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City University of New York, 1993

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SIMILARITY OF EXTREME TRAITS AS A PREDICTOR OF SIMILARITY OF COGNITION AND PREFERENCE

by Mel Waldman

A dissertation submitted to the Graduate Faculty
in Psychology in partial Fulfillment of the requirements
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Abstract

SIMILARITY OF EXTREME TRAITS
AS A PREDICTOR OF SIMILARITY OF COGNITION AND PREFERENCE

by Mel Waldman

Adviser: Professor Howard Ehrlichman

The question of whether all people can be relevantly described by all traits remains a significant issue in personality assessment. It is related to the larger question of whether the concept of personality traits has predictive utility. My approach is an alternative perspective to the moderator variable approach. Moderator variables are claimed to allow one to identify individuals at any level of a trait for whom the trait is relevant. Two such moderators are consistency and trait importance. However, this study was designed to explore the idea that trait extremity may determine or be a major component of trait relevance. I predicted that trait level itself could identify relevant traits for an individual. Furthermore, I hypothesized that individuals who obtain extreme scores on the same traits would be more similar to each other than would individuals who obtain moderate scores on the same traits. In this study, overlap in the use of cognitive constructs and movie preferences were employed as

indicators of similarity between individuals. I predicted that there would be more overlap for individuals who shared extreme scores on traits than for individuals who shared intermediate scores on traits. A homogeneous sample of 56 female subjects 18-25 years old was obtained from the original sample of 133 undergraduate students at Queens College who participated in the study. Subjects filled out the Personality Research Form, the Personal Views Questionnaire, and the Trait Importance Questionnaire. Subjects who shared extreme traits had significantly greater movie overlap than subjects who shared intermediate traits but did not differ with respect to construct overlap. As the number of extreme shared traits increased, the amount of construct overlap significantly increased. However, the amount of movie overlap did not significantly increase. The amount of overlap for subjects sharing two or more intermediate traits and subjects sharing one intermediate trait was not significantly different. The findings were the same for constructs and movies. The implications of these results for further research are discussed. Finally, extreme traits were significantly more consistent but not significantly more important than intermediate traits.

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INTRODUCTION

Psychologists use personality tests because they believe that such tests enable them to predict how people will behave. However, this belief has been challenged by research that suggests poor ability of personality tests to predict behavior (Mischel, 1968; Peterson, 1968; Vernon, 1964). Although anyone who fills out a personality test will obtain a score, all too often that score seems to reveal little about the person. The poor ability of personality tests to predict behavior has led some psychologists to question whether broad personality characteristics intended to be assessed by most personality tests are viable units for describing personality. Others have suggested that the problem lies not in the underlying conception of traits, but in the way in which traits are measured. One possibility that has been raised by many writers is that a score on a personality test my be relevant for some individuals but not for others. That is, for two individuals who receive the same score on a personality test, that score may be relevant (in the sense of predictive of the individual's behavior) for one of these individuals and irrelevant for the other. Obviously, for this line of reasoning to be at all fruitful, it is necessary to have a way of deciding whether a score is or is not relevant for a given individual.

Two ways of assessing trait relevance have been studied in recent years. Some psychologists (Baumeister & Tice, 1988; Bem & Allen, 1974) argue that the key to knowing when a trait will be predictive is consistency, either in the manner the test questions are answered or by individuals' own statements about the variability of their behavior. Others (Cheek, 1982; Markus, 1977) suggest that people's assertions of a personality characteristic's importance will indicate whether or not the score is relevant for them. The research strategy is to investigate whether the relationships between trait scores and some criterion behavior is stronger for those individuals for whom the trait is consistent and/or important as compared to those individuals for whom the trait is inconsistent and/or unimportant.

I agree that it is important to determine which traits are relevant for which people. However, the "moderator-variable" approach outlined above has come under criticism (Paunonen & Jackson, 1985). My approach is an alternative perspective. I propose that trait level itself can identify relevant traits for an individual. Specifically, I believe that traits on which individuals obtain extreme scores are relevant (and predictive) whereas traits on which individuals obtain moderate scores are irrelevant (and non-predictive). I propose to test this point of view by hypothesizing that individuals who obtain extreme scores on the same traits will be more similar to each other than will individuals who obtain moderate scores on the same traits.

Constructs refer to the characteristics, qualities, and attributes people use to describe various aspects of their world

such as themselves, other people, social situations, and other aspects of their environment (Kelly, 1955). In this study, overlap in the use of cognitive constructs and movie preferences were employed as indicators of similarity between individuals. I predicted that there would be more overlap for individuals who shared extreme scores on traits than for individuals who shared intermediate scores on traits.

Nature of Personality Traits

The question of whether all people can be relevantly described by all traits remains a significant issue in personality assessment. It is related to the larger question of whether the concept of personality traits has predictive utility. In order to address this issue of trait relevance, we must understand the nature and structure of personality traits.

I believe that personality traits are best thought of as psychological structures that function causally to determine the way one acts in and thinks about the world. My conceptualization of personality traits as real entities is consistent with a philosophy of science (Manicas & Secord, 1983) sometimes called the realist theory of science (Bhaskar, 1975). In the realist view, science aims to discover causal mechanisms. According to Bhaskar (1975), natural science is concerned with "real structures which endure and operate independently of our knowledge, our experience, and the conditions which allow access to them"

(p. 25). In addition, Manicas and Secord (1983) pointed out that "science aims at discovering lawful processes" (p. 406). However, these "laws are not about events, but about the causal powers of structures which exist and operate in the world" (p. 406).

Thus, this philosophy of science argues that theoretical constructs ought to refer to real entities. However, we will not necessarily discover real psychological structures by means of current methodologies and statistical procedures (Manicas & Secord, 1983). That is, these methodologies and statistical procedures are descriptive rather than explanatory. But results based on these techniques are descriptions that may lead to scientific explanations. These explanations entail "identification of structures and their dynamics" (Manicas & Secord, 1983, p. 405) and are derived from "imaginative theory" (p. 405) rather than mere description.

The notion that personality traits are real is also part of Allport's (1961) conceptualization of veridical traits. Allport noted that "the term veridical in philosophy means that the object under discussion is really there. Thus, a trait, if veridical, corresponds to some neurophysiological system" (p. 334). Personal traits are veridical whereas common traits are "more nominal" and "only semiveridical" (p. 340). Allport concluded that "as a hypothetical construct, trait is at present an inescapable inference and may some day be demonstrated directly" (p. 336).

In embracing a veridical notion of traits, Allport (1961) argued that the existence of traits is implied by consistency in behavior. However, phenotypical explanations must be distinguished from genotypical ones. While the former are mere descriptions, the latter attempt to understand the underlying personality structure.

In order to discover individuals' real personality traits which correspond to psychological and causal structures with predictive utility, I propose that the issue of trait relevance be re-examined. According to Allport (1937), not all trait dimensions are equally relevant to all people. Allport (1937, 1962) noted that there is a relation between trait relevance and trait predictability. In addition, Bem and Allen (1974) argued that only if traits are relevant for an individual will they have predictive utility. In my research, trait relevance is defined as trait predictability.

This study is designed to explore the idea that trait extremity may determine or be a major component of trait relevance. From this perspective, the issue in question is not whether a trait that isn't extreme can be adequately measured, but whether that trait has any significance for the individual's life. An analogy is the physical dimension of height. Height can be measured accurately for everyone, but it has far more impact on the lives of very short or very tall individuals than on those of average height.

Other approaches to this issue have focused on moderator variables that are claimed to allow one to identify individuals

at any level of a trait for whom the trait is relevant. Two such moderators are consistency and trait importance.

Indices of Trait Relevance

Consistency

There have been a number of proposed indices of trait relevance. The first variable considered as an index of trait relevance was consistency (Baumeister & Tice, 1988; Bem & Allen, 1974). However, using the variable of consistency as a measure of trait relevance has presented researchers with a variety of theoretical and empirical problems.

Since there have been various measures of consistency, some researchers (Baumeister & Tice, 1988; Paunonen & Jackson, 1985; Zuckerman et al., 1988) have raised the question about how to measure consistency. The ipsatized variance index, one of two consistency measures used by Bem and Allen (1974), refers to the ratio of interitem variance on a particular trait to the interitem variance for all traits. In the Bem and Allen study (1974), subjects completed the Cross Situation Behavior Survey (CSBS), an 86-item questionnaire which includes a 24-item scale for friendliness and a 23-item scale for conscientiousness. The ipsatized variance index for conscientiousness was the ratio of each subject's "variance across the 23 conscientiousness items" (p. 515) to the "variance across all 86 items of the questionnaire" (p.

515). The ipsatized variance index has been criticized since with ipsatization, variance on a particular trait is confounded with total variance among traits, which is irrelevant to trait consistency.

The second measure used by Bem and Allen was self-reported consistency. Such measures, based upon single-item rating scales, have been criticized as being unreliable (Rushton, Jackson, & Paunonen, 1981). The nonipsatized variance index, which refers to interitem variance on a particular trait, has also been used by some researchers (Baumeister & Tice, 1988; Paunonen & Jackson, 1985), but this measure has been criticized on a number of psychometric grounds such as "faultiness, the probabilistic nature of trait indicators, temporal fluctuations that are trait compatible but intrude on trait measurements, and trait-consistent behavioral complexity" (Tellegen, 1988, p. 645).

Another problem is that the relations among the various consistency measures have been unclear. When the construct validity of these measures was evaluated, findings indicated poor levels of convergent validity (Paunonen & Jackson, 1985).

There has also been much conceptual confusion about the relation between trait consistency and trait relevance. According to Bem and Allen (1974), trait relevance moderates cross-situational behavioral consistency. However, they tested the effects of trait consistency rather than the effects of trait relevance. Various theorists (Burke, Kraut, & Dworkin, 1984; Cheek, 1982; Zuckerman et al., 1988) have pointed out that trait

consistency and trait relevance are not identical. Moreover, empirical studies (Burke, Kraut, & Dworkin, 1984; Cheek, 1982) have shown only a weak relation between the two concepts. Since Bem and Allen (1974) did not measure trait relevance directly, Zuckerman et al. (1988) argued that they failed to test their hypothesis and suggested that a direct measure of trait relevance be used to test the original proposal.

Nevertheless, Baumeister and Tice (1988) have continued to use trait consistency, as measured by interitem variance, to determine trait relevance and traitedness. In particular, they have been concerned about metatraits, "the trait of having versus not having a particular trait" (p. 573). According to the metatrait hypothesis, "different personalities are constructed out of different trait dimensions, which entails that a given trait dimension will not apply equally well to all individuals" (p. 572). Although they found that metatraits are both moderators and direct predictors of behavior, their findings have been questioned on a psychometric issue (Tellegen, 1988).

Thus, research in which trait consistency has been used to assess trait relevance and traitedness has met with psychometric objections. It has also produced mixed empirical results. (See Chaplin & Goldberg, 1985 and Paunonen & Jackson, 1985 for negative findings. See Baumeister & Tice, 1988 and Zuckerman et al., 1988 for positive findings.)

Finally, there has been conceptual confusion about the relation between trait consistency and level. The variable of con-

sistency is different at extreme levels as compared to intermediate levels. At extreme levels, there is greater consistency. At intermediate levels, however, there may be high or low consistency (Paunonen & Jackson, 1985). To control for such confounding, matching procedures based on median splits of consistency computed for each level of the trait have been used (Bem & Allen, 1974) as well as the method of moderated multiple regression (Paunonen & Jackson, 1985).

Importance

Another variable that has been considered as an index of trait relevance is trait importance. Trait importance refers to how important a trait, rated by an individual or a rater, is to the individual's self-evaluation. One implication of trait importance is that it increases reliability of personality ratings by judges (Conrad, 1932). This result has been discussed by Allport (1937, 1962) who cites Conrad's study.

When teachers were asked to rate 30 children on 231 trait dimensions, the median reliability coefficient was only .48 (Conrad, 1932). However, when they "were asked to star only those traits that they considered to be of 'central or dominating importance in the child's personality'" (Allport, 1962, p. 418), the reliability of the personality ratings by the judges was

high. Teachers' ratings on the starred traits had a correlation of .95. Thus, for those traits regarded as important by the judges, interrater reliability was significantly higher.

Conrad's use of correlation for the starred ratings has been criticized as being an inappropriate statistic (Paunonen, 1988). But what is most interesting from my point of view is the fact that the study strongly supports my contention that trait extremity is a major component of trait relevance (see below). Most of the starred ratings were extreme. Thus, extreme traits were considered most important in the child's personality.

The idea that trait importance can increase predictability has been given a cognitive interpretation by Markus (1977). According to Markus (1977), people have different cognitive structures or cognitive generalizations about the self (self-schemata). These cognitive representations affect predictability of behavior. Subjects who have judged a behavioral dimension as important are "those most likely to display a correspondence between self-descriptions and behavior and to exhibit cross-situational consistency in that dimension" (p. 77).

However, the notion that trait importance increases predictability has been questioned by some researchers (Burke, Kraut, & Dworkin, 1984). This challenge to the self schema model is related to the question of whether measures of trait importance are confounded by measures of level (Burke et al., 1984). Measures of schema have been operationally defined in terms of level and importance (Bem, 1981, 1982; Markus, 1977; Markus et

al., 1982; Markus et al., 1985). Thus, "a person who is schematic on a trait is one who has an extreme level on that dimension and who considers the dimension important. The relation between level and importance is unclear" (Burke et al., 1984, p. 570).

Although schema measures lack discriminant validity, the schema model might be defended in terms of its value as a processing model (Markus et al., 1982). According to self-schema theorists, the schema model explains how trait level affects the way people process information about themselves. It has "discriminant validity of underlying cognitive processes" (Burke et al., 1984, p. 574). Nevertheless, Burke et al. argued that the concept of level can explain individual differences in processing information about the self by using a threshold account or evaluating behavioral evidence, rendering the schema model unnecessary. They also pointed out that whether or not the schema model adds to predictability after trait level has been controlled has yet to be determined.

Extremity

Part of the distribution of trait level that might be considered an index of trait relevance is trait extremity. As previously mentioned, the issue in question is not whether a trait that isn't extreme can be adequately measured, but whether that trait has any significance for the individual's life. An

analogy is the physical dimension of height. Height can be measured accurately for everyone, but it has far more impact on the lives of very short or very tall individuals than on those of average height. A basic assumption of test theory is that all levels of a trait are equally predictive. In contrast, I argue that different levels are differentially predictive, with only trait extremity having predictive utility. Intermediate levels of the trait are not relevant and lack predictive utility.

This view of trait extremity is not commonly shared and researchers who argue against moderator effects (Paunonen, 1988; Paunonen & Jackson, 1985) imply that trait extremity has no particular psychological significance other than being a confound. Furthermore, no other researchers explicitly argue that trait extremity itself is an indicator of trait relevance. I suggest, however, that trait extremity is an indicator of trait relevance in its own right.

Another issue is whether trait extremity is an adequate measure of traitedness. The measurement of traitedness by means of trait extremity has been criticized by some theorists (Baumeister & Tice, 1988; Tellegen, 1988). According to Baumeister and Tice (1988), this approach implies that "people with extremely high or low ratings are classified as having the trait dimension whereas those with intermediate scores are classified as lacking it. This approach systematically confounds trait with metatrait, that is, it confuses the level of the trait with the trait dimension's presence or absence in the personality (Burke et al., 1984; Rushton et al., 1981)" (p. 580).

