to individuals' types in response to increases in anxiety, which she

measured with the State-Trait Anxiety Indicator (STAI Form Y). In addition to collecting

data from the subjects, she also asked their Significant Others (SOs) to assess the

subjects' basic types as well as their types when "under a lot of stress" and "when doing

very well." Results indicated concurrent validity of the WTES with the MBTI,

significant agreement between subjects and their SOs regarding subjects' basic types, and

no support for theoretical change of type in response to stress or states of well being.

Thrasher's (1994) revision of Wagner's (1981) instrument was based on her and

Wagner's understandings of the theory of the Enneagram typology. It was comprised of

198 five-point scale items, 22 items per each of nine scales. The answers on each

subscale were summed and the highest score determined a subject's Type. The STAI is a

40-item instrument used to determine current and chronic anxiety levels. The MBTI is a

popular personality inventory with varied reports regarding its reliability and validity. It

is comprised of 126 dichotomous items and produces continuous scores for each of eight

personality traits and converted scores for each of four scales (each of the eight

personality traits is matched with its opposing trait to form the four scales). Thrasher

reports the reliability and validity statistics from the developers of both the STAI and the

MBTI as at least acceptable.

One hundred seventeen subjects who claimed to know their Enneagram types

("known type" was used as the criterion variable) took the WTES, the STAI, and the

MBTI. Thrasher provided one-page descriptions of the nine types to SOs and asked them

to type their subjects to describe them under three conditions: *normal, under a lot of*

stress, and *when doing very well.*

Cohen's kappa values were calculated to analyze agreement between subjects' self-typings and their scores on the WTES. For the sample overall, there was agreement at a significant level (p < .001). The WTES was better at typing some Types than others (kappa values ranged from .22 to .84), with six of the nine types demonstrating agreement at kappa values greater than .71. Thrasher reported that although statistically significant, the WTES does not predict self-typings adequately enough for research or clinical purposes.

Kappa values correlated to subjects' certainty of their self-typings. "Very certain" subjects' (N=62) self-typings and WTES scores agreed at kappa = .76, p < .001; among subjects "not at all certain" of their types, kappa = .18, p < .05. As Thrasher pointed out, these results could indicate either that less certain subjects are more likely to have erroneous self-typings or that self-aware subjects are more capable of being typed. Another possibility is that belief in one's type (whether or not it is "true") biases a subject to endorse items that are congruent with it; the transparency of an instrument poses this threat to validity. This issue was a concern in the studies of Zinkle (1974), Randall (1979), and Wagner (1981) as well. A Pearson product-moment correlation was computed to evaluate the relationship between the lengths of time subjects had known the enneagram system and the WTES's success at typing them. The two variables showed no relationship.

Internal consistency reliability of the WTES was analyzed by computing Cronbach alpha values for each of the nine subscales. Values ranged from .85 to .93. The subscales were fairly highly intercorrelated which raises the question of whether the reliabilities of the nine subscales were artifacts of the intercorrelation overall. As

Fishman & Galguera (2003) point out, Cronbach alpha values over .90 suggest the possibility that items are *too* highly correlated, i.e. so similar that the high correlation indicates they measure trivially different qualities.

For comparisons between self-typings and typings by SOs, Cohen's kappa was used. Typings were compared: (1) on the entire sample (N=117); (2) between SOs did (N=73) who did and did not (N=43) have pre-study opinions of subjects' types; (3) between SOs of different degrees of familiarity with the Enneagram system; (4) for each of the SO groups determined by their certainty of their typings of subjects. Probabilities were calculated according to Woolson's (1987) technique. A Chi-Square analysis was done to compare typing agreements of the top and bottom thirds of the sample, ordered on lengths of acquaintance with the Enneagram. For all of the sub-groups, SOs predicted subjects' self-typings at significant levels (p < .001). The kappa indicated perfect agreement among the subgroup of SOs who were very familiar with the Enneagram typology prior to the study. As with the results of subjects who were certain of their self-typings having scores on the WTES that agreed with those self-typings, the question is raised as to whether the SOs of subjects had, prior to this study, discussed with the subjects, and come to an agreement on the subjects' types, and if so, had merely reported previously drawn conclusions of a subject's type, rather than a considered report of their observations of the subject.

The primary limitation of Thrasher's (1994) study is its use of self-typing as the criterion to measure the validity of Significant Others' and WTES typings, to measure convergence with MBTI, and to assess the validity of intertype movements. Thrasher admits there is not an acceptable criterion of what an "accurate" typing would be.

Subjects' beliefs about their types creates a bias the may have inflated agreement with scores on the WTES, and with their SOs.

Sharp (1994) conducted nine factor analyses (principal factor analyses; varimax orthogonal rotations) on each of Palmer & Cohen's (1988) (108 items, 12 per each of nine subscales, with dichotomous responses), Wagner's (1981) (135 Likert-scale items) and Zinkle's (1974) (225 items dichotomous items) instruments, on Holland's (1985) Vocational Preference Inventory (VPI), the VPI combined with each of the other 3, on all 3 of the Enneagram instruments combined, and on all 4 inventories combined. His subjects were 335 primarily college undergraduate students, ages 16-67 yrs old. He administered all of the instruments in one sitting. Described below are the results of factor analyses of the Enneagram instruments.

Palmer & Cohen's items loaded on four factors, accounting for 53% of variance. The four factors had items from different Type subscales, and were titled/characterized by Sharp as follows:

- Factor 1 (Fear and Repression) loaded with items predominantly from subscales for Types 1 and 2.

- Factor 2 (Social Ambition) loaded with items predominantly from the subscale for

  Type 2.

- Factor 3 (Anxiety) loaded with items predominantly from subscales for

  Types 6, 5, 9, 1.

- Factor 4 (Excess) loaded with items predominantly from subscales for

  Types 4, 7, 8.

Wagner's items loaded on five factors, accounting for 59% of variance. The four factors had items from different Type subscales, and were titled/characterized by Sharp as follows:

- Factor 1 (no name) loaded with items predominantly from subscales for Types 4, 5, 6, 1, 7

- Factor 2 (Achievement Orientation) loaded with items predominantly from subscales for Types 3, 1, 8.

- Factor 3 (Peacemaker) loaded with items predominantly from the subscale for Type 9.

- Factor 4 (Helper) loaded with items predominantly from the subscale for Type 2.

- Factor 5: (Excess) loaded with items predominantly from subscales for Types 4, 7, 8

  o This factor is the same as Factor 4, derived from Palmer & Cohen's scale, (see above).

Zinkle's items loaded on five factors, accounting for 62% variance. The four factors had items from different Type subscales, and were titled/characterized by Sharp as follows:

- Factor 1:Withdrawal (the "under-developed" types of each of the Enneagram triads)

  o Types 4, 5 (withdrawal), 1 (perfection),

- Factor 2: Social Aggression

  o Types 8 (power), 3 (success)

- Factor 3: Compulsion

  o Types 6 (doubt), 1 (perfection), 5 (withdrawal) , 3 (achievement)

- Factor 4: Positive Extraversion (the "overdeveloped function" types of two of

  the Enneagram triads)

  o Types 2 (positive feelings), 7 (doing)

- Factor 5: Denial

  o Types 9, 7

When items from all instruments were combined, 6 Factors were extracted,

accounting for 55% of variance. The six factors had items from different Type subscales,

and were titled/characterized by Sharp as follows:

- Factor 1: Ambition

  o Types 3 and 8

  o Palmer 3 and 8; Zinkle 3 and 8; Wagner 3 and 8

  o Identical to Factor 2 in the Palmer and Zinkle analyses (above)

- Factor 2: Anxious Compulsion

  o Types 1, 5, 6

  o from each inventory

  o Similar to Factor 3 of Zinkle

- Factor 3: not interpretable

  o Types 9, 6, 1, 2, 5, 4

  o from Cohen-Palmer

- Factor 4: Excess (see Palmer factor 4 and Wagner factor 5)

  o Types Palmer 4; Wagner 4, Wagner 7, Zinkle 4,

- Factor 5: Positive Extraversion

    o Wagner 2; Zinkle 2; Zinkle 7; negative loadings from Palmer's and Zinkle's 5

- Factor 6: Denial (like Zinkle's 5th factor)

    o Palmer 7, Wagner 9, Zinkle 7

One limitation of this study is its small subjects:variables ratio. As recommended by Pett, Lackey & Sullivan (2003) and Preacher & MacCallum (2003), a meaningful factor analysis requires 10-15 subjects per variable. With Sharp's sample size of 335, the subjects:variables ratios for factor analyses of the data collected with Zinkle's (225 items), Wagner's (135 items) and Palmer's (108 items) instruments were 1.5, 2.5, 3.1, respectively: about one-tenth to one-third of the minimum recommended subjects:variables ratio. When the instruments were combined, the number of subjects was less than one-tenth of the recommended number. As discussed by Pett, Lackey & Sullivan (2003, p. 72), fewer than 10-15 subjects per item can result in an *ill-conditioned* correlation matrix (the basic ingredient of factor analysis) because statistical software "rounds off" correlations and though these round-offs produce small errors in the correlations, they produce large errors in the solutions produced from an ill-conditioned matrix.

Another limitation of this study was that there was no control of items that may have been identical or nearly identical, so their correlations may have been trivial. The fact that items from the same type subscales of the different instruments loaded together on some of the same factors when the different instruments were combined, as well as when they were analyzed separately, may be due to the redundancies of items. This

would not be surprising since each of the instruments was designed from the same Enneagram theory.

Warling (1995) examined the external validity of the Riso-Hudson Enneagram Type Indicator (RHETI) by comparing results from it to those of the Cattell 16 Personality Factor Questionnaire (16PF). The RHETI is a set of 144 forced, dichotomous choices. The 16PF measures fifteen "primary" and five "basic" personality factors. With data obtained from a sample of 153 university students, Warling conducted correlational and discriminant function analyses. She demonstrated convergent validity of the RHETI with the 16PF.

Newgent (2001) conducted a study on the validity and reliability of the Riso-Hudson Enneagram Type Indicator (RHETI [Version 2.5]). The RHETI is a set of 144 forced, dichotomous choices. In her sample of 287 participants (78% women and 22% men) Newgent discovered Cronbach's coefficient alpha ranging from .70 to .82 for six of the RHETI's nine scales, but marginally acceptable values for three of the scales whose alpha values were .56 to .66. Factor analysis did not support the construct validity of the RHETI that purports to measure nine Enneagram types, as data from each of the nine sub-scales factored into two components, for a total of 18 factors. Newgent does not discuss the correlations among the factors that formed for each of the types. Newgent found some support for the RHETI's concurrent validity with the NEO-PI-R, but mixed support for its incremental validity when measured against the NEO PI-R. RHETI data overall were invariant with the demographic variables of age, race and gender. She concluded that the RHETI has the potential to be a useful tool to the helping profession in assessing personality dynamics, but that it requires more work to be valid and reliable.

Newgent concluded her study by calling for research on the RHETI with a more representative sample of the population especially as regards gender. She also recommends item analysis to resolve questions raised by her factor analyses.

In their 2004 expansion of the Newgent's 2001 dissertation study, Newgent, Parr, Newman & Higgins (2004) analyzed the construct validity of the RHETI (Version 2.5) by assessing the relationship between the RHETI and the NEO PI-R by means of a canonical correlation. They report that the construct validity of the RHETI was supported; however their analysis calls into question the validity of the Enneagram typology's nine distinct types. The authors caution counseling professionals against reliance on the RHETI as a sole means to assess personality.

Palmer, along with Cohen, (Palmer, 1988) constructed an instrument called the Cohen-Palmer Enneagram Inventory (CPEI) with 108 items, 12 per each of nine subscales, with dichotomous responses. Types were determined by the subscale on which subjects scored highest. Subjects were 172 adults of "known" types. Palmer's study revealed the ability of the CPEI to match the subjects' predetermined types for 26 percent to 72 percent of cases, across the nine Types. Subsequent use of discriminant analysis resulted in 97 percent of subjects being classified into their predetermined Type. Her use of discriminant analysis may or may not have included each case in the set of data used to predict the same case; she did not report the specific procedures she used to conduct discriminant analysis. As with all of the studies done prior to hers, Palmer's use of subjects of known types introduced the internal threat of bias to her study, as subjects' familiarity with descriptions of their "known types" may have biased their endorsements of statements as being "like me" or "not like me." An additional problem with

interpretation of Palmer's results is that the "known type" of a subject (determined by what the researcher considered a competent judge of types, sometimes the subject him/herself being the judge) was the external criterion against which her instrument was validated.

Palmer also examined the concurrent validity of her CPEI by comparing its results to results of subjects' completions of the Myers-Briggs Type Indicator and the Minnesota Multiphasic Personality Indicator. Her comparisons were post-hoc, i.e. without prior hypotheses of outcomes, and she reports that scores on the CPEI were consistent with scores on both the MBTI and MMPI. Results were similar, but not identical to those of Wagner (1981) who also assessed concurrent validities of scores on his Enneagram typing instrument and the MBTI.

Daniels & Price (2009) developed a test for Enneagram typing, *The Essential Enneagram Test,* that guides one through a process of: (1) reading nine short paragraphs, each descriptive of the essential character of one of the nine types. The paragraphs were based on the authors' concepts of what was a logical description of each type and each was reviewed and revised by representatives of each type (as judged, presumably, but Daniels & Price); (2) choosing the three that best describe one, and ranking them in order of accuracy; (3) linking the chosen paragraphs to the particular types they describe; (4) reading four pages of information about the first choice type; (5) consideration of four alternative types, called "connected types" (the 2 wings, the stress and the security types), and also "look-alikes" (not "connected," but resembling the identified type); (6) consideration of other types, based on data about how those of known types initially typed themselves; (7) reading the two-page "Type Discriminators," to help clarify the

differences between the types that closely resemble each other. This process of self-typing is relatively challenging, compared to the procedures for administration of instruments comprised of separate, simply worded items. Some issues related to the complexity of *The Essential Enneagram Test* are described below.

Daniels & Price (2009) researched the reliability and validity of *The Essential Enneagram Test*. For a sample of 970 Enneagram-naïve subjects, they compared the subjects' scores on the test to one of two other ratings: a diagnostic typing interview conducted by a certified Enneagram teacher or the individual's own re-evaluation after taking a 10-week course or its equivalent. These two standards produced similar results. Percentages of subjects whose typings by *The Essential Enneagram Test* were the same as the typings by one of the criterion measures ranged from 52% to 68% across the nine types. The kappa value for overall test concordance with the criterion measures was significant as were intraclass correlations for each type. Alternative versions of the test, administered four weeks after administration of *The Essential Enneagram Test,* to Enneagram-naïve subjects, yielded significant values for test-retest reliability.

The use of *The Essential Enneagram Test* is limited in ways that call attention to the need for a simple, valid, and reliable typing instrument. First of all, it requires a considerable investment of time and thought on the part of a respondent. It requires an understanding of the probability values that are provided with each type. It requires an understanding of the theory of the Enneagram types, in terms of "wings', stress type, and security type, because these terms are used to direct a respondent to consider various alternatives to her first choice of a type at intermediate stages of the typing process. A cumbersome aspect of taking the test is that it requires identifying with an entire

paragraph, and keeping each profile in one's mind as one compares and ranks them as more or less descriptive of one's personality. It requires considerable self-knowledge and honest self-appraisal.[1] As opposed to conventional test development theory, Daniels & Price's descriptions include socially undesirable or negative traits. As Daniels & Price (2009, p. 15) state: "... [it] requires being candid and willing to be non-judgmental toward yourself." Further, *The Essential Enneagram Test* requires reading and attending skills, and the ability to follow relatively complex directions, compared to the skill required for answering scale items. For instance, the authors emphasize that the Type Determination and Type Description pages are critical to determining your type (after having rank ordered the 9 paragraphs). This would not be a problem for high school graduates who are interested into digging into the typing process. It would, however, probably not sustain the interest of someone who is unconvinced of its use and value, and/or has difficulty reading at the level of a high school graduate.

The strengths of Daniels and Price's test are the flip sides of its limitations: Its detail and

complexity encourage and allow exploration of the subtleties of each type by those who are interested and possess sufficient reading and conceptualization skills. It is thorough. It recommends 3 levels of self-scrutiny (descriptive paragraphs, Determination/Descriptions, Discriminations), examination of traits as they are exhibited not only "ordinarily," but under two types, or levels, of stress, those being stress which mobilizes versus that which overwhelms, and traits exhibited when psychologically

---

[1] This requirement creates a dilemma: to learn about one's personality, one must know enough about it to recognize it in the descriptive paragraphs. This dilemma is posed in some form by all of the studies reviewed in this paper, and is identified as a limitation to the study proposed by this paper.

secure. In summary, Daniels & Price's method for typing is demanding and it begs for an easier, objective, more efficient way to assess a person's Enneagram type.

Summary of Current Knowledge

The Enneagram has been endorsed by thousands of people, worldwide, for its descriptions of nine distinct personality types. The Enneagram typology is the foundation for a complex theory of the etiology of personality expression which is used in settings of mental health, spiritual programs, and major businesses. However, neither the typology nor its theoretical etiology, "movements between types", nor the basic, characteristic descriptors of the basic nine types have been empirically validated.

Attempts at validation of the typology and of typing instruments have relied on measures of external criteria that have, themselves, not been validated. One currently accepted method of typing is for a person to recognize his/her own type by observing representatives of each of the types talk about themselves. Perhaps this process, to which Palmer (1988) and Daniels & Price (2009) refer as the "narrative tradition," is a necessarily information-rich presentation of the types, providing a demonstration of subtle, non-verbal as well as verbal nuances which allows recognition at levels other than the restricted, linguistic one. Watching the performance of the different types allows for a resonant recognition of a gestalt that is lost when dismantled into intentionally simple and discrete statements about a personality. On the other hand, criteria for selection of the "representatives" of each type are unclear and presumably susceptible to error. As with criterion-keyed classifications (such as the Minnesota Multiphasic Personality Inventory [MMPI]), the clusters of defining characteristics for different types are prone to be specific to the samples which generate them (Kline, 1993, pp. 22-23). Which

characteristics of a criterion-keyed type are actually criterial versus spurious remains unclear and therefore psychologically meaningless, according to Kline (Kline, 1993, pp. 22-23).

The studies of Daniels & Price (2009), Palmer (1988), Randall (1979), Thrasher (1994), Wagner (1981), and Zinkle (1974) all were limited by their reliance on unexamined, unvalidated external criteria, namely "expert opinions," when those opinions were not, in fact, "external," but judgments based on adherence to the same systems that generated the assessments to which their judgments were compared. Basic questions regarding the validity of Enneagram typology have not been scientifically answered: Are there nine types of personalities? What are the defining characteristics of each of the types? How will a person's type be determined? Answers to these questions have been stymied by the lack of a criterion of external validity. To validate various typing instruments, researchers have relied upon experts' opinions of what characterizes each of the nine types, *and* those experts' abilities to recognize the types in particular persons. Overall, researchers have avoided the question of how expertise is established. In most studies, the reliability and validity of experts have been assumed, based on their years of experience, or completion of a course on the Enneagram. As Riso (2000, p. viii) points out, however, "there is not . . . a universally agreed-on interpretation of the Enneagram" and thus there is, presumably, not one set of criteria against which to measure the reliability and validity of an expert opinion of a person's Enneagram type. One study (Gamard, 1986), in fact, revealed that raters' typings were not reliable between raters or even between one rater's typings across time, even for the putative experts who had been trained in the same way, by the same teacher.

Of the eleven empirical studies that have been conducted on the Enneagram, six assessed the construct validity of the nine types. Two of those six studies used factor analysis to examine construct validity, and their results failed to support the theory of Enneagram typology. The data of Sharp's (1994) study loaded variously onto four, five, and six components instead of the theoretical nine, however his study was flawed by a low ratio of subjects-to-variables. Newgent (2001) conducted factor analysis not across all subscales, but on each subscale separately, and while Enneagram theory predicts one factor per subscale, her data, collected with the RHETI, factored on two factors per subscale, thus failing, in Newgent's view, to support Enneagram construct validity (although this conclusion perhaps is premature in its dismissal of the possibility that for each distinctive type there *are* two distinct expressions of it, and that perhaps the two factors per type may have been sufficiently correlated to be considered one type). Five studies (Newgent, 2001; Newgent, Parr, Newman, & Higgins, 2004; Palmer & Cohen, 1988; Thrasher, 1994; Warling, 1995) assessed the convergent validity of the Enneagram by comparing it to instruments of established reliability and validity. In these five studies, convergent validity of the Enneagram supported claims for the validity of the nine types. None of the studies of convergent validity, however, allow conclusions about whether the nine types are distinct from each other, or if they comprehensively describe all types of personalities.

Studies to date have used demographically restricted samples.

Need for further research

Factor analysis provides answers to questions such as: Are there nine types of personality? What are the defining characteristics of each of the types? Exploratory

Factor Analysis calculates items' covariances of responses and finds patterns among the covariances to produce a model, or at least to describe which items among a set of items covary most meaningfully and strongly, in a pattern of clustering that indicates distinct constructs which, when taken together, account for some proportion of variance among all of the items. In the terms of this study, factor analysis would comment on *how many underlying factors (types)* are described and *how completely they describe* the varied responses to the items of this instrument. Thus, factor analysis would bypass the issue of identifying an acceptable criterion of external validity. As Kline (1993) states, a factor explains variance and for that reason, is a useful concept.

A factor analytic study of a sufficiently large and representative sample would produce factors to be meaningfully compared to the nine personality types as they are described in the literature on the Enneagram. This might help to clarify the type descriptions which are currently

at the stage of rational-theoretical construction and vulnerable to confused notions of what is and is not distinctive of a particular type.

CHAPTER THREE

Hypotheses

Factor analysis of the data will produce exactly nine factors, each of which will describe one of the personality types of the Enneagram personality typology.

The value of Cronbach's coefficient alpha of each set of items which load onto a given factor will be greater than .70 indicating that the items are consistent measures of the same construct.

The value of Cronbach's coefficient alpha of each set of items which load onto a given factor will be greater than .70 whether or not subjects had prior knowledge of their types.

The value of Cronbach's coefficient alpha of each set of items which load onto a given factor will be greater than .70 regardless of the gender of the respondents.

Procedures

Experimental Design

Overview of the design. Data were collected by means of a scale instrument consisting of 124 6-choice Likert items. The instrument was a re-design of the RHETI (version 2.5), a dichotomous, forced-choice instrument of 288 items. The re-designed instrument was piloted with 103 subjects and then refined, based on their responses. The refined instrument, called the Likert RHETI, was then administered to an entirely separate sample for the main part of this study. Data collected were factor analyzed to answer the question of whether or not they represented nine distinct styles/types of responses to the instrument and if the factors were descriptive of Enneagram types. Refined factors were analyzed for effects of subjects' prior knowledge of their

Enneagram types, and for effects of gender. An independent sample of responses to the

Likert RHETI, equal in size to the first dataset, was factor analyzed, with analysis of only

the items that had been retained in the final, refined factor solution of the first dataset.

Results between the two samples were compared.

Theoretical rationale. This study's post-positivistic orientation assumes that the

traits of human personality can be meaningfully measured and analyzed quantitatively.

Factor analysis. Factor analysis is a method for structuring the information of

multiple variables into a reduced number of "factors." The Enneagram typology

supposes there are nine distinct personality types and an assumption of this study is that if

there are nine personality types, they will manifest themselves in nine distinct styles of

responding to the items that were written to prompt subjects to display their personal

styles, or "types". Factor analysis is conducted by creation of a matrix of the covariances

of each item in an instrument with every other item in that instrument and then

comparisons of possible linear combinations of the items, with the "best" solution being

the one that accounts for the most variance among the items with the fewest linear

combinations of the items. The statistical process relies on the General Linear Model and

assumes linear relationships among the variables (items). Factor analysis reports which

items linearly relate to together in such a way that the equation of a line explains their

covariance. Items reported to be of one factor are items each one of which predicts the

responses to the other items, and for purposes of this study, the items of each factor are

said to describe a "type" of personality.

Types of factor analysis. Statistical software programs like SPSS, the one used in

this study, provide alternative methods for selecting factors and then relating the factors

to each other. Principle Components Analysis (PCA) uses all variance observed within the data to group the variables into their respective components. Exploratory Factor Analysis (EFA), of which there are several options, allows for some of the variance among items to be specific to each item and for some to be random, or due to measurement error. As stated by Pett, Lackey & Sullivan (2003), Brown (2006), and Kim & Mueller (1978), PCA reduces a multitude of variables to a smaller number of groups of the variables, by producing ". . . mere linear combinations of each other" (Pett, Lackey & Sullivan, p. 89), but does not necessarily explain the combinations as expressions of hypothetical constructs estimated from the shared variance among the items. PCA, by not separating out random variance from shared variance, inflates the estimates of relationships among variables. EFA, on the other hand, allows for interpretation of the variance in responses as hypothetical factors. For this reason, EFA was the approach used in this study; i.e. it was assumed that shared patterns of variance among responses were caused by the subjects' different personality types, in addition to variance unique to each item and to measurement error. Shared variance was of interest in this study.