Theorists who argue against the use of trait extremity to measure traitedness have taken "attitudes as the analog to personality traits" (Baumeister & Tice, 1988, p. 576) or schematicity, measured independently of trait extremity (Bem, 1981), as the basis of traitedness (Tellegen, 1988). On the other hand, those who argue that trait extremity is an adequate measure of traitedness suggest that schematicity is determined by trait extremity (Markus, 1977) or that different temperamental types measured by trait extremity, are "analogous to biological strains" (Kagan, 1989, p. 670).

The notion of trait extremity as an index of trait relevance is similar to the concept of personal or ego-involvement of individuals with strong attitudes (Sherif & Sherif, 1956). In one study (Hovland & Sherif, 1952), "strongly ego-involved subjects were instructed to use eleven categories for judgment of favorableness-unfavorableness. These highly ego-involved subjects placed a large number of the items in the extreme categories with which they strongly disagreed and relatively fewer in the extreme categories with which they agreed" (Sherif & Hovland, 1965, p. 129-130). For subjects who were not ego-involved and who had less intense attitudes, a greater number of the items were placed nearer the middle.

A person's stand on an issue may be "conceived as a range or a latitude of acceptance" (Sherif & Hovland, 1965, p. 129). It is "the range of the positions on an issue that an individual considers acceptable to him (including the one "most acceptable"

to him)" (p. 129). On the other hand, "the latitude of rejection consists of the positions he finds objectionable (including the one "most objectionable" to him)" (p. 129). Furthermore, individuals who are strongly ego-involved on an issue have a narrow range of acceptance, a narrow range of indifference, and a wide range of rejection. Individuals who are not ego-involved have a broad range of acceptance, a broad range of indifference, and a narrow range of rejection.

My proposal to use trait extremity to measure traitedness is supported by Kagan's (1989) research on inhibited and uninhibited children. Most children who were selected and designated as inhibited and uninhibited because of their extreme behavior in the second year of life continued to manifest such behavior at 71/2 years of age. According to Kagan (1989), the two temperamental types that he calls inhibited and uninhibited refer to classes of children "who share a genotype, an environmental history, and a set of correlated behavioral and physiological characteristics" (p. 670).

In one longitudinal study, children were not selected on the basis of their extreme behavior. In this normative sample, children were observed at 14 months, 20 months, 32 months, and 48 months of age. Using continuous indices of behavioral inhibition at 14 or 20 months, the researchers (Reznick, Gibbons, Johnson, & McDonough, in press) were unable to predict behavioral differences at 48 months of age. However, when the data were reanalyzed only for children who were extremely inhibited or

uninhibited at both 14 and 20 months, they were able to predict behavioral differences for the two extreme groups at 48 months of age.

Kagan (1989) concludes that these results and the findings about children who were selected for their extreme behavior "imply that the constructs inhibited and uninhibited refer to qualitative categories of children. These terms do not refer to a behavioral continuum ranging from extreme shyness to sociability in an unselected sample of children, even though such a phenotypic continuum exists" (p. 671). Furthermore, the two temperamental types have different physiological and physical correlates (Rosenberg & Kagan, 1987) which suggest genetic differences.

There may be some traits that function in the way Kagan noted and actually serve to organize people's emotions and cognitions in a qualitative way. At this point, however, I am not claiming some traits are biological and other traits are not. According to the behavior genetic research, all personality traits that have been studied so far seem to have the same degree of heritability in which 45-55% of the variance is due to genetics. (Along these lines, all the traits on the PRF, which was used in my study, are equally likely to have a genetic basis.)

I argue that trait extremity may determine or be a major component of trait relevance and traitedness. Although my conceptualization is similar to Markus's (1977) notion of self-

schema, like the notion of metatraits, trait extremity refers to "personality and behavior, whereas self-schemata refer to the organization of self-knowledge" (Baumeister & Tice, 1988, p. 573).

Nature and Implications of Dependent Variables

To study indices of trait relevance, researchers have used various correlational measures for their dependent variables. In the Bem and Allen (1974) study of moderator effects, correlations among friendliness and conscientiousness measures were the dependent variables. That is, self-report measures were correlated with reports of peers and parents and objective behaviors. Self-report measures of friendliness and conscientiousness, as well as peers' and parents' reports, combined single and multiple-item scales into one score. In addition, behavioral measures based upon a "group discussion" and "spontaneous friendliness" (p. 513) were used to rate friendliness. Behavioral measures based on "returning evaluations," "course readings," and "neatness" (p. 513) were used to rate conscientiousness. The six friendliness measures were correlated for low and high variability subjects. The seven conscientiousness measures were also correlated for low and high variability subjects. Other researchers have also used self-peer correlations as the dependent variables in studies of moderator effects (e.g., Cheek, 1982; Paunonen & Jackson, 1985; Zuckerman et al., 1988). Cheek (1982)

examined the effects of different moderator variables such as empathy, self-monitoring, private self-consciousness, personal identity, importance, variability, and observability. The dependent variables were the self-peer correlations of subjects high or low on the moderators. Zuckerman et al. (1988) investigated the moderator effects of trait relevance, consistency, and observability. The dependent variables were the self-peer correlations for subjects high or low on the moderator variable.

In contrast, Baumeister and Tice (1988) correlated trait scores with behavior in one study and interitem variance with behavior in a second study. In the first study, the moderator effects of the metatrait, measured by interitem variance, were examined and the correlations were the dependent variables. Trait scores for locus of control were correlated with duration of practice for traited and untraited subjects. In the second, the moderator effects of the metatrait were initially examined. For subjects who were traited and untraited on self-esteem, self-esteem scores were correlated with advice-seeking behavior in public and private conditions. The four correlations were the dependent variables. However, the direct prediction by the metatrait was the focus of the second study. (Note that the second study was an experiment. Baumeister and Tice analyzed the results in two ways. Using analysis of variance, the advice-seeking behavior of the subjects was the dependent variable for each of the four conditions "for traited and untraited subjects, in the public and private conditions" (p. 593). They also corre-

lated interitem variance directly with behavior for the public and private conditions and found a significant difference between the two correlations.) The correlations and the behavior of the subjects were the dependent variables.

What are the implications of using these correlational measures as dependent variables? First, level of one variable is used to predict level of another variable. In most of these studies, level of a trait as rated by self is correlated with level of a trait as rated by peers. However, in the first study by Baumeister and Tice (1988), level of a trait is correlated with behavior. In the second, level of the continuous metatrait coefficient is correlated with behavior. Implicit in all these analyses is a variable centered approach, in which all levels of a variable are equally predictive. In Allport's (1962) terms, the assumption is that at any trait level, the trait has the capacity to render many stimuli functionally equivalent.

But does one have any information about people by knowing they are intermediate on a trait? In fact, one has negative information. If an individual is intermediate on height, one can rule out that the individual is a basketball player. Analogously, if an individual is intermediate on the trait of dominance, one can rule out that the individual is dominant, assertive, authoritative, and powerful. If a person is intermediate on trait anxiety or depression, one can rule out that the individual is dysfunctional because of extreme levels of anxiety and depression. What one knows about such people is that

dominance or anxiety are not likely to be important contributers to their behaviors. It is not that they have trait structures corresponding to "moderate" levels of dominance or anxiety, but rather that they do not possess the underlying structures that would cause their transactions with the world to occur in terms of dominance or anxiety. The analogous concept in terms of self-schematas is that people who are intermediate on a trait are aschematic on it (Markus, 1977).

Are there any traits in which intermediate levels are relevant and predictive beyond providing negative information? Baumeister and Tice (1988) have argued that "intermediate or moderate scores are not the same as being untraited, for one can be strongly traited at an intermediate level" (p. 574). For example, they pointed out that "it is misleading and wrong to describe medium self-esteem as the lack of a level of self-esteem" (p. 574). Although it is true that medium self-esteem is relevant and important to the individual, self-esteem is not so much a trait as an "attitude about the self" that may reflect a variety of traits (p. 575). Furthermore, the object of this attitude is of extreme importance to virtually everyone.

In conclusion, traits as conceptualized in my research, and by Allport (1961) in terms of personal dispositions, are not usually relevant at intermediate levels and are not usually predictive except for providing negative information. Indeed, I suggest that many traits are better considered as categorical rather than as dimensional variables in the sense that individu-

als who are extreme on the trait will have behaviors and perceptions which are qualitatively different from those individuals who are moderate on the trait.

Another implication of the variable centered approach is that pairs of people with the same score will be equally similar to each other regardless of level. However, my view leads to the prediction that two individuals with high scores on a given trait measure will be more similar to each other than two individuals with intermediate scores on that measure (see next section). That is, two individuals with high scores on a given trait measure have similar psychological structures related to that measure that function causally to determine the way they act in and think about the world. However, two individuals with intermediate scores on that measure do not have similar psychological structures related to that measure. Since they lack similar psychological structures, they will be less similar to each other than two individuals with high scores.

Furthermore, since individuals with intermediate scores on a measure lack similar psychological structures related to that measure, pairs of subjects who share many intermediate trait scores will be no more similar to each other than pairs who share few intermediate trait scores. In contrast, pairs of subjects who share many extreme trait scores will be more similar than those who share few extreme trait scores. That is, the number of shared intermediate traits for a pair is irrelevant to the similarity of the pair since the number of shared intermediate

traits does not indicate the degree of similarity of psychological structures.

Constructs and Movies

There is no absolute distinction between cognition and affect. I wanted to have a domain which would tap into cognitive similarities (Kelly, 1955) and a domain which would tap more into affect. Preferences are considered a part of affect. The fact that preferences reflect affective processes is widely accepted (Smith & Lazarus, 1990; Zajonc, 1980). In addition, I wanted to find domains for which people had some form of common experience. The domains of school, work, and interpersonal relationships are part of a common culture. People have available constructs for these common experiences. Movies are also part of a common culture and common experiences. People have movie preferences for this more affective domain which is commonly experienced.

Personality Traits and Constructs

Traits are in part conceptualized as organizing factors that determine the way one thinks about the world. One implication of this conceptualization is that traits will determine the personal constructs individuals employ. It is useful to examine the theoretical notions of Markus (1977) and Higgins et al. (1982),

to clarify the conceptual relation between personality traits and constructs.

The concept of self-schemata (Markus, 1977) has been compared to the concept of metatraits (Baumeister & Tice, 1988). However, "metatraits refer to personality and behavior, whereas self-schemata refer to the organization of self-knowledge" (Baumeister & Tice, 1988, p. 573). In addition, the idea of self-schemata is different from the idea of metatraits in terms of the conceptualization of level. Although Baumeister and Tice (1988) suggest that intermediate levels of a trait are relevant, Markus (1977) argues that only extreme levels are relevant. Nevertheless, both theorists argue that not all traits are relevant to all individuals.

Markus's view of self-schemata is similar to the conceptualization of traits which is presented in this research. However, the schemata discussed by Markus are about the self whereas traits are conceptualized as organizing factors that determine the way one thinks about the world (which, of course, includes the self). I suggest that there may be an intrinsic relationship between extremity and schematic structure. Indeed, this notion is what Markus (1977) has proposed, for Markus measures self-schema in terms of trait extremity. Thus, the current research is the synthesis and marriage of trait theory and construct theory, with personal constructs "especially important to consider in the personality-social-cognitive psychology interface" (Higgins et al., 1982, p. 35).

Similar to Markus's (1977) notion of self-schemata, there is the idea of chronically accessible constructs (Bargh et al., 1988) which has been used to explain personality dispositions. Construct accessibility refers to the fact that "two individuals could have the same construct stored in memory (i.e., equal availability) but differ in their likelihood of using the construct to process stimulus input (i.e., differential accessibility)" (Higgins et al., 1982, p. 36). In addition, chronically accessible constructs refer to "chronic individual differences in construct accessibility" (Bargh et al., 1988, p. 600). In so far as chronically accessible constructs are idiosyncratic, they resemble Allport's (1961) notion of personal dispositions. On the other hand, in so far as they are used to compare people with one another, chronically accessible constructs are similar to Allport's (1961) notion of common traits.

Thus, there is much conceptual overlap between the idea of personality traits and the idea of constructs. The notions of personality traits such as common traits, personal dispositions, and metatraits overlap with the notions of self-schemata and chronically accessible constructs. This conceptual overlap pertains to hypothetical constructs which function as independent variables. However, in this study, constructs are conceptualized as dependent variables. Nevertheless, they are determined by organizing factors which may be labeled as personality traits or self-schemata or chronically accessible constructs.

A number of hypotheses pertaining to theoretical issues in personality assessment will be tested in this study by measuring

construct overlap between individuals. Although previous studies have not found strong main effects of personality variables on social perception (Bargh et al., 1988; Schneider, 1973; Taguiri, 1969), I suggest that these findings are due to the fact that relevant traits were not measured. As mentioned above, I chose the domains of school, work, and interpersonal relationships because they are domains for which people have some form of common experience. Since they are part of a common culture, people have available constructs for these common experiences. Thus, in this study, I argue that personality traits will have significant effects on perceptions of the school and work environment and interpersonal relationships if the traits are relevant to the individual, as indicated by trait extremity.

Personality Traits and Movies

Traits are in part conceptualized as organizing factors that determine the way one thinks about the world. In addition, they are conceptualized as organizing factors that are related to and influence affect (Costa & McCrae, 1980, 1984; Emmons & Diener, 1985). As mentioned above, preferences reflect affective processes (Smith & Lazarus, 1990; Zajonc, 1980). I chose movies as a domain because it taps more into affect. Movies are also part of a common culture and common experiences. People have movie preferences for this more affective domain which is commonly experienced.

A Person Centered Approach

This conceptualization of traits leads to a person centered approach rather than a variable centered approach to personality assessment. Knowing people's extreme traits enables us to tell what characteristics are important for them in the real world. I assume that each individual is extreme on some traits, and it is these traits that will be most predictive of the person's cognition and behavior. This approach shifts research questions from, "What are implications of being high or low on trait T in situation S," to "What are implications of having (i.e., being extreme on) trait A, B, or C in situation S."

The low correlations we typically get in the variable centered approach may belie the fact that there is a great deal of predictability with the person centered approach. In the latter approach, the focus is on absolute (as opposed to relative) predictability. That is, one hopes to say how Person A will behave in a particular situation in contrast to comparing the behavior of Person A with Person B.

This idea of absolute predictability is related to Allport's (1962) notion of morphogenic prediction. By understanding the unique patterns of the individual, the researcher is able to make morphogenic predictions about particular people in contrast to dimensional predictions about people in general. Furthermore, there are semi-morphogenic methods which are partly morphogenic

and dimensional. In my research, the person centered approach is similar to Allport's (1962) notion of the semi-morphogenic method. Although "the common dimensional instrument, the rating scale" (Allport, 1962, p. 418) is used, by discovering people's extreme traits one can move toward the absolute predictability which Allport (1962) points to in morphogenic prediction.

The person centered approach is related to the notion of veridical traits (Allport, 1961) and the search for "natural cleavages of personality" (Allport, 1961, p. 340). I suggest, however, that "the natural cleavages" (Allport, 1961, p. 340) occur only with trait extremity.

Hypotheses

Traits are conceptualized in this research as organizing factors that determine the way one thinks about the world. Although it is not by definition the case that only extreme traits are organizing factors, I predict that traits are more likely to be organizing factors when they are extreme. Indeed, I suggest that trait extremity is indicative of veridical traits in contrast to nominal traits. In my approach, the amount of construct overlap and movie overlap in subjects with similar trait scores will be assessed.

The following predictions are made:

1a. Subjects with extreme scores on the same traits will have greater mean construct overlap than will subjects with moderate scores on the same traits.

1b. Subjects with extreme scores on the same traits will have greater mean **movie overlap** than will subjects with moderate scores on the same traits.

Two other hypotheses were formulated in the process of developing the methodology for this study. At this point, I will simply state the predictions. In chapter 2, the underlying conceptualizations are discussed at length.

The following additional predictions are made:

2a. Subjects sharing two or more extreme traits but not any intermediate traits will have greater mean **construct overlap** than will subjects sharing one extreme trait but not any intermediate traits.

2b. Subjects sharing two or more extreme traits but not any intermediate traits will have greater mean **movie overlap** than will subjects sharing one extreme trait but not any intermediate traits.

3a. Subjects sharing two or more intermediate traits but not any extreme traits will have the same mean **construct overlap** as subjects sharing one intermediate trait but not any extreme traits.

3b. Subjects sharing two or more intermediate traits but not any extreme traits will have the same mean **movie overlap** as subjects sharing one intermediate trait but not any extreme traits.

After the above mentioned hypotheses are tested, I will determine if extreme traits are more consistent and/or important than intermediate traits.

METHODOLOGY

Overview

This study was conducted at Queens College. In the course of three sessions, subjects filled out the Personality Research Form (PRF Form-E; Jackson, 1984), the Personal Views Questionnaire, and the Trait Importance Questionnaire. The first week they filled out the Personality Research Form. A week later, they filled out the Personal Views Questionnaire, a questionnaire about their perceptions of the school environment, about what their ideal and worst jobs would be like, about people they like and dislike, and about their favorite movies. The third week they provided judgments of self-rated importance on 9-point scales for each of the 20 PRF trait dimensions.

Subjects

One hundred and thirty-three undergraduate students participated in the study. The sample consisted of 106 females and 27 males. The original sample of 133 was reduced to 56. Note that this reduction of the initial N in no way biases the results in favor of my hypotheses. Twenty-seven males were eliminated to control for the effect of sex. Twenty-eight females were

eliminated because they did not complete the questionnaires. Twenty-two females over 25 were also eliminated. The age range of these subjects was 26-71. I wanted to characterize the sample as an undergraduate sample. A large age range of a few people could have affected the nature of the constructs which were generated. That is, people from different generations might have generated different constructs. It is not clear whether or not people from different generations would have shared the same constructs even if they shared the same trait scores. Thus, after controlling for sex and age and eliminating subjects who did not complete the questionnaires, a homogeneous sample of 56 females 18-25 years old was obtained.

Instruments

PRF. The Personality Research Form (PRF Form-E; Jackson, 1984) was used to measure personality. "This inventory consists of 16 items for each of 20 content scales and 2 validity scales" (Paunonen & Jackson, 1985, p. 492). In this study, subjects' responses were recorded on 9-point rating scales, 1 representing "disagree strongly or does not describe me at all," 9 indicating "agree strongly or describes me extremely well," and 5 indicating "neither agree nor disagree or partially describes me" (Paunonen & Jackson, 1985). Because of time constraints, subjects made these ratings for the first 220 of the 352 PRF items. Except for three PRF traits, all of the obtained Spearman-Brown split-half

coefficients fall within the range of the Spearman-Brown split-half coefficients in the PRF manual. (See Table 7 for Spearman-Brown split-half coefficients and Cronbach's alphas.)

Note that the PRF was chosen in preference to a number of other personality scales because it is generally accepted psychometrically. The PRF is the most accepted instrument in terms of social desirability response sets and has a good range of traits. It is a middle level test. In addition, the PRF itself is related to and overlaps with the big five factor structure. It represents the major factors in personality (McCrae & Costa,).

Importance Ratings. Subjects also provided judgments of self-rated importance for each of the 20 trait dimensions. Ratings on 9-point scales of how important each trait is to subjects' overall self-evaluation (Markus, Smith, & Moreland, 1985, p. 1497) were made (1 = not at all important; 9 = extremely important. I have reversed the direction of the scale as used by Markus et al. so that it is in the same direction as the 20 content scales). To illustrate, one of the trait dimensions assessed by the PRF is labeled "achievement." Subjects "first read a brief description of a person who would typify the characteristics of a high-scoring respondent" (Paunonen & Jackson, 1985, p. 492) on the achievement scale: "aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence" (PRF Form-E; Jackson,

1984, p. 6). After reading this description, subjects rated themselves on the importance of the dimension.

Constructs. A week later, subjects were asked to fill out a questionnaire about their perceptions of the school environment, about what their ideal and worst jobs would be like, about the characteristics they like about people they like, and about the characteristics they dislike about people they dislike. (Note that the rationale for these constructs is provided in the introduction.) Subjects received the following instructions: "Please list as many different words or phrases as you can that describe what you like about your school environment up to a maximum of 10. Please list as many different words or phrases as you can that describe what you dislike about your school environment up to a maximum of 10. Please list as many different words or phrases as you can describing what your ideal job would be like up to a maximum of 10. You may include anything about the job. Please list as many different words or phrases as you can describing what your worst job would be like up to a maximum of 10. You may include anything about the job. What are the characteristics you like about people you like? Please try to use one or two words to describe each characteristic up to a maximum of 10 characteristics. What are the characteristics you dislike about people you dislike? Please try to use one or two words to describe each characteristic up to a maximum of 10 characteristics."

Movies. In addition, subjects were asked to list some of their favorite movies. (Note that the rationale for movies is

provided in the introduction.) Movie overlap scores (see section on movie overlap scores) refer to the number of the same movies listed as favorite movies which a pair of subjects (matched for extreme or intermediate traits) shares. Movie overlap scores are a more affective and completely objective measure. Subjects received the following instructions: "Please list 15 of your favorite movies. (It does not matter whether you considered these movies great or even good. In fact, you could include movies you did not consider objectively great or good but which you just liked.)"

Independent Variables

Extremity. Subjects' PRF trait scores were computed as their mean endorsements (9-point ratings) across the 10 items within a scale (Paunonen & Jackson, 1985, p. 498). Since PRF scales are bipolar, mean trait scores in the top 15th percentile and bottom 15th percentile of the obtained distribution were considered as extreme scores and indicative of a psychologically relevant trait. For subjects with more than one extreme trait, all such traits were considered in obtaining a comparison group for matching and computing mean construct overlap and mean D scores. Finally, mean trait scores close to the 50th percentile (43-57th percentile) were considered as intermediate scores.

After the six hypotheses were tested, I determined if extreme traits were more consistent and/or important than intermediate traits. Subjects' variance on each of the 20 multiple-item trait dimensions were used as measures of consistency. With this nonipsatized variance index of consistency, low variance signifies high consistency and high variance signifies inconsistency. In addition, subjects' self-ratings of importance on each of the 20 one-item 9-point scales were used as measures of importance.

Dependent Variables

Construct Overlap Scores. Construct overlap scores refer to the number of synonymous constructs which a pair of subjects (matched for extreme or intermediate traits) shares. The mean construct overlap scores for each individual was the mean of the construct overlap scores with all other individuals who shared extreme (intermediate) traits with that individual. By using mean scores, no subjects contributed more data because of their overlapping with more people.

The distance measure D (Cronbach & Gleser, 1953; Osgood & Suci, 1952) is a measure of profile similarity and "considers profile level, dispersion, and shape" (Nunnally, 1978, p. 443). "The distance D between the two points corresponding to the profiles for two persons equals the square root of the sum of squared differences on the profile variables. All the scores for one person on k variables serve to define one point in a k-space of variables, each variable being plotted as orthogonal to the others. The point for the person then summarizes all the information in the profile" (Nunnally, 1978, p. 443).

D scores were used to rule out the possibility that differences between subjects who share extreme traits and subjects who share intermediate traits might be due to differences in profile similarity. That is, D scores were initially calculated to determine if there was overall profile similarity for the subjects who share extreme traits and the subjects who share inter-

mediate traits. If overall profile similarity did not exist, it would have been created by elimination of pairs which contributed to the asymmetry. This matching procedure guaranteed that differences between the two matrices were not due to differences in profile similarity. As I will discuss shortly, D scores can be computed in two matrices for pairs of subjects sharing extreme traits and pairs of subjects sharing intermediate traits. Pairs of subjects with small D's have similar profiles, and pairs of subjects with relatively large D's have dissimilar profiles. Finally, each subject had a mean D score, which is the sum of the subject's D scores for each pairing divided by the number of pairings in the "extreme" matrix and in the "intermediate" matrix.

Setting up Matrices. To obtain mean construct overlap scores for subjects paired with individuals who share extreme traits or intermediate traits, four matrices were set up: a traits by subjects (loss rate of subjects) matrix (whose function was to determine how many subjects had at least one extreme and one intermediate trait and to eliminate subjects who did not fulfill this criterion), a levels by traits (pairs based on shared traits) matrix, a subjects by subjects (construct overlap matrix/number of shared traits) matrix for individuals who share extreme traits, and a subjects by subjects (construct overlap matrix/number of shared traits) matrix for individuals who share intermediate traits.

To illustrate how scores were obtained from matrices, a hypothetical data set of 12 subjects, 8 traits, and 10 constructs

has been created that corresponds to the pattern of results that I predicted (see Appendix C-Hypothetical Data Set: Tables 1-4, pp. 90-93). Table 1 (p. 90) is a traits by subjects (loss rate of subjects) matrix. Numbers in each box are trait scores for each subject for each of the 8 traits (1 & 6 = extreme scores; 3 & 4 = intermediate scores). The 8 columns of the matrix correspond to the 8 traits whereas the 12 rows correspond to the 12 subjects.

Table 2 (see Appendix, p. 91) is a levels by traits (pairs based on shared traits) matrix. The 8 rows of the matrix correspond to the 8 traits whereas the 2 columns correspond to pairs of subjects for each trait who share extreme trait scores and intermediate trait scores. The pairs of subjects who share extreme traits are obtained from Table 1. For each trait in Table 1, all subjects who share extreme scores and do not share any intermediate scores are discovered and listed in Table 2 under column 1. Also, the number of such pairs for each trait is indicated.

Column 1 shows subjects sharing extreme traits. However, not all the pairs of subjects with extreme scores of 1 or 6 are listed for each of the 8 traits. Some of these pairs have been eliminated because in addition to matching on extreme scores for the trait, they also match for intermediate scores on at least one of the other 7 traits.

For example, subjects 3 and 11 are both extreme on traits 1, 6, and 7, but are also intermediate on trait 3 (see Table 1). Thus, their pairing is eliminated. (In Table 3 described below, the box which represents their pairing receives an X.) Similarly, subjects 5 and 7 are both extreme on trait 4 but are also intermediate on trait 8 (see Table 1). Their pairing is eliminated (see Table 3). Thus, only subjects who are matched for extreme scores and who are unmatched for intermediate scores are included in column 1 of Table 2.

Column 2 shows subjects sharing intermediate traits. However, not all of the pairs of subjects with intermediate scores of 3 and 4 are listed for each of the 8 traits. Some of these pairs have been eliminated because in addition to matching on intermediate scores for the trait, they also match for extreme scores on at least one of the other 7 traits.

For example, subjects 1 and 10 are both intermediate on trait 1 but are also both extreme on traits 2 and 3 (see Table 1). Thus, their pairing is eliminated. (In Table 4 described below, the box which represents their pairing receives an X.) Similarly, subjects 2 and 8 are both intermediate on trait 1 but are also extreme on trait 2 (see Table 1). Their pairing is also eliminated (see Table 4). Thus, only subjects who are matched for intermediate scores and who are unmatched for extreme scores on any of the traits are included in column 2 of Table 2. Column 2 also indicates the number of pairs for each trait.

Table 3 (see Appendix, p. 92) is the subjects by subjects (construct overlap matrix/number of shared traits) matrix for

subjects who share extreme traits. Numbers in the upper (right) half of the matrix refer to the number of constructs shared by each pair of subjects who share extreme traits. Numbers in the column to the far right refer to mean construct overlap for each subject. Mean construct overlap is the sum of the number of shared constructs for each pair divided by the number of pairs. The number at the bottom of the column to the far right is the grand mean construct overlap for the "extreme" matrix.

Construct overlap scores could be obtained for every pair of subjects, that is, construct overlap scores for pairs of subjects who do not share extreme or intermediate traits could also be obtained. Further, all possible pairs of subjects would probably be matched at some level of some trait (s). However, the clearest test of my hypotheses was to compare subjects sharing extreme traits with subjects sharing intermediate traits. Therefore, in my study, only these subsets of subject pairs were compared.

Numbers in the lower (left) half of the matrix refer to the number of extreme traits shared by each pair. (These numbers are obtained from Table 1.) These numbers were used for pair-wise analysis of the matrix. It was hypothesized that there would be a positive correlation between the number of extreme traits shared by a pair and the construct overlap score for the pair (i.e., a positive pair-wise correlation between the two sections of the matrix).

It should be noted that all pairings for the upper half of the "extreme" matrix are derived from Table 2 and were set up

before any constructs were scored. This procedure eliminated any possibility of bias.

Table 4 (p. 93) is the subjects by subjects (construct overlap matrix/number of shared traits) matrix for subjects who share intermediate traits. Numbers in the upper half of the matrix refer to amount of construct overlap. Numbers in the column to the far right refer to mean construct overlap for each subject. The number at the bottom of the column to the far right is the grand mean construct overlap for the "intermediate" matrix.

Numbers in the lower half of the matrix refer to the number of intermediate traits shared for pairs not matched on extremity. (These numbers are obtained from Table 1.) These numbers were used for a pair-wise analysis in the "intermediate" matrix. It was hypothesized that there would be no significant correlation between the number of intermediate traits shared by a pair and the construct overlap score for the pair. I further predicted that the correlation from the "extreme" matrix would be significantly greater than that from the "intermediate" matrix.

Profile Similarity Matrices. To obtain mean D scores for subjects when paired with individuals who share extreme traits or intermediate traits, two "profile similarity" matrices were set up: a subjects by subjects matrix for individuals who share extreme traits and a subjects by subjects matrix for individuals who share intermediate traits. For the "extreme" matrix, D scores were computed for all pairs of subjects. (As previously mentioned, D scores are computed to rule out the possibility that

differences between subjects who share extreme traits and subjects who share intermediate traits are due to differences in profile similarity.) Then mean D scores for each subject in the "extreme" matrix were computed. Finally, the overall mean D score for the "extreme" matrix was computed. It equaled the sum of all the mean D scores for each subject divided by the number of subjects.

For the "intermediate" matrix, D scores were computed for all pairs of subjects. Then mean D scores for each subject in the "intermediate" matrix were computed. Finally, the overall mean D score for the "intermediate" matrix was computed.

A between-matrix analysis was carried out to determine if there was a difference between the mean D score of the "extreme" matrix and the mean D score of the "intermediate" matrix. Since each subject had a D score derived from each matrix, this analysis entailed a within-subject t test. Since the mean D scores of the two matrices were not significantly different (see p. 47), I considered that there was overall profile similarity for the two matrices.