Methods of extraction and rotation of the factors. Factor analysis entails first extraction of factors. Principal Axis Factoring (PAF), reported by Pett, Lackey & Sullivan (2003, p. 112) to be the most common extraction method of EFA, and Unweighted Least Squares (ULS), both recommended by Pett, Lackey & Sullivan, were initially applied to the data. Their results were comparable, and PAF was chosen for all remaining analyses in this study.

After they are extracted, *rotation* of the factors is usually required so they can be meaningfully interpreted. Interpretation of the factors requires at least an approximation

of the condition called *simple structure,* i.e. the condition in which each item loads on one factor only and each factor contains some items that load heavily on it while the majority of items do not load on it. Simple structure provides the clarity of distinction between the factors. A basic decision regarding rotation of factors is whether or not to allow the factors to correlate with each other. Simple structure is more easily achieved when factors are not allowed to correlate because then items are forced to load onto one factor only. On the other hand, as cited in Pett, Lackey & Sullivan (2003, p. 149), Pedhazur and Schmelkin (1991) state that it is "naïve and unrealistic" to expect that sociobehavioral phenomena will be unrelated to each other. Furthermore, descriptions of Enneagram types indicate sharing of some traits among the types. Therefore, an oblique rotation (linear combinations of items are allowed to be at angles less than 90 degrees to each other), as opposed to orthogonal rotation (linear combinations of items are restricted to be at angles of 90 degrees to each other) of factors is reasonable. Direct Oblimin rotation requires choice of a value for "delta," the parameter used to control the degree of obliqueness, or correlation, allowed between factors. It can range from negative to positive, with larger negative values decreasing the magnitude of the correlations among the factors, making them more orthogonal. Pett, Lackey and Sullivan, (p. 164), recommend comparison of results for delta values of -.5, 0, and +.5, to see which produces the clearest and most meaningful simple structure.

Exploratory factor analysis versus confirmatory factor analysis. Confirmatory Factor Analysis (CFA) is a kind of structural equation modeling which is applied in cases in which there is a theoretical basis for hypothesizing a particular model (such as the one hypothesized in this study) descriptive of observed variables (such as responses to test

items), indicator variables (such as personality types), and covariance among certain ones of the variables, as suggested by prior research and theory. Unlike EFA, which does not specify and constrain the relationships between observed and unobserved variables, CFA specifies which items will load onto which factors, and which factors will correlate with which others. Given that the Enneagram typology has been widely endorsed and described (even though with minimal and equivocal empirical substance), and that the instrument used in this study was designed to describe particular personality types, it might seem that CFA would have been a useful tool for specifying a model against which the data could have been measured for their degree of "fit" with the model. As explained by Brown (2006), however, models of more than 20 variables are not suitable for analysis by the AMOS software available for this study for conducting CFA. With this study's instrument of well over 124 (and even after refinement, 64 variables), CFA was not viable.

Because of the theory of the Enneagram types guided the researcher's decision to re-introduce the *Nine-type* items, after a refined, simple solution had been derived without them, to see if the *Nine-type* would form as a factor (procedures and rationale are further described below, p. 54), the method used was a blend of both EFA and CFA.

Population and Sample

Pilot Sample. A total of 109 pilot instruments were completed. Of these, 6 were discarded either because the times taken to complete the instrument indicated hurried (less than 3 seconds per item) and/or capricious (all responses were identical) response sets. 103 responses to the pilot were analyzed. With a planned sample size of approximately 1200 for administration of the final instrument, this pilot sample was

slightly less than the criterion of Pett, Lackey & Sullivan (2003, p. 47), who recommend that for the pilot administration, one tenth the size of the sample proposed for the major study be recruited. Sample size was, however, within the limit recommended by Spector (1992, p.29), who recommends 100 to 200 subjects for a pilot administration. (Although sample size of the main part of this study was planned to be 1200, 6401 subjects were finally recruited for the main part of the study, and with demographics that were notably different from that of the pilot, as described below).

Of the 103 subjects who completed the pilot instrument, 53 were recruited among masters-level students from two different courses at The College of William & Mary and 50 subjects were provided as a panel by the *Qualtrics* company. These 50 purchased respondents were among a population of panelists who were recruited by *Qualtrics* either on the company's home page or via a partner site, by targeting corporate and educational websites such as sites for members of air mile clubs, alumni groups, etc. Subjects had been previously verified (their IP addresses were checked to ensure location both when registering and when taking the survey, and their stated employment and income had also been verified) and registered by *Qualtrics'* partner company. They were selected randomly by *Qualtrics* to receive invitations to complete this study's survey. Because a sample representative of the US population was desired[2], collection of responses was terminated once the categories of age, race and gender were represented in proportions comparable to the United States population, taking into account that the subjects provided by Qualtrics were to be combined with the already collected responses from students at

---

[2] At the time of the administration of the pilot instrument, the plan was to recruit subjects from the United States only for the main study. The actual method for recruiting subjects was different from what was planned, and subjects for the main part of the study were from 90 different countries/regions. Thus, the population studied shifted during the course of the study. This issue is addressed in the section *Limitations of the Study*.

the College of William and Mary. Thus, the responses of some subjects whose characteristics of age, race, or gender would have resulted in over-representation of a particular one of those demographic categories were eliminated. Each *Qualtrics* panelist who completed a survey received a cash-equivalent incentive from *Qualtrics*.

Main Study Sample. The sample for the main part of the study was recruited by methods of *convenience* and *snowball*. Specifically, the majority of the sample was recruited through an email (Appendix A) sent by Don Riso of *The Enneagram Institute* to approximately 1100 of his former students. Personnel of The Enneagram Institute also placed a link to the Likert RHETI on their website inviting any website visitor to take the instrument (Appendix B). Also, an email was sent by the Assistant Dean of the School of Education at The College of William & Mary to faculty and students of the department, inviting them to take the instrument (Appendix C).

Design of the Pilot Instrument: Revision of the RHETI (version 2.5)

The RHETI (version 2.5) was rewritten according to accepted principles of scale development, as described below, to produce an instrument capable of collecting data that would conform to the assumptions of the Exploratory Factor Analysis extraction methods offered by SPSS software, specifically that data be continuous and multivariate normal (Brown, 2006; Harrington, 2009; Pett, Lackey & Sullivan, 2003; Spector, 1992). The pilot instrument was administered in the same way as was the final instrument, as an on-line survey, administered by *Qualtrics*, a web-based software for design and publication of on-line surveys, hosted by The College of William & Mary.

The items. The 288 statements (paired, to comprise 144 forced-choice items) of the RHETI (Version 2.5) were culled and re-written, to create a scale instrument of 22

items per each of nine sub-scales, totaling 198 items. Items were presented to each participant in a different random order. As a pilot instrument, it was constructed to be of a longer than optimal duration in order to have a large pool of items to cull for creation of the final instrument. While Fishman & Galguera (2003, p.93) recommend 15 items per subscale, Pett, Lackey & Sullivan (2003, p. 45), recommend 10-15 items per subscale for scaled instruments, stating that sufficient reliability builds up relatively quickly with the variance they offer, and allows for a large enough pool of initial items so that the items that correlate poorly with other items can be eliminated and still have sufficient items remain for a reliable final instrument. The desirability of a large number of initial items was balanced with the requirement for a reasonable duration of time required to administer the instrument. Fishman & Galguera (2003, p.96) state that from their experience, a test should not take longer than 20 minutes to complete.

Of the 288 statements of the RHETI (version 2.5), an item was either eliminated or re-written, to conform to recommendations by Fishman & Galguera (2003), Pett, Lackey & Sullivan (2003), and Spector (1992), that each item be a strongly worded, declarative statement, containing one idea only, and without jargon or ambiguous terms. For example, RHETI (version 2.5), item #1 which reads: "I've been romantic and imaginative," was re-written to produce two separate items, "I've been romantic," and another, "I've been imaginative," so that each item contained one idea only.

Items from one subscale that were similar to items of a different subscale were avoided, to have subscales as distinct as possible. Some items were re-worded to avoid biases relating to social desirability. Some RHETI (version 2.5) items are comprised of two statements that are negatives of each other. For instance, RHETI (version 2.5) item

#2 reads "I have tended to take on confrontations," paired with "I have tended to avoid confrontations." In such cases, one statement only was retained in the pilot instrument because the Likert scale response options allow respondents to respond as "not at all like me," or "just like me." Factor analysis accounts for opposite responses by allowing an item to correlate with two separate subscales, one positively, and one negatively. To allow non-endorsements of an item to be criterial for the sub-scale for which the item's non-endorsement would be descriptive (e.g. "I have taken on confrontations" is criterial for *Type Eight* and it is anti-criterial for *Type Nine*), analysis of such an item's scores involved reverse-scoring the item, to create a new variable for calculations of Cronbach's coefficient alpha for each of the instrument's sub-scales.

Wording of the RHETI (version 2.5) items was adjusted to account for the instructions which directed subjects to respond as they have been for most of their lives. Therefore phrases from RHETI items such as "have tended to be," or "typically have been" were replaced with "have been," to simplify each statement.

Reading level as assessed by the readability statistics tool available with Microsoft Word software, indicated a Flesch-Kincaid Grade Level score of 4.4, i.e. that the instrument required a fourth to fifth grade reading ability. The scale was not timed, in order to avoid testing for reading speed; instructions encouraged respondents to take their time, as the online format allowed them to save their responses and return to them later, for completion. The item format was consistent throughout the instrument to minimize confusion. The scale was designed to be easily administered as an on-line survey to individuals with no training in test administration.

Likert scale responses. Citing Steiner & Norman (1995), and in agreement with Fishman & Galguera (2003, p. 89), Pett, Lackey & Sullivan (2003, p. 43) state that there is no rule regarding the optimal number of response options. Options are chosen to maximize whatever response variance exists, and also to avoid spurious or random variance that is unrelated to criterion variance. Pett, Lackey & Sullivan (2003, p. 43) state that five to seven options are "generally recommended." For this pilot instrument, six response options were provided for each item, allowing for fine distinctions and a maximum possibility of variance. Although an even number of response options disallows true indecision to be expressed by precluding the middle, neutral response, and may, therefore, frustrate subjects who are forced to weigh for or against a statement, response variance may be increased by disallowing the neutral response, and for this reason, Fishman & Galguera (2003, p. 90) recommend an even number of options. Spector (1992) concurs that an even number of response options is desirable, in order to avoid response sets of central tendency. The six response options for this instrument were presented as follows:

Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me

These responses were scored 1...2...3...4...5...6 except for some items that were also scored

6 ...5...4...3...2...1, when those items were applied to sub-scales for which the item's statement was negatively criterial. An additional response option, *No comment. This statement is not clear to me*, was provided on the pilot instrument, to assist with item analysis. In addition, there was an open-ended question at the end of the instrument, as recommended by Pett, Lackey & Sullivan (2003, p. 47), which invited subjects to provide suggestions for improvement of the instrument.

The pilot instrument is displayed in Appendix D.

Evaluation preliminary to the pilot administration. Members of the researcher's dissertation committee and three others were recruited to complete the preliminary pilot instrument and asked to provide feedback to improve the instrument prior to the pilot administration. This preliminary administration was done in the same way as were the pilot and the final instrument, i.e. as an on-line *Qualtrics* survey.

Feedback received from the preliminary administration indicated no changes were necessary and the pilot instrument was made available as an on-line *Qualtrics* survey, hosted by The College of William and Mary.

Refinement of the pilot instrument: item analysis. Data collected from the pilot administration were downloaded to an SPSS dataset and SPSS software was used to assess which items to eliminate to produce an instrument as reliable and as short as possible. Based on those criteria, 16 items per subscale were considered optimal (Pett, Lackey & Sullivan, 2003). Because some items served more than one subscale (by reverse-scoring them to create a new variable which was then included in analysis of a separate subscale), an instrument with less than 16 items per 9 subscales was achieved. The final instrument consisted of 124 Enneagram-relevant items plus 4 items added to assess whether or not respondents were attending to the meaning of the items.

As described by Fishman & Galguera (2003), decisions about which items to retain are not formulaic, but made with a holistic perspective that takes into account an item's *degree of criteriality, interitem consistency,* and *discriminability* (Fishman & Galguera, 2003). In addition to these criteria, the *clarity* of each item of the pilot

instrument was assessed by looking at respondents' uses of the response option for each item that identified the item as confusing.

Interitem reliability (Fishman & Galguera, 2003) was assessed by using the SPSS option *Cronbach's alpha if item deleted* and this diagnostic was given priority for choosing items to eliminate. Along with *discriminability*, this is a measure of the internal consistency of a subscale. It is diagnostic of whether or not the items of a subscale share a common variance and measure the same construct (Spector, 1992). Internal consistency is the most frequently used criterion for item selection, according to Spector (1992, p. 35). Items the deletions of which were indicated to result in an increase in the instrument's Cronbach's coefficient alpha were considered for deletion. A series of steps was taken, deleting items suggested by the *Cronbach's alpha if item deleted* statistic and assessing the resulting Cronbach's coefficient alpha of the subscale, with various combinations of the removable items assessed. The value of Cronbach's coefficient alpha increases with the removal of inconsistent items yet decreases with a decrease in the total number of items for the subscale. Because of possible complex interactions among the items, the *Cronbach's alpha if item deleted* statistics were considered and reconsidered in a series of deletions and restorations of items.

Among the items thus suggested for deletion, those with low values of the SPSS statistic *corrected item-total correlation* were targeted. This statistic is diagnostic of *item discriminability* (Fishman & Galguera, 2003), another measure of a subscale's *internal consistency* (Spector, 1992). This statistic is the correlation (Pearson r correlation coefficient) of a particular item with the total score on its subscale after the contribution of the item has been subtracted from the subscale's total score. It is, according to

Fishman & Galguera (2003, p. 64) a "compromise" statistic that indicates the degree to which an item measures what it is intended to measure – i.e. its validity, and it rests on the assumption that the total score on a subscale of items designed to measure a construct is the best estimate we have of that construct, a condition which is commonly accepted in the early stages of development of a scale (Fishman & Galguera, 2003). According to Fishman & Galguera, it is a "compromise" in the sense that it is used in place of a measure of external validity with which to correlate the items in this instrument. Spector (1992) recommends values of .40 or greater for the *corrected item-total correlation*. Accordingly, among the items recommended for deletion to increase the value of Cronbach's coefficient alpha, items with values <.40 were preferentially assessed for deletion.

Along with their contributions to their subscales' Cronbach's coefficient alpha values and their *corrected item-total correlation*, items were assessed for their *degree of criteriality*. The *degree of criteriality* of an item refers to the distribution of responses to an item. The diagnostics of *variance, skewness,* and *kurtosis* were considered to assess: (1) which items detected the most variance; (2) the satisfactoriness of the distribution of responses. Although platykurtic distributions would indicate desirably high variance, they would also have indicated that more variance could have been plumbed with a greater number of response options. While a relatively normal distribution of responses displays less variance, with its responses clumped at the mean, a normal distribution indicates that the highest and lowest extremes of subjects' attitudes toward the item statement were detected. An additional consideration regarding the distribution of responses to each item is that normally distributed responses are assumed in some extraction methods (such as

Maximum Likelihood) of factor analysis. The *degree of criteriality* of each item was thus assessed by ranking the items based on their variance, skewness, and kurtosis. Items were considered to be desirable in terms of their criteriality, to the extent that responses to them were highly varied, with minimal skew and moderate kurtosis.

In addition, and as recommended by Fishman & Galguera (2003), each item's correlation with every other item was examined by having SPSS generate a correlation matrix. Items' correlations were assessed for indications of possibly redundant items, as suggested by Pearson r values greater than .70 (Fishman & Galguera, 2003, p. 62). No such highly correlated items were found. *Item remainder coefficients* were examined to detect any problems that might have been indicated by a negative coefficient (Spector, 1992, p. 34) and none were detected.

Items that drew the response: *"No comment. This statement is not clear to me,"* were considered, along with other criteria for elimination or re-writing.

The content of each item of the refined pilot instrument of 124 Enneagram-relevant items was examined by personnel of The Enneagram Institute, Stone Ridge, New York, to confirm that each was consistent with Enneagram theory, as interpreted by The Enneagram Institute. The Enneagram Institute is proprietor of the RHETI (version 2.5), and retains proprietorship of the Likert RHETI. They refined the wording of 57 of the 128 items to make them as specifically diagnostic of particular types as possible.

Administration of the Final Instrument

The final instrument, called the Likert RHETI, was published as an on-line survey, administered by *Qualtrics*, web-based software hosted by The College of William & Mary.

Analysis of the Main Study Dataset

Preparation of the dataset. The entire sample of 6401 cases obtained from the

Likert RHETI survey was examined for missing data and for outliers. The dataset was

then divided in half by using the SPSS option for random selection of half of the cases.

Random separation of the cases would allow the factor structure refined with one half of

the data to be validated on the second half. Specifically, this was done by conducting

factor analysis of the second half dataset, using only the respective items of the refined

factor structure derived from the first half dataset.

Examination of the correlation matrix. The correlation matrix and statistics

provided by SPSS were examined to determine if the data were adequate for factor

analysis, per recommendations of Pett, Lackey & Sullivan (2003). Specifically, the

correlation matrix was examined (1) to see if the matrix was positive-definite

(determinant > 0), (2) to see if any items too highly correlated (> .79), (3) to assess

Bartlett's test of sphericity, an indicator of adequate correlations among the variables, and

recommended to be significant at a level of $p<.05$, and (4) to assess the *Kaiser-Meyer-*

Olkin (KMO) statistic, another indicator of sufficient strength of relationships among

variables, and recommended to be >.60. The *anti-image correlation matrix* was used to

examine measures of sampling adequacy (MSA), in terms of the strength of the

correlation of each variable with the other items in the matrix, by examining the values

on the diagonal of the matrix, which are the correlations of each item with all other items

in the matrix. MSA values are "ideally" >.70, according to Pett, Lackey and Sullivan (p.

79). After assessment that factor analysis of the correlation matrix could be meaningfully

conducted, factors were extracted.

Extraction and rotation of the initial factors. To observe the factor structure of

the data without specification of the number of factors for extraction, an extraction of

factors that met the criterion of having eigenvalues >1.0 was conducted, using Principal

Axis Factoring (PAF) and Unweighted Least Squares (ULS) methods, to compare the

results of each. For each extraction method, rotation of factors by the method of Direct

Oblimin was conducted, and with specification of delta values (delta values specify the

degree to which factors are allowed to correlate) of -.5, 0, and +.5. The factor correlation

matrix for each of these iterations of factor extraction and rotation was used to assess the

numbers of factors which correlated >.299, because, as suggested by Pett, Lackey &

Sullivan (2003, p. 164), factors correlated at more than .30 may be considered for

combination into one factor, because of their apparent measurement of the same

construct. In the case of predominantly low intercorrelations, it would have been

advisable to re-run the factor analysis, specifying an orthogonal rotation of factors. The

factor structure matrix displays simple correlations of the items with the factors, and in

accordance with the recommendation of Pett, Lackey & Sullivan (2003, p. 152), it was

the focus for identification and interpretation of the factors. The researcher's

interpretation of the factors was then compared to results displayed in the *factor pattern*

matrix, to determine, in accordance with Pett, Lackey & Sullivan, (p. 134), the extent to

which simple structure had been achieved.

Because PAF and ULS solutions were comparable, and because a value of delta =

0, for the Direct Oblimin method of rotation, allowed the items to load on more than one

factor (and thus allowed consideration of the most meaningfully interpretable and

realistic sorting of items), and because setting delta = +.5 disallowed convergence to a

solution, it was decided to conduct further analyses for refinement of factors with PAF

extraction, Direct Oblimin oblique rotations, delta = 0.

The initial solution produced 18 factors. Because five of the factors loaded with

four or fewer items and five pairs of factors correlated >.30, a factor analysis was done

specifying extraction of 13 factors. Three of the thirteen factors were correlated >.30 and

so analysis of a 10-factor solution was conducted. Two more iterations were done, each

time using the criterion of the number of factors that correlated >.30, to determine the

number of factors to extract, so that a 9-factor, and then an 8-factor solution were reached

before none of the factors correlated >.30.

Refinement of the solution. Suppression of values <.30 in the factor structure

matrix facilitated recognition of the patterns of factor loadings. The factor structure

matrix was examined for the purpose of identifying items that insufficiently loaded onto

any of the factors in the matrix (i.e., <.30). Items without reasonable loadings on any

factor were considered non-diagnostic for purposes of Enneagram types and a new factor

solution was run without them.

Refinements of the factors began by examining scale reliability statistics for each

one, and considering values of alpha > .87 to be indicative of redundant items within the

scale (Fishman & Galguera, 2003; Pett, Lackey & Sullivan, 2003; Spector, 1992).

Between such items judged by the researcher to be redundant, the one considered to

better conform to standards of scale/item development (in terms of the criteria: one-idea-

only, unambiguous, lacking jargon) was retained, the other eliminated, and the scale

reliability statistics re-computed.

After elimination of the non-loading and the redundant items, the scale reliability

statistics (*corrected item-total correlation* and the *Cronbach's alpha if item deleted*) of

the items grouped into each factor were assessed. Some items loaded onto more than one

factor. For these, the *corrected item-total correlation* and the *Cronbach's alpha if item*

deleted statistics for the item, from the subscales competing for the item, were compared.

Both statistics were then used to decide with which subscale the item was the best fit.

Items for which there were not clear differences between the statistics from different

scales were eliminated from both scales. Each factor thus refined was analyzed by

examining the recomputed scale reliability statistics. Thus, refinement of each of the

factors of the 8-factor solution was an iterative process involving sequential elimination

and sometimes replacement of items, based on scales' statistics as well as the researcher's

interpretations of the items' redundancies and meanings.

This 8-factor solution was examined and refined through multiple iterations of

refinement which resulted in a refined solution of eight factors, none of them including

items from the *Nine-Type* sub-scale. At this stage, then, the *Nine-Type* items were re-

introduced for the next iteration of analysis, and a simple solution of nine factors resulted.

Subsequent iterations of adding and deleting other items that had been eliminated in

earlier stages of factor refinement, and which had resulted in sub-scales with relatively

small numbers of items (specifically items from the *Six-Type* and the *Eight-Type* sub-

scales), confounded the simple structure, and they were re-eliminated for the next steps.

A factor analysis was conducted on the entire refined dataset which had been

culled of nearly half of its original 124 items. The same procedures that had been used for

consideration and refinement of the initial dataset were again used to consider the factors

of the solution of the refined dataset. This iterative process resulted in 66 items loading onto nine factors/sub-scales[3].

Each scale was factor analyzed to determine if it was one factor or not, following up on Newgent's study (2001) that found that each of the Enneagram types measured by the RHETI (version 2.5) factored onto two factors instead of the expected one.

Effects of gender and knowledge of Enneagram type. In addition to the scale reliability statistics for each factor/sub-scale of the dataset as a whole, the dataset was split by gender, and by responses to the question of whether or not a respondent knew his/her Enneagram type. This latter split of the dataset was to follow up on Randall's (1979) study in which he reported that only 23.3% of respondents who did not know their types were typed by his instrument congruently with independent typings by experts. Similarly, Zinkle (1974), Wagner (1981), and Thrasher (1994) had all discovered sharp differences between the accuracy of their instruments with subjects of known types, compared to those who did not know their types.

Analysis of the main study second dataset

Factor analysis of the second dataset was conducted using only the items that had been retained after refinement of the first dataset, with specification of nine factors, and again using PAF for extraction and Direct Oblimin (d=0) for rotation of the factors. The resulting solution of the factor analysis on this dataset was compared to the solution obtained on the first dataset. Scale reliability statistics were calculated for each factor/sub-scale of the second dataset, using the same procedures that had been followed for the first dataset. As for the first dataset, each factor was factor analyzed and

---

[3] The total number of items included in the scale reliability analyses was 71. The additional 5 items were the result of reverse-scoring 5 items that loaded positively onto one factor and negatively onto another, thus taking on two, opposite meanings, for two different scales.

52

Cronbach's coefficient alpha values were calculated for each of the factors split by both gender and by knowledge of Enneagram type.

Comparisons of type scores derived from: self-identification, the unrefined set of items, and the refined set of items.