Scoring Construct Overlap

After insuring that the mean D scores of the two matrices were similar, constructs were scored for overlap for each pairing in the "extreme" and "intermediate" matrices by two raters. Construct overlap was measured by using synonyms which are "opera-

tionally defined in terms of Roget's Thesaurus" (Higgins et al., 1986, p. 9). Constructs which are synonymous were rated as overlapping. Constructs which are not synonymous were rated as non-overlapping. Construct overlap scores were then inserted in the top part of the "extreme" matrix and the "intermediate" matrix. Appendix C, pages 90-94, illustrates the predicted pattern of overlap scores for intermediate and extreme matrices.

Scoring Movie Overlap

Movie overlap was measured by determining the number of the same movies listed as favorite movies which a pair of subjects (matched for extreme or intermediate traits) shared. The same methodology and statistical analyses used for construct overlap scores was also used for movie overlap scores.

Consistency and Importance

After the hypotheses of the study were tested for construct overlap and movie overlap, I determined if extreme traits were more consistent and/or important than intermediate traits. Variance scores were computed for the 20 PRF traits. For each subject, a mean variance score for the extreme traits and a mean variance score for the intermediate traits were obtained (see Table 8. The Traits x Subjects Matrix is used to discover low and high extreme traits and intermediate traits). Importance

scores were also obtained for the 20 PRF traits. Similarly, for each subject, a mean importance score for extreme traits and a mean importance score for intermediate traits were obtained. Two within-subject t tests for 52 subjects were done. (After setting up a Traits x Subjects Matrix, one subject (id 040) was lost because she did not have any extreme traits. Three additional subjects were lost after the Subjects x Subjects Matrices were set up. One subject did not have any extreme pairs. Two subjects did not have any intermediate pairs. Thus, with four subjects eliminated from the sample of 56 subjects, 52 subjects remained in the study.)

Summary of Methods

To summarize the methods used in this study, Table 5 in Appendix D (pp. 95-100) lists 34 steps which were used in generating data. Table 5 indicates how the four matrices were set up, lists the different matching procedures and computations of basic data, and indicates the statistical tests that were carried out.

RESULTS

Construction of Matrices

Percentiles

Prior to setting up the Traits x Subjects Matrix, the goal was to compute for each of the 20 PRF traits the bottom, top, and middle 15th percentiles which would be respectively the low extreme traits, the high extreme traits, and the intermediate traits. Only approximate equalities were obtained (see Table 6a, p. 113). There are a few differences. These differences work against my hypotheses i.e., that people at the extremes will be more similar to each other.

Traits x Subjects Matrix

After setting up a Traits x Subjects Matrix, one subject (id 040) was lost because she did not have any extreme traits (see Table 8, pp. 116-117).

Levels x Traits Matrix

Mean number of pairs per trait across the 20 traits for extreme and intermediate levels is 26.1. (Note, however, that after "extreme" and "intermediate" matrices were set up, three additional subjects were eliminated. After these subjects were eliminated, new means were calculated for the Levels x Traits Matrix. The mean number of pairs per trait across the 20 traits for the extreme level is 22.5. The mean number of pairs per trait across the 20 traits for the intermediate level is 21.4. See Tables 9-10, pp. 118-119.)

Subjects x Subjects Matrices

Three additional subjects were lost after the Subjects x Subjects Matrices were set up. One subject did not have any extreme pairs. Two subjects did not have any intermediate pairs. Thus, with a total of four subjects eliminated from the sample, fifty-two subjects remained in the study (see Tables 11a, pp. 120-123 and 12a, pp. 129-132).

T-test for D scores

A between-matrix analysis was carried out to determine if there was a difference between the mean D score of the "extreme"

matrix and the mean D score of the "intermediate" matrix. This was a within-subject t test. There is no significant difference between the two matrices, t(51), = 1.41, p = .16 (two-tailed. See Table 14, p. 139). In addition, the lower mean for the "intermediate" matrix indicates greater profile similarity for pairs of subjects sharing intermediate traits. Thirty-two of the 52 subjects had smaller mean D scores (greater profile similarity) for the "intermediate" matrix than for the "extreme" matrix.

Interrater Reliability

Interrater reliability for two judges who scored constructs for the amount of construct overlap and movies for the amount of movie overlap for 30 pairs chosen randomly from the total of 562 pairs was .90 for constructs and .88 for movies. (Note that interrater reliability for movies was only .88 because of an artifact during the reliability check. That is, two different rules were applied in scoring movies which have sequels. For example, one rater equated Rocky 1 with Rocky 1 or Rocky 2 or Rocky 3. The other rater equated Rocky 1 with Rocky 1 but not Rocky 2 or Rocky 3. After doing the reliability tests, only exact matches were considered as movie overlaps. The use of different rules for scoring movies which have sequels was the only reason reliabilities did not reach 1.0.) Constructs were matched in each of the six sections (the first six questions of the Per-

sonal Views Questionnaire). The two judges gave each of the 30 pairs one construct overlap score which was the sum of the raw overlap scores for the first six questions. Interrater reliability for construct overlap scores was the correlation of these two scores for each pair (N = 30). Similarly, the two judges gave each of the 30 pairs one movie overlap score which was the number of the same movies listed as favorite movies. Interrater reliability for movie overlap scores was the correlation of these two scores for each pair (N = 30).

Ratings of Constructs for Study Proper

After it was determined that interrater reliability was adequate, I decided to split the judgment process between each of two judges because of the large number of judgments to be made. Judge 1 scored questions 1, 2, and 3. Judge 2 scored questions 4, 5, 6, and the movie question.

I did not want judges to make biased judgments as a result of scoring a pair consecutively for questions 1-3 or questions 4-6 and the movie question. In order to avoid biased ratings by judges, judges randomly rated all pairs for a section. That is, 562 pairs were randomly scored for construct overlap for question 1. Subsequently, 562 pairs were randomly scored for construct overlap respectively for questions 2, 3, 4, 5, 6. Then 562 pairs were randomly scored for movie overlap for question 7.

Comparison of Subjects Sharing Extreme Vs Intermediate Traits

The number of constructs and movies generated by each of the 52 subjects remaining in the study is shown in Table 15 (pp. 140-141). The mean number of constructs and movies was 41.81 (sd = 9) and 14.33 (sd = 3), respectively. Each of the 52 subjects had two mean construct overlap scores. The first score was the mean of the construct overlap scores for each subject and other individuals with whom that subject shared at least one extreme trait and no intermediate traits. The second score was the mean of the construct overlap scores for each subject and other individuals with whom that subject shared at least one intermediate trait and no extreme traits.

Construct Overlap. Hypothesis 1a predicted that subjects with extreme scores on the same traits will have greater mean construct overlap than will subjects with moderate scores on the same traits.

Mean construct overlap scores for 52 subjects matched with individuals who shared at least one extreme trait and no intermediate traits ranged from 2.00-18.00. Mean construct overlap

scores for the same 52 subjects matched with individuals who shared at least one intermediate trait and no extreme traits ranged from 4.50-22.00 (see Table 16b, pp. 142-143).

A within-subject t-test was conducted between the "extreme" and "intermediate" construct overlap scores.

There is no significant difference between the two scores, $t(51) = -.0.16$, $p = .88$ (two-tailed). Hypothesis 1a was not supported (see Table 16a, p. 50).

Table 16a

Grand Mean Construct Overlap Scores

for 52 Subjects with Pairs Matched

on Extreme or Intermediate PRF Scores

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme	52	11.84	2.71	0.38
Intermediate	52	11.90	2.93	0.41

$t(51) = -.0.16$, ns.

Movie Overlap. Hypothesis 1b predicted that subjects with extreme scores on the same traits will have greater mean movie overlap than will subjects with moderate scores on the same traits.

Mean movie overlap scores for 52 subjects matched with individuals who shared at least one extreme trait and no intermediate traits ranged from .00-4.00. Mean movie overlap scores for the same 52 subjects matched with individuals who shared at least one intermediate trait and no extreme traits ranged from .13-2.63 (see Table 17b, pp. 144-145).

A within-subject t-test indicated that the amount of movie overlap for the two scores is significantly different, $t(51) = 2.05$, $p < .05$ (two-tailed). Thus, the mean movie overlap score for the "extreme" pairs is significantly greater than the mean movie overlap score for the "intermediate" pairs (see Table 17a, p. 51). Hypothesis 1b was supported.

Table 17a

Grand Mean Movie Overlap Scores
for 52 Subjects with Pairs Matched
on Extreme or Intermediate PRF Scores

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme	52	1.45	0.89	0.12
Intermediate	52	1.28	0.65	0.09

$t(51) = 2.05$, $p < .05$.

Comparison of Subjects Sharing One Vs Two or More Extreme Traits

Construct Overlap. Hypothesis 2a predicted that subjects sharing two or more extreme traits but not any intermediate traits will have greater mean construct overlap than will subjects sharing one extreme trait but not any intermediate traits.

Mean construct overlap scores for 44 subjects sharing one extreme trait ranged from 7.00-18.00. Mean construct overlap scores for the same 44 subjects sharing two or more extreme traits ranged from 7.50-17.20 (see Table 20b, pp. 152-153).

There was a significant difference between the mean construct overlap scores, $t(43) = -2.63$, $p = .012$ (two-tailed). The mean construct overlap for subjects sharing two or more extreme traits was significantly greater than the mean construct overlap for subjects sharing one extreme trait (see Table 20a, p. 53). Hypothesis 2a was supported.

Table 20a

Grand Mean Construct Overlap Scores

for 44 Subjects with Pairs Matched

on One Extreme Trait or Two or more Extreme Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme 1	44	11.25	2.63	0.40
Extreme 2	44	12.45	2.59	0.39

$t(43) = -2.63$, $p < .05$.

Movie Overlap. Hypothesis 2b predicted that subjects sharing two or more extreme traits but not any intermediate traits will have greater mean movie overlap than will subjects sharing one extreme trait but not any intermediate traits.

Mean movie overlap scores for 44 subjects sharing one extreme trait ranged from .00-4.00. Mean movie overlap scores for the same 44 subjects sharing two or more extreme traits ranged from .00-3.50 (see Table 21b, pp. 154-155).

There was no significant difference between the mean movie overlap scores, $t(43) = 0.70$, $p = .486$. Thus, the amount of movie overlap for subjects sharing two or more extreme traits and subjects sharing one extreme trait was the same (see Table 21a, p. 54), failing to support Hypothesis 2b.

Table 21a

Grand Mean Movie Overlap Scores

for 44 Subjects with Pairs Matched

on One Extreme Trait or Two or more Extreme Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme 1	44	1.53	1.20	0.18
Extreme 2	44	1.42	0.86	0.13

$t(43) = 0.70$, ns.

Comparison of Subjects Sharing One Vs Two or More Intermediate Traits

Construct Overlap. Hypothesis 3a predicted that subjects sharing two or more intermediate traits but not any extreme traits will have the same mean construct overlap as subjects sharing one intermediate trait but not any extreme traits.

Mean construct overlap scores for 39 subjects sharing one intermediate trait ranged from 4.75-16.00. Mean construct over-

lap scores for the same 39 subjects sharing two or more intermediate traits ranged from 7.00-21.00 (see Table 22b, pp. 156-157).

There was no significant difference between the mean construct overlap scores, $t(38) = -1.16$, $p = .252$ (two-tailed). (See Table 22a, p. 55). Thus, the amount of construct overlap for subjects sharing two or more intermediate traits and subjects sharing one intermediate trait was not significantly different, supporting Hypothesis 3a.

Table 22a

Grand Mean Construct Overlap Scores
for 39 Subjects with Pairs Matched
on One Intermediate Trait
or Two or more Intermediate Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Intermediate 1	39	11.56	2.49	0.40
Intermediate 2	39	12.05	2.73	0.44

$t(38) = -1.16$, ns.

Movie Overlap. Hypothesis 3b predicted that subjects sharing two or more intermediate traits but not any extreme traits will

have the same mean movie overlap as subjects sharing one intermediate trait but not any extreme traits.

Mean movie overlap scores for 39 subjects sharing one intermediate trait ranged from .00-3.00. Mean movie overlap scores for the same 39 subjects sharing two or more intermediate traits ranged from .00-4.00 (see Table 23b, pp. 158-159).

There was no significant difference between the mean movie overlap scores, $t(38) = -0.97$, $p = .339$ (two-tailed). (See Table 23a, p. 56). Thus, the amount of movie overlap for subjects sharing two or more intermediate traits and subjects sharing one intermediate trait was not significantly different, supporting Hypothesis 3b.

Table 23a

Grand Mean Movie Overlap Scores

for 39 Subjects with Pairs Matched

on One Intermediate Trait

or Two or more Intermediate Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Intermediate 1	39	1.19	0.84	0.13
Intermediate 2	39	1.31	0.88	0.14

$t(38) = -0.97$, ns.

Construct Overlap and Movie Overlap Scores

The findings differed for constructs and movies. (See summary of results in the discussion.) In addition, there are conceptual and methodological differences between the constructs and movies. Nevertheless, construct overlap scores and movie overlap scores had a correlation of .1422 (562), $p < .001$.

D Scores and Overlap Scores

As an additional check to rule out the possibility that D scores predicted overlap scores, two Pearson correlations were carried out in which the D scores for 562 pairs were correlated with construct overlap scores and movie overlap scores. D scores and construct overlap scores had a correlation of -.0059 (562), $p = .444$. D scores and movie overlap scores had a correlation of -.0361 (562), $p = .196$.

Consistency and Importance

Two t-tests were carried out to determine if extreme traits were more consistent and/or important than intermediate traits (see Tables 24-25, pp. 160-161). The mean variance score for extreme traits was significantly lower than the mean variance score for intermediate traits, $t(51) = -6.82$, $p < .01$ (two-tailed). Thus, extreme traits were more consistent than intermediate traits. However, the mean importance score for extreme traits was not significantly different from the mean importance score for intermediate traits, $t(51) = 0.53$, $p = .60$ (two-tailed). Extreme traits were not more important than intermediate traits.

DISCUSSION

Summary of Results

I proposed that trait level can identify relevant traits for an individual. I speculated that traits on which individuals obtain extreme scores are relevant (and predictive) whereas traits on which individuals obtain moderate scores are irrelevant (and non-predictive). I tested this point of view by hypothesizing that individuals who obtain extreme scores on the same traits will be more similar to each other than will individuals who obtain moderate scores on the same traits. This conceptualization implies that individuals who share extreme scores on traits have similar psychological structures whereas individuals who share moderate scores lack similar psychological structures.

In this study, overlap in the use of cognitive constructs and movie preferences were employed as indicators of similarity of individuals. I predicted that there would be more overlap for individuals who shared extreme scores on traits than for individuals who shared intermediate scores on traits.

The findings differed for constructs and movies. There was no significant difference between the "extreme" and "intermediate" construct overlap scores, failing to support Hypothesis 1a. However, there was a significant difference between the "extreme" and "intermediate" movie overlap scores, supporting Hypothesis 1b.

I also predicted that there would be more overlap for individuals who shared two or more extreme traits than for individuals who shared one extreme trait. Indeed, as the number of extreme shared traits increased, the amount of construct overlap significantly increased, supporting Hypothesis 2a. However, as the number of extreme shared traits increased, the amount of movie overlap did not significantly increase, failing to support Hypothesis 2b.

In addition, I predicted that the amount of overlap for subjects sharing two or more intermediate traits and subjects sharing one intermediate trait would not be significantly different. The findings were the same for constructs and movies. There was no significant difference between the mean construct overlap scores and between the mean movie overlap scores, supporting Hypotheses 3a and 3b.

Finally, the findings pertaining to Hypotheses 2a, 2b, 3a, and 3b were not artifacts of D scores. There are no consistent patterns for the D scores. In the first analyses (pertaining to Hypothesis 1a, 1b), D scores are not predictive of overlap. Indeed, subjects sharing intermediate traits have greater profile

similarity (smaller D scores) but less movie overlap. In the supplementary analyses, sometimes greater profile similarity results in more overlap and sometimes it does not. There were significant D score differences between subjects sharing 1 versus 2 or more extreme traits and between subjects sharing 1 versus 2 or more intermediate traits. However, in comparing subjects with 1 versus 2 or more shared traits, only the extreme pairs had a significant construct overlap difference. Tentatively, my hypotheses are supported. But given the fact that the patterns for construct overlap are in the same direction for both subjects sharing 1 versus 2 or more extreme traits and subjects sharing 1 versus 2 or more intermediate traits, I do not want to affirm the null hypothesis. The findings suggest that intermediate trait levels are not predictive. However, since I could not test for an interaction effect (see below), more research is required.

Consistency and Importance

Since my approach is an alternative perspective to the moderator variable approach, I wished to know if the moderator variables of consistency and trait importance were related to trait extremity. For the 52 subjects in this study, extreme traits are more consistent than intermediate traits, confirming the findings of Paunonen and Jackson (1985). Consistency is not independent of trait extremity for these subjects. However,

extreme traits are not more important than intermediate traits for these subjects. It appears that most of these subjects gave high ratings of importance for most of the 20 traits. Subjects rated each of the 20 traits from 1-9. Across the 20 PRF traits, the mean importance rating was 6.05. Perhaps, if subjects had ranked the 20 traits from 1-20 in order of importance instead of rating them separately, extreme traits would have been more important than intermediate traits.

Limitations of the Present Study

Problems with the Dependent Variables

Conceptual Problems

Constructs refer to the characteristics, qualities, and attributes people use to describe various aspects of their world such as themselves, other people, social situations, and other aspects of the environment. Thus, constructs are relevant to person and social perception. Furthermore, as I mentioned in the introduction, there is much conceptual overlap between the idea of personality traits and the idea of constructs. The notions of personality traits such as common traits, personal dispositions, and metatraits overlap with the notions of self-schemata and chronically accessible constructs.

On the other hand, the constructs generated in this study may also have been determined by factors other than personality traits, resulting in error variance. Common notions about the school environment, the ideal job, the worst job, and about people who are liked and disliked rather than personality traits may have determined some of the constructs. That is, constructs used to describe what students like about their school environ-

ment such as good professors, academically challenging environment, interesting classes, variety of classes, friendly students, reasonable tuition rate, and nice campus may be determined more by popular and societal ideas about the nature of a good school environment rather than by personality traits. Similarly, constructs used to describe what students dislike about their school environment such as bad professors, boring classes, limited number of classes, unfriendly students, and bureaucracy may also be determined more by popular and societal ideas of the nature of a bad school rather than by personality traits. In other words, these constructs may be readily available to most people in our society and may be more determined by social factors rather than by personality traits.

The same point can be made about notions about the ideal and worst job and about people who are liked or disliked. In other words, certain properties of constructs may not reflect individual differences and may be nondiscriminatory with regard to personality characteristics because of conventional associations. As a result, the dependent variable may be less sensitive to individual differences.

In contrast to constructs, movie preferences seem to have little conceptual overlap with personality traits. But since traits are in part conceptualized as organizing factors that determine the way one thinks about the world and in addition, are related to and influence affect (Costa & McCrae, 1980, 1984; Emmons & Diener, 1985) I speculate that traits partially

determine the movie preferences of individuals. That is, a preference is "an affective reaction" (Zajonc, 1980, p. 151) and movie preferences, in contrast to the constructs in this study which are largely cognitive, are mainly affective in nature. Thus, I speculate that movie preferences reflect significant personality differences and may be less determined by factors other than personality traits. That is, movie preferences may be more discriminatory with regard to personality characteristics and less determined by conventional associations. As a result, the dependent variable of movie preference overlap may be more sensitive to individual differences.

Methodological Problems

Construct overlap was measured by using synonyms which are "operationally defined in terms of Roget's Thesaurus" (Higgins et al., 1986, p. 9) and was determined by the surface meaning of constructs or by applying a set of rules for determining matches. Constructs which are synonymous or which satisfied other criteria (see below) were rated as overlapping. Constructs which are not synonymous and did not satisfy other criteria (see below) were rated as nonoverlapping.

In addition to using synonyms found in Roget's Thesaurus as one criterion for similarity, several rules were used to determine if constructs matched even if they were not synonyms according to Roget's Thesaurus. Broad, inclusive categories for constructs were used. If two constructs could be considered particular examples of a more inclusive construct, they were rated as overlapping constructs. For example, the constructs of enthusiastic, friendly, and inspiring professors are not synonymous constructs according to Roget's Thesaurus but were counted as overlaps with each other and with "good professor." That is, these specific constructs could be included within the more general construct of "good professor" or "professor with positive attributes." Thus, "good professor" included a broad range of characteristics such as enthusiastic, attentive, helpful, caring, unselfish, friendly, intelligent, non-authoritarian,

amusing, worldly, interesting, inspiring, competent, etcetera. However, a student who indicated she liked a "good professor" who was interesting may have referred to something different from the student who indicated she liked a "good professor" who was caring. Nevertheless, these students received a match for the construct of "good professor."

Similarly, the constructs of friendly, understanding, and fair bosses are not synonymous constructs but were counted as overlaps with each other and with "good boss." That is, they could be included within the more general construct of "good boss" or "boss with positive attributes." Thus, the construct of the "good boss" included a broad range of characteristics such as friendly, understanding, fair, respectful, someone who can get the point across without yelling, someone who provides guidance and constructive criticism, someone who does not constantly supervise, someone who does not nag, someone who is not macho, etcetera. Two individuals could be matched for the construct of "good boss" yet be in fact describing different things. One individual may be referring to a fair boss whereas the other person may be referring to someone who does not constantly supervise. Nevertheless, I decided to use broad, inclusive categories for constructs to insure that there were enough matches to do the analyses.

Two constructs which were not synonyms according to Roget's Thesaurus and which could not be considered particular examples of a more inclusive construct but could be considered as having a

part/whole relationship were rated as overlapping. Thus, the constructs "the trees" and "the campus" or "the grass" and "the campus" were considered as matches.

If two constructs shared at least one characteristic but not all characteristics, they were considered as overlapping. Thus, the constructs "the campus" and "the pretty campus" or "the campus" and "the large campus" were considered as overlapping constructs.

In conclusion, constructs were rated as overlapping or non-overlapping by using the criterion of synonyms found in Roget's Thesaurus or other criteria involving the application of a set of rules. Only constructs which did not satisfy any of these criteria were rated as nonoverlapping.

On the other hand, movie overlap was measured by determining how many of the same movies individuals listed as their favorite movies. Judgments of movie overlap are objective and do not require subjective interpretations. (Note that interrater reliability for movies was only .88 because of an artifact during the reliability check.)

Several sources of variability contributed to the conceptual and methodological problems with similar constructs as a dependent variable. As mentioned in the previous section on conceptual problems, one source of variability is the nondiscriminatory power of some constructs with regard to personality characteristics because of conventional associations. Another source of variability is the different numbers of constructs that were gen-

erated. Because some subjects generated fewer numbers of constructs, some of the overlap scores may not have picked up real variance due to personality characteristics. Other sources of variability include the ambiguity of the constructs and the consensual nature of similar constructs mentioned above. Although my methodology is partially based on Higgins' work on construct overlap (1987), there is a major difference between his design and mine. In his methodology, construct overlap is a within-subject analysis whereas in mine it is a between-subject analysis. Because of my between-subject analysis of construct overlap, there is no way of knowing whether words or phrases refer to the same thing. The same words may not have the same significance whereas different words may have the same significance. Despite these problems, significant results were still obtained for some analyses.

Patterns of Results

Different patterns of results were found within and between the dependent variables. Although a number of factors pertaining to the dependent variables have been discussed, it is not clear how these factors are responsible for the specific patterns of results. Nevertheless, the problems with the dependent variables that were discussed may have contributed to the inconsistencies in the results.

Problems with Statistical Analyses

I predicted and found that subjects matched on one intermediate trait did not differ from subjects matched on two or more intermediate traits. But because of the problem of affirming the null hypothesis, I can not claim that I have demonstrated that there is no difference. Unfortunately, the way my study was set up, it is impossible to test for an interaction effect. The possibility of a direct comparison between trait level (extreme versus intermediate traits) and number of shared traits (1 versus 2 or more shared traits) is precluded. When one tries to get the same subjects in all four conditions (extreme 1, extreme 2, intermediate 1, intermediate 2) for the two dependent variables (similar constructs versus same movie preferences), the N goes down to virtually nothing. (See Tables 11b and 11c, pp. 124-128 and Tables 12b, 12c, and 13, pp. 133-138). Since the design did not permit a direct test for an interaction effect, the findings need to be replicated using a methodology which would permit such a test.

Implications for Further Research

Although the results are promising, they need to be followed up with a study that minimizes the possible sources of error-the ambiguity of the constructs, the consensual nature of similar constructs, and the limited range of same movie preferences. Furthermore, due to the fact that an undergraduate sample was used that consisted of 56 females 18-25 years old, my study should be replicated with a larger sample, other age groups, and males to determine if the results are generalizable.

Movie overlap (number of same movie preferences) seems to be a more objective measure than construct overlap, with a minimal amount of ambiguity. In addition, Hypothesis 1b was confirmed. Therefore, I suggest that the dependent variable in the followup study be the amount of movie overlap. However, subjects would select their favorite movies from a large list of movies rather than generating their favorite movies. Hopefully, such a study would minimize the possible sources of error-the ambiguity of the constructs, the consensual nature of similar constructs, and the limited range of same movie preferences.

Appendix A

Simulation Study

Objectives

A simulation study was carried out to determine if the proposed methodology was feasible. One objective was to determine how many subjects would have at least one extreme trait and one intermediate trait. I wished to know what the loss rate of subjects would be given the constraints on subject selection. This knowledge was essential for determining the number of subjects to be included in the actual study.

Another objective was to determine if the matching procedure works. Does the matching procedure produce equal numbers of pairs of subjects matched as sharing traits both across the twenty traits and within each trait i.e., when matching is based on extreme or intermediate scores? (Tables 2-4; I refer to the hypothetical tables presented earlier to orient the reader toward what was done in the simulation study. However, the reader should recall that Tables 1-4 are set up for 12 subjects and 8 traits, whereas the simulation study used 50 subjects and 20 traits.)

Procedure and Results

By means of a table of random numbers, data were generated for this simulation. "Subjects" were assigned scores corresponding to high extreme, low extreme, intermediate, or neither on each of twenty traits. Numbers from zero to fourteen (00-14) were rated as being high extreme. (Thus, the band for the high extreme scores was a 15 percentile range as in the actual study.) Numbers from fifteen to twenty-nine (15-29) were rated as being intermediate (corresponding to a 15 percentile range as in the actual study). Numbers from thirty to forty-four (30-44) were rated as being low extreme (corresponding to a 15 percentile range as in the actual study). Numbers from forty-five to ninety-nine (45-99) were considered as being neither extreme nor intermediate.

Traits x Subjects Matrix

In this simulation, fifty subjects received "scores" on each of the twenty traits. A traits x subjects matrix (analogous to Table 1) was set up. (The function of the traits x subjects matrix is to determine how many subjects have at least one extreme trait and one intermediate trait. This matrix is also used to set up the levels x traits matrix.) Going down all of the columns of Table 1, extreme scores and intermediate scores

were found. Subjects who had at least one extreme trait and one intermediate trait remained in the simulation. Subjects who did not fulfill this criterion were eliminated. (Similarly, in the actual study, only subjects who have at least one extreme trait and one intermediate trait will be included.)

Forty-nine of the fifty subjects in the simulation study have at least one extreme trait and one intermediate trait. The subject (2%) who was dropped from the study did not have any intermediate traits. (Two additional subjects were dropped from the study when the subjects x subjects matrices were set up. See subjects x subjects matrices.)

Levels x Traits Matrix

Next, a levels x traits matrix (analogous to Table 2) was set up for the remaining 49 subjects. (The function of the levels x traits matrix is to obtain for each trait equal numbers of pairs of subjects matched for extreme or intermediate scores.) Subjects who shared extreme scores on any of the 20 traits and subjects who shared intermediate scores on any of the 20 traits were listed in the "extreme" and "intermediate" columns next to their shared traits. These lists of subjects were converted into lists of pairs of subjects who shared extreme and intermediate traits.

In Column 1 of Table 2, pairs of subjects who matched for intermediate as well as extreme scores were eliminated. Thus,

all pairs of subjects who had not been eliminated (and the number of such pairs) are listed in Column 1 (except for pairs of subjects randomly eliminated. See next paragraph). In Column 2 of Table 2, pairs of subjects who matched for extreme as well as intermediate scores were eliminated. Thus, all pairs of subjects who had not been eliminated (and the number of such pairs) are listed in Column 2 (except for pairs of subjects randomly eliminated. See next paragraph).

When the number of pairs of subjects who shared extreme scores was unequal to the number of pairs of subjects who shared intermediate scores for a trait, an equal number of pairs of subjects was obtained by randomly eliminating pairs of subjects from the level (extreme or intermediate) with the greater number of pairs of subjects. This procedure insures equal band widths (15th percentile) across traits and equal numbers of extreme and intermediate pairs within traits, with a minimum number of one pair per trait.

The matching procedure produces a viable data set. For each trait, equal numbers of pairs of subjects matched for extreme or intermediate scores could be obtained, with a reasonably large number of pairs: The mean number of pairs of subjects per trait who share extreme traits or intermediate traits is 12.2, with a standard deviation of 6.1 and a range of pairs from 4-24. (See Table S-1.)

Subjects x Subjects Matrices

Next, all pairings for the "extreme" matrix (analogous to Table 3), and the "intermediate" matrix (analogous to Table 4) were set up.

In the proposed study and hypothetical Table 3, the function of the "extreme" subjects x subjects matrix is to obtain the grand mean construct overlap score for subjects who share extreme scores. That is, Table 3 is a subjects x subjects matrix for subjects who share extreme traits. Numbers in the upper (right) half of the matrix refer to the number of constructs shared by each pair of subjects who share extreme traits. Numbers in the column to the far right refer to mean construct overlap for each subject. Mean construct overlap is the sum of the number of shared constructs for each pair divided by the number of pairs. N refers to the number of pairs. The number at the bottom of the column to the far right is the grand mean construct overlap for the "extreme" matrix. In hypothetical Table 4, the "intermediate" matrix has a similar function.

In the simulation study, the function of these matrices is to estimate the mean number of other subjects who share extreme traits or intermediate traits with each subject. (See Table S-2.) Also, the standard deviation, the range of pairs, and the distribution of pairs of subjects sharing one or more traits were obtained.