The entire dataset of 6401 cases was analyzed in this final stage of analysis. Z-scores were calculated for the sums of the items that loaded onto each of the refined factors. This allowed the sums of the factors/scales which were comprised of different numbers of items to be meaningfully compared. Similarly, the weighted mean scores of each of the sub-scale sums, as calculated by the *Qualtrics* software, were used to compare scorings on each of the un-refined sub-scales of the original set of 124 items. Descriptive statistics were calculated for each of the sets of subjects who had identified themselves as a particular type. This allowed assessments of the congruence between the scores calculated by using the original 124 items, those calculated with the refined set of 66 items, and subjects' self-identified typings.

CHAPTER FOUR

Analyses of Results

Pilot Study

      Demographics of the sample. The 103 retained responses to the pilot test were

representative of the United States population, as published by the US Census Bureau

(April 1, 2000 – July 1, 2009), in terms of age, race, and gender. Demographic

information pertaining to the pilot sample is presented in Appendix E. The pilot sample

had been collected to be representative of the United States population, in anticipation of

obtaining those same demographics for the main portion of the study. As it turned out,

however, data for the main study were from an international population and were

predominantly female.

      Item analysis of the pilot instrument. As described in *Refinement of the pilot*

instrument: item analysis, above, an iterative process of removing the poorest performing

items, reassessment of the internal consistency of the sub-scale, and further removal

and/replacements of items, to achieve an internally consistent scale with items of nearly

normal distributions, was conducted. Eight of the 198 items drew more than 3 responses

of *"No comment. This statement is not clear to me;"* one item, which drew six such

responses was retained because of its values for the statistics of *corrected item-total*

correlation and *Cronbach's alpha if item deleted*; the others were either eliminated or re-

written.

      This iterative process of refinement of the sub-scales resulted in retention of a total

of 124 items out of the original 198. Because some of those items did "double-duty,"

being criterial for one scale and anti-criterial for another, each Enneagram type was

represented by 16 items each. Cronbach's coefficient alpha values ranged from .751 to .887 for the refined subscales, indicating internal reliability of the individual subscales, according to what Spector (1992, p. 32) cites as Nunnally's (1978) "widely accepted rule of thumb" of .70 as the minimum value of Cronbach's coefficient alpha for demonstration of internal consistency. The refined sub-scales are displayed in Appendix F, with notations of items that were eliminated, based on analyses described above. The instrument displayed in Appendix F was further refined by personnel of The Enneagram Institute, resulting in 14 to 16 items per sub-scale. The final instrument, the Likert RHETI, is displayed in Appendix G.

Results of the pilot administration of the instrument indicated that some respondents completed it in as little as 13 minutes. The Qualtrics survey allowed respondents to finish the survey in more than one sitting by permitting the survey to be saved and completed at a later sitting. Time to complete a survey included the "time outs" and therefore no meaningful estimates of the longest time required to take the pilot instrument were available. Based on Fishman & Galguera's (2003, p.96) recommendation that a test should not take longer than 20 minutes to complete, and the fact that many respondents completed the pilot in 20 minutes or less, it appeared that the study's final instrument which was 63 percent the length of the pilot instrument would be short enough to be avoid fatigue and impatience among the study's respondents.

Main Study

Demographics of participants in the main study. Demographic data from the 6401 participants were as follows: Females comprised 69.6 % of respondents; males 30.2%. Of all respondents, 69.2% were from the United States, 21.7% were from other

countries, and 9.1% did not specify where they lived. Respondents reported living in a total of 89 different countries and/or regions outside of the United States, and from 50 of the United States and the District of Columbia. Of all subjects, 16.3% were 18-24 years old; 43.4% were 25-44 years old; 35.6% were 45-64 years old; 4.7% were 65 years or older. Participants reported their races as follows: .6% American Indian or Alaskan Native; 7.8% Asian; 2.2% Black or African American; 2.8% Hispanic or Latino; .2% Native Hawaiian or Other Pacific Islander; 81.7% White; 4.6% Other. Those who reported knowing their Enneagram types prior to taking the Likert RHETI were 41.9% of respondents; 58.1% of respondents reported they did not know their types. Demographic data for the main study are displayed in Appendix H.

Assessment of the main study correlation matrix. The correlation matrix was positive definite, with a determinant of 5.65E-026. It showed there were no items too highly intercorrelated (i.e. correlated > .79). *Bartlett's test of sphericity*, an indicator of adequate correlations among the variables, and recommended to be significant at a level of $p < .05$, met that criterion, at the level of $p < .000$. The *Kaiser-Meyer-Olkin (KMO)* statistic, another indicator of sufficient strength of relationships among variables, and recommended to be > .60, was .956, a value considered "marvelous" by Kaiser (1974), cited by Pett, Lackey & Sullivan (2003, p. 78). Values on the diagonal of the *Anti-image correlation matrix* were > .880, and most were > .950, thereby meeting the criterion of > .70 for ideal values indicating the adequacy of the sample in terms of the strength of the correlation of each variable with all other items in the matrix.

It was concluded that sampling was adequate and that each of the items was sufficiently correlated with the rest of the items to proceed, even though the determinant

of the matrix for the dataset of 6401 cases was close to 0. Because of the determinant's low value, per the recommendations of Pett, Lackey & Sullivan, the possibility of duplicate cases was checked and none were found. Pett, Lackey & Sullivan (2003, p. 68) state: "We have major problems with the correlation matrix if the determinant is equal to or very close to zero." However, in personal communication, Pett stated, "I would not worry about the determinant [of this study's dataset]. The fact that it is close to 0 is not surprising given your number of cases and number of items." With these considerations made, the dataset was determined to be factorable, and analysis proceeded.

Preparation of the dataset. There were no missing data in the sample of 6401 cases. Four outliers were identified by the AMOS statistical software program, but because none of them exhibited characteristics that would have indicated capricious responses, none were eliminated from the dataset for analysis.

Factor analysis.

After the set of 6401 cases was divided in half, analyses of the first half of data were conducted and the following results obtained.

Extraction and rotation of the initial factors: first half dataset. Initial extraction of factors, specifying the criterion of eigenvalue > 1, by both of the extraction methods of PAF and ULS resulted in solutions of 18 factors. The scree plots from both methods, however, suggested there were between 7-11 factors with meaningfully large numbers of items with significant loadings on the factors. The factor correlation matrix showed that five pairs of the 18 factors correlated at levels > .30, suggesting that each of those pairs would be better represented as one factor than as two (Pett, Lackey & Sullivan, 2003). Furthermore, the pattern matrix indicated 5 of the 18 factors were sparsely loaded with

few items (4, 4, 4, 3, and 1, respectively). Based on results of the scree plot, the correlations > .30 of 5 pairs of factors, and 5 factors loading with fewer than 5 items, specification of a 13-factor solution was conducted.

The 13-factor solution produced a scree plot suggesting that between 6-11 factors accounted for the majority of variance. Four of the 13 factors correlated > .30, suggesting that each of those pairs would be better represented as one factor than as two (Pett, Lackey & Sullivan, 2003). Based on results of the scree plot and the correlations > .30 of 4 pairs of factors, a 9-factor solution was conducted.

The 9-factor solution would have lent support to the Enneagram typology, if, in fact, the 9 factors had been comprised of items that described the nine personality types as they are described in the Enneagram typology. What resulted, however, was one factor of six items (they had the overall quality of "*Nine-Type/Six-Type*"), all of which loaded with values <.382, and this factor was correlated at .308 with another of the factors (a "*Four-Type/Six-Type*" combination of items). With the one factor having no item-to-factor loading >.382, it was considered to be dubious to interpret it as a factor at all, since, as pointed out by Pett, Lackey & Sullivan (2003, p. 209), the items loading onto it shared very little variance. Because of this, and because of the correlation >.30 of two of the factors of this solution, factor analysis with extraction of eight factors was conducted.

The 8-factor solution displayed an approximately simple solution. Although multiple items loaded on more than one factor in the pattern matrix, the majority of items loaded on one factor and one factor only. One item failed to load >.30 on any factor and it was eliminated from further analyses.

Each of the eight factors was assessed individually by having SPSS compute the scale reliability statistics of *Cronbach alpha, corrected item-total correlation,* and *alpha-if-item-deleted* for each factor. Cronbach's coefficient alpha values > .87 were considered to be indicative of a scale within which some items were possibly redundant, as per Pett, Lackey & Sullivan (2003) and Spector (1992). Such scales were examined, and between items judged by the researcher to be redundant, the one considered to better conform to standards of scale/item development (in terms of standards of one-idea-only, unambiguous, lacking jargon) was retained, the other eliminated, and the scale reliability statistics re-computed.

Refinement of the factors. For items that loaded onto more than one factor, computation of the scale reliability statistics of *corrected item-total correlation,* and *Cronbach's alpha if item deleted* for each of the subscales were examined, to decide with which subscale the item was the best fit. Items which were not indicated by the scale reliability statistics to better fit with one factor only were eliminated from both scales, as recommended by Kline (2000), cited in Pett, Lackey & Sullivan (2003, p. 173). Items the deletion of which improved the value of Cronbach's coefficient alpha were also deleted. The values of Cronbach's coefficient alpha for the factors thus refined ranged from .765 to .843, all considered good indicators of internal reliability (Spector, 1992, p.32). Numbers of items per scale ranged from 5 to 11. There was a total of 59 items that defined the 8 factors of the refined solution.

At this point, it was decided to re-introduce the items of the *Nine-Type* sub-scale that had been entirely and progressively eliminated during the refinement of factors. It was thought that with the elimination of nearly half of the total items, they might now

define their own factor. This proved to be the case. All nine of the items of the *Nine-Type* sub-scale loaded together onto one factor and the other eight factors that had comprised the earlier, 8-factor solution, remained largely unchanged. Examination of the scale reliability statistics for this new *Nine-Type* sub-scale showed that one of the items was poorly correlated with the others as a whole, and it was eliminated from the next iteration of factor analysis which produced a 9-factor, approximately simple solution of clearly interpretable factors.

To allow some other previously eliminated items the chance to be part of this now refined solution, Six-Type and Eight-Type items were selectively re-introduced to the set of total items, in various combinations that might allow them to take their places among factors. No simple solution was attained in this way, except that one *Six-Type* item did load onto the new *Nine-Type* factor, and one *One-Type* item switched from loading with other *One-Type* items, to loading with the *Six-Type* items. All other additions of an individual item or set of items resulted in multiple sparsely loaded and therefore un-interpretable factors.

A factor analysis of the final 66 items was conducted. The final refined 9-factor solution displayed an approximately simple solution, with only six of the 66 items loading on more than one factor in the pattern matrix. In the structure matrix, all factors had their highest loaders loading at .650 or higher, and all with at least eight items, although subsequent refinements directed by the scale reliability statistics of each factor resulted in one factor, the *Eight-Type*, with five items.

As recommended by Pett, Lackey & Sullivan (2003, p. 209), a factor should be interpreted by relying on the items that load > .60 to define the characteristics of that

item. They state further, that several items with loadings >.63 lend confidence that an adequate interpretation of a factor has been achieved. On the other hand, Pett, Lackey & Sullivan condone using more than simply statistical criteria to name a factor, and allow that consideration of initial constructs' conceptualizations are necessary. With these considerations in mind, each of the eight refined factors are considered below, and interpreted in terms of the Enneagram typology and this study's guiding hypotheses.

The "One-Type" factor. Table 1 displays the eight items that comprise the refined *One-Type* factor. The first two are the ones that loaded >.60 and are, therefore, considered to distinctively characterize the factor. The eight items are congruent with the Enneagram *One-Type* which is labeled *The Reformer* (Riso & Hudson, 1999) or *The Perfectionist* (Palmer, 1988).

The initial numeral of the item numbers displayed in the tables name the Enneagram type for which the associated statement was designed to be diagnostic. Thus, for example, item 3s is recognizable as an item that was expected to factor with other items diagnostic of *Three-Type,* but which factored instead, in this case, with *One-Type* items. Conversely, it can be seen that seven of the eight items are ones that were written to conform to accepted characterizations of the *One-Type*. Thus, the *One-Type* clearly emerged, with seven of the eight items that covaried to form it, having been written to be diagnostic of the *One-Type*. The value of Cronbach's coefficient alpha for this scale/factor = .761, indicating the items are consistent with each other.

Table 1

Items of the Refined Factor Interpreted as One-Type

Item No.	Likert RHETI Item
1u	**I have been organized and orderly.**
1k	**I have been self-disciplined.**
1c	I have been good at dealing with details.
1r	I have seen others as disorganized.
1j	I have felt the need to do things perfectly.
1o	People have trusted me because I will do what is right.
3s	When I feel I'm falling behind, I have been motivated to "get going."
1s	I have always tried to fulfill my high ideals.

Note: Items that loaded >.60 are boldface.

The "Two-Type" factor. Table 2 displays the seven items that comprise the refined *Two-Type* factor. The first four loaded >.60 in the structure matrix and are, therefore, considered to distinctively characterize the factor. The seven items are congruent with the Enneagram *Two-Type* which is labeled *The Helper* (Riso & Hudson, 1999), or *The Giver* (Palmer, 1988). Thus, the *Two-Type* clearly emerged, with all of items that co-varied to form it, having been written to be diagnostic of the *Two-Type*. The value of Cronbach's coefficient alpha for this scale/factor = .843, indicating items are consistent with each other (Spector, 1992, p. 32).

Table 2

Items of the Refined Factor Interpreted as Two-Type

Item No.	Likert RHETI Item
2h	**I have been known for being warm and caring.**
2v	**I have enjoyed telling people they are special to me.**
2e	**I have needed to show affection to people.**
2g	**I have been sensitive to others' needs.**
2b	I have used physical contact to reassure others about how I feel toward them.
2i	People have responded to me because I have been interested in them.
2p	I have liked serving others.

Note: Items that loaded >.60 are boldface.

The "Three-Type" factor. The following eight items comprise the refined *Three-Type* factor. The first three are the ones that loaded >.60 and are, therefore, considered to distinctively characterize the factor. The 8 items are congruent with the Enneagram *Three-Type* which is labeled *The Achiever* (Riso & Hudson, 1999), or *The Performer* (Palmer, 1988). Two of the items that loaded on this factor were written to be diagnostic of the *Two-Type* and one was written for the *Eight-Type*. Each of these "unexpected" items express feelings about desired effects on others, as opposed to the items of the *Two-Type* factor which are all expressive of one's own behaviors toward others. And while item 8q seems to be a fit for the Eight-Type factor, it failed to load on it >.30. Thus, the *Three-Type* clearly emerged, with five of the eight items that co-varied to form it, having been written to be diagnostic of the *Three-Type*. The value of Cronbach alpha for this scale/factor = .805, indicating items are consistent with each.

Table 3

Items of the Refined Factor Interpreted as Three-Type

Item No.	Likert RHETI Item
3m	**It has been important to me to be admired.**
3o	**I have been attracted to activities that had substantial potential for recognition.**
2o	**I have taken pride in being important to others.**
8q	I have needed to feel my impact on those around me.
3p	I have been concerned with doing better than others.
3u	My image has been one of my most important concerns.
3a	I have worked hard to be appropriate and well-liked.
2f	I have wanted people to depend on me.

Note: Items that loaded >.60 are boldface.

The Four-Type factor. Table 4 displays the nine items that comprise the refined

Four-Type factor. The first four are the ones that loaded >.60 and are, therefore,

considered to distinctively characterize the factor. The 9 items are congruent with the

Enneagram *Four-Type* which is labeled *The Individualist* (Riso & Hudson, 1999), or *The*

Tragic Romantic (Palmer, 1988). This factor drew two items intended for the *Six-Type*

sub-scale, both of which express worry and/or brooding, a quality that was not depicted

in the *Six-Type* factor in this study. The *Four-Type* clearly emerged, with six of the nine

items that co-varied to form it, having been written to be diagnostic of the *Four-Type*.

The value of Cronbach's coefficient alpha for this scale/factor = .826, indicating items

are consistent with each other.

Table 4

Items of the Refined Factor Interpreted as Four-Type

Item No.	Likert RHETI Item
4r	**I have focused on disappointments from the past.**
4e	**When troubled, I have "obsessed" about my emotional states.**
6h	**I have tended to dwell on "worst case" scenarios.**
4o	**I have taken things too personally.**
6g	It has been difficult for me to relax and stop worrying about potential problems.
4z	I have been optimistic. (REVERSE SCORED)
4d	I have been stopped in my tracks by self-consciousness.
7j INV	I have been known for my unsinkable spirit. (REVERSE SCORED)
4a	I have spent more time imagining relationships than actually having them.

Note: Items that loaded >.60 are boldface.

The "Five-Type" factor. Table 5 displays the nine items that comprise the refined

Five-Type factor. The first one is the one item that loaded >.60 and is, therefore,

considered to distinctively characterize the factor. The 11 items are congruent with the

Enneagram *Five-Type* which is labeled *The Investigator* (Riso & Hudson, 1999), or *The*

Observer (Palmer, 1988). This factor captured two items intended for the *Four-Type*

factor, as shown, one expressing the inward focus of this "ideas-oriented" type, while the

other one expresses feeling different from others. The last three items listed in the table

suggest some overlap with the characterization of the *Four-Type* which included an item

that expresses a tendency to think about relationships rather than to have them. Thus, the

Five-Type clearly emerged, with nine of the eleven items that co-varied to form it, having

been written to be diagnostic of the *Five-Type*. The value of Cronbach's coefficient alpha

for this scale/factor = .780, indicating items are consistent with each other.

Table 5

Items of the Refined Factor Interpreted as Five-Type

Item No.	Likert RHETI Item
5k	**I have enjoyed investigating complex issues no one else is interested in.**
5h	I have been mentally intense.
5p	I have come across to others as being eccentric.
5o	I have enjoyed speculating about things in great detail.
5v	I have gotten lost in my interests for hours.
5f	I have been attracted to subjects that others find disturbing.
4g	I have spent a lot of time looking inward.
5e	Intellectual debate has brought out my forceful side.
4h	I have liked feeling how different I am from most people.

Note: Items that loaded >.60 are boldface.

The Six-Type factor. Table 6 displays the seven items that comprise the refined

Six-Type factor. The first three listed are the ones that loaded >.60 and are, therefore,

considered to distinctively characterize the factor. The seven items fail to capture the

Enneagram *Six-Type* characterized by the labels that have been assigned to it: *The*

Loyalist (Riso & Hudson, 1999), or *The Devil's Advocate* (Palmer, 1988). As opposed to

both of those labels, this factor loaded with the *Six-Type* items that describe a cautious,

methodical personality. The factor drew three items from the very different *Seven-Type*

factor, because they relate inversely to the *Six-Type* items. The inversely loading *Seven-*

66

Type items indicate that low scores on items expressive of spontaneity and excitement correspond to this cautious, methodical personality type. The *Six-Type* clearly emerged, even though only three of the seven items that co-varied to form it had been written to be diagnostic of the *Six-Type*. The worried, indecisive qualities, attributed by the Enneagram literature to the *Six-Type*, failed to factor with the *Six-Type* traits listed in Table 6. (Two such items loaded with the *Four-Type*, one of them loading sufficiently to be noted as interpretive of that factor; see above). The value of Cronbach's coefficient alpha for this scale/factor = .791, indicating items are consistent with each other (Spector, 1992, p. 32).

Table 6

Items of the Refined Factor Interpreted as Six-Type

Item No.	Likert RHETI Item
6e	**I have been cautious.**
6u	**I have wanted to follow clear-cut guidelines.**
6v	**I have needed consistent predictability.**
1h	I have not liked it when people have broken the rules.
7e INV	I have been spontaneous. (REVERSE-SCORED)
7l INV	I have tried to keep my life exciting. (REVERSE-SCORED)
7o INV	I have been adventuresome and enjoyed trying many new things. (REVERSE-SCORED).

Note: Items that loaded >.60 are boldface.

The Seven-Type factor. Table 7 displays the nine items that comprise the refined *Seven-Type* factor. The first four items loaded >.60 and are, therefore, considered to distinctively characterize the factor. The eight items are congruent with the Enneagram *Seven-Type* which is labeled *The Enthusiast* (Riso & Hudson, 1999), or *The Epicure*

(Palmer, 1988). Thus, the *Seven-Type* clearly emerged, with eight of the nine items that

co-varied to form it, having been written to be diagnostic of the *Seven-Type*. The value of

Cronbach's coefficient alpha for this scale/factor = .822, indicating items are consistent

with each other (Spector, 1992, p. 32).

Table 7

Items of the Refined Factor Interpreted as Seven-Type

Item No.	Likert RHETI Item
7f	**I have been fun-loving.**
7e	**I have been spontaneous.**
7l	**I have tried to keep my life exciting.**
7b	**I have liked to keep things light and playful.**
7c	Given a choice between something familiar and something new, I have chosen something new.
7i	I have been out-going with a high turnover of friends.
7j	I have been known for my unsinkable spirit.
7m	Many people consider me to be hyper-energetic.
4z	I have been optimistic.

Note: Items that loaded >.60 are boldface.

The Eight-Type factor. Table 8 displays the five items that comprise the refined

Eight-Type factor. The first three loaded >.60 and are, therefore, considered to

distinctively characterize the factor. The five items are congruent with the Enneagram

Eight-Type which is labeled *The Challenger* (Riso & Hudson, 1999), or *The Boss*

(Palmer, 1988). Thus, the *Eight-Type* clearly emerged, with all of the five items that co-

varied to form it, having been written to be diagnostic of the *Eight-Type*. The value of

Cronbach's coefficient alpha for this scale/factor = .792, indicating items are consistent

with each other.

Table 8

Items of the Refined Factor Interpreted as Eight-Type

Item No.	Likert RHETI Item
8e	**I have a dominating personality.**
8r	**One of my strengths has been to take charge.**
8g	**I have taken on confrontations.**
8n	Making big things happen has been one of my major strengths.
8a	When I have gotten angry, people have known about it.

Note: Items that loaded >.60 are boldface.

The "Nine-Type" factor. Table 9 displays the nine items that comprise the

refined *Nine-Type* factor. The first one loaded >.60 and is, therefore, considered to

distinctively characterize the factor. The nine items are congruent with the Enneagram

Nine -Type which is labeled *The Peacemaker* (Riso & Hudson, 1999), or *The Mediator*

(Palmer, 1988). Thus, the *Nine-Type* clearly emerged, with eight of the nine items that

co-varied to form it, having been written to be diagnostic of the *Nin-Type*. The value of

Cronbach's coefficient alpha for this scale/factor = .749, indicating items are consistent

with each other.

The items and scale statistics for each of the factors is displayed in Appendix I.

The pattern, structure, and factor correlation matrices for this final solution are displayed

in Appendices J, K, and L respectively. The pattern and structure matrices are displayed

with suppression of values <.30.

Table 9
Items of the Refined Factor Interpreted as Nine-Type

Item No.	Likert RHETI Item
9o	**I have been too passive.**
9x	I have resisted being drawn in to confrontations.
6f	I have had difficulty making decisions.
9z	It has been hard for me to know what I've wanted when I've been with other people.
9v	I have felt comfortable letting others tell me what to do.
9k	I have tried to keep my life peaceful.
9j	It has been important to me that everybody gets along.
9c	I have felt overwhelmed when there was a lot of stimulation.
9l	I have been laid back and not worried about getting ahead.

Note: Items that loaded >.60 are boldface.

Factoring of the factors. Each of the final nine factors was factor analyzed to

determine if it was one factor or not, following up on Newgent's study (2001) in which

she found that each of the Enneagram types factored onto two factors instead of the

expected one. Of the nine factors in the refined solution, three (the *Two-Type*, *Five-Type*

and *Eight-Type*) were not reducible further. The other 6 types produced two factors each,

but the factors were sufficiently correlated to be meaningfully interpreted as one factor.

The correlations between the factors of the six two-factor solutions ranged from .480 (for the *Nine-Type*), to .633 (the *Three-Type*). Results of the factor analyses for each of the nine refined factors are shown in Appendix M.

Effects of gender and knowledge of Enneagram type. Just as the internal consistency of each of the scales was validated with sufficiently beefy Cronbach's coefficient alpha values, so were the values of Cronbach's coefficient alpha that were calculated separately for males and females. Cronbach's coefficient alpha values for the type sub-scales, split by gender, ranged from .739 for males and .740 for females, to .842 (males) and .836 (females).

All of the sub-scales/factors were internally consistent regardless of whether or not respondents knew their Enneagram types. Cronbach's coefficient alpha values for the type sub-scales, split by whether or not Enneagram type was known, ranged from .755 for those who knew their types and .733 for those who did not, to .860 (those who knew their types) and .828 (those who did not). Appendix N displays Cronbach's coefficient alpha values for each of the scales un-split and split by gender and by knowledge of Enneagram type.

Testing of the model derived from factor analysis of the dataset of the first sample with the second sample dataset

The factor structure of the second dataset was identical to that of the first, using the 66 items of the factors refined from the first dataset, and specification of nine factors. The same sets of items that comprised the refined factors of the first dataset formed factors in the second dataset, all with strong Cronbach's coefficient alpha values (.744 to .832). The scale reliability statistics for the second dataset are shown in Appendix O. The

pattern, structure, and factor correlation matrices for the second dataset are displayed in Appendices P, Q and R, respectively.

Factoring of the factors. As for the first half dataset, each of the final nine factors of the second half dataset was factor analyzed to determine if it was one factor or not, following up on Newgent's study (2001) in which she found that each of the Enneagram types factored onto two factors instead of the expected one. The same three factors in the second half dataset as those in the first half dataset (the *Two-Type*, *Five-Type* and *Eight-Type*) were found to be not further reducible. The other 6 types produced two factors each, but, as in the first half dataset, the factors were sufficiently correlated to be meaningfully interpreted as one factor. The correlations between the factors of the six two-factor solutions ranged from .504 (for the *Six-Type*), to .638 (the *Three-Type*). Results of the factor analyses for each of the nine factors of the second half dataset are shown in Appendix S.

Effects of gender and knowledge of Enneagram type. As for the first dataset, Cronbach's coefficient alpha statistics were computed for each of the scales/factors of the second dataset, splitting the dataset by gender. Cronbach's coefficient alpha values indicated all of the sub-scale/factors were internally consistent for both males and females. Values for males ranged from .753 to .834; for females they ranged from .766 to .831.

All of the type sub-scales were internally consistent regardless of whether or not respondents knew their Enneagram types. Values of Cronbach's coefficient alpha ranged from .758 to .849 for those who did know their types, and from .733 to .833 for those who did not.

Tables of Cronbach's coefficient alpha values for each of the sub-scales/factors

split by gender and by knowledge of Enneagram type are displayed in Appendix T.

Comparisons of type scores derived from: self-identification, the unrefined set of

items, and the refined set of items

Overall (the *Six-Type* being the exception), there was congruence among the type

scores generated by summing the Types' respective items of the original 124 items,

summing the refined factors' respective items, and the subjects' self-identified types. For

example, among those who identified themselves as *One-Types*, their scores across all of

the refined factor/sub-scales had the highest mean z-score on the *One-Type* factor/sub-

scale. Similarly, the weighted mean score on the *One-Type* sub-scale was higher than on

any of the other sub-scales calculated from the original items on the Likert RHETI.

This congruence held across all self-identified types, except for those who identified

themselves as *Six-Types*. Among these subjects, the refined *Six-Type* factor/sub-scale

mean z-score *was* higher than any of the other refined type z-scores, however, the

weighted mean score calculated from the original Likert RHETI *Six-Type* items was less

than the weighted mean scores of the *One-*, *Two-*, and *Four-Types*, among those subjects

who identified themselves as *Six-Types*. Thus, the refined *Six-Type* solution, comprised

of only seven items, was better able to identify a self-identified *Six-Type* subject than

were the original 14 items of the *Six-Type* scale, which apparently failed to capture the

essence of the *Six-Type*. Thus, all nine of the refined factors, were able, by using the

highest of the refined factor z-scores, to predict the types of those who reported their

types. Descriptive statistics for each of the groups of self-identified types are displayed

in Appendix U.

CHAPTER FIVE

Conclusions

Summary

Data collected from a broad demographic produced a nine-factor structure. Each of the nine factors is clearly congruent with one of the nine Enneagram types as they are described in popular literature about the Enneagram. The nine factors which emerged were consistently strong between genders and between those who did and did not have prior beliefs about their Enneagram type. The refined factors were validated by descriptive statistics which showed that subjects scored highest on the items of the factor which was descriptive of the same Enneagram type that those same subjects identified as their types. In fact, the refined factors, even though relying on much reduced numbers of items (one scale, the *Eight-Type* was comprised of only five items), were better able to predict a subject's self-identified type than were all of the original items (14-16 items per sub-scale). The results of the factor refinement conducted with the first dataset were validated with a second, independent sample of equal size.

Conclusions

This study produced the first and only empirical evidence of nine personality types as proposed by the Enneagram typology. Its use by counselors, educators, spiritual directors, and consultants to businesses, which has relied to date on anecdotal evidence merely, is bolstered by this study which supports and justifies the statement that at least among the population of people interested in the Enneagram, nine distinct types of personality exist. It further allows statements of the characteristics that are distinctive about each of those nine types of personality. While this is a major contribution to claims

for the Enneagram, it does not validate the comprehensive theory of the Enneagram which extends beyond the descriptions of types.

The nine factors that emerged from the data of this study describe personality types that are recognizably Enneagram types, and are also more concise than traditional descriptions of the Enneagram types. This need not be interpreted to mean that the traditional descriptions of each type are wrong. It is, in fact, reasonable to expect that personality types will be not as distinct as a factor analytic simple structure depicts. I.e. personality types would be expected to share traits, and this consideration drove the decision to obliquely rotate factors, allowing them to inter-correlate, and to share items. Warling's (1995) study, in fact, demonstrated all but eight of all 36 possible pairs of types determined by the RHETI to correlate significantly with each other. This is important as it relates to the theory of Enneagram personality types, according to which each person *is expected* to display traits not only of one, basic type, but of a basic type plus predominantly one "wing" type (one of the types on either side of the basic type), and perhaps of the type toward which a person "moves" when on a path of growth, or conversely, on a path termed variously as "disintegration" or "stress" (Maitri, 2000; Palmer, 1988; Riso & Hudson, 1999). The point of citing these nuances of Enneagram theory is to highlight this point: the factor analytic solution derived by this study is a description of what is *distinctive* about each of the patterns of responses to a particular 124 items, and *not a definitive description* of any one of the types. The final factor solution is the result of a process that favored elimination of items that ambiguously loaded on more than one factor. This frequently had the effect of elimination of items that

loaded respectably on one or more factors, and that correlated strongly with their respective factors as wholes.

There is enough validity to the Enneagram typology to justify further efforts to refine it. The results of this study support the claims of its usefulness by Enneagram enthusiasts. The results also suggest, however, that it should be used with caution. This study is part of only a small body of research that has explored the validity of the nine Enneagram types. Factor analysis, and the insights it offers about actual, observed patterns and covariance of responses, has been available for practical research purposes only since the 1980's; only one study since then has made judicious use of factor analysis to examine patterns that relate to the Enneagram typology (Newgent, 2001), and that was a limited use of it, with a limited sample. In addition, and important enough to be restated, the types themselves are but a portion of Enneagram theory, which extends beyond descriptions of types to predictions and prescriptions of specific directions for growth as well as stress for the different types.

The factors that are described by this study describe variance and are, therefore, necessarily useful (Kline, 1993). To what use they will be put, to fuel interpretations, or to direct future research will be determined by a creative activity that will limit or expand their utility for counselors and other students of human personality.

Suggestion for Future Research

A process of constructing new items would be meaningfully applied to all of the type sub-scales. It will be both interesting and necessary, if the Enneagram is to be considered a definitive description of personality, to expand the descriptions of each type, in order to further explore the validity of the characterizations of each type that are

declared as definitive in the popular literature about the Enneagram. An interesting question about each of the factors in this study is: What does it leave out? A comparison between the items in each factor and popular characterizations would form hypotheses that would be tested with the design of a new instrument and a new study. This study suggests especially careful attention be paid to construction of items to describe the *Six-Type*; only three items written to diagnose it were included in the final, refined factor that characterizes it, and the total set of original items written to characterize it failed to identify as *Six-Type*s those who identified themselves as such.

Limitations

The Likert RHETI was designed for and piloted on a sample from the population of the United States. Data were collected, however, from 89 different countries/regions, in addition to the United States. Therefore, it is possible that some of the items' idiomatic phrases, such as "wet blanket," or "get going," were confusing to some subjects and may have contributed to errors.

The sampling of this study was disproportionately female. Approximately 70% of respondents were female and 30% male.[4] Descriptive statistics showed that men and women had different patterns of self-identified types. For instance, while 20% of men had previously typed themselves as *Five-Types*, 8% of women had. Nineteen percent of women had previously identified themselves as Two-Types, while 7% of men had. The fact remains, however, there were 1932 men sampled for this study, for a more than adequate subjects:variable ratio of roughly 16:1 for the male subjects alone. The sample for this study was further biased by being from a population of those who self-select by

---

[4] This proportion is only slightly better than the one in Newgent's (2000) study for which her sample was 78% female and 22% male. Wagner's (1981) study used a sample that was 80% women. Warling's (1995) sample was 73% female, 27% male.

responding to a request for help, and/or to learn about the Enneagram personality typology by connecting to the web-site of The Enneagram Institute.

There were oversights in the construction of the Likert RHETI which resulted in some redundant items. If this had been recognized earlier, in the design phase, there may have been more items that were distinctively characteristic of each Enneagram type. Any instrument used to collect data necessarily limits the kinds and nuances of information that are accessed. What patterns of variance among subjects that could have been, but weren't tapped, are not known.

Finally, this study did not include an assessment of test-retest reliability. This is an important issue to the underlying assumption that what is measured in a personality typing instrument are traits, not states.

Appendix A

Email to Recruit Subjects for the Main Study

Don Riso to Friends: Validation study of new Likert RHETI and Enneagram itself!

Dear Friends,

Announcing a New Test—Your Participation Invited for Validation Work on the Enneagram Typology System and a New Version of the RHETI.
We are working with Sara Scott, a doctoral student in Counselor Education at the College of William and Mary in Virginia. She approached us to undertake this work nearly two years ago because of her interest in helping to bring the Enneagram into more mainstream attention.

You can participate in this worthwhile endeavor by taking her free 6-point Likert-scale version of the RHETI from this link: https://wmsas.qualtrics.com/SE/?SID=SV_doPACqR3Nr4lmuM. Please invite as many others as you would like to also take the test.

Since the Enneagram typology has not been empirically validated, Sara is endeavoring to conduct the most rigorous study of the Enneagram as a whole to date. This is similar to the work SHL originally began with us, but from a different perspective. Instead of comparing the Enneagram to another validated system (the NEO-PI-R), she is using a statistical tool called Factor Analysis. Sara is using the statements from the RHETI rearranged with a 6-point agree/disagree Likert-scale format.
In Factor Analysis all the responses to each item on the Likert-scale version of the RHETI are combined in different ways to show which items correlate most strongly with each other. The idea is that a response to one of the items in a cluster predicts responses to other items in that same cluster as well, with the hypothesis that nine different personality clusters (factors) will form. If the nine different factors tested on this Likert-RHETI each hangs together, it can be said to validly indicate nine different types of meaning-making—the nine personality types. This would indicate the construct validity of the RHETI, which would confirm that there truly are nine different types of people in the world.

To achieve the level of validation that Sara is seeking for her doctoral dissertation, she needs 1,500 subjects to take the Likert RHETI. This will be by far the largest empirical independent validation ever completed, not only of the RHETI, but more importantly of the Enneagram itself. As one of our students, we greatly appreciate your responding to this request by taking the test at https://wmsas.qualtrics.com/SE/?SID=SV_doPACqR3Nr4lmuM.
You are also invited by the researcher to share this test with your friends, family, and business associates. The broader the sampling of respondents, the better. We have personally found that the Likert RHETI is extremely accurate, fun, and easy to take. You will get your results for all nine types at the end of the test. The Likert RHETI will take 15-20 minutes to complete. It is free, totally confidential, and will greatly help the whole Enneagram field!
Many thanks!
Don

Don Richard Riso
President
The Enneagram Institute (World Headquarters)
The Nine Domains Group LLC
3355 Main Street
Stone Ridge, New York 12484

Office: 845-687-9878
FAX: 845-687-7486
www.EnneagramInstitute.com

Appendix B

Recruitment Announcement for the Main Study Posted on the Website of The Enneagram Institute

Free Likert RHETI

Riso-Hudson Enneagram Type Indicator
Validation Study for Doctoral Dissertation

20 minutes, free
133 questions on a 6-point Likert Scale

Sara Scott, a doctoral student in Counselor Education at the College of William and Mary in Virginia, is attempting to validate the RHETI in a new format. She has reduced the RHETI to 133 statements on a 6-point Likert Scale. Sara is endeavoring to conduct the most rigorous study of the Enneagram as a whole to date. Please participate in this worthwhile endeavor.

You don't have to know your type to take the Likert-RHETI.

> Details

> Take the Test

Appendix C

Recruitment Email from Assistant Dean of the School of Education,
The College of William & Mary,
for the Main Study

Hello, Faculty and Students;
If you would like to learn about your personality type in terms of the Enneagram
personality typology, AND provide data to Sara Scott for her doctoral dissertation, please
click on this link to take her 15-20 minute survey. At the end of the survey, you will
receive scores and a link that will provide you with descriptions of what those scores may
indicate about your personality.

https://wmsas.qualtrics.com/SE/?SID=SV_doPACqR3Nr4lmuM

It's easy and fun and I know Sara would appreciate your help.

Dr. Ward

Appendix D

Pilot Instrument*
(as printed directly from its online web site)
* This instrument is the property of *The Enneagram Institute*, Stone Ridge, New York.

I agree to participate in a study on The Enneagram. The purpose of this study is to develop an instrument which will identify personality types. I understand that this study is being conducted as part of the research Sara Scott is conducting for her doctoral dissertation in the Counselor Education program at the College of William & Mary.

I understand that I will be expected to complete a survey instrument which will take approximately 30 minutes.

I have been informed that any information obtained in this study will be confidential and anonymous.

I understand that I am free to withdraw my consent and discontinue participation in this study at any time. If I have any questions or problems that arise in connection with my participation in this study, I should contact Sara Scott at 757-615-2288 or sasco2@email.wm.edu or Dr. Charles Gressard, Sara's Faculty Advisor, at 757-221-2352 or cfgres@wm.edu.

⌐ *Clicking here signifies that I am at least 18 years of age and that I consent to participate in this study.*

Instructions:

For each item, please answer to describe yourself, AS YOU HAVE BEEN FOR MOST OF YOUR LIFE. Imagine a movie of your entire life, with you as the main character. Answer the questions below to describe, in general, that main character.

Please do not skip any item. The survey will prevent you from going to the next page if a response is missing from one of the items. (If you skip an item, a message at the end of the page will alert you. If that happens, please scroll through the questions - a quick scroll will allow you to see the red alert message next to the non-completed items).

After you have completed all of the items, your scores for each of the nine Enneagram types will be displayed.

You can save your work and return to finish it later.

Your response is important to me. I am eager to receive it as soon it is possible for you to complete it.

Thank you for your participation in my research project!

My gender is:
- ⌐ Male
- ⌐ Female

Q6
⌐

My age is:
- ⌐ 18 - 25

- ◯ 26 - 35
- ◯ 36 - 45
- ◯ 46 - 65
- ◯ 66 - 66 +

Q7

☐

I identify with the following race:

- ◯ American Indian or Alaska Native
- ◯ Asian
- ◯ Black or African American
- ◯ Hispanic or Latino
- ◯ Native Hawaiian or Other Pacific Islander
- ◯ White

Q8

☐

Do you know your Enneagram Type?

- ◯ Yes
- ◯ No

Display This Question:
If Do you know your Enneagram Type? **Yes** Is **Selected** Edit

Q9

☐

Please indicate your Type:

- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five
- ◯ Six
- ◯ Seven
- ◯ Eight
- ◯ Nine

Q10
I have had strong convictions about how things should be.
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,...)
Q11

I have come across as sure of myself
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q12
I have been good at dealing with details
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q13
I have been strict with myself
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q14
I have pushed to get things done correctly
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q15
I have been idealistic
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q16
I have been direct
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q17
I have not liked it when people have broken the rules
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q18
It has been difficult for me to be flexible
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q19
I have felt the need to do things perfectly
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q20
I have been self-disciplined
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q21
I have felt angry when others didn't seem to listen to what I told them
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q22
I have been "driven "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q23
I have been a serious person
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q24
People have trusted me because I will do what is right
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q25
I have been proud of my ability to take a stand
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q26
I have come across as "uptight "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q27
I have seen others as disorganized
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q28
I have been a responsible person
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q29
I have followed my conscience
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q30
I have been organized and orderly
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q31
I have felt guilty about not getting enough accomplished
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q32

I have worried about being left out of others' activities

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q33

I have used physical contact to reassure others about how I feel toward them

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q34

Closeness in relationships has been important to me

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q35

I have enjoyed welcoming new friends into my life

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q36

I have needed to show affection for people

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q37

I have wanted people to depend on me

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q38

I have been supportive of others

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q39

I have been known for being warm and caring

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q40

People have responded to me because I have been interested in them

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q41

I have been overly emotional

(Not at all like me, Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q42

I have felt upset when others didn't seem to appreciate what I had done for them

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q43

I have been possessive of loved ones

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q44

I have tried to figure out how to get closer to others

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q45

I have wanted to rescue people

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q46

I have taken pride in being important to others

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q47

Being of service to others has been a high priority for me

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q48

I have figured out what others like in a person, and then acted that way

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q49

I have gotten into trouble with others by intruding on their time and space

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q50

I have presented myself to others as being more caring than I really am

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q51

I have tried to NOT be seen as selfish

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q52

I have tried to shape relationships into what I wanted them to be

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q53
I have enjoyed telling people they are special to me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q54
I have worked hard to be accepted and well-liked
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q55
I have come across as cool and aloof
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q56
I have been able to put my feelings aside, to get the job done
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q57
I have been single-minded and persistent
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q58
I have wanted to distinguish myself from others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q59
I have been diplomatic
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q60
I have been charming
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q61
I have been ambitious
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q62
When presented with a new experience, I have asked myself if it would be useful to me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q63
I have been goal-oriented
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q64
I have chosen to do things on my own, rather than to depend on people
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q65
I have been a "go-getter "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q66
It has been important to me to be admired
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q67
I have felt driven to excel
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q68
I have been attracted to activities that had substantial potential for recognition
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q69
I have been concerned with doing better than others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q70
I have been proud of my ability to be flexible
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q71
When I have felt insecure, I have become argumentative
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q72
When times get tough, I have been motivated to "get goin' "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q73

I have worried about meeting the expectations of others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q74
I have liked to make to-do lists and schedules for myself
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q75
I have liked to stay busy, even when on vacation, or just "hanging out "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q76
I have wanted others to come into my world before I show them affection
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q77
Being the center of attention has seemed natural to me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q78
I have been moody
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q79
I have been stopped in my tracks by self-doubt
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q80
When troubled, I have "obsessed" about it
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q81
When I have had conflicts with others, I have withdrawn
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q82
I have spent a lot of time looking inward
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q83
I have emphasized how different I am from most people
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q84
I have been drawn to situations that stir up intense emotions
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q85
I have been a "romantic "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q86
I have been "stand-offish "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q87
Being understood has been important to me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q88
People have responded to me because I have been unusual
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q89
I have been undisciplined
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q90
I have taken things too personally
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q91
One of my strengths has been my ability to describe my feelings
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q92
I have done what I have wanted to do
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q93
I have focused on the past
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q94

I have been a highly individualistic person

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q95

I have been willing to share my feelings

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q96

My melancholy moods have been important to me

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q97

I have longed for what others have

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q98

I have not been emotionally demonstrative

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q99

I have felt isolated from others

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q100

I have preferred pursuit of my personal interests more than security

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q101

My style is "simplicity "

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q102

When debating with friends, I have argued forcefully

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q103

I have been attracted to subjects that others find disturbing

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q104

I have been focused

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q105

I have been intense

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q106

I have preferred to maintain some distance from people

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q107

I have been recognized for my insight

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q108

I've been interested in asking tough questions

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q109

I have been detached from what is going on

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q110

I have been proud of my objectivity

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q111

I have preferred to inhabit my own little world

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q112

My thoughts have been about possibilities

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q113

I have come across to others as being unusual

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q114

I have felt tired after being with people for a long time

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q115
I have experienced people as intrusive
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q116
I have chosen to rely on myself
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q117
I have worried about being overwhelmed by the needs and demands of others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q118
I have learned from observing or reading - not by doing
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q119
I have gotten lost in my interests for hours
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q120
I have stood by my friends, even when they were wrong
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q121
I have doubted my abilities
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q122
Social obligations have been important to me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q123
I have been methodical
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q124
I have been cautious
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q125
I have had difficulty making decisions
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q126
It has been difficult for me to relax and stop worrying about potential problems
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q127
I have tended to think of "worst case" scenarios
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q128
I have been practical and down-to-earth
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q129
I've been sentimental
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q130
My friends have known they could depend on me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q131
I have been pessimistic
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q132
I have "tested" loved ones to see if they were really there for me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q133
I have been proud of being reliable
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q134
When I have been unsure of what to do, I have sought the advice of others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q135

My thoughts have been about practical things
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q136
I have done what I HAD to do, as opposed to what I WANTED to do
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q137
I have had a deep need to belong
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q138
I have gotten into trouble with others by not communicating with them
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q139
When I have felt insecure, I have become arrogant
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q140
I have wanted clear-cut guidelines
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q141
I have liked predictability
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q142
When meeting someone for the first time, I have been chatty
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q143
 I have felt connected to others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q144
Given a choice between something familiar and something new, I have chosen something new
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q145
It has been hard for me to slow down
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q146
I have been spontaneous
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q147
I have been fun-loving
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q148
When presented with a new experience, I have asked myself if it would be enjoyable
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q149
I've worried that I'm missing out on something better
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q150
I have been out-going
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q151
I have been known for my unsinkable spirit
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q152
Coming up with new ideas has been one of my major strengths
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q153
I have tried to keep my life exciting
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q154
I have been energetic
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q155
When I have been unsure of what to do, I have tried different things
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Q156
I have enjoyed pushing the limits
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q157
I have taken pride in my "gusto "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q158
I have thought about things to do in the future, more than about what I am doing in the present
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q159
I have worried that I won't have the resources to meet the responsibilities I have taken on
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q160
I have followed my impulses
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q161
I have tried to NOT be boring
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q162
I have not liked feeling obligated to others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q163
I have managed to get what I want
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q164
When I have gotten angry, I have told people about it
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q165
I have been strong for others, to the point of not dealing with my own fears
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q166
I have been recognized for my ability to make a decision
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q167
Practical results have been important to me
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q168
I have been bold
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q169
I have been confident in myself
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q170
I have taken on confrontations
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q171
I have liked to "shake things up "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q172
I have reacted to pressure from others by becoming more assertive
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q173
I have preferred to take the lead
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q174
I have enjoyed high-pressured situations
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q175
I have felt the need to be a "pillar of strength "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q176
I've worried that someone would take advantage of me

(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q177
Making things happen has been one of my major strengths
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q178
I have provided many people with direction
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q179
People have trusted me because I am confident
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q180
I have liked my presence to be known
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q181
One of my strengths has been to take charge
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q182
I have come across as aggressive
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q183
I have presented myself to others as being tougher than I really am
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q184
I have respected people who stand up for themselves
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q185
I have supported the "underdog "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q186
I have let others tell me what to do
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q187
I have wanted to "fit in "
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q188
I have been too open
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q189
I have felt nervous when there was a lot of stimulation
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q190
It has been hard for me to get up the energy to do things
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q191
I have been optimistic
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q192
I have focused too much on others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q193
I have been reluctant to get involved with people
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q194
I've been interested in maintaining my peace of mind
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q195
I have been agreeable
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q196
It has been important to me that everybody gets along
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q197

I have tried to keep my life peaceful
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q198
I have had modest goals
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q199
I have thought of myself as a "sunny" person
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q200
I have been concerned with making things okay for others
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q201
I have been too passive
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q202
Hard times have made me feel discouraged
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q203
I have wondered why people focus on the negative, when there is so much that is wonderful about life
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q204
I have lost out because I have not felt up to taking advantage of opportunities
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q205
It has been hard for me to know what I want when I have been with other people
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q206
Others have seen me as peaceful when inside I have been nervous
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)
Q207
I have avoided confrontations
(Not at all like me , Not like me , Not much like me , Somewhat like me , Like me , Just like me ,)

Your score for each type is as follows

Type One= ${gr //One Type/Score}

Type Two= ${gr //Two Type/Score}

Type Three= ${gr //Three Type/Score}

Type Four= ${gr //Four Type/Score}

Type Five= ${gr //Five Type/Score}

Type Six= ${gr //Six Type/Score}

Type Seven= ${gr //Seven Type/Score}

Type Eight= ${gr //Eight Type/Score}
Type Nine= ${gr //NIne Type/Score}

You may print this page, to keep a copy of your scores

Please add any suggestions or comments that would help the researcher to improve the experience of completing this survey

93

Appendix E

Pilot Study Demographics

My gender is:

		Frequency	Percent
Valid	Male	50	49%
	Female	53	51%
	Total	103	100%

My age is:

		Frequency	Percent
Valid	18 - 25	32	31%
	26 - 35	15	15%
	36 - 45	15	15%
	46 - 65	31	30%
	66 - 66 +	10	10%
	Total	103	100%

I identify with the following race:

		Frequency	Percent
Valid	American Indian or Alaska Native	3	3%
	Asian	2	2%
	Black or African American	8	8%
	Hispanic or Latino	18	17%
	White	71	69%
	Other	1	1%
	Total	103	100%

Appendix F
Sub-Scales Refined from Pilot Instrument

Items in frames are those that were eliminated from the scales during refinement.