Two additional subjects were dropped from the simulation because they did not share intermediate traits with at least one other subject.

The mean number of other subjects who share extreme traits with each subject is 8.0, with a standard deviation of 4.8, and a range from 1-20.

The mean number of other subjects who share intermediate traits with each subject is 7.9, with a standard deviation of 5.3, and a range from 1-20.

Numbers in the lower half of the "extreme" matrix (analogous to Table 3), referring to the number of shared extreme traits for each pair of subjects, and numbers in the lower half of the "intermediate" matrix (analogous to Table 4), referring to the number of shared intermediate traits for each pair of subjects, range from 0-4. (These tables are not presented. Note that pairs of subjects used in this specific analysis are based upon all subjects who share extreme or intermediate trait scores for each trait prior to random elimination of pairs of subjects. There is no need to randomly eliminate any pairs in this analysis. Recall that in the levels x traits analysis, random elimination of pairs is used to obtain equal numbers of pairs of subjects matched as sharing extreme or intermediate scores within each trait. We do not want any one trait to be unequally represented in extreme or intermediate scores. Each trait will be responsible for the same number of extreme and intermediate pairs. For determining if subjects who share more extreme traits

have higher construct overlap scores than those sharing fewer traits, any elimination would distort the findings since an accurate picture of the degree of similarity, as indicated by the number of extreme traits a pair shares, can only be obtained when all traits on which subjects share extreme scores are considered. Thus, depending on the analysis, a pair will or will not be included.) In addition to the limited range, the distribution of pairs of subjects sharing one or more traits was highly skewed: For the "extreme" matrix, 265 pairs shared one trait, 81 pairs shared two traits, 27 pairs shared three traits, and nine pairs shared four traits. For the "intermediate" matrix, 146 pairs shared one trait, 36 pairs shared two traits, five pairs shared three traits, and one pair shared four traits. Both the limited range and skewed distribution preclude a correlational analysis.

However, there are enough pairs so that construct overlap scores and movie overlap scores for the pairs can be converted into mean construct overlap scores and mean movie overlap scores for subjects.

Two within-subject t tests for mean construct overlap scores and mean movie overlap scores can be done in which subjects with extreme scores on a given trait who are paired with individuals sharing two or more extreme traits but not any intermediate traits can be compared to subjects with extreme scores on a given trait who are paired with individuals sharing one extreme trait but not any intermediate traits.

Similarly, two within-subject t tests for mean construct overlap scores and mean movie overlap scores can be done in which

subjects with intermediate scores on a given trait who are paired with individuals sharing two or more intermediate traits but not any extreme traits can be compared to subjects with intermediate scores on a given trait who are paired with individuals sharing one intermediate trait but not any extreme traits.

Conclusions

The simulation suggested that the methodology was feasible and the matching procedure would work. While maintaining the 15th percentile for both the extreme and intermediate pairs of subjects, an equal number of pairs of subjects within each trait can be obtained by randomly eliminating pairs of subjects from the levels with the greater number of pairs of subjects. This procedure insures equal band widths (15th percentile) across traits and equal numbers of extreme and intermediate pairs within traits, with a minimum number of one pair per trait.

Table S-1

Numbers Of Pairs Sharing Only Extreme Or Intermediate Traits

Trait	Extreme	Intermediate
1	8	8
2	14	14
3	22	22
4	6	6
5	12	12
6	16	16
7	7	7
8	13	13
9	4	4
10	11	11
11	8	8
12	21	21
13	16	16
14	13	13
15	X	X
16	18	18
17	7	7
18	4	4
19	8	8
20	24	24

Note. Extreme = Top 15% and Bottom 15% Of Distribution; Intermediate = Middle 15% Of Distribution. Also, for trait 15, X indicates that one of the levels of the trait has zero pairs. Thus, this trait is eliminated from the analysis.
N = 49.

Table S-2

Number Of Other Ss With Whom Each S Shares At Least One Ext Or Int Trait (After Elimination)

S	Ext	Int
1	7	2
2	11	13
3	8	13
4	9	13
5	20	2
6	5	6
7	5	9
8	12	5
9	10	3
10	9	8
11	8	5
12	8	4
13	15	2
14	16	2
15	11	2
16	5	8
17	4	5
18	3	6
19	4	5
20	9	2
21	5	10
22	16	3
23	3	11
25	5	12
26	5	19
27	6	3
28	16	2
29	12	8
30	11	5
31	3	13
32	1	14
33	5	11
34	6	9
35	4	10
36	8	6
37	4	20
38	5	20
39	6	15
40	1	19
41	13	6
44	7	9
45	19	2
46	1	12

47	16	6
48	6	10
49	3	2
50	9	1

Note. Ext = Extreme Trait; Int = Intermediate Trait. Also, Ss 24, 42, and 43 were eliminated from the analysis. Subject 42 did not have any intermediate traits. Subject 24 and subject 43 did not share intermediate traits with at least one other subject.

Appendix B

College Pilot Study

Objectives

A pilot study was conducted to determine if the constructs which subjects generate can be rated by a group of judges for construct overlap and whether the range of construct overlap scores would be wide enough for a within-subject t test. Another objective was to determine if interrater reliability was sufficient.

Procedure and Results

Nine college students were asked to fill out a questionnaire about their perceptions of their school environment. Three students were from a residential college and six students were from a non-residential college. The students were asked to "list 10 words or phrases that describe what you like about your school environment" and to "list 10 words or phrases that describe what you dislike about your school environment." After filling out

the questionnaire, they were interviewed to clarify and explain any ambiguous answers.

From the two lists of ten words or phrases that describe what subjects like and dislike about their school environment, two lists of five words or phrases were obtained for each subject. That is, from each list of ten words or phrases, the first five different constructs were selected for each subject. Thus, the data set consisted of five constructs pertaining to what subjects like about their school environment and five constructs pertaining to what they dislike about their school environment.

Thirty-six pairs of subjects were included in the construct overlap analysis. Construct overlap scores, obtained for each pair of subjects, were determined by the surface meaning of constructs without examining subjects' explanations of ambiguous answers as originally conceived and were based upon four kinds of matches: like-like, dislike-dislike, like-dislike, and dislike-like constructs.

Construct overlap scores ranged from 0-8. (Highest possible construct overlap score was 20.) For my ratings, the following distributions were obtained for construct overlap for the thirty-six pairs of subjects: Four pairs had no construct overlap. Three pairs overlapped on one construct. Four pairs overlapped on two constructs. Five overlapped on three constructs. Five overlapped on four constructs. Seven overlapped on five constructs. Five overlapped on six constructs. Two overlapped on seven constructs. One pair overlapped on eight constructs.

Interrater reliability was .78, the correlation across pairs between the two raters. This reliability can be considered the minimal interrater reliability for construct overlap scores to be expected in the actual study since it was obtained without a hundred per cent agreement on what constructs to use. (That is, each rater decided independently which were the first five non-redundant constructs.) In the actual study, raters will use the same sets of constructs when scoring construct overlap.

Hospital Pilot Study

Procedure and Results

In a previous pilot study conducted in a major hospital in the northeast part of the United States, nine staff members in the methadone maintenance treatment program (MMTP) answered questions about their work environment.

For one question, subjects were asked to "list up to 10 words or phrases describing what your ideal work environment would be." For another question, subjects were asked to "list up to 10 words or phrases describing what your worst work environment would be." From these two lists of words or phrases pertaining to the ideal and worst work environment, two lists of 5 words or phrases were obtained for each subject. That is, the first five different constructs were selected for each subject. Thus, the data set consisted of 5 constructs pertaining to the ideal work environment and 5 constructs pertaining to the worst work environment.

Thirty-six pairs of subjects were included in the construct overlap analysis. Construct overlap scores, obtained for each pair of subjects, were determined by the surface meaning of constructs without examining subjects' explanations of ambiguous

answers as originally conceived and were based upon four kinds of matches: ideal-ideal, worst-worst, ideal-worst, and worst-ideal constructs.

Construct overlap scores ranged from 0-15. (Highest possible construct overlap score was 20.) For my ratings, the following distributions were obtained for construct overlap for the 36 pairs of subjects: Three pairs had no construct overlap. One pair overlapped on one construct. Three pairs overlapped on two constructs. Six pairs overlapped on three constructs. Five pairs overlapped on four constructs. Five pairs overlapped on five constructs. Four pairs overlapped on six constructs. Three pairs overlapped on seven constructs. Two pairs overlapped on nine constructs. One pair overlapped on ten constructs. One pair overlapped on eleven constructs. One pair overlapped on fourteen constructs. One pair overlapped on fifteen constructs.

Discussion of Pilot Studies

One objective of the college pilot study was to determine if interrater reliability was sufficient. Interrater reliability was .78. Although .78 reliability is sufficient for the study, several methodological changes to improve reliability were suggested.

First, raters should use the same sets of constructs when scoring construct overlap.

Second, the inverse matches such as like-dislike, dislike-like, ideal-worst, and worst-ideal should be eliminated from the study. These matches were difficult to make and there was conceptual confusion.

Third, the amount of construct overlap should be determined by the surface meaning of constructs without examining subjects' explanations of ambiguous answers as originally conceived. (That is, the results of the pilot study indicated that the interviews were unnecessary.)

Another objective was to determine if the range of construct overlap scores would be wide enough for a within-subject t test. As previously mentioned, in the college pilot study, the range of construct overlap scores was 0-8. Eighteen pairs overlapped on 0-4 constructs. The other eighteen pairs overlapped on 4-8 constructs. In the hospital pilot study, however, the range of con-

struct overlap scores was 0-15. Eighteen pairs overlapped on 0-4 constructs. The other eighteen pairs overlapped on 5-15 constructs.

These results suggest that the questions about the ideal and worst work environments generated enough constructs to be included in the actual study. (Note that although we only used the questions about the work environment in the hospital pilot study, we used a broader range of domains in the actual study.)

In conclusion, constructs which subjects generate can be rated by a group of judges for construct overlap, the range of construct overlap scores is wide enough for a within-subject t test, and interrater reliability is sufficient.

Appendix C
Hypothetical Data Sets

Table 1
Traits x Subjects Matrix
(Loss Rate Of Subjects)

	Traits							
	1	2	3	4	5	6	7	8
Subjects								
1	4	6	1	2	4	5	2	6
2	4	1	2	3	2	6	5	2
3	1	1	3	5	6	6	6	6
4	1	3	1	1	1	6	6	1
5	5	2	3	1	4	3	3	3
6	2	3	6	6	5	5	3	6
7	6	2	2	1	6	6	1	4
8	3	1	6	6	1	1	6	1
9	1	1	6	6	1	3	2	4
10	3	6	1	1	6	5	1	2
11	1	2	3	3	4	6	6	1
12	6	6	3	3	4	1	1	6

Scores = Mean Trait Scores (1 = low extreme score; 6 = high extreme score; 3 & 4 = intermediate scores.)

Note. Extreme scores of 1 and 6 are in boldface.

Note. Intermediate scores of 3 and 4 are underlined.

Table 2
Levels x Traits Matrix
(Pairs Based on Shared Traits)

		Levels			
		Extreme		Intermediate	
Traits	1	3-4, 4-9, 4-11, 7-12	4	1-2, 1-8 2-10, 8-10	4
	2	2-9	1	4-6	1
	3	1-4, 6-9, 8-9	3	3-5, 5-11, 5-12	3
	4	5-10, 6-8	2	2-12, 11-12	2
	5	3-7, 4-8, 4-9, 7-10, 8-9	5	1-5, 1-11, 5-11, 5-12, 11-12	5
	6	8-12	1	5-9	1
	7	3-8	1	5-6	1
	8	1-3, 8-11	2	5-9, 7-9	2

Pairs = pairs of subjects who are extreme or intermediate on a trait.
Note. The number to the right of each set of pairs = the number of pairs.

Table 3
Subjects x Subjects Extreme Matrix
(Construct Overlap Matrix/Number Of Shared Traits)

		Subjects													
		1	2	3	4	5	6	7	8	9	10	11	12	n	$\bar{X}$
Subjects	1		-	6	6	-	EP	-	-	-	X	-	X	12 2	6
	2	0		EP	EP	-	-	EP	X	6	-	X	-	6 1	6
	3	1	EP		8	-	EP	7	7	7	EP	X	X	35 5	7
	4	1	EP	3		EP	-	EP	8	7	EP	9	-	38 5	7.6
	5	0	0	0	EP		-	X	-	-	6	-	-	6 1	6
	6	EP	0	EP	0	0		-	7	7	-	-	EP	14 2	7
	7	0	EP	2	EP	X	0		-	-	8	EP	7	22 3	7.3
	8	0	X	2	3	0	2	0		8	-	7	6	43 6	7.2
	9	0	1	2	2	0	2	0	3		-	6	-	41 6	6.8
	10	X	0	EP	EP	1	0	3	0	0		-	EP	14 2	7
	11	0	X	X	4	0	0	EP	2	1	0		-	22 3	7.3
	12	X	0	X	0	0	EP	2	1	0	EP	0		13 2	6.5

Mean Construct Overlap Score for Matrix = 6.81

Note. Numbers in the top (right) half of the matrix refer to construct overlap scores. Numbers in the bottom (left) half of the matrix refer to the number of extreme traits shared by a pair of subjects. For illustration, pairs of subjects sharing 2, 3, and 4 extreme traits are in boldface in the bottom half of the matrix. The construct overlap scores for these pairs are in boldface in the top half of the matrix (e.g., pair 7, 10 had 8 common constructs and shared 3 extreme traits). X means that the pair is matched on at least one intermediate trait. EP means that the pair has been randomly eliminated from the study by means of a probability table.

Table 4
Subjects x Subjects Intermediate Matrix
(Construct Overlap Matrix/Number Of Shared Pairs)

		Subjects													
		1	2	3	4	5	6	7	8	9	10	11	12	n	$\bar{X}$
Subjects	1		1	-	-	3	-	-	2	-	X	2	X	8 4	2
	2	1		-	-	-	-	-	X	-	1	X	3	5 3	1.7
	3	0	0		-	1	-	-	-	-	-	X	X	1 1	1
	4	0	0	0		-	2	-	-	-	-	-	-	2 1	2
	5	1	0	1	0		3	X	-	1	-	3	2	13 6	2.2
	6	0	0	0	1	1		-	-	-	-	-	-	5 2	2.5
	7	0	0	0	0	X	0		-	2	-	-	-	2 1	2
	8	1	X	0	0	0	0	0		-	2	-	-	4 2	2
	9	0	0	0	0	2	0	1	0		-	-	-	3 2	1.5
	10	X	1	0	0	0	0	0	1	0		-	-	3 2	1.5
	11	1	X	X	0	2	0	0	0	0	0		1	6 3	2
	12	X	1	X	0	2	0	0	0	0	0	3		6 3	2

Mean Construct Overlap Score for Matrix = 1.86

Note. Numbers in the top half of the matrix refer to construct overlap scores. Numbers in the bottom half of the matrix refer to the number of intermediate traits shared by a pair of subjects. X means that the pair is matched on at least one extreme trait.