One Subscale
Cronbach alpha: .755

Q10   I have had strong convictions about how things should be.
Q11   I have come across as sure of myself.
Q12   I have been good at dealing with details.
Q13   I have been strict with myself.
Q14   I have pushed to get things done correctly.
Q15   I have been idealistic.
Q16   I have been direct.
Q17   I have not liked it when people have broken the rules.
Q18   It has been difficult for me to be flexible.
Q19   I have felt the need to do things perfectly.
Q20   I have been self-disciplined.
Q21   I have felt angry when others didn't seem to listen to what I told them.
Q22   I have been "driven."
Q23   I have been a serious person.
Q24   People have trusted me because I will do what is right.
Q25   I have been proud of my ability to take a stand.
Q26   I have come across as "uptight."
Q27   I have seen others as disorganized.
Q28   I have been a responsible person.
Q29   I have followed my conscience.
Q30   I have been organized and orderly.
Q31   I have felt guilty about not getting enough accomplished.
Q33   I have used physical contact to reassure others about how I feel toward them. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q54   I have worked hard to be accepted and well-liked. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q120   I have stood by my friends, even when they were wrong. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q203   I have wondered why people focus on the negative, when there is so much that is wonderful about life. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Two Subscale
Cronbach alpha: .860

Q32   I have worried about being left out of others' activities.
Q33   I have used physical contact to reassure others about how I feel toward them.
Q34   Closeness in relationships has been important to me.
Q35   I have enjoyed welcoming new friends into my life.

Q36   I have needed to show affection for people.
Q37   I have wanted people to depend on me.
Q38   I have been supportive of others.
Q39   I have been known for being warm and caring.
Q40   People have responded to me because I have been interested in them.
Q41   I have been overly emotional.
Q42   I have felt upset when others didn't seem to appreciate what I had done for them.
Q43   I have been possessive of loved ones.
Q44   I have tried to figure out how to get closer to others.
Q45   I have wanted to rescue people.
Q46   I have taken pride in being important to others.
Q47   Being of service to others has been a high priority for me.
Q48   I have figured out what others like in a person, and then acted that way.
Q49   I have gotten into trouble with others by intruding on their time and space.
Q50   I have presented myself to others as being more caring than I really am.
Q51   I have tried to NOT be seen as selfish.
Q52   I have tried to shape relationships into what I wanted them to be.
Q53   I have enjoyed telling people they are special to me.
Q54   I have worked hard to be accepted and well-liked.
Q55   I have come across as cool and aloof. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q76   I have wanted others to come into my world before I show them affection. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q98   I have not been emotionally demonstrative. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q193   I have been reluctant to get involved with people. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q201   I have been too passive. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Three Subscale
Cronbach alpha: .791

Q54   I have worked hard to be accepted and well-liked.
Q55   I have come across as cool and aloof.
Q56   I have been able to put my feelings aside, to get the job done.
Q57   I have been single-minded and persistent.
Q58   I have wanted to distinguish myself from others.
Q59   I have been diplomatic.
Q60   I have been charming.
Q61   I have been ambitious.

Q62   When presented with a new experience, I have asked myself if it would be useful to me.

Q63   I have been goal-oriented.

Q64   I have chosen to do things on my own, rather than to depend on people.

Q65   I have been a "go-getter."

Q66   It has been important to me to be admired.

Q67   I have felt driven to excel.

Q68   I have been attracted to activities that had substantial potential for recognition.

Q69   I have been concerned with doing better than others.

Q70   I have been proud of my ability to be flexible.

Q71   When I have felt insecure, I have become argumentative.

Q72   When times get tough, I have been motivated to "get goin'."

Q73   I have worried about meeting the expectations of others.

Q74   I have liked to make to-do lists and schedules for myself.

Q75   I have liked to stay busy, even when on vacation, or just "hanging out."

Q76   I have wanted others to come into my world before I show them affection.

Q77   Being the center of attention has seemed natural to me.

Q34   Closeness in relationships has been important to me. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q78   I have been moody. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q79   I have been stopped in my tracks by self-doubt. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q164   When I have gotten angry, I have told people about it. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q187   I have wanted to "fit in." *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Four Subscale
Cronbach alpha: .799

Q76   I have wanted others to come into my world before I show them affection.

Q77   Being the center of attention has seemed natural to me.

Q78   I have been moody.

Q79   I have been stopped in my tracks by self-doubt.

Q80   When troubled, I have "obsessed" about it.

Q81   When I have had conflicts with others, I have withdrawn.

Q82   I have spent a lot of time looking inward.

Q83   I have emphasized how different I am from most people.

Q84   I have been drawn to situations that stir up intense emotions.

Q85   I have been a "romantic."

Q86   I have been "stand-offish."

Q87   Being understood has been important to me.

Q88   People have responded to me because I have been unusual.

Q89   I have been undisciplined.

Q90   I have taken things too personally.

Q91   One of my strengths has been my ability to describe my feelings.

Q92   I have done what I have wanted to do.

Q93   I have focused on the past.

Q94   I have been a highly individualistic person.

Q95   I have been willing to share my feelings.

Q96   My melancholy moods have been important to me.

Q97   I have longed for what others have.

Q122   Social obligations have been important to me. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q165   I have been strong for others, to the point of not dealing with my own fears. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q191   I have been optimistic. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q192   I have focused too much on others. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q204   I have lost out because I have not felt up to taking advantage of opportunities.

Five Subscale

Cronbach alpha: .829

Q98   I have not been emotionally demonstrative.

Q99   I have felt isolated from others.

Q100   I have preferred pursuit of my personal interests more than security.

Q101   My style is "simplicity."

Q102   When debating with friends, I have argued forcefully.

Q103   I have been attracted to subjects that others find disturbing.

Q104   I have been focused.

Q105   I have been intense.

Q106   I have preferred to maintain some distance from people.

Q107   I have been recognized for my insight.

Q108   I've been interested in asking tough questions.

Q109   I have been detached from what is going on.

Q110   I have been proud of my objectivity.

Q111   I have preferred to inhabit my own little world.

Q112   My thoughts have been about possibilities.

Q113   I have come across to others as being unusual.

Q114   I have felt tired after being with people for a long time.

Q115   I have experienced people as intrusive.

Q116   I have chosen to rely on myself.

Q117   I have worried about being overwhelmed by the needs and demands of others.

Q118   I have learned from observing or reading - not by doing.

Q119   I have gotten lost in my interests for hours.

Q10   I have had strong convictions about how things should be. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Six Subscale
Cronbach alpha: .751

Q120   I have stood by my friends, even when they were wrong.

Q121   I have doubted my abilities.

Q122   Social obligations have been important to me.

Q123   I have been methodical.

Q124   I have been cautious.

Q125   I have had difficulty making decisions.

Q126   It has been difficult for me to relax and stop worrying about potential problems.

Q127   I have tended to think of "worst case" scenarios.

Q128   I have been practical and down-to-earth.

Q129   I've been sentimental.

Q130   My friends have known they could depend on me.

Q131   I have been pessimistic.

Q132   I have "tested" loved ones to see if they were really there for me.

Q133   I have been proud of being reliable.

Q134   When I have been unsure of what to do, I have sought the advice of others.

Q135   My thoughts have been about practical things.

Q136   I have done what I HAD to do, as opposed to what I WANTED to do.

Q137   I have had a deep need to belong.

Q138   I have gotten into trouble with others by not communicating with them.

Q139   When I have felt insecure, I have become arrogant.

Q140   I have wanted clear-cut guidelines.

Q141   I have liked predictability.

Q11   I have come across as sure of myself. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q66   It has been important to me to be admired. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q100   I have preferred pursuit of my personal interests more than security. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q144   Given a choice between something familiar and something new, I have chosen something new. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q188   I have been too open. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Seven Subscale
Cronbach alpha: .865

Q142   When meeting someone for the first time, I have been chatty.

Q143   I have felt connected to others.

Q144   Given a choice between something familiar and something new, I have chosen something new.

Q145   It has been hard for me to slow down.

Q146   I have been spontaneous.

Q147   I have been fun-loving.

Q148   When presented with a new experience, I have asked myself if it would be enjoyable.

Q149   I've worried that I'm missing out on something better.

Q150   I have been out-going.

Q151   I have been known for my unsinkable spirit.

Q152   Coming up with new ideas has been one of my major strengths.

Q153   I have tried to keep my life exciting.

Q154   I have been energetic.

Q155   When I have been unsure of what to do, I have tried different things.

Q156   I have enjoyed pushing the limits.

Q157   I have taken pride in my "gusto. "

Q158   I have thought about things to do in the future, more than about what I am doing in the present.

Q159   I have worried that I won't have the resources to meet the responsibilities I have taken on.

Q160   I have followed my impulses.

Q161   I have tried to NOT be boring.

Q162   I have not liked feeling obligated to others.

Q163   I have managed to get what I want.

Q13   I have been strict with myself. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q189   I have felt nervous when there was a lot of stimulation. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q204   I have lost out because I have not felt up to taking advantage of opportunities. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Appendix F
Sub-Scales Refined from Pilot Instrument
(continued)

Eight Subscale
Cronbach alpha: .887

Q164   When I have gotten angry, I have told people about it.

Q165   I have been strong for others, to the point of not dealing with my own fears.

Q166   I have been recognized for my ability to make a decision.

Q167   Practical results have been important to me.

Q168   I have been bold.

Q169   I have been confident in myself.

Q170   I have taken on confrontations.

Q171   I have liked to "shake things up."

Q172   I have reacted to pressure from others by becoming more assertive.

Q173   I have preferred to take the lead.

Q174   I have enjoyed high-pressured situations.

Q175   I have felt the need to be a "pillar of strength."

Q176   I've worried that someone would take advantage of me.

Q177   Making things happen has been one of my major strengths.

Q178   I have provided many people with direction.

Q179   People have trusted me because I am confident.

Q180   I have liked my presence to be known.

Q181   One of my strengths has been to take charge.

Q182   I have come across as aggressive.

Q183   I have presented myself to others as being tougher than I really am.

Q184   I have respected people who stand up for themselves.

Q185   I have supported the "underdog."

Q81   When I have had conflicts with others, I have withdrawn. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q82   I have spent a lot of time looking inward. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Q125   I have had difficulty making decisions. [This item was REVERSE SCORED for calculation of Cronbach Alpha]

Nine Subscale
Cronbach alpha: .820

Q186   I have let others tell me what to do.

Q187   I have wanted to "fit in."

Q188   I have been too open.

Q189   I have felt nervous when there was a lot of stimulation.

Q190   It has been hard for me to get up the energy to do things.

Q191   I have been optimistic.

Q192	I have focused too much on others.
Q193	I have been reluctant to get involved with people
Q194	I've been interested in maintaining my peace of mind.
Q195	I have been agreeable.
Q196	It has been important to me that everybody gets along.
Q197	I have tried to keep my life peaceful.
Q198	I have had modest goals.
Q199	I have thought of myself as a "sunny" person.
Q200	I have been concerned with making things okay for others.
Q201	I have been too passive.
Q202	Hard times have made me feel discouraged.
Q203	I have wondered why people focus on the negative, when there is so much that is wonderful about life.
Q204	I have lost out because I have not felt up to taking advantage of opportunities.
Q205	It has been hard for me to know what I want when I have been with other people.
Q206	Others have seen me as peaceful when inside I have been nervous.
Q207	I have avoided confrontations.
Q14	I have pushed to get things done correctly. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q16	I have been direct. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q83	I have emphasized how different I am from most people. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q84	I have been drawn to situations that stir up intense emotions. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q102	When debating with friends, I have argued forcefully. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q103	I have been attracted to subjects that others find disturbing. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q127	I have tended to think of "worst case" scenarios. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q131	I have been pessimistic. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q170	I have taken on confrontations. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q171	I have liked to "shake things up." *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*
Q173	I have preferred to take the lead. *[This item was REVERSE SCORED for calculation of Cronbach Alpha]*

Appendix G
The Likert RHETI*: The Instrument Used in the Main Study

*The Likert RHETI is the property of The Enneagram Institute, Stone Ridge, New York.
Personality Type Indicator - Copy

Q1.1   The Riso-Hudson Enneagram Type Indicator, RHETI vs. 2.5©:   A Research Project

Q2.1   I agree to participate in a study on the Enneagram. The purpose of this study is to improve an existing validated instrument (the Riso-Hudson Enneagram Type Indicator, RHETI vs. 2.5©), and to validate the Enneagram typology.   I understand that this study is being conducted as part of the research Sara Scott is conducting for her doctoral dissertation in the Counselor Education program at the College of William & Mary. The dissertation is planned to be finished by the spring of 2011. I agree to complete this survey instrument of 133 items, which will take approximately 15-20 minutes.   I understand that any information obtained in this study will be confidential and anonymous. I understand that I am free to withdraw my consent and discontinue participation in this study at any time. If I have any questions or problems that arise in connection with my participation in this study, I may contact Sara Scott at 757-615-2288 or sasco2@email.wm.edu or Dr. Charles Gressard, Sara's Faculty Advisor, at 757-221-2352 or cfgres@wm.edu.

O   Clicking here signifies that I am at least 18 years of age and that I consent to participate in this study. (1)

Q3.1 Instructions: For each item, please answer to describe yourself, AS YOU HAVE BEEN FOR MOST OF YOUR LIFE. Imagine a movie of your entire life, with you as the main character. Answer the questions below to describe, in general, that main character.   Please do not skip any item. The survey will prevent you from going to the next page if a response is missing from one of the items. (If you skip an item, a message at the end of the page will alert you. If that happens, please scroll through the questions - a quick scroll will allow you to see the red alert message next to the non-completed items).   After you have completed all of the items, your scores for each of the nine Enneagram types will be displayed.   You can save your work and return to finish it later. Your response will be a valuable contribution to the field of Personality Assessment. I am eager to receive your survey responses as soon as it is possible for you to complete the survey. Thank you for your participation in this significant research project for the entire Enneagram field!   I would like to thank Don Riso and Russ Hudson of The Enneagram Institute, originators of the Riso-Hudson Enneagram Type Indicator (RHETI, vs. 2.5) on which this Likert-Scale version of the test is based. They have been generous in allowing researchers before me to study the RHETI, which allowed demonstration that the RHETI is an instrument of internal validity and reliability. They have shared not only the RHETI with me for research purposes, but the wealth of the large set of data which they have accumulated over the years. I would also like to thank Katy Taylor, Director of Special Projects at The Enneagram Institute, for her insights, helpful suggestions, and participation in this project.

Q4.1 My gender is:
- O Male (1)
- O Female (2)

Q4.2 My age is:
- O 18 - 24 (1)
- O 25 - 44 (2)
- O 45 - 64 (3)
- O 65 - 65+ (4)

Q4.3   I identify with the following race:
- O American Indian or Alaska Native (1)
- O Asian (2)
- O Black or African American (3)
- O Hispanic or Latino (4)
- O Native Hawaiian or Other Pacific Islander (5)
- O White (6)
- O Other (7)

Q4.4 I live in:
- O Alabama (4)
- O Alaska (5)
- O Arizona (7)
- O Arkansas (8)
- O California (9)
- O Colorado (10)
- O Connecticut (11)
- O Delaware (12)
- O District of Columbia (13)
- O Florida (14)
- O Georgia (15)
- O Guam (16)
- O Hawaii (17)
- O Idaho (18)
- O Illinois (19)
- O Indiana (20)
- O Iowa (21)
- O Kansas (22)
- O Kentucky (23)
- O Louisiana (24)
- O Maine (25)
- O Maryland (26)
- O Massachusetts (27)
- O Michigan (28)
- O Minnesota (29)

- ○ Mississippi (30)
- ○ Missouri (31)
- ○ Montana (32)
- ○ Nebraska (33)
- ○ Nevada (34)
- ○ New Hampshire (35)
- ○ New Jersey (36)
- ○ New Mexico (37)
- ○ New York (38)
- ○ North Carolina (39)
- ○ North Dakota (40)
- ○ Ohio (42)
- ○ Oklahoma (43)
- ○ Oregon (44)
- ○ Pennsylvania (45)
- ○ Puerto Rico (46)
- ○ Rhode Island (47)
- ○ South Carolina (48)
- ○ South Dakota (49)
- ○ Tennessee (50)
- ○ Texas (51)
- ○ Utah (52)
- ○ Vermont (53)
- ○ Virginia (54)
- ○ Virgin Islands (55)
- ○ Washington (56)
- ○ West Virginia (57)
- ○ Wisconsin (58)
- ○ Wyoming (59)
- ○ I do not live in the US (3)

Answer If I live in: I do not live in the US Is Selected

Q4.6 Please type the name of the country in which you live:

Q4.5 Do you know your Enneagram Type?
- ○ Yes (1)
- ○ No (2)

Q4.7 Please indicate your Type:
- ○ One (1)
- ○ Two (2)
- ○ Three (3)
- ○ Four (4)
- ○ Five (5)
- ○ Six (6)
- ○ Seven (7)
- ○ Eight (8)
- ○ Nine (9)

Q5.1 1a I have had strong convictions about how things should be.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.2 I have come across as needing to be right.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.3   I have been good at dealing with details.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.4   I have been strict with myself.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.5   I have pushed to get things done correctly.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.6 I have come across as being stern.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.7   I have not liked it when people have broken the rules.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.8   I have felt the need to do things perfectly.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.9　　I have been self-disciplined.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.10 I have been driven by my conscience.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.11　　People have trusted me because I will do what is right.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.12　　I have seen others as disorganized.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.13 I have always tried to fulfill my high ideals.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.14   I have been organized and orderly.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.15   I have used physical contact to reassure others about how I feel toward them.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.16   I have enjoyed welcoming new friends into my life.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.17 I have needed to show affection to people.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.18   I have wanted people to depend on me.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.19 I have been sensitive to others' needs.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.20   I have been known for being warm and caring.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.21   People have responded to me because I have been interested in them.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.22   I have tried to figure out how to get closer to others.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.23   I have wanted to rescue people.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.24   I have taken pride in being important to others.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.25 I have liked serving others.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.26   I have tried to NOT be seen as selfish.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.27   I have enjoyed telling people they are special to me.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.28   I have been reluctant to get involved with people
- ○ Not at all like me (6)
- ○ Not like me (5)
- ○ Not much like me (4)
- ○ Somewhat like me (3)
- ○ Like me (2)
- ○ Just like me (1)

Q5.29   I have come across as cool and aloof.
○ Not at all like me (6)
○ Not like me (5)
○ Not much like me (4)
○ Somewhat like me (3)
○ Like me (2)
○ Just like me (1)

Q5.30 I have worked hard to be appropriate and well-liked.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.31 I have worked hard to be an outstanding person.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.32 People have seen me as charming.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.33 I have been ambitious to be seen as "the best."
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.34 I have been goal-oriented, and able to switch goals quickly in order to achieve .
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.35 I have been such a "go-getter" that it's hard for me to take time off.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.36   It has been important to me to be admired.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.37 I have compared myself to others and worked hard to excel.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.38   I have been attracted to activities that had substantial potential for recognition.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.39 My responses on this survey have been sincere.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.40   I have been concerned with doing better than others.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.41 I have been proud of my ability to be adaptable.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.42 When I feel I'm falling behind, I have been motivated to "get going."
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.43 My image has been one of my most important concerns.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.44 I have liked to stay busy, even when on vacation or just "hanging out."
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.45   Being the center of attention has seemed natural to me.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.46 I have spent more time imagining relationships than actually having them.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.47   I have been moody.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.48 I have been stopped in my tracks by self-consciousness.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.49 When troubled, I have "obsessed" about my emotional states.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.50 Conflicts with others may have caused me to never speak with them again.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.51   I have spent a lot of time looking inward.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.52 I have liked feeling how different I am from most people.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.53   I have been "stand-offish."
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.54 My private thoughts have had an emotional charge for me.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.55   I have taken things too personally.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.56 I have focused on disappointments from the past.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.57 My melancholy moods have been meaningful to me.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.58   I have longed for what others have.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.59   I have lost out because I have not felt up to taking advantage of opportunities.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.60   I have been optimistic.
○ Not at all like me (6)
○ Not like me (5)
○ Not much like me (4)
○ Somewhat like me (3)
○ Like me (2)
○ Just like me (1)

Q5.61   I have felt isolated from others.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.62 I have preferred the pursuit of my personal interests more than security.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.63 Being comfortable has not been a high value for me.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.64 I have been paying attention to the meanings of the items on this survey.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.65 Intellectual debate has brought out my forceful side.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.66   I have been attracted to subjects that others find disturbing.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.67 I have been mentally intense.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.68 I have preferred to maintain distance from people.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.69 I have enjoyed investigating complex issues no one else is interested in.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.70 Emotional detachment has allowed me to work on scary problems.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.71   I have preferred to inhabit my own little world.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.72 I have enjoyed speculating about things in great detail.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.73 I have come across to others as being eccentric.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.74 I have allowed only a few "tested" people into my world.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.75 I have experienced people as too emotional and needy.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.76   I have gotten lost in my interests for hours.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.77 I have doubted my ability to do what's expected of me.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.78   I have been cautious.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.79   I have had difficulty making decisions.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.80   It has been difficult for me to relax and stop worrying about potential problems.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.81 I have tended to dwell on "worst case" scenarios.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.82 People have told me I'm often a "wet blanket."
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.83   I have "tested" loved ones to see if they were really there for me.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.84 I have had a deep need to know what to do next.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.85 I have gotten into trouble with others by being "on-again, off-again."
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.86 I have wanted to follow clear-cut guidelines.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.87 I have needed consistent predictability.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.88   When I have felt insecure, I have become argumentative.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.89 When meeting someone for the first time, I have usually been chatty.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.90 I have liked to keep things light and playful.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.91 Given a choice between something familiar and something new, I have chosen something new.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.92 I have been spontaneous.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.93 I have been fun-loving.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.94 I have been out-going with a high turnover of friends.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.95   I have been known for my unsinkable spirit.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.96 I have rushed through this survey, so my responses are probably not meaningful.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.97 Coming up with many new ideas has been one of my major strengths.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.98   I have tried to keep my life exciting.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.99 Many people consider me to be hyper-energetic.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.100 When I have been unsure of what to do, I have tried many different things.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.101 I have been adventuresome and enjoyed trying many new things.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.102 I have taken pride in my "joie de vivre. "
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.103 I have kept myself happy by being a spontaneous person.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.104   I have tried to NOT be boring.
- O   Not at all like me   (1)
- O   Not like me   (2)
- O   Not much like me   (3)
- O   Somewhat like me   (4)
- O   Like me   (5)
- O   Just like me   (6)

Q5.105 When I have gotten angry, people have known about it.
- O   Not at all like me   (1)
- O   Not like me   (2)
- O   Not much like me   (3)
- O   Somewhat like me   (4)
- O   Like me   (5)
- O   Just like me   (6)

Q5.106 I have been recognized for my ability to make difficult decisions without agonizing over them.
- O   Not at all like me   (1)
- O   Not like me   (2)
- O   Not much like me   (3)
- O   Somewhat like me   (4)
- O   Like me   (5)
- O   Just like me   (6)

Q5.107 I have a dominating personality.
- O   Not at all like me   (1)
- O   Not like me   (2)
- O   Not much like me   (3)
- O   Somewhat like me   (4)
- O   Like me   (5)
- O   Just like me   (6)

Q5.108 My first response to situations has been to be self-assertive.
- O   Not at all like me   (1)
- O   Not like me   (2)
- O   Not much like me   (3)
- O   Somewhat like me   (4)
- O   Like me   (5)
- O   Just like me   (6)

Q5.109   I have taken on confrontations.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.110   I have liked to "shake things up."
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.111 I have needed to be in control.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.112 I have felt the need to be a "pillar of strength."
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.113 Making big things happen has been one of my major strengths.
O Not at all like me (1)
O Not like me (2)
O Not much like me (3)
O Somewhat like me (4)
O Like me (5)
O Just like me (6)

Q5.114 I have empowered people to find their own strengths.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.115 People have followed me because I have been confident.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.116 I have needed to feel my impact on those around me.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.117   One of my strengths has been to take charge.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.118   I have come across as aggressive.
- ○ Not at all like me (1)
- ○ Not like me (2)
- ○ Not much like me (3)
- ○ Somewhat like me (4)
- ○ Like me (5)
- ○ Just like me (6)

Q5.119 I have felt comfortable letting others tell me what to do.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.120 I have felt overwhelmed when there was a lot of stimulation.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.121   It has been important to me that everybody gets along.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.122   I have tried to keep my life peaceful.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.123 I have been laid back and not worried about getting ahead.
- O Not at all like me (1)
- O Not like me (2)
- O Not much like me (3)
- O Somewhat like me (4)
- O Like me (5)
- O Just like me (6)

Q5.124   I have been too passive.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.125 I have been careless with my responses on this survey.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.126 Hard times have brought out my ability to endure and be patient.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.127 I have resisted being drawn in to confrontations.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q5.128 It has been hard for me to know what I've wanted when I've been with other people.
○ Not at all like me (1)
○ Not like me (2)
○ Not much like me (3)
○ Somewhat like me (4)
○ Like me (5)
○ Just like me (6)

Q6.1 Your score for each type is as follows:Type One= ${gr://One Type/Score} Type
Two= ${gr://Two Type/Score} Type Three= ${gr://Three Type/Score}   Type
Four= ${gr://Four Type/Score} Type Five= ${gr://Five Type/Score} Type
Six= ${gr://Six Type/Score} Type Seven= ${gr://Seven Type/Score}   Type
Eight= ${gr://Eight Type/Score}Type Nine= ${gr://NIne Type/Score}   For
descriptions of the Enneagram types, visit The Enneagram Institute on line. Thank You
for taking this survey! Your participation in this research project has provided data that
are useful. Please click on the forward arrows below, so that your responses will be
recorded.

Appendix H

Main Study Demographics

	Frequency	Percent		Frequency	Percent
Angola	1	0.10%	Alabama	82	1.3
Argentina	3	0.20%	Alaska	26	0.4
Asia	1	0.10%	Arizona	91	1.4
Australia	213	15.30%	Arkansas	16	0.2
Austria	4	0.30%	California	673	10.5
Belarus	5	0.40%	Colorado	236	3.7
Belgium	18	1.30%	Connecticut	54	0.8
Bermuda	2	0.10%	Delaware	6	0.1
Brazil	20	1.40%	District of Columbia	23	0.4
Britain	1	0.10%	Florida	143	2.2
Bulgaria	1	0.10%	Georgia	98	1.5
Calgary	1	0.10%	Hawaii	7	0.1
Canada	316	22.70%	Idaho	9	0.1
Caribbean	1	0.10%	Illinois	184	2.9
Chile	1	0.10%	Indiana	60	0.9
China	7	0.50%	Iowa	30	0.5
Colombia	1	0.10%	Kansas	25	0.4
Croatia	13	0.90%	Kentucky	89	1.4
Cyprus	1	0.10%	Louisiana	43	0.7
Czech Republic	3	0.20%	Maine	33	0.5
Denmark	26	1.90%	Maryland	60	0.9
Dominican Republic	1	0.10%	Massachusetts	104	1.6
Ecuador	1	0.10%	Michigan	127	2
England	54	3.90%	Minnesota	189	3
Ethiopia	1	0.10%	Mississippi	5	0.1
Europe	2	0.10%	Missouri	49	0.8
Fiji	1	0.10%	Montana	16	0.2
Finland	15	1.10%	Nebraska	18	0.3
France	13	0.90%	Nevada	24	0.4
Germany	25	1.80%	New Hampshire	26	0.4
Ghana	2	0.10%	New Jersey	65	1
Great Britain	1	0.10%	New Mexico	40	0.6
Greece	4	0.30%	New York	247	3.9
Holland	2	0.10%	North Carolina	173	2.7
Honduras	1	0.10%	North Dakota	1	0
Hong Kong	26	1.90%	Ohio	194	3
Hungary	8	0.60%	Oklahoma	27	0.4
India	35	2.50%	Oregon	152	2.4
Indonesia	9	0.60%	Pennsylvania	105	1.6
Iran	1	0.10%	Puerto Rico	3	0

Ireland	32	2 30%		Rhode Island	12	0 2
Israel	8	0 60%		South Carolina	32	0 5
Italia	12	0 90%		South Dakota	8	0 1
Japan	16	1 20%		Tennessee	49	0 8
Kenya	1	0 10%		Texas	212	3 3
Latvia	3	0 20%		Utah	26	0 4
Malaysia	8	0 60%		Vermont	16	0 2
Malta	3	0 20%		Virginia	241	3 8
Mauritius	1	0 10%		Washington	162	2 5
Mexico	4	0 30%		West Virginia	18	0 3
Netherlands	20	1 40%		Wisconsin	91	1 4
New Zealand	32	2 30%		Wyoming	5	0 1
Nigeria	4	0 30%		Total	4425	69 1
Norway	10	0 70%				
Pakistan	1	0 10%		Percent of total sample		69 10%
Panama	1	0 10%				
Pavel	1	0 10%				
Philippines	41	2 90%				
Poland	11	0 80%				
Portugal	6	0 40%				
Romania	7	0 50%				
Romdeau	1	0 10%				
Russia	16	1 20%				
Samoa	2	0 10%				
Saudi arabia	1	0 10%				
Scotland	4	0 30%				
Serbia	5	0 40%				
Singapore	30	2 20%				
Slovenia	1	0 10%				
South Africa	42	3 00%				
South Korea	2	0 10%				
Spain	6	0 40%				
Sweden	51	3 70%				
Switzerland	8	0 60%				
Taiwan	3	0 20%				
Thailand	5	0 40%				
Trinidad	1	0 10%				
Trinidad & Tobago	4	0 30%				
Turkey	4	0 30%				
Ukraine	1	0 10%				
United Arab emirates	3	0 20%				
United Kingdom	124	8 90%				

134

Appendix H

Main Study Demographics
(continued)

Venezuela	6	0.4%	
Vietnam	2	0.1%	
Wales	3	0.2%	
Zimbabwe	3	0.2%	
Total	1391	100.0%	
Percent of total sample		21.7%	

Percent of total sample:	
Non-United States	21.7%
United States	69.1%
Unspecified	9.2%

My gender is:

		Frequency	Percent
Valid	Male	1932	30.2
	Female	4469	69.8
	Total	6401	100.0

My age is:

		Frequency	Percent
Valid	18 - 24	1042	16.3
	25 - 44	2779	43.4
	45 - 64	2281	35.6
	65 - 65+	299	4.7
	Total	6401	100.0

I identify with the following race:

		Frequency	Percent
Valid	American Indian or Alaska Native	40	.6
	Asian	501	7.8
	Black or African American	143	2.2
	Hispanic or Latino	177	2.8
	Native Hawaiian or Other Pacific Islander	16	.2
	White	5231	81.7
	Other	293	4.6
	Total	6401	100.0

135

Appendix H

Main Study Demographics
(continued)

Do you know your Enneagram Type?

		Frequency	Percent
Valid	Yes	2680	41.9
	No	3721	58.1
	Total	6401	100.0

Please indicate your Type:

		Frequency	Percent
Valid	One	232	3.6
	Two	411	6.4
	Three	186	2.9
	Four	373	5.8
	Five	312	4.9
	Six	279	4.4
	Seven	316	4.9
	Eight	194	3.0
	Nine	376	5.9
	Total	2679	41.9
Missing	System	3722	58.1
Total		6401	100.0

Appendix I

Scale Reliability Statistics of the Refined Nine Factors: First Half Dataset

ONE

Reliability Statistics

Cronbach's Alpha	N of Items
761	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1cQ3I have been good at dealing with details	30 23	27 409	499	728
1jQ8I have felt the need to do things perfectly	30 02	29 302	397	747
1kQ9I have been self-disciplined.	**30.36**	**27.366**	**.551**	**.718**
1oQ11People have trusted me because I will do what is right	29 60	31 597	387	748
1rQ12I have seen others as disorganized	30 54	28 909	439	739
1sQ13I have always tried to fulfill my high ideals	29 83	31 077	377	749
1uQ14I have been organized and orderly.	**30.57**	**25.616**	**.619**	**.702**
3sQ42When I feel I'm falling behind, I have been motivated to "get going "	30 12	29 928	394	747

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

TWO

Reliability Statistics

Cronbach's Alpha	N of Items
843	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
2bQ15I have used physical contact to reassure others about how I feel toward them	26 44	29 473	563	828
2eQ17I have needed to show affection to people.	**26.26**	**28.527**	**.697**	**.805**
2gQ19I have been sensitive to others' needs.	**25.73**	**32.121**	**.569**	**.826**
2hQ20I have been known for being warm and caring.	**25.87**	**29.608**	**.717**	**.804**
2iQ21People have responded to me because I have been interested in them	25 89	32 848	510	833
2pQ25I have liked serving others	26 15	32 022	464	841
2vQ27I have enjoyed telling people they are special to me.	**26.16**	**28.390**	**.686**	**.806**

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale.

137

Appendix I

Scale Reliability Statistics of the Refined Nine Factors: First Half Dataset (continued)

THREE

Reliability Statistics

Cronbach's Alpha	N of Items
805	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
2fQ18I have wanted people to depend on me	28 17	36 794	422	797
2oQ24I have taken pride in being important to others.	**27.57**	**35.837**	**.580**	**.774**
3aQ30I have worked hard to be appropriate and well-liked	27 70	37 186	455	791
3mQ36It has been important to me to be admired.	**27.89**	**34.011**	**.670**	**.759**
3oQ38I have been attracted to activities that had substantial potential for recognition.	**28.22**	**35.532**	**.522**	**.782**
3pQ40I have been concerned with doing better than others	27 97	36 347	469	790
3uQ43My image has been one of my most important concerns	28 34	35 371	505	785
8qQ116I have needed to feel my impact on those around me	27 84	36 305	525	782

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

FOUR

Reliability Statistics

Cronbach's Alpha	N of Items
826	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
4aQ46I have spent more time imagining relationships than actually having them	29 7023	54 756	397	826
4dQ48I have been stopped in my tracks by self-consciousness	29 1743	55 150	492	812
4eQ49When troubled, I have "obsessed" about my emotional states.	**29.3027**	**51.663**	**.596**	**.800**
4oQ55I have taken things too personally.	**28.8435**	**55.483**	**.519**	**.810**
4rQ56I have focused on disappointments from the past.	**29.4374**	**51.316**	**.657**	**.793**
4zQ60I have been optimistic	30 7941	55 939	521	810
6gQ80It has been difficult for me to relax and stop worrying about potential problems	29 2143	53 812	548	806
6hQ81I have tended to dwell on "worst case" scenarios.	**29.7288**	**51.233**	**.621**	**.797**
INV7jQ95I have been known for my unsinkable spirit ----	30 3643	56 899	434	818

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

138

Appendix I

Scale Reliability Statistics of the Refined Nine Factors: First Half Dataset (continued)

FIVE

Reliability Statistics

Cronbach's Alpha	N of Items
780	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
4gQ51I have spent a lot of time looking inward	33 59	45 514	383	770
4hQ52I have liked feeling how different I am from most people	34 40	43 995	402	768
5eQ65Intellectual debate has brought out my forceful side	34 24	43 815	400	768
5fQ66I have been attracted to subjects that others find disturbing	34 81	41 629	456	761
5hQ67I have been mentally intense	33 84	43 312	514	753
5kQ69I have enjoyed investigating complex issues no one else is interested in.	34 16	40 510	589	740
5oQ72I have enjoyed speculating about things in great detail	33 99	42 816	496	755
5pQ73I have come across to others as being eccentric	34 89	41 072	504	753
5vQ76I have gotten lost in my interests for hours	33 68	44 262	441	762

Note. Items in boldface loaded > 60, indicating the defining characteristics of the scale.

SIX

Reliability Statistics

Cronbach's Alpha	N of Items
791	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1hQ7I have not liked it when people have broken the rules	20 0856	27 861	417	785
6eQ78I have been cautious.----	**20.1012**	**27.064**	**.554**	**.758**
6uQ86I have wanted to follow clear-cut guidelines.-----	**20.3140**	**26.195**	**.524**	**.764**
6vQ87I have needed consistent predictability.-----	**20.8244**	**25.646**	**.599**	**.749**
INV7cQ91Given a choice between something familiar and something new, I have chosen something new	21 1278	26 698	557	757
INV7eQ92I have been spontaneous	21 2377	27 122	533	762
INV7lQ98I have tried to keep my life exciting	21 2858	28 273	456	776

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

139

Scale Reliability Statistics of the Refined Nine Factors: First Half Dataset (continued)

SEVEN

Reliability Statistics

Cronbach's Alpha	N of Items
822	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
7bQ90I have liked to keep things light and playful.	**30.9269**	**45.573**	**.442**	**.813**
7cQ91Given a choice between something familiar and something new, I have chosen something new	30 8629	44 583	481	809
7eQ92I have been spontaneous.	**30.7529**	**42.542**	**.630**	**.792**
7fQ93I have been fun-loving.	**30.4024**	**43.425**	**.638**	**.792**
7iQ94I have been out-going with a high turnover of friends	32 1456	44 269	428	817
7jQ95I have been known for my unsinkable spirit ----	30 7838	43 719	522	804
7lQ98I have tried to keep my life exciting.	**30.7048**	**43.084**	**.618**	**.794**
7mQ99Many people consider me to be hyper-energetic	31 6898	42 629	473	812
INV4zQ60I have been optimistic	30 3540	44 160	528	804

Note. Items in boldface loaded > 60, indicating the defining characteristics of the scale

EIGHT

Reliability Statistics

Cronbach's Alpha	N of Items
792	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
8aQ105When I have gotten angry, people have known about it	14 71	19 157	460	788
8eQ107I have a dominating personality.	**15.33**	**16.722**	**.656**	**.724**
8gQ109I have taken on confrontations.	**15.10**	**17.769**	**.583**	**.749**
8nQ113Making big things happen has been one of my major strengths	15 03	18 633	522	768
8rQ117One of my strengths has been to take charge.	**14 60**	**17 731**	**641**	**731**

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale.

Appendix I

Scale Reliability Statistics of the Refined Nine Factors: First Half Dataset (continued)

NINE

Reliability Statistics

Cronbach's Alpha	N of Items
749	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
9vQ119I have felt comfortable letting others tell me what to do	31 14	42 072	410	729
9cQ120I have felt overwhelmed when there was a lot of stimulation	30 24	42 190	352	739
9jQ121It has been important to me that everybody gets along	29 68	43 985	356	737
9kQ122I have tried to keep my life peaceful	29 64	43 849	385	733
9lQ123I have been laid back and not worried about getting ahead	31 00	43 210	304	747
9oQ124I have been too passive.	**30.60**	**37.238**	**.638**	**.688**
9xQ127I have resisted being drawn in to confrontations	30 00	40 603	492	716
9zQ128It has been hard for me to know what I've wanted when I've been with other people	30 54	40 885	436	725
6fQ79I have had difficulty making decisions	30 41	39 764	470	719

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

Appendix J

Pattern Matrix: First Half Dataset

	Factor							
	2	3	4	5	6	7	8	9
7fQ93I have been fun-loving								
7bQ90I have liked to keep things light and playful								
7eQ92I have been spontaneous								- 0 318
7lQ98I have tried to keep my life exciting								-0 31
7iQ94I have been out-going with a high turnover of friends								
4eQ49When troubled, I have "obsessed" about my emotional states	0 664							
4rQ56I have focused on disappointments from the past	0 61							
4oQ55I have taken things too personally	0 598							
6hQ81I have tended to dwell on "worst case" scenarios	0 528							0 321
6gQ80It has been difficult for me to relax and stop worrying about potential problems	0 498							
4dQ48I have been stopped in my tracks by self-consciousness	0 445							
4zQ60I have been optimistic	0 422							
7jQ95I have been known for my unsinkable spirit ----	-0 4							
5kQ69I have enjoyed investigating complex issues no one else is interested in		0 737						
5oQ72I have enjoyed speculating about things in great detail		0 566						
5pQ73I have come across to others as being eccentric		0 536						
5vQ76I have gotten lost in my interests for hours		0 531						
5hQ67I have been mentally intense		0 498						
5fQ66I have been attracted to subjects that others find disturbing		0 482						
5eQ65Intellectual debate has brought out my forceful side		0 444					0 311	
4hQ52I have liked feeling how different I am from most people		0 422						
4gQ51I have spent a lot of time looking inward		0 412						
4aQ46I have spent more time imagining relationships than actually having them								
1uQ14I have been organized and orderly			- 0 733					
1kQ9I have been self-disciplined			- 0 619					
1cQ3I have been good at dealing with details			- 0 542					
1rQ12I have seen others as disorganized			- 0 477					

142

Pattern Matrix: First Half Dataset
(continued)

Item				
1jQ8I have felt the need to do things perfectly	-0 444			
3sQ42When I feel I'm falling behind, I have been motivated to "get going "	-0 433			
1sQ13I have always tried to fulfill my high ideals	-0 388			
1oQ11People have trusted me because I will do what is right	-0 363			
9oQ124I have been too passive		0 755		
9xQ127I have resisted being drawn in to confrontations		0 582		
6fQ79I have had difficulty making decisions		0 545		
9zQ128It has been hard for me to know what I've wanted when I've been with other people		0 506		
9v Q119I have felt comfortable letting others tell me what to do		0 479		
9k Q122I have tried to keep my life peaceful		0 443		
9j Q121It has been important to me that everybody gets along		0 424		
9cQ120 I have felt overwhelmed when there was a lot of stimulation		0 411		
9l Q123I have been laid back and not worried about getting ahead		0 36		
3mQ36It has been important to me to be admired			-0 783	
3oQ38I have been attracted to activities that had substantial potential for recognition			-0 601	
3pQ40I have been concerned with doing better than others			-0 581	
3uQ43My image has been one of my most important concerns			-0 57	
2oQ24I have taken pride in being important to others			-0 557	
8qQ116I have needed to feel my impact on those around me			-0 535	
3aQ30I have worked hard to be appropriate and well-liked			-0 46	
2fQ18I have wanted people to depend on me			-0 378	
8eQ107I have a dominating personality				-0 729
8gQ109I have taken on confrontations				-0 604
8aQ105When I have gotten angry, people have known about it				-0 579
8rQ117One of my strengths has been to take charge				-0 567

Pattern Matrix: First Half Dataset
(continued)

8nQ113Making big things happen has been one of my major strengths						-0 392		
7mQ99Many people consider me to be hyper-energetic						-0 328		
2hQ20I have been known for being warm and caring							-0 753	
2vQ27I have enjoyed telling people they are special to me							-0 702	
2eQ17I have needed to show affection to people							-0 69	
2gQ19I have been sensitive to others' needs							-0 679	
2bQ15I have used physical contact to reassure others about how I feel toward them							-0 557	
2pQ25I have liked serving others							-0 534	
2iQ21People have responded to me because I have been interested in them							-0 519	
6uQ86I have wanted to follow clear-cut guidelines -----								0 578
6vQ87I have needed consistent predictability --- --								0 567
6eQ78I have been cautious ----								0 51
7cQ91Given a choice between something familiar and something new, I have chosen something new								-0 49
1hQ7I have not liked it when people have broken the rules								0 439

Extraction Method Principal Axis Factoring

Rotation Method Oblimin with Kaiser Normalization

a Rotation converged in 18 iterations

Appendix K

Structure Matrix: First Half Dataset

	Factor							
	2	3	4	5	6	7	8	9
7fQ93I have been fun-loving							-0 377	
7eQ92I have been spontaneous								-0 479
7bQ90I have liked to keep things light and playful								
7lQ98I have tried to keep my life exciting						-0 333		-0 417
7iQ94I have been out-going with a high turnover of friends						-0 34		
4eQ49When troubled, I have "obsessed" about my emotional states	0 703							
4rQ56I have focused on disappointments from the past	0 695							
6hQ81I have tended to dwell on "worst case" scenarios	0 624							0 405
4oQ55I have taken things too personally	0 611							
6gQ80It has been difficult for me to relax and stop worrying about potential problems	0 563							0 366
4dQ48I have been stopped in my tracks by self-consciousness	0 534					0 301		
4zQ60I have been optimistic	0 523						0 356	
7jQ95I have been known for my unsinkable spirit ----	-0 469						-0 319	
4aQ46I have spent more time imagining relationships than actually having them	0 401	0 326						
5kQ69I have enjoyed investigating complex issues no one else is interested in		0 701						
5oQ72I have enjoyed speculating about things in great detail		0 574						
5hQ67I have been mentally intense		0 572						
5pQ73I have come across to others as being eccentric		0 559						
5vQ76I have gotten lost in my interests for hours		0 516						
5fQ66I have been attracted to subjects that others find disturbing		0 5						
5eQ65Intellectual debate has brought out my forceful side		0 467				-0 352		
4gQ51I have spent a lot of time looking inward	0 34	0 463						
4hQ52I have liked feeling how different I am from most people		0 45						

Appendix K

Structure Matrix: First Half Dataset
(continued)

1uQ14I have been organized and orderly			-0 717				
1kQ9I have been self-disciplined			-0 645				
1cQ3I have been good at dealing with details			-0 566				
1rQ12I have seen others as disorganized			-0 489				
3sQ42When I feel I'm falling behind, I have been motivated to "get going "			-0 474				
1jQ8I have felt the need to do things perfectly			-0 469				
1oQ11People have trusted me because I will do what is right			-0 452			-0 328	
1sQ13I have always tried to fulfill my high ideals			-0 452				
9oQ124I have been too passive				0 753			
9xQ127I have resisted being drawn in to confrontations				0 581			
6fQ79I have had difficulty making decisions				0 545			
9zQ128It has been hard for me to know what I've wanted when I've been with other people				0 505			
9v Q119I have felt comfortable letting others tell me what to do				0 479			
9k Q122I have tried to keep my life peaceful				0 443			
9j Q121It has been important to me that everybody gets along				0 425			
9cQ120 I have felt overwhelmed when there was a lot of stimulation				0 41			
9l Q123I have been laid back and not worried about getting ahead				0 361			
3mQ36It has been important to me to be admired					-0 76		
3oQ38I have been attracted to activities that had substantial potential for recognition					-0 633	-0 332	
2oQ24I have taken pride in being important to others					-0 607		-0 371
8qQ116I have needed to feel my impact on those around me					-0 59		
3pQ40I have been concerned with doing better than others					-0 582		
3uQ43My image has been one of my most important concerns					-0 579		
3aQ30I have worked hard to be appropriate and well-liked					-0 5		-0 361
2fQ18I have wanted people to depend on me					-0 449		-0 323
8eQ107I have a dominating personality					-0 313	-0 771	

146

Structure Matrix: First Half Dataset
(continued)

Item								
8rQ117One of my strengths has been to take charge			-0 355		-0 302	-0 665		
8gQ109I have taken on confrontations						-0 641		
8aQ105When I have gotten angry, people have known about it						-0 552		
8nQ113Making big things happen has been one of my major strengths			-0 307		-0 368	-0 55		
7mQ99Many people consider me to be hyper-energetic						-0 445		
2hQ20I have been known for being warm and caring							-0 785	
2vQ27I have enjoyed telling people they are special to me							-0 726	
2eQ17I have needed to show affection to people							-0 713	
2gQ19I have been sensitive to others' needs							-0 675	
2bQ15I have used physical contact to reassure others about how I feel toward them							-0 576	
2iQ21People have responded to me because I have been interested in them							-0 562	
2pQ25I have liked serving others							-0 557	
6vQ87I have needed consistent predictability -----								0 65
6uQ86I have wanted to follow clear-cut guidelines -----			-0 336					0 641
6eQ78I have been cautious ----								0 608
7cQ91Given a choice between something familiar and something new, I have chosen something new								-0 577
1hQ7I have not liked it when people have broken the rules			-0 35					0 51

Extraction Method Principal Axis Factoring

Rotation Method Oblimin with Kaiser Normalization

147

Appendix L

Factor Correlation Matrix: First Half Dataset

Factor	1	2	3	4	5	6	7	8	9
1	1 000	- 177	- 039	073	002	- 169	- 195	- 260	- 266
2	- 177	1 000	217	109	024	- 139	113	047	244
3	- 039	217	1 000	- 038	- 002	- 095	- 105	066	- 115
4	073	109	- 038	1 000	003	195	136	148	- 205
5	002	024	- 002	003	1 000	- 004	- 023	- 011	018
6	- 169	- 139	- 095	195	- 004	1 000	226	193	- 089
7	- 195	113	- 105	136	- 023	226	1 000	045	170
8	- 260	047	066	148	- 011	193	045	1 000	- 005
9	- 266	244	- 115	- 205	018	- 089	170	- 005	1 000