Data in Appendix C

Note. The data in Appendix C have been set up to illustrate the predicted patterns: First, the mean construct overlap score for the "extreme" matrix is greater than the mean construct overlap score for the "intermediate" matrix. In Table 3, the mean construct overlap score for the "extreme" matrix is 6.81. In Table 4, the mean construct overlap score for the "intermediate" matrix is 1.86. Second, for pairs of subjects who share extreme traits, there is a positive correlation between the number of extreme traits shared by a pair and the construct overlap score for the pair. In Table 3, pairs of subjects who share one extreme trait have a construct overlap score of 6. Pairs of subjects who share two extreme traits have a construct overlap score of 7. Pairs of subjects who share three extreme traits have a construct overlap score of 8. Pairs of subjects who share four extreme traits have a construct overlap score of 9. Third, for pairs of subjects who share intermediate traits and do not share any extreme traits, there is no correlation between the number of intermediate traits shared by a pair and the construct overlap score for the pair. In Table 4, there are no consistent differences in construct overlap scores for pairs of subjects who share one, two, three, or four intermediate traits.

Appendix D

Table 5

Steps in Generating Data

1. Set up a traits x subjects matrix (Table 1).
2. Go down all of the columns of Table 1 and find high and low extreme scores and intermediate scores.
3. Start setting up Table 2. List subjects who share high or low extreme scores and subjects who share intermediate scores in the "extreme" and "intermediate" columns.
4. Convert lists of subjects into lists of pairs of subjects who share high or low extreme and intermediate traits.
5. In column 1 of Table 2, eliminate pairs of subjects who are also matched for intermediate scores.
6. In column 1 of Table 2, list all pairs of subjects who are not matched for intermediate scores and list the number of these pairs (except for pairs of subjects randomly eliminated).
7. In column 2 of Table 2, eliminate pairs of subjects who are also matched for high or low extreme scores.

8. In column 2 of Table 2, list all pairs of subjects who are not matched for high or low extreme scores and list the number of these pairs (except for pairs of subjects randomly eliminated).
9. If the number of pairs of subjects who share extreme scores is not equal to the number of pairs of subjects who share intermediate scores, randomly eliminate pairs of subjects from the levels with the greater number of pairs of subjects to obtain an equal number of pairs of subjects within traits. The levels x traits matrix (Table 2) has now been set up.
10. Determine and set up all pairings for the upper half of the "extreme" matrix (Table 3) from Table 2 before any constructs are scored.
11. Compute D scores for these pairings.
12. Compute mean D scores for each subject in the "extreme" matrix.
13. Compute the overall mean D score for the "extreme" matrix.
14. Determine and set up all pairings for the upper half of the "intermediate" matrix (Table 4) from Table 2 before any constructs are scored.
15. Compute D scores for these pairings.
16. Compute mean D scores for each subject in the "intermediate" matrix.

17. Compute the overall mean D score for the "intermediate" matrix.
18. A between-matrix analysis was carried out to determine if there was a difference between the mean D score of the "extreme" matrix and the mean D score of the "intermediate" matrix. This was a within-subject t test.
19. Since the mean D scores of the two matrices were similar, there was overall profile similarity for the two matrices and constructs and movies were scored by a group of raters for the amount of construct overlap and movie overlap for each pairing in the "extreme" and "intermediate" matrices. Construct overlap was determined by using synonyms from Roget's thesaurus. Movie overlap was measured by determining how many of the same movies individuals listed as their favorite movies. (If the mean D scores of the two matrices had been different, pairs which contributed to the asymmetry would have been eliminated to create overall profile similarity. This procedure would have been an iterative process.)
20. Construct overlap scores and movie overlap scores were inserted in the top part of the "extreme" and "intermediate" matrices (Tables 3 & 4).
21. Mean construct overlap scores and mean movie overlap scores for subjects in the "extreme" and "intermediate"

matrices were computed.

22. The overall mean construct overlap score and overall mean movie overlap score for the "extreme" matrix and for the "intermediate" matrix were computed.
23. A between-matrix analysis was conducted in which the mean construct overlap score for the "extreme" matrix was compared to the mean construct overlap score for the "intermediate" matrix.
24. A between-matrix analysis was conducted in which the mean movie overlap score for the "extreme" matrix was compared to the mean movie overlap score for the "intermediate matrix.
25. Numbers in the lower half of the "extreme" matrix (Table 3) were obtained from Table 1.
26. Numbers in the lower half of the "intermediate" matrix (Table 4) were obtained from Table 1.
27. A within-subject t test was done comparing the mean D scores of subjects paired with individuals sharing two or more extreme traits but not any intermediate traits with the mean D scores of subjects paired with individuals sharing one extreme trait but not any intermediate traits. (Numbers in the lower half of the "extreme" matrix (Table 3) were used to determine the number of extreme traits shared by a pair of subjects. For each subject, all pairs of subjects who share two or more extreme traits and all pairs of subjects who share

one extreme trait were used to determine the mean D scores.)

28. A within-subject t test was done comparing the mean D scores of subjects paired with individuals sharing two or more intermediate traits but not any extreme traits with the mean D scores of subjects paired with individuals sharing one intermediate trait but not any extreme traits. (Numbers in the lower half of the "intermediate" matrix (Table 4) were used to determine the number of intermediate traits shared by a pair of subjects. For each subject, all pairs of subjects who share two or more intermediate traits and all pairs of subjects who share one intermediate trait were used to determine the mean D scores.)
29. Using the numbers in the top (right) half of the "extreme" matrix (Table 3), a within-subject t test was done comparing the mean construct overlap scores of subjects paired with individuals sharing two or more extreme traits but not any intermediate traits with the mean construct overlap scores of subjects paired with individuals sharing one extreme trait but not any intermediate traits.
30. A within-subject t test was also done comparing the mean movie overlap scores of subjects paired with individuals sharing two or more extreme traits but not any intermediate traits with the mean movie overlap scores

of subjects paired with individuals sharing one extreme trait but not any intermediate traits.

31. Using the numbers in the top (right) half of the "intermediate" matrix (Table 4), a within-subject t test was done comparing the mean construct overlap scores of subjects paired with individuals sharing two or more intermediate traits but not any extreme traits with the mean construct overlap scores of subjects paired with individuals sharing one intermediate trait but not any extreme traits.
32. A within-subject t test was also done comparing the mean movie overlap scores of subjects paired with individuals sharing two or more intermediate traits but not any extreme traits with the mean movie overlap scores of subjects paired with individuals sharing one intermediate trait but not any extreme traits.
33. Two Pearson correlations were done in which D scores for 562 pairs were correlated with construct overlap scores and movie overlap scores.
34. Two t tests were done to determine if extreme traits were more consistent and/or important than intermediate traits.

Appendix E

PRF-Form E

DIRECTIONS

On the following pages you will find a series of statements which a person might use to describe him/herself. Read each statement and decide whether or not it describes you. Then indicate your answer on the separate answer sheet.

The response scale runs from 1 to 9 as shown below. Feel free to use whatever number from 1 to 9 that best describes you. Answer every statement with a rating, even if you are not completely sure of your answer. In marking your answer sheet, be sure that the number of the statement you have just read is the same as the number on the answer sheet.

1	2	3	4	5	6	7	8	9
DISAGREE STRONGLY or DOES NOT DESCRIBE ME AT ALL				NEITHER AGREE NOR DISAGREE or PARTIALLY DESCRIBES ME				AGREE STRONGLY or DESCRIBES ME EXTREMELY WELL

SAMPLE STATEMENTS

AB	HIGH SCORER:	I like to be the first to apologize after an argument.
AB	LOW SCORER:	I would never call attention to any of my weaknesses.
AC	HIGH SCORER:	I will not be satisfied until I am the best in my field of work.
AC	LOW SCORER:	I try to work just hard enough to get by.
AF	HIGH SCORER:	People consider me to be quite friendly.
AF	LOW SCORER:	I don't really have fun at large parties.
AG	HIGH SCORER:	I think that certain people deserve to be "put in their places."
AG	LOW SCORER:	I seldom feel like hitting anyone.
AU	HIGH SCORER:	I delight in feeling unattached.
AU	LOW SCORER:	Family obligations make me feel important.
CH	HIGH SCORER:	The main joy in my life is going to new places and seeing new sights.
CH	LOW SCORER:	When I find a good way to do something, I avoid trying new things.
CS	HIGH SCORER:	When I go on a trip I prepare a timetable beforehand.
CS	LOW SCORER:	I very seldom make careful plans.
DE	HIGH SCORER:	I would get into a long discussion rather than admit I am wrong.
DE	LOW SCORER:	It is usually quite easy for me to admit I am wrong.

DO	HIGH SCORER:	I feel confident when directing the activities of others.
DO	LOW SCORER:	I would make a poor military leader.
EN	HIGH SCORER:	When I hit a snag in what I am doing, I don't stop until I have found a way to get around it.
EN	LOW SCORER:	I don't have the staying power to do work that must be very accurate.
EX	HIGH SCORER:	At a party I enjoy entertaining others.
EX	LOW SCORER:	I am more of a listener than a talker.
HA	HIGH SCORER:	I don't ever go walking in places where there might be poisonous snakes.
HA	LOW SCORER:	To me, crossing the ocean in a sailboat would be a wonderful adventure.
IM	HIGH SCORER:	I often say the first thing that comes into my head.
IM	LOW SCORER:	I am careful to consider all sides of an issue before taking action.
NU	HIGH SCORER:	I would rather have a job serving people than a job making something.
NU	LOW SCORER:	I feel no great concern for the troubles of other people.
OR	HIGH SCORER:	I spend a lot of time keeping my belongings in order.
OR	LOW SCORER:	I feel comfortable in a somewhat disorganized room.
PL	HIGH SCORER:	I spend a good deal of my time just having fun.
PL	LOW SCORER:	People consider me a serious, reserved person.
SE	HIGH SCORER:	The motion of water in a river can almost hypnotize me.

SE	LOW SCORER:	I rarely notice the texture of a piece of clothing.
SR	HIGH SCORER:	I would not consider myself successful unless other people thought I was.
SR	LOW SCORER:	I will not go out of my way to behave in an approved manner.
SU	HIGH SCORER:	I would like to be married to a protective and sympathetic person.
SU	LOW SCORER:	If I feel sick, I don't like to have friends or relatives fuss over me.
UN	HIGH SCORER:	I like to read several books on one topic at the same time.
UN	LOW SCORER:	There are many activities that I prefer to reading.

Note. Sample statements of the high scorer are descriptive of the high scorer of each bipolar PRF trait dimension. Sample statements of the low scorer are descriptive of the low scorer of each bipolar trait dimension. AB to UN refer to the respective 20 PRF traits of Abasement, Achievement, Affiliation, Aggression, Autonomy, Change, Cognitive Structure, Defendence, Dominance, Endurance, Exhibition, Harmavoidance, Impulsivity, Nurturance, Order, Play, Sentience, Social Recognition, Succorance, and Understanding.

Appendix F

Date _____ Code

PERSONAL VIEWS QUESTIONNAIRE

Please list as many different words or phrases as you can that describe what you like about your school environment up to a maximum of 10.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list as many different words or phrases as you can that describe what you dislike about your school environment up to a maximum of 10.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list as many different words or phrases as you can describing what your ideal job would be like up to a maximum of 10. You may include anything about the job.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list as many different words or phrases as you can describing what your worst job would be like up to a maximum of 10. You may include anything about the job.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

What are the characteristics you like about people you like? Please try to use one or two words to describe each characteristic up to a maximum of 10 characteristics.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

What are the characteristics you dislike about people you dislike? Please try to use one or two words to describe each characteristic up to a maximum of 10 characteristics.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list 15 of your favorite movies. (It does not matter whether you considered these movies great or even good. In fact, you could include movies you did not consider objectively great or good but which you just liked.)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

Appendix G

Date _____ Code _____

TRAIT IMPORTANCE QUESTIONNAIRE

Instructions

Certain ways of describing people may be more meaningful for some people than for others. For example, being very athletic or not very athletic may be very important for some people but not for others. For people who consider it important, their degree of athletic skill matters a lot to them or is part of their self-description. People who do not consider it important don't care very much about it one way or another, and their degree of athletic skill is not part of their self-description.

We would like you to consider each of the following dimensions of personality and indicate how important that dimension is as part of your self-description. In other words, how much would we have to know your position on the dimension to get a picture of who you are? This is not the same as your actual position on the dimension. For example, people who are very athletic, moderately athletic, or not at all athletic could think their degree of athletic skill is part of their self-description. Similarly, no matter what their level of athletic skill, they might consider athletic skill not to be an important part of their self-description.

Use the following 9-point scale to indicate how important each dimension is to your self-description. Please use any number from 1-9 that best indicates the importance of the dimension. Place the rating in the space provided next to the dimension name.

1	2	3	4	5	6	7	8	9
NOT AT ALL IMPORTANT				MODERATELY IMPORTANT				EXTREMELY IMPORTANT

_____ 1. Meek versus Arrogant: "A Meek person shows a high degree of humility; accepts blame and criticism even when not deserved; exposes him/herself to situations where he/she is in an inferior position; tends to be self-effacing. The opposite is Arrogant."

_____ 2. Ambitious versus Unaspiring: "An Ambitious person aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; is willing to put forth effort to attain excellence. The opposite is Unaspiring."

_____ 3. Sociable versus Aloof: "A Sociable person enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people. The opposite is Aloof."

_____ 4. Aggressive versus Even-tempered: "An Aggressive person enjoys combat and argument; is easily annoyed; is sometimes willing to hurt people to get his/her way; may seek to "get even" with people whom he/she perceives as having harmed him/her. The opposite is Even-tempered."

_____ 5. Independent versus Dependent: "An Independent person tries to break away from restraints, confinement, or restrictions of any kind; enjoys being unattached, free, not tied to people, places, or obligations; may be rebellious when faced with restraints. The opposite is Dependent."

_____ 6. Changeable versus Predictable: "A Changeable person likes new and different experiences; dislikes routine and avoids it; may readily change opinions or values in different circumstances; adapts readily to changes in environment. The opposite is Predictable."

_____ 7. Precise versus Unexacting: "A Precise person does not like ambiguity or uncertainty in information; wants all questions answered completely; desires to make decisions based upon definite knowledge, rather than upon guesses or probabilities. The opposite is Unexacting."

1 2 3 4 5 6 7 8 9

NOT AT ALL IMPORTANT — MODERATELY IMPORTANT — EXTREMELY IMPORTANT

_____ 8. Defensive versus Open: "A Defensive person readily suspects that people mean him/her harm or are against him/her; is ready to defend him/herself at all times; takes offense easily; does not accept criticism readily. The opposite is Open."

_____ 9. Assertive versus Compliant: "An Assertive person attempts to control his/her environment, and to influence or direct other people; expresses opinions forcefully; enjoys the role of leader and may assume it spontaneously. The opposite is Compliant."

_____ 10. Persistent versus Resigning: "A Persistent person is willing to work long hours; doesn't give up quickly on a problem; is persevering, even in the face of great difficulty; is patient and unrelenting in his/her work habits. The opposite is Resigning."

_____ 11. Exhibitionistic versus Shy: "An Exhibitionistic person wants to be the center of attention; enjoys having an audience; engages in behavior which wins the notice of others; may enjoy being dramatic or witty. The opposite is Shy."

_____ 12. Cautious versus Adventuresome: "A Cautious person does not enjoy exciting activities, especially if danger is involved; avoids risk of bodily harm; seeks to maximize personal safety. The opposite is Adventuresome."