Extraction Method Principal Axis Factoring
Rotation Method Oblimin with Kaiser Normalization

148

Appendix M

Each Factor Factored: First Half Dataset

ONE-TYPE

Structure Matrix

	Factor	
	1	2
1uQ14I have been organized and orderly	861	468
1cQ3I have been good at dealing with details	593	393
1rQ12I have seen others as disorganized	573	301
1jQ8I have felt the need to do things perfectly	399	377
1kQ9I have been self-disciplined	535	626
1sQ13I have always tried to fulfill my high ideals		597
3sQ42When I feel I'm falling behind, I have been motivated to "get going "	345	506
1oQ11People have trusted me because I will do what is right	317	503

a Rotation converged in 8 iterations

Factor Correlation Matrix

Factor	1	2
1	1 000	569
2	569	1 000

Extraction Method Principal Axis Factoring
Rotation Method Oblimin with Kaiser Normalization

TWO-TYPE
Only one factor was extracted

THREE-TYPE

Structure Matrix

	Factor	
	1	2
3mQ36It has been important to me to be admired	769	594
3oQ38I have been attracted to activities that had substantial potential for recognition	642	411
3pQ40I have been concerned with doing better than others	604	336
3uQ43My image has been one of my most important concerns	598	416
2oQ24I have taken pride in being important to others	506	747
2fQ18I have wanted people to depend on me	330	606
8qQ116I have needed to feel my impact on those around me	511	561
3aQ30I have worked hard to be appropriate and well-liked	421	504

Factor Correlation Matrix

Factor	1	2
1	1 000	633
2	633	1 000

Appendix M

Each Factor Factored: First Half Dataset
(continued)

FOUR-TYPE

Structure Matrix

	Factor	
	1	2
4eQ49When troubled, I have "obsessed" about my emotional states	730	309
4rQ56I have focused on disappointments from the past	723	470
6hQ81I have tended to dwell on "worst case" scenarios	652	527
4oQ55I have taken things too personally	641	
6gQ80It has been difficult for me to relax and stop worrying about potential problems	618	374
4dQ48I have been stopped in my tracks by self-consciousness	548	
4aQ46I have spent more time imagining relationships than actually having them	409	319
4zQ60I have been optimistic	454	874
INV7jQ95I have been known for my unsinkable spirit ----	375	635

Factor Correlation Matrix

Factor	1	2
1	1 000	525
2	525	1 000

FIVE-TYPE

Only one factor was extracted

SIX-TYPE

Structure Matrix

	Factor	
	1	2
6uQ86I have wanted to follow clear-cut guidelines -----	760	- 328
6vQ87I have needed consistent predictability -----	667	- 504
1hQ7I have not liked it when people have broken the rules	586	
6eQ78I have been cautious ----	570	- 494
INV7eQ92I have been spontaneous	383	- 720
INV7IQ98I have tried to keep my life exciting		- 705
INV7cQ91Given a choice between something familiar and something new, I have chosen something new	441	- 675

Factor Correlation Matrix

Factor	1	2
1	1 000	- 493
2	- 493	1 000

150

Appendix M

Each Factor Factored: First Half Dataset
(continued)

SEVEN-TYPE

Structure Matrix

	Factor	
	1	2
7eQ92I have been spontaneous	740	- 435
7fQ93I have been fun-loving	714	- 490
7lQ98I have tried to keep my life exciting	713	- 422
7cQ91Given a choice between something familiar and something new, I have chosen something new	541	- 369
7iQ94I have been out-going with a high turnover of friends	509	
7bQ90I have liked to keep things light and playful	498	- 365
7mQ99Many people consider me to be hyper-energetic	489	- 402
7jQ95I have been known for my unsinkable spirit ----	476	- 805
INV4zQ60I have been optimistic	503	- 711

Factor Correlation Matrix

Factor	1	2
1	1 000	- 603
2	- 603	1 000

EIGHT-TYPE

Only one factor was extracted

NINE-TYPE

Structure Matrix

	Factor	
	1	2
9oQ124I have been too passive.	730	509
6fQ79I have had difficulty making decisions	666	
9zQ128It has been hard for me to know what I've wanted when I've been with other people	607	
9vQ119I have felt comfortable letting others tell me what to do	424	380
9cQ120I have felt overwhelmed when there was a lot of stimulation	410	
9lQ123I have been laid back and not worried about getting ahead	325	
9kQ122I have tried to keep my life peaceful		710
9xQ127I have resisted being drawn in to confrontations	451	598
9jQ121It has been important to me that everybody gets along		508

Factor Correlation Matrix

Factor	1	2
1	1 000	480
2	480	1 000

Appendix N

Cronbach's Coefficient Alpha Values for Each Factor, Split by Gender and Knowledge of Type: First Half Dataset

Case Processing Summary

My gender is			N	%
Male	Cases	Valid	989	100 0
		Excluded	0	0
		Total	989	100 0
Female	Cases	Valid	221 2	100 0
		Excluded	0	0
		Total	221 2	100 0

Case Processing Summary

Do you know your Enneagram Type?			N	%
Yes	Cases	Val id	1319	100 0
		Exc lud ed	0	0
		Tot al	1319	100 0
No	Cases	Val id	1882	100 0
		Exc lud ed	0	0
		Tot al	1882	100 0

ONE

Reliability Statistics

Cronbach's Alpha	N of Items
761	8

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	794	9
Female	802	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	762	8
No	758	8

TWO

Reliability Statistics

Cronbach's Alpha	N of Items
843	7

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	842	7
Female	836	7

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	860	7
No	828	7

**Cronbach's Coefficient Alpha Values for Each Factor,
Split by Gender and Knowledge of Type: First Half Dataset
(continued)**

THREE

Reliability Statistics

Cronbach's Alpha	N of Items
.805	8

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.815	8
Female	.801	8

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.818	8
No	.794	8

FOUR

Reliability Statistics

Cronbach's Alpha	N of Items
.826	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.833	9
Female	.825	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.837	9
No	.818	9

FIVE

Reliability Statistics

Cronbach's Alpha	N of Items
.747	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.739	9
Female	.743	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.763	9
No	.733	9

Cronbach's Coefficient Alpha Values for Each Factor,
Split by Gender and Knowledge of Type: First Half Dataset
(continued)

SIX

Reliability Statistics

Cronbach's Alpha	N of Items
.791	7

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.788	7
Female	.793	7

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.800	7
No	.785	7

SEVEN

Reliability Statistics

Cronbach's Alpha	N of Items
.822	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.832	9
Female	.818	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.838	9
No	.809	9

EIGHT

Reliability Statistics

Cronbach's Alpha	N of Items
.792	5

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.792	5
Female	.793	5

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.817	5
No	.772	5

**Cronbach's Coefficient Alpha Values for Each Factor,
Split by Gender and Knowledge of Type: First Half Dataset
(continued)**

NINE

Reliability Statistics

Cronbach's Alpha	N of Items
.749	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.765	9
Female	.740	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.755	9
No	.745	9

Appendix O

Scale Reliability Statistics: Second Half Dataset

ONE

Reliability Statistics

Cronbach's Alpha	N of Items
0 752	8

Item-Total Statistics

	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1cQ3I have been good at dealing with details	26 498	0 496	0 716
1jQ8I have felt the need to do things perfectly	28 337	0 375	0 739
1kQ9I have been self-disciplined.	26 106	0 554	0 704
1oQ11People have trusted me because I will do what is right	30 182	0 385	0 737
1rQ12I have seen others as disorganized	27 816	0 417	0 731
1sQ13I have always tried to fulfill my high ideals	29 815	0 358	0 74
1uQ14I have been organized and orderly.	24 653	0 59	0 695
3sQ42When I feel I'm falling behind, I have been motivated to "get going "	28 645	0 396	0 735

Note Items in boldface loaded > 60, indicating the
defining characteristics of the scale

TWO

Reliability Statistics

Cronbach's Alpha	N of Items
0 832	7

Item-Total Statistics

	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
2bQ15I have used physical contact to reassure others about how I feel toward them	29 013	0 509	0 822
2eQ17I have needed to show affection to people.	27 549	0 678	0 792
2gQ19I have been sensitive to others' needs.	30 744	0 57	0 811
2hQ20I have been known for being warm and caring.	28 545	0 685	0 793
2iQ21People have responded to me because I have been interested in them	31 321	0 519	0 818
2pQ25I have liked serving others	30 174	0 474	0 826
2vQ27I have enjoyed telling people they are special to me.	27 441	0 651	0 797

Note Items in boldface loaded > 60, indicating the
defining characteristics of the scale

Appendix O

Scale Reliability Statistics: Second Half Dataset
(continued)

THREE

Reliability Statistics

Cronbach's Alpha	N of Items
0 809	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
2fQ18I have wanted people to depend on me	28 13	36 639	0 436	0 801
2oQ24I have taken pride in being important to others.	27 49	35 874	0 59	0 778
3aQ30I have worked hard to be appropriate and well-liked	27 65	37 208	0 456	0 797
3mQ36It has been important to me to be admired.	27 83	34 396	0 667	0 766
3oQ38I have been attracted to activities that had substantial potential for recognition.	28 21	36 014	0 505	0 79
3pQ40I have been concerned with doing better than others.	27 91	36 226	0 494	0 792
3uQ43My image has been one of my most important concerns	28 27	35 622	0 518	0 788
8qQ116I have needed to feel my impact on those around me	27 76	36 372	0 535	0 786

Note: Items in boldface loaded > 60, indicating the defining characteristics of the scale.

FOUR

Reliability Statistics

Cronbach's Alpha	N of Items
0 83	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
4aQ46I have spent more time imagining relationships than actually having them	29 6578	55 965	0 411	0 83
4dQ48I have been stopped in my tracks by self-consciousness	29 0941	56 47	0 507	0 816
4eQ49When troubled, I have "obsessed" about my emotional states.	29 2544	53 025	0 584	0 807
4oQ55I have taken things too personally	28 8075	57 065	0 505	0 816
4rQ56I have focused on disappointments from the past.	29 3709	52 46	0 667	0 797
4zQ60I have been optimistic	30 7231	57 7	0 518	0 816
6gQ80It has been difficult for me to relax and stop worrying about potential problems.	29 1388	54 773	0 578	0 808
6hQ81I have tended to dwell on "worst case" scenarios.	29 66	52 65	0 641	0 8
INV7jQ95I have been known for my unsinkable spirit ----	30 2734	58 752	0 435	0 824

Note: Items in boldface loaded > 60, indicating the defining characteristics of the scale.

Appendix O

Scale Reliability Statistics: Second Half Dataset
(continued)

FIVE

Reliability Statistics

Cronbach's Alpha	N of Items
0 786	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
4gQ51I have spent a lot of time looking inward	33 65	46 851	0 371	0 778
4hQ52I have liked feeling how different I am from most people	34 44	44 619	0 424	0 772
5eQ65Intellectual debate has brought out my forceful side	34 29	44 883	0 386	0 777
5fQ66I have been attracted to subjects that others find disturbing	34 82	42 169	0 486	0 764
5hQ67I have been mentally intense	33 87	43 8	0 547	0 756
5kQ69I have enjoyed investigating complex issues no one else is interested in.	34 21	41 321	0 608	0 745
5oQ72I have enjoyed speculating about things in great detail	34 04	44 64	0 459	0 767
5pQ73I have come across to others as being eccentric	34 85	41 67	0 526	0 757
5vQ76I have gotten lost in my interests for hours	33 72	45 307	0 443	0 769

Note: Items in boldface loaded > 60, indicating
the defining characteristics of the scale.

SIX

Reliability Statistics

Cronbach's Alpha	N of Items
0 785	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1hQ7I have not liked it when people have broken the rules	20 1166	26 832	0 442	0 772
6eQ78I have been cautious ----	20 0594	26 916	0 523	0 756
6uQ86I have wanted to follow clear-cut guidelines.----	20 3347	25 504	0 539	0 752
6vQ87I have needed consistent predictability.-----	20 8303	25 494	0 578	0 744
INV7cQ91Given a choice between something familiar and something new, I have chosen something new	21 1147	26 494	0 528	0 755
INV7eQ92I have been spontaneous	21 2203	26 408	0 547	0 751
INV7lQ98I have tried to keep my life exciting	21 2747	28 122	0 422	0 774

Note: Items in boldface loaded > 60, indicating
the defining characteristics of the scale.

Appendix O

Scale Reliability Statistics: Second Half Dataset
(continued)

SEVEN

Reliability Statistics

Cronbach's Alpha	N of Items
817	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
7bQ90I have liked to keep things light and playful.	30 7991	43 639	456	806
7cQ91Given a choice between something familiar and something new, I have chosen something new	30 7309	43 446	445	807
7eQ92I have been spontaneous.	30 6253	41 412	593	789
7fQ93I have been fun-loving.	30 2672	42 095	632	787
7iQ94I have been out-going with a high turnover of friends	32 0359	43 046	417	812
7jQ95I have been known for my unsinkable spirit ----	30 6613	42 230	524	798
7lQ98I have tried to keep my life exciting	30 5709	41 776	595	790
7mQ99Many people consider me to be hyper-energetic	31 5953	40 792	486	804
INV4zQ60I have been optimistic	30 2116	42 386	539	796

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

EIGHT

Reliability Statistics

Cronbach's Alpha	N of Items
783	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
8aQ105When I have gotten angry, people have known about it	14 60	18 985	439	781
8eQ107I have a dominating personality.	15 27	16 397	645	712
8gQ109I have taken on confrontations.	15 00	17 475	577	737
8nQ113Making big things happen has been one of my major strengths	15 02	18 155	518	756
8rQ117One of my strengths has been to take charge.	14 52	17 446	621	723

Note Items in boldface loaded > 60, indicating the defining characteristics of the scale

Appendix O

Scale Reliability Statistics: Second Half Dataset
(continued)

NINE

Reliability Statistics

Cronbach's Alpha	N of Items
744	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
9vQ119I have felt comfortable letting others tell me what to do	31 02	41 967	369	729
9cQ120I have felt overwhelmed when there was a lot of stimulation	30 09	41 718	331	737
9jQ121It has been important to me that everybody gets along	29 54	43 094	357	731
9kQ122I have tried to keep my life peaceful	29 50	42 921	393	726
9lQ123I have been laid back and not worried about getting ahead	30 84	43 101	278	744
9oQ124I have been too passive.	30 49	37 124	612	686
9xQ127I have resisted being drawn in to confrontations.	29 83	39 604	509	706
9zQ128It has been hard for me to know what I've wanted when I've been with other people	30 37	39 712	456	715
6fQ79I have had difficulty making decisions	30 22	38 841	489	709

Note Items in boldface loaded >.60, indicating the
defining characteristics of the scale

Appendix P

Pattern Matrix: Second Half Dataset

	Factor								
	1	2	3	4	5	6	7	8	9
7fQ93I have been fun-loving	676								
7bQ90I have liked to keep things light and playful	675								
7eQ92I have been spontaneous	499								- 337
7lQ98I have tried to keep my life exciting	463								- 304
7iQ94I have been out-going with a high turnover of friends	399								
7mQ99Many people consider me to be hyper-energetic	338								
4eQ49When troubled, I have "obsessed" about my emotional states		665							
4rQ56I have focused on disappointments from the past		637							
6gQ80It has been difficult for me to relax and stop worrying about potential problems		597							
6hQ81I have tended to dwell on "worst case" scenarios		586							
4oQ55I have taken things too personally		578							
4dQ48I have been stopped in my tracks by self-consciousness		423							
4zQ60I have been optimistic	- 355	421							
7jQ95I have been known for my unsinkable spirit -- --	321	- 391							
5kQ69I have enjoyed investigating complex issues no one else is interested in			742						
5pQ73I have come across to others as being eccentric			532						
5vQ76I have gotten lost in my interests for hours			527						
5oQ72I have enjoyed speculating about things in great detail			516						
5hQ67I have been mentally intense			510						
5fQ66I have been attracted to subjects that others find disturbing			491						
4hQ52I have liked feeling how different I am from most people			436						
5eQ65Intellectual debate has brought out my forceful side			422				- 377		
4gQ51I have spent a lot of time looking inward			416						
4aQ46I have spent more time imagining relationships than actually having them									
1kQ9I have been self-disciplined				- 687					
1uQ14I have been organized and orderly				- 641					
1cQ3I have been good at dealing with details				- 485					
3sQ42When I feel I'm falling behind, I have been motivated to "get going "				- 471					
1sQ13I have always tried to fulfill my high ideals				- 433					
1jQ8I have felt the need to do things perfectly				- 406					

161

Pattern Matrix: Second Half Dataset
(continued)

Item							
1rQ12I have seen others as disorganized			- 397				
1oQ11People have trusted me because I will do what is right			- 364				
9oQ124I have been too passive				722			
9xQ127I have resisted being drawn in to confrontations				606			
6fQ79I have had difficulty making decisions				567			
9zQ128It has been hard for me to know what I've wanted when I've been with other people				527			
9kQ122I have tried to keep my life peaceful				456			
9vQ119I have felt comfortable letting others tell me what to do				432			
9jQ121It has been important to me that everybody gets along				428			
9cQ120I have felt overwhelmed when there was a lot of stimulation				394			
9lQ123I have been laid back and not worried about getting ahead				333			
3mQ36It has been important to me to be admired					- 778		
3oQ38I have been attracted to activities that had substantial potential for recognition					- 608		
3pQ40I have been concerned with doing better than others					- 604		
3uQ43My image has been one of my most important concerns					- 593		
8qQ116I have needed to feel my impact on those around me					- 548		
2oQ24I have taken pride in being important to others					- 543		- 302
3aQ30I have worked hard to be appropriate and well-liked					- 444		
2fQ18I have wanted people to depend on me					- 367		- 332
8eQ107I have a dominating personality						- 712	
8gQ109I have taken on confrontations						- 640	
8aQ105When I have gotten angry, people have known about it						- 577	
8rQ117One of my strengths has been to take charge						- 550	
8nQ113Making big things happen has been one of my major strengths						- 377	
2hQ20I have been known for being warm and caring							- 721
2vQ27I have enjoyed telling people they are special to me							- 679
2eQ17I have needed to show affection to people							- 678

Appendix P

Pattern Matrix: Second Half Dataset

2gQ19I have been sensitive to others' needs.									-.669	
2pQ25I have liked serving others.									-.554	
2iQ21People have responded to me because I have been interested in them.									-.534	
2bQ15I have used physical contact to reassure others about how I feel toward them.									-.507	
6uQ86I have wanted to follow clear-cut guidelines.-----										.613
6vQ87I have needed consistent predictability.-----										.546
1hQ7I have not liked it when people have broken the rules.										.507
6eQ78I have been cautious.----										.498
7cQ91Given a choice between something familiar and something new, I have chosen something new.										-.463

163

Appendix Q

Structure Matrix: Second Dataset

	Factor								
	1	2	3	4	5	6	7	8	9
7fQ93I have been fun-loving	745							- 375	
7bQ90I have liked to keep things light and playful	652								
7eQ92I have been spontaneous	619								- 501
7lQ98I have tried to keep my life exciting	581						- 317		- 391
7iQ94I have been out-going with a high turnover of friends	468								
7mQ99Many people consider me to be hyper-energetic	447						- 408		
4rQ56I have focused on disappointments from the past		713							
4eQ49When troubled, I have "obsessed" about my emotional states		688							
6hQ81I have tended to dwell on "worst case" scenarios		669							358
6gQ80It has been difficult for me to relax and stop worrying about potential problems		635							312
4oQ55I have taken things too personally		598							
4dQ48I have been stopped in my tracks by self-consciousness		531							
4zQ60I have been optimistic	- 513	529						364	
7jQ95I have been known for my unsinkable spirit ----	463	- 467						- 308	
4aQ46I have spent more time imagining relationships than actually having them		414	329						
5kQ69I have enjoyed investigating complex issues no one else is interested in			711						
5hQ67I have been mentally intense			598						
5pQ73I have come across to others as being eccentric			587						
5oQ72I have enjoyed speculating about things in great detail			529						
5fQ66I have been attracted to subjects that others find disturbing			523						
5vQ76I have gotten lost in my interests for hours			517						
4hQ52I have liked feeling how different I am from most people			469						
4gQ51I have spent a lot of time looking inward		316	462						
5eQ65Intellectual debate has brought out my forceful side			446				- 411		
1kQ9I have been self-disciplined				- 684					
1uQ14I have been organized and orderly				- 655					302
1cQ3I have been good at dealing with details				- 527					331
3sQ42When I feel I'm falling behind, I have been motivated to "get going "				- 508					
1oQ11People have trusted me because I will do what is right				- 473				- 337	

Structure Matrix: Second Dataset
(continued)

Item									
1sQ13I have always tried to fulfill my high ideals				- 468					
1rQ12I have seen others as disorganized				- 428					
1jQ8I have felt the need to do things perfectly				- 424					
9oQ124I have been too passive					721				
9xQ127I have resisted being drawn in to confrontations					607				
6fQ79I have had difficulty making decisions					568				
9zQ128It has been hard for me to know what I've wanted when I've been with other people					528				
9kQ122I have tried to keep my life peaceful					456				
9vQ119I have felt comfortable letting others tell me what to do					432				
9jQ121It has been important to me that everybody gets along					427				
9cQ120I have felt overwhelmed when there was a lot of stimulation					395				
9lQ123I have been laid back and not worried about getting ahead					332				
3mQ36It has been important to me to be admired						- 759			
3oQ38I have been attracted to activities that had substantial potential for recognition						- 619			
3pQ40I have been concerned with doing better than others						- 615			
2oQ24I have taken pride in being important to others						- 607		- 392	
3uQ43My image has been one of my most important concerns						- 599			
8qQ116I have needed to feel my impact on those around me						- 597		- 302	
3aQ30I have worked hard to be appropriate and well-liked						- 485		- 349	315
2fQ18I have wanted people to depend on me						- 448		- 392	
8eQ107I have a dominating personality							- 763		
8gQ109I have taken on confrontations							- 660		
8rQ117One of my strengths has been to take charge				- 395			- 648		
8nQ113Making big things happen has been one of my major strengths				- 363		- 307	- 544		
8aQ105When I have gotten angry, people have known about it							- 542		
2hQ20I have been known for being warm and caring	323							- 763	
2eQ17I have needed to show affection to people								- 703	
2vQ27I have enjoyed telling people they are special to me								- 694	

Appendix Q

Structure Matrix: Second Dataset
(continued)

2gQ19I have been sensitive to others' needs						- 663	
2iQ21People have responded to me because I have been interested in them						- 579	
2pQ25I have liked serving others						- 572	
2bQ15I have used physical contact to reassure others about how I feel toward them						- 529	
6uQ86I have wanted to follow clear-cut guidelines -----							657
6vQ87I have needed consistent predictability -----		306					632
6eQ78I have been cautious ----		330					592
1hQ7I have not liked it when people have broken the rules				- 370			562
7cQ91Given a choice between something familiar and something new, I have chosen something new	394						- 540

166

Appendix R

Factor Correlation Matrix: Second Half Dataset

Factor	1	2	3	4	5	6	7	8	9
1	1 000	- 224	- 060	008	013	- 134	- 176	- 269	- 242
2	- 224	1 000	233	110	018	- 183	110	046	246
3	- 060	233	1 000	- 025	- 003	- 084	- 108	075	- 144
4	008	110	- 025	1 000	010	171	169	158	- 238
5	013	018	- 003	010	1 000	003	- 027	007	- 004
6	- 134	- 183	- 084	171	003	1 000	229	178	- 076
7	- 176	110	- 108	169	- 027	229	1 000	039	173
8	- 269	046	075	158	007	178	039	1 000	- 004
9	- 242	246	- 144	- 238	- 004	- 076	173	- 004	1 000

Appendix S
Each Factor Factored: Second Half Dataset

ONE

Structure Matrix

	Factor	
	1	2
1uQ14I have been organized and orderly.	.793	.429
1cQ3I have been good at dealing with details.	.614	.351
1rQ12I have seen others as disorganized.	.561	
1jQ8I have felt the need to do things perfectly.	.399	.318
1sQ13I have always tried to fulfill my high ideals.		.627
1kQ9I have been self-disciplined.	.547	.621
1oQ11People have trusted me because I will do what is right.	.321	.501
3sQ42When I feel I'm falling behind, I have been motivated to "get going."	.355	.497

Factor Correlation Matrix

Factor	1	2
1	1.000	.527
2	.527	1.000

TWO
Only one factor was extracted.

THREE

Structure Matrix

	Factor	
	1	2
3mQ36It has been important to me to be admired.	.779	.573
3uQ43My image has been one of my most important concerns.	.625	.409
3oQ38I have been attracted to activities that had substantial potential for recognition.	.616	.390
3pQ40I have been concerned with doing better than others.	.612	.366
2oQ24I have taken pride in being important to others.	.531	.742
2fQ18I have wanted people to depend on me.	.344	.639
8qQ116I have needed to feel my impact on those around me.	.517	.581
3aQ30I have worked hard to be appropriate and well-liked.	.435	.486

Factor Correlation Matrix

Factor	1	2
1	1.000	.638
2	.638	1.000

168

Appendix S
Each Factor Factored: Second Half Dataset
(continued)

FOUR

Structure Matrix

	Factor	
	1	2
4rQ56I have focused on disappointments from the past	748	429
4eQ49When troubled, I have "obsessed" about my emotional states	697	303
6hQ81I have tended to dwell on "worst case" scenarios	683	515
6gQ80It has been difficult for me to relax and stop worrying about potential problems	652	384
4oQ55I have taken things too personally	609	
4dQ48I have been stopped in my tracks by self-consciousness	554	319
4aQ46I have spent more time imagining relationships than actually having them	437	
4zQ60I have been optimistic	466	909
INV7jQ95I have been known for my unsinkable spirit ----	389	631

Factor Correlation Matrix

Factor	1	2
1	1 000	529
2	529	1 000

FIVE

One factor extracted.

SIX

Structure Matrix

	Factor	
	1	2
6uQ86I have wanted to follow clear-cut guidelines -----	759	346
6vQ87I have needed consistent predictability -----	652	479
1hQ7I have not liked it when people have broken the rules	613	
6eQ78I have been cautious ----	531	479
INV7lQ98I have tried to keep my life exciting		697
INV7eQ92I have been spontaneous	439	680
INV7cQ91Given a choice between something familiar and something new, I have chosen something new	432	642

Factor Correlation Matrix

Factor	1	2
1	1 000	504
2	504	1 000

SEVEN

Structure Matrix

	Factor	
	1	2
7eQ92I have been spontaneous.	.714	-.409
7fQ93I have been fun-loving.	.705	-.525
7lQ98I have tried to keep my life exciting.	.702	-.404
7cQ91Given a choice between something familiar and something new, I have chosen something new.	.517	-.321
7mQ99Many people consider me to be hyper-energetic.	.506	-.419
7bQ90I have liked to keep things light and playful.	.502	-.428
7iQ94I have been out-going with a high turnover of friends.	.481	
INV4zQ60I have been optimistic.	.502	-.785
7jQ95I have been known for my unsinkable spirit.----	.479	-.741

Factor Correlation Matrix

Factor	1	2
1	1.000	-.626
2	-.626	1.000

EIGHT

One factor was extracted.

170

NINE

Structure Matrix

	Factor	
	1	2
6fQ79I have had difficulty making decisions.	.700	.320
9oQ124I have been too passive.	.673	.546
9zQ128It has been hard for me to know what I've wanted when I've been with other people.	.650	
9cQ120I have felt overwhelmed when there was a lot of stimulation.	.424	
9kQ122I have tried to keep my life peaceful.		.668
9xQ127I have resisted being drawn in to confrontations.	.432	.640
9jQ121It has been important to me that everybody gets along.		.508
9vQ119I have felt comfortable letting others tell me what to do.	.330	.408
9lQ123I have been laid back and not worried about getting ahead.		.306

Factor Correlation Matrix

Factor	1	2
1	1.000	.506
2	.506	1.000

Appendix T

Cronbach Coefficient Alpha Statistics
Dataset Split by Gender and by Knowledge of Enneagram Type: Second Half
Dataset

<table>
<tr><th colspan="5" style="text-align:center">Case Processing Summary</th></tr>
<tr><td>My gender is</td><td></td><td></td><td>N</td><td>%</td></tr>
<tr><td>Male</td><td>Cases</td><td>Valid</td><td>943</td><td>100 0</td></tr>
<tr><td></td><td></td><td>Excluded</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>Total</td><td>943</td><td>100 0</td></tr>
<tr><td>Female</td><td>Cases</td><td>Valid</td><td>2257</td><td>100 0</td></tr>
<tr><td></td><td></td><td>Excluded</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>Total</td><td>2257</td><td>100 0</td></tr>
</table>

<table>
<tr><th colspan="5" style="text-align:center">Case Processing Summary</th></tr>
<tr><td>Do you know your Enneagram Type?</td><td></td><td></td><td>N</td><td>%</td></tr>
<tr><td>Yes</td><td>Cases</td><td>Valid</td><td>1361</td><td>100 0</td></tr>
<tr><td></td><td></td><td>Excluded</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>Total</td><td>1361</td><td>100 0</td></tr>
<tr><td>No</td><td>Cases</td><td>Valid</td><td>1839</td><td>100 0</td></tr>
<tr><td></td><td></td><td>Excluded</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>Total</td><td>1839</td><td>100 0</td></tr>
</table>

ONE

Reliability Statistics

Cronbach's Alpha	N of Items
752	8

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	745	8
Female	752	8

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	772	8
No	735	8

TWO

Reliability Statistics

Cronbach's Alpha	N of Items
832	7

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	822	7
Female	825	7

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	849	7
No	816	7

Cronbach Coefficient Alpha Statistics
Dataset Split by Gender and by Knowledge of Enneagram Type: Second Half
Dataset
(continued)

THREE

Reliability Statistics

Cronbach's Alpha	N of Items
.809	8

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.829	8
Female	.800	8

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.823	8
No	.797	8

FOUR

Reliability Statistics

Cronbach's Alpha	N of Items
.830	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.834	9
Female	.831	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.826	9
No	.833	9

FIVE

Reliability Statistics

Cronbach's Alpha	N of Items
.786	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.770	9
Female	.788	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.801	9
No	.773	9

Cronbach Coefficient Alpha Statistics
Dataset Split by Gender and by Knowledge of Enneagram Type: Second Half
Dataset
(continued)

SIX

Reliability Statistics

Cronbach's Alpha	N of Items
785	7

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	777	7
Female	789	7

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	797	7
No	776	7

SEVEN

Reliability Statistics

Cronbach's Alpha	N of Items
817	9

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	813	9
Female	818	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	836	9
No	801	9

EIGHT

Reliability Statistics

Cronbach's Alpha	N of Items
783	5

Reliability Statistics

My gender is	Cronbach's Alpha	N of Items
Male	788	5
Female	782	5

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	812	5
No	758	5

Cronbach Coefficient Alpha Statistics
Dataset Split by Gender and by Knowledge of Enneagram Type: Second Half
Dataset
(continued)

NINE

Reliability Statistics

Cronbach's Alpha	N of Items
.744	9

Reliability Statistics

My gender is:	Cronbach's Alpha	N of Items
Male	.741	9
Female	.746	9

Reliability Statistics

Do you know your Enneagram Type?	Cronbach's Alpha	N of Items
Yes	.758	9
No	.733	9

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types

ONE

	N	Minimum	Maximum	Mean
One Type Weighted Mean	232	4	6	5.04
Eight Type Weighted Mean	232	2	6	4.16
Three Type Weighted Mean	232	2	6	4.01
Two Type Weighted Mean	232	2	5	3.97
Five Type Weighted Mean	232	2	6	3.95
Four Type Weighted Mean	232	2	5	3.70
Seven Type Weighted Mean	232	1	5	3.47
Six Type Weighted Mean	232	2	5	3.46
NIne Type Weighted Mean	232	2	4	3.19
Zscore(refinedONE)	232	-2.26	2.26	.90
Zscore(RefinedSIX)	232	-1.71	2.67	.68
Zscore(RefinedEIGHT)	232	-1.87	2.21	.43
Zscore(RefinedFIVE)	232	-2.93	1.99	.00
Zscore(RefinedTHREE)	232	-3.09	2.08	-.03
Zscore(RefinedFOUR)	232	-2.49	2.02	-.07
Zscore(RefinedTWO)	232	-3.24	1.53	-.37
Zscore(RefinedSEVEN)	232	-2.98	1.68	-.51
Zscore(refinedNINE)	232	-3.39	1.54	-.60
Please indicate your Type:	232	1	1	1.00
Valid N (listwise)	232			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

176

**Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)**

TWO

	N	Minimum	Maximum	Mean
Two Type Weighted Mean	411	4	6	5.04
One Type Weighted Mean	411	2	6	4.25
Seven Type Weighted Mean	411	2	6	4.18
Three Type Weighted Mean	411	2	6	4.11
Eight Type Weighted Mean	411	2	6	3.99
NIne Type Weighted Mean	411	2	6	3.72
Four Type Weighted Mean	411	2	6	3.72
Five Type Weighted Mean	411	2	6	3.42
Six Type Weighted Mean	411	1	5	3.35
Zscore(RefinedTWO)	411	-1.0	1.8	1.0
Zscore(RefinedTHREE)	411	-2.5	2.4	.4
Zscore(RefinedSEVEN)	411	-2.2	2.6	.4
Zscore(RefinedEIGHT)	411	-2.7	2.2	.2
Zscore(refinedNINE)	411	-2.7	2.4	.1
Zscore(refinedONE)	411	-2.4	2.3	.0
Zscore(RefinedFOUR)	411	-2.2	2.3	-.1
Zscore(RefinedSIX)	411	-2.7	2.5	-.1
Zscore(RefinedFIVE)	411	-3.5	2.0	-.4
Please indicate your Type:	411	2	2	2.00
Valid N (listwise)	411			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)

THREE

	N	Minimum	Maximum	Mean
Three Type Weighted Mean	186	3	6	4.89
One Type Weighted Mean	186	3	6	4.46
Eight Type Weighted Mean	186	3	5	4.30
Two Type Weighted Mean	186	2	6	4.23
Seven Type Weighted Mean	186	2	6	4.16
Five Type Weighted Mean	186	2	5	3.84
Four Type Weighted Mean	186	2	6	3.53
NIne Type Weighted Mean	186	1	4	3.29
Six Type Weighted Mean	186	2	5	3.19
Zscore(RefinedTHREE)	186	-1.2	2.4	.9
Zscore(RefinedEIGHT)	186	-2.3	2.2	.5
Zscore(refinedONE)	186	-2.4	2.3	.4
Zscore(RefinedSEVEN)	186	-2.3	2.4	.4
Zscore(RefinedTWO)	186	-2.9	1.5	-.1
Zscore(RefinedSIX)	186	-2.1	2.7	-.2
Zscore(RefinedFIVE)	186	-2.5	2.0	-.2
Zscore(RefinedFOUR)	186	-2.5	1.9	-.4
Zscore(refinedNINE)	186	-3.4	1.7	-.5
Please indicate your Type:	186	3	3	3.00
Valid N (listwise)	186			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)

FOUR

	N	Minimum	Maximum	Mean
Four Type Weighted Mean	373	3	6	4.81
Five Type Weighted Mean	373	3	6	4.29
One Type Weighted Mean	373	2	6	3.99
Two Type Weighted Mean	373	1	6	3.97
NIne Type Weighted Mean	373	1	5	3.71
Six Type Weighted Mean	373	2	5	3.70
Three Type Weighted Mean	373	2	6	3.70
Seven Type Weighted Mean	373	2	6	3.53
Eight Type Weighted Mean	373	2	5	3.36
Zscore(RefinedFOUR)	373	-2.0	2.3	1.0
Zscore(RefinedFIVE)	373	-1.8	2.1	.5
Zscore(refinedNINE)	373	-2.7	2.4	.3
Zscore(RefinedTHREE)	373	-2.9	2.2	.0
Zscore(RefinedSIX)	373	-2.9	2.5	.0
Zscore(RefinedTWO)	373	-3.6	1.8	-.2
Zscore(refinedONE)	373	-4.1	2.1	-.5
Zscore(RefinedEIGHT)	373	-2.7	2.2	-.5
Zscore(RefinedSEVEN)	373	-2.8	1.8	-.6
Please indicate your Type:	373	4	4	4.00
Valid N (listwise)	373			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)

FIVE

	N	Minimum	Maximum	Mean
Five Type Weighted Mean	312	2	6	4.82
One Type Weighted Mean	312	2	6	4.20
Four Type Weighted Mean	312	2	6	4.07
Eight Type Weighted Mean	312	2	6	3.55
Three Type Weighted Mean	312	1	6	3.53
NIne Type Weighted Mean	312	2	5	3.52
Seven Type Weighted Mean	312	2	6	3.51
Six Type Weighted Mean	312	2	5	3.39
Two Type Weighted Mean	312	1	5	3.28
Zscore(RefinedFIVE)	312	-2.5	2.1	.9
Zscore(RefinedFOUR)	312	-2.2	2.3	.1
Zscore(refinedNINE)	312	-3.1	2.5	.1
Zscore(RefinedSIX)	312	-2.9	2.5	.0
Zscore(refinedONE)	312	-2.9	2.3	-.2
Zscore(RefinedEIGHT)	312	-2.7	2.2	-.3
Zscore(RefinedSEVEN)	312	-2.8	2.2	-.6
Zscore(RefinedTHREE)	312	-3.5	2.4	-.7
Zscore(RefinedTWO)	312	-3.4	1.7	-1.1
Please indicate your Type:	312	5	5	5.00
Valid N (listwise)	312			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)

SIX

	N	Minimum	Maximum	Mean
One Type Weighted Mean	279	2	6	4.42
Two Type Weighted Mean	279	2	6	4.17
Four Type Weighted Mean	279	2	6	4.08
Six Type Weighted Mean	279	3	5	4.04
NIne Type Weighted Mean	279	2	5	3.82
Three Type Weighted Mean	279	2	6	3.81
Five Type Weighted Mean	279	2	5	3.76
Eight Type Weighted Mean	279	2	5	3.55
Seven Type Weighted Mean	279	1	6	3.43
Zscore(RefinedSIX)	279	-1.7	3.0	.8
Zscore(RefinedFOUR)	279	-2.0	2.3	.6
Zscore(refinedNINE)	279	-2.1	2.4	.4
Zscore(refinedONE)	279	-2.4	2.1	.2
Zscore(RefinedTHREE)	279	-3.5	2.4	.1
Zscore(RefinedTWO)	279	-2.6	1.8	-.1
Zscore(RefinedEIGHT)	279	-2.5	2.0	-.2
Zscore(RefinedFIVE)	279	-3.2	2.1	-.3
Zscore(RefinedSEVEN)	279	-3.1	2.2	-.6
Please indicate your Type:	279	6	6	6.00
Valid N (listwise)	279			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

**Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)**

SEVEN

	N	Minimum	Maximum	Mean
Seven Type Weighted Mean	316	3	6	4.92
Two Type Weighted Mean	316	2	6	4.30
Eight Type Weighted Mean	316	2	6	4.28
Three Type Weighted Mean	316	2	6	4.22
One Type Weighted Mean	316	2	6	3.90
Five Type Weighted Mean	316	2	6	3.80
Four Type Weighted Mean	316	1	6	3.36
NIne Type Weighted Mean	316	2	4	3.22
Six Type Weighted Mean	316	1	4	2.89
Zscore(RefinedSEVEN)	316	-.9	2.6	1.3
Zscore(RefinedEIGHT)	316	-2.1	2.2	.6
Zscore(RefinedTWO)	316	-2.8	1.8	.1
Zscore(RefinedFIVE)	316	-3.3	2.1	.0
Zscore(RefinedTHREE)	316	-2.8	2.2	.0
Zscore(refinedONE)	316	-3.3	1.9	-.4
Zscore(refinedNINE)	316	-3.1	2.0	-.6
Zscore(RefinedFOUR)	316	-3.0	2.0	-.7
Zscore(RefinedSIX)	316	-2.9	1.2	-1.1
Please indicate your Type:	316	7	7	7.00
Valid N (listwise)	316			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)

EIGHT

	N	Minimum	Maximum	Mean
Eight Type Weighted Mean	194	4	6	4.90
One Type Weighted Mean	194	3	6	4.46
Three Type Weighted Mean	194	2	6	4.21
Seven Type Weighted Mean	194	2	6	4.19
Five Type Weighted Mean	194	2	6	4.03
Two Type Weighted Mean	194	2	6	3.98
Four Type Weighted Mean	194	2	5	3.45
Six Type Weighted Mean	194	2	5	3.08
NIne Type Weighted Mean	194	1	4	2.68
Zscore(RefinedEIGHT)	194	-.1	2.2	1.4
Zscore(RefinedSEVEN)	194	-2.0	2.4	.4
Zscore(refinedONE)	194	-3.3	2.1	.1
Zscore(RefinedTHREE)	194	-3.1	2.4	.0
Zscore(RefinedFIVE)	194	-2.7	2.1	.0
Zscore(RefinedSIX)	194	-2.9	1.7	-.4
Zscore(RefinedTWO)	194	-2.9	1.7	-.4
Zscore(RefinedFOUR)	194	-2.9	1.4	-.6
Zscore(refinedNINE)	194	-3.4	.8	-1.4
Please indicate your Type:	194	8	8	8.00
Valid N (listwise)	194			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

Appendix U
Descriptive Statistics: Refined and Unrefined Type Scores for
Each of the Self-Identified Types
(continued)

NINE

	N	Minimum	Maximum	Mean
NIne Type Weighted Mean	376	3	6	4.33
Two Type Weighted Mean	376	2	6	4.17
One Type Weighted Mean	376	2	6	3.94
Five Type Weighted Mean	376	2	6	3.64
Seven Type Weighted Mean	376	1	6	3.63
Four Type Weighted Mean	376	2	6	3.63
Three Type Weighted Mean	376	2	5	3.52
Six Type Weighted Mean	376	2	5	3.40
Eight Type Weighted Mean	376	1	5	3.21
Zscore(refinedNINE)	376	-1.7	2.8	.9
Zscore(RefinedSIX)	376	-2.4	2.7	.3
Zscore(RefinedTWO)	376	-2.9	1.8	.1
Zscore(RefinedSEVEN)	376	-3.1	2.0	-.2
Zscore(RefinedFOUR)	376	-2.8	2.3	-.3
Zscore(refinedONE)	376	-3.8	2.1	-.4
Zscore(RefinedTHREE)	376	-3.2	1.9	-.4
Zscore(RefinedFIVE)	376	-3.8	2.0	-.5
Zscore(RefinedEIGHT)	376	-2.7	1.4	-.9
Please indicate your Type:	376	9	9	9.00
Valid N (listwise)	376			

Note: Z-scores of the refined scores, and weighted means of unrefined scores, for each type, are sorted within their respective groups; highest scores within each group are listed first, and shaded.

184

References

Aiken, L. R. (1989). *Assessment of personality*. Needham Heights, MA: Simon &
Shuster.

Archer, R. P., & Smith, S. R. (2008). *Personality assessment*. New York: Routledge.

Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: The
Guilford Press.

Byrne, B. (2010). *Structural equation modeling with amos: Basic concepts, applications,
and programming*. New York: Routledge.

Daniels, D., & Price, V. (2009). *The essential enneagram: The definitive personality test
and self-discovery guide*. New York: Harper Collins Publishers.

De Raad, B., & Perugini, M. (2002). In De Raad B., Perugini M. (Eds.), *Big five
assessment*. Germany: Hogrefe & Huber Publishers.

Deikman, A. J. (1982). *The observing self: Mysticism and psychotherapy*. Boston, MA:
Beacon Press.

Fishman, J. A., & Galguera, T. (2003). *Introduction to test construction in the social and
behavioral sciences*. New York: Rowman and Littlefield Publishers, Inc.

Gamard, W. S. (1986). *Interrater reliability and validity of judgments of enneagram
personality types*. (PhD, California Institute of Integral Studies). . (GAX86-255584)

Harrington, D. (2009). *Confirmatory factor analysis*. New York: Oxford University Press, Inc.

Jervis, J. (2007). *The enneagram: Symbolism and community in the age of aquarius*. (PhD, Concordia University).

Johnson, P., & Mutschelknaus, M. (2001). *Disembodied spirituality: Conflicts in the writing center*. Paper presented at the Annual Meeting of the Conference on Composition and Communication (52nd, Denver, Colorado, March 14-17, 2001). ERIC Clearinghouse, Bloomington, IN. CS217513.

Kegan, R. (1982). *The evolving self: Problem and process in human development*. Cambridge, MA: Harvard University Press.

Kim, J. & Mueller, C. (1978). *Introduction to factor analysis: What it is and how to do it*. Newbury Park, CA: Sage Publications, Inc.

Kline, P. (1993). *Personality: The psychometric view*. New York: Routledge.

Levine, J. (1999). *The enneagram intelligences: Understanding personality for effective teaching and learning*. Westport, Connecticut: Bergin & Garvey.

Levine, J. (1995). *Nine perspectives on what motivates learning. A companion guidebook to the video: Demonstrating learning motivations in adolescents using the enneagram*

Luckcock, T. (2007). The soul of teaching and professional learning: An appreciative inquiry into the enneagram of reflective practice. *Educational Action Research,* *15*(1), 127-145.

Maitri, S. (2000). *The spiritual dimension of the enneagram: Nine faces of the soul.* New York: Penguin Putnam Inc.

Myers, I. B. (1995). *Gifts differing: Understanding personality type.*

Newgent, R. A. (2001). *An investigation of the reliability and validity of the riso-hudson enneagram type indicator.* (PhD, University of Akron).

Newgent, R. A., Parr, P. E., Newman, I., & Higgins, K. K. (2004). The riso-hudson enneagram type indicator: Estimates of reliability and validity. *Measurement and Evaluation in Counseling and Development, 36*(4), 226.

Palmer, H. (1995). *The enneagram in love and work: Understanding your intimate and business relationships.* New York: Harper Collins.

Palmer, H. (1988). *The enneagram: Understanding yourself and the others in your life.* San Francisco: Harper Collins.

Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research.* Thousand Oaks, CA: Sage Publications.

Randall, S. (1979). *Development of an inventory to assess enneagram personality types.* (PhD, California Institute of Integral Studies). . (40/09-B. GAX 80-05160)

Riso, D. R. (1993). *Enneagram transformations: Releases and affirmations for healing your personality type.* New York: Houghton Mifflin Co.

Riso, D. R., & Hudson, R. (1999). *The wisdom of the enneagram: The complete guide to psychological and spiritual growth for the nine personality types.* New York: Bantam Books.

Riso, D. R., & Hudson, R. (2000). *Understanding the enneagram: The practical guide to personality types.* New York: Houghton Mifflin Co.

Riso, D. R., & Hudson, R. (2003). *Discovering your personality type: The essential introduction to the enneagram.* New York: Houghton Mifflin Company.

Rohr, R., & Ebert, A. (2001). *The enneagram: A christian perspective.* New York: The Crossroad Publishing Company.

Sharp, P. M. (1994). *A factor analytic study of threee enneagram personality inventories and the vocational preference inventory.* (Ed.D., Texas Tech University). (9426740)

Spector, P. E. (1992). *Summated rating scale construction: An introduction.* Newbury Park, California: Sage Publications, Inc.

Tapp, K., & Engebretson, K. (2010). Using the enneagram for client insight and

transformation: A type eight illustration. *Journal of Creativity in Mental Health,*

5(1), 65-72.

Thrasher, P. (1994). *The enneagram: Movement between types, an inventory, and a*

criterion measure. (PhD, Loyola University). (9416974)

Wagner, J. (1981). *A descriptive, validity, and reliability study of the enneagram*

personality typology. (PhD, Loyola University). (8109973)

Warling, D. (1995). *An examination of the external validity of the riso hudson enneagram*

type indicator (RHETI). (Master of Science, The University of Guelph).

Weiner, I. B., & Greene, R. L. (2008). *Handbook of personality assessment.* Hoboken,

New Jersey: John Wiley & Sons.

Zinkle, T. (1974). *A pilot study toward the validation of the sufi personality typology.*

(PhD, United States International University). . (35/05B. GAX 74-24539)

Vita

The author, Sara Ann Scott, was born in Santa Barbara, California, on February 11, 1954. She attended the University of California at Davis, graduating in 1976 with a Bachelor of Arts degree in Psychology. She studied from 1987 through 1988 at the Naval Postgraduate School, Monterey, California, where she earned a Master of Science degree in Manpower Management. From 2005 to 2007, she attended The College of William and Mary, Williamsburg, Virginia, and earned a Master of Education in Family Counseling. Sara continued her studies at The College of William and Mary completing a doctoral degree program in Counselor Education and Supervision, with an emphasis on Transpersonal Psychology, in May, 2011.

Full Name: Sara Ann Scott

Date of Birth: February 11, 1954

Place of Birth: Santa Barbara, California

Education

Undergraduate: University of California at Davis

    Bachelor of Arts: 1976

Graduate: Naval Postgraduate School, Monterey, California

    Master of Science: 1988

Graduate: The College of William and Mary, Williamsburg, Virginia

    Master of Education: 2007

    Marriage and Family Counseling

    Doctor of Philosophy: 2011

    Counselor Education and Supervision: Transpersonal Psychology