_____ 13. Impulsive versus Methodical: "An Impulsive person tends to act on the "spur of the moment" and without deliberation; gives vent readily to feelings and wishes; speaks freely; may be volatile in emotional expression. The opposite is Methodical."

_____ 14. Sympathetic versus Unsupportive: "A Sympathetic person gives sympathy and comfort; assists others whenever possible, interested in caring for children, the disabled, or the infirm; offers a "helping hand" to those in need; readily performs favors for others. The opposite is Unsupportive."

_____ 15. Organized versus Disorderly: "An Organized person is concerned with keeping personal effects and surroundings neat and organized; dislikes clutter, confusion, lack of organization; is interested in developing methods for keeping materials methodically organized. The opposite is Disorderly."

1	2	3	4	5	6	7	8	9
NOT AT ALL IMPORTANT				MODERATELY IMPORTANT				EXTREMELY IMPORTANT

_____ 16. Fun-loving versus Serious: "A Fun-loving person does many things "just for fun," spends a good deal of time participating in games, sports, social activities, and other amusements; enjoys jokes and funny stories; maintains a light-hearted, easy-going attitude toward life. The opposite is Serious."

_____ 17. Sentient versus Unsensual: "A Sentient person notices smells, sounds, sights, tastes, and the way things feel; remembers these sensations and believes that they are an important part of life; is sensitive to many forms of experience; may maintain an essentially hedonistic or aesthetic view of life. The opposite is Unsensual."

_____ 18. Status-seeking versus Unpretentious: "A Status-seeking person desires to be held in high esteem by acquaintances; is concerned about reputation and what other people think of him/her; works for the approval and recognition of others. The opposite is Unpretentious."

_____ 19. Support-seeking versus Self-sufficient: "A Support-seeking person frequently seeks the sympathy, protection, love, advice, and reassurance of other people; may feel insecure or helpless without such support; confides difficulties readily to a receptive person. The opposite is Self-sufficient."

_____ 20. Inquisitive versus Unstudious: "An Inquisitive person wants to understand many areas of knowledge; values synthesis of ideas, verifiable generalization, logical thought, particularly when directed at satisfying intellectual curiosity. The opposite is Unstudious."

Table 6a

Percentiles of PRF Traits
for Low, Intermediate, and High Levels

	Low			Int			High		
	Per	Range	N	Per	Range	N	Per	Range	N
AB	19.6	(1-19.6)	11	18.8	(39.3-57.1)	12	18.9	(82.1-100.0)	11
AC	17.9	(1-17.9)	10	17.0	(42.9-58.9)	11	17.1	(83.9-100.0)	11
AF	19.6	(1-19.6)	11	18.8	(41.1-58.9)	11	20.6	(80.4-100.0)	12
AG	19.6	(1-19.6)	11	17.0	(42.9-58.9)	11	20.6	(80.4-100.0)	13
AU	16.1	(1-16.1)	9	15.2	(42.9-57.1)	8	15.3	(85.7-100.0)	10
CH	19.6	(1-19.6)	11	18.8	(41.1-58.9)	11	18.9	(82.1-100.0)	11
CS	17.9	(1-17.9)	10	17.0	(42.9-58.9)	10	17.1	(83.9-100.0)	11
DE	19.6	(1-19.6)	11	18.9	(37.5-55.4)	14	17.1	(83.9-100.0)	13
DO	17.9	(1-17.9)	10	17.1	(37.5-53.6)	13	17.1	(83.9-100.0)	11
EN	17.9	(1-17.9)	10	17.1	(39.3-55.4)	9	17.1	(83.9-100.0)	10
EX	16.1	(1-16.1)	9	15.2	(42.9-57.1)	8	15.3	(85.7-100.0)	9
HA	19.6	(1-19.6)	11	17.0	(41.1-57.1)	11	17.1	(83.9-100.0)	10
IM	17.9	(1-17.9)	10	17.0	(41.1-57.1)	10	17.1	(83.9-100.0)	14
NU	17.9	(1-17.9)	10	15.3	(44.6-58.9)	10	17.1	(83.9-100.0)	10
OR	19.6	(1-19.6)	11	17.1	(44.6-60.7)	10	17.1	(83.9-100.0)	10
PL	17.9	(1-17.9)	10	15.3	(44.6-58.9)	10	17.1	(83.9-100.0)	14
SE	16.1	(1-16.1)	9	15.2	(42.9-57.1)	10	15.3	(85.7-100.0)	10
SR	19.6	(1-19.6)	11	17.1	(37.5-53.6)	10	17.1	(83.9-100.0)	13
SU	17.9	(1-17.9)	10	17.0	(41.1-57.1)	11	17.1	(83.9-100.0)	11
UN	16.1	(1-16.1)	9	15.2	(42.9-57.1)	13	15.3	(85.7-100.0)	10

Note. Low Per refers to the percent of the respective PRF trait for the low extreme level. Int Per refers to the percent of the respective PRF trait for the intermediate level. High Per refers to the percent of the respective PRF trait for the high extreme level. Range refers to percentile range for each of the three trait levels for the respective PRF trait. N = the number of subjects included in the percentile range for each of the three trait levels for the respective trait. AB to UN refer to the respective 20 traits.

Table 6b

Summary Statistics of PRF Traits

	Mean	S.D.	Range	Minimum	Maximum
AB	4.17	1.07	5.30	1.40	6.70
AC	5.84	1.30	5.60	2.60	8.20
AF	5.72	1.09	5.10	2.80	7.90
AG	5.32	1.07	5.30	3.10	8.40
AU	4.17	1.29	5.80	1.70	7.50
CH	5.19	1.04	5.04	2.56	7.60
CS	5.12	.95	3.90	3.60	7.50
DE	5.23	.98	4.20	3.30	7.50
DO	5.11	1.23	4.97	2.70	7.67
EN	5.26	1.30	6.10	2.10	8.20
EX	4.94	1.45	6.02	2.20	8.22
HA	6.03	1.63	6.30	2.60	8.90
IM	4.47	.98	4.40	2.40	6.80
NU	6.69	1.08	4.70	4.00	8.70
OR	5.36	1.81	6.60	1.70	8.30
PL	5.09	.88	3.90	3.30	7.20
SE	5.41	1.21	4.80	2.90	7.70
SR	5.61	1.20	5.09	2.80	7.89
SU	5.46	1.28	5.30	3.10	8.40
UN	5.15	1.29	6.50	1.80	8.30

Table 7
Spearman-Brown Split-Half Coefficients and Cronbach's Alphas for 20 PRF Traits

Traits	S-B in Manual	Obtained S-B	Obtained Alphas
AB	.70	.68	.62
AC	.57	.78	.78
AF	.86	.73	.66
AG	.63	.61	.52
AU	.66	.82	.71
CH	.65	.42	.48
CS	.69	.57	.48
DE	.66	.22	.48
DO	.67	.77	.73
EN	.75	.69	.79
EX	.85	.72	.81
HA	.91	.86	.84
IM	.85	.65	.49
NU	.65	.64	.61
OR	.89	.89	.87
PL	.50	.41	.29
SE	.70	.68	.63
SR	.73	.61	.69
SU	.73	.60	.67
UN	.77	.73	.74

Note. S-B in Manual refers to Spearman-Brown split-half coefficients listed in the PRF Manual. Obtained S-B refers to Spearman-Brown split-half coefficients obtained in the sample. Obtained Alphas refers to Cronbach's alphas obtained in the sample. AB to UN refer to the respective 20 PRF traits. For three PRF traits (AC, AU, DO) obtained Spearman-Brown split-half coefficients are greater than those listed in the manual. For one PRF trait (OR), they are the same. Except for three PRF traits (CH, DE, PL), all of the obtained Spearman-Brown split-half coefficients fall within the range of the Spearman-Brown split-half coefficients listed in the PRF Manual. Except for five PRF traits (CH, CS, DE, IM, PL), all of the obtained Cronbach's alphas fall within the range of the Spearman-Brown split-half coefficients listed in the PRF Manual. For four PRF traits (AC, AU, DO, EN), obtained Cronbach's alphas are greater than the Spearman-Brown split-half coefficients listed in the manual.

Table 8

Traits x Subjects Matrix

ID	AB	AC	AF	AG	AU	CH	CS	DE	DO	EN	EX	HA	IM	NU	OR	PL	SE	SR	SU	UN
003	--	LO	IN	LO	--	--	--	--	--	--	--	--	LO	LO	--	--	LO	HI	--	LO
004	--	--	LO	LO	HI	LO	LO	--	LO	--	--	HI	HI	--	LO	IN	IN	--	LO	HI
005	LO	--	LO	HI	--	LO	HI	HI	HI	--	--	--	HI	LO	--	--	--	IN	HI	LO
007	IN	--	IN	IN	HI	--	--	IN	--	IN	--	IN	--	--	IN	HI	IN	--	IN	--
008	--	--	--	HI	--	--	--	--	--	IN	--	--	--	--	--	IN	IN	LO	LO	--	IN
011	LO	--	HI	IN	--	HI	--	HI	HI	HI	HI	LO	HI	HI	HI	HI	HI	HI	IN	--
015	IN	--	--	--	IN	LO	LO	LO	LO	--	--	HI	--	LO	--	--	LO	LO	LO	LO
016	--	HI	--	LO	--	IN	HI	--	--	HI	--	LO	HI	--	HI	--	--	IN	IN	--
021	LO	LO	HI	IN	--	HI	--	IN	LO	LO	IN	--	IN	HI	HI	LO	--	HI	HI	--
023	LO	HI	HI	HI	HI	HI	HI	--	HI	HI	HI	HI	LO	--	HI	IN	HI	HI	IN	LO	HI
025	HI	--	LO	IN	LO	IN	--	IN	LO	--	LO	--	IN	--	--	LO	--	--	--	--	--
038	HI	IN	LO	--	LO	IN	--	LO	LO	LO	LO	HI	IN	--	--	--	--	--	--	HI	LO
040	--	--	IN	IN	IN	--	--	--	--	IN	IN	--	--	IN	IN	--	--	IN	--	--
041	--	--	--	--	--	HI	HI	--	--	--	--	--	--	IN	--	--	--	--	--	--	--
042	--	IN	--	HI	HI	--	HI	IN	--	--	LO	IN	--	--	HI	LO	--	LO	--	--
044	--	--	LO	IN	LO	LO	--	--	IN	--	--	HI	--	--	--	--	--	--	HI	HI	LO
045	IN	LO	IN	IN	--	--	--	HI	IN	LO	IN	--	LO	LO	IN	LO	--	--	LO	HI
046	IN	HI	--	HI	LO	--	HI	--	--	--	LO	IN	LO	--	--	--	IN	--	--	IN
049	--	--	IN	IN	--	IN	IN	IN	--	IN	IN	LO	IN	--	--	--	--	LO	IN	IN
050	--	--	HI	--	LO	--	--	LO	LO	--	--	--	--	HI	--	IN	IN	HI	HI	LO
051	--	IN	HI	--	--	IN	IN	IN	--	--	--	HI	LO	LO	--	HI	HI	IN	--	--
055	HI	HI	--	IN	IN	HI	IN	HI	--	--	LO	LO	LO	HI	HI	LO	HI	HI	--	IN
057	IN	LO	LO	HI	--	LO	LO	--	--	LO	--	IN	HI	IN	LO	--	--	--	IN	IN
058	IN	IN	IN	--	IN	HI	IN	HI	LO	--	LO	LO	--	--	IN	IN	--	HI	HI	--
066	LO	LO	LO	HI	IN	LO	--	HI	IN	LO	--	--	IN	LO	--	HI	LO	--	HI	LO
070	IN	IN	--	--	--	IN	--	--	IN	IN	IN	IN	IN	LO	IN	IN	IN	--	--	--
071	IN	--	IN	LO	IN	--	IN	IN	--	IN	--	--	IN	--	IN	IN	IN	--	IN	IN
072	--	--	--	--	--	--	IN	IN	IN	--	HI	--	--	--	--	--	--	--	--	--	IN
073	LO	HI	HI	--	HI	--	LO	--	IN	HI	--	--	HI	HI	LO	--	HI	LO	LO	HI
074	--	HI	HI	IN	--	--	--	LO	--	HI	--	IN	IN	LO	--	--	--	LO	LO	HI
075	--	HI	--	HI	--	--	HI	IN	--	--	--	HI	LO	--	IN	LO	--	HI	--	--
077	IN	--	--	LO	--	--	IN	--	IN	--	IN	IN	--	IN	--	HI	IN	LO	--	--
079	HI	--	LO	--	HI	HI	--	HI	IN	--	LO	--	HI	--	LO	LO	IN	HI	--	HI
080	HI	LO	IN	HI	IN	LO	--	HI	--	IN	HI	--	--	HI	HI	IN	HI	HI	--	--
084	LO	--	--	IN	--	--	--	--	HI	LO	HI	--	HI	IN	LO	IN	--	IN	--	--
085	--	LO	--	HI	--	--	LO	HI	HI	LO	HI	--	HI	LO	LO	HI	--	HI	IN	LO
089	LO	--	--	--	--	--	--	--	--	IN	LO	IN	IN	--	IN	--	HI	HI	IN	--	--
091	--	HI	--	HI	LO	IN	--	IN	LO	LO	--	HI	--	--	HI	--	--	HI	--	--
092	HI	IN	--	--	--	LO	LO	--	IN	IN	LO	--	IN	IN	HI	LO	LO	LO	LO	--
094	LO	IN	LO	LO	HI	--	HI	LO	--	IN	--	LO	LO	IN	--	LO	HI	LO	HI	HI

ID	AB	AC	AF	AG	AU	CH	CS	DE	DO	EN	EX	HA	IM	NU	OR	PL	SE	SR	SU	UN
119	--	HI	HI	--	LO	--	LO	--	--	HI	HI	--	HI	HI	LO	HI	--	IN	HI	HI
121	HI	IN	--	IN	--	LO	IN	LO	HI	--	IN	HI	LO	IN	--	--	LO	--	IN	IN
122	HI	HI	HI	--	HI	--	LO	LO	LO	--	--	--	HI	HI	LO	HI	--	LO	IN	IN
123	--	--	IN	LO	--	--	--	LO	IN	HI	--	IN	--	--	HI	--	IN	--	IN	IN
126	HI	--	HI	LO	HI	HI	LO	LO	IN	--	IN	LO	HI	--	LO	HI	IN	LO	--	IN
129	--	HI	IN	--	IN	--	IN	IN	HI	--	--	LO	--	--	--	HI	--	IN	--	IN
131	LO	IN	LO	--	--	HI	LO	--	HI	HI	--	LO	--	--	LO	--	--	--	LO	--
134	IN	IN	IN	--	LO	IN	--	IN	IN	--	LO	--	--	--	LO	--	LO	--	--	LO
135	LO	LO	--	LO	--	HI	--	HI	LO	--	--	IN	--	IN	--	IN	HI	--	HI	--
303	HI	--	--	LO	LO	LO	IN	LO	--	IN	HI	HI	LO	--	--	--	LO	IN	HI	--
305	--	--	HI	--	--	IN	HI	IN	--	--	--	--	--	--	HI	IN	--	--	--	HI
308	IN	LO	HI	--	--	IN	--	IN	HI	IN	HI	IN	--	LO	--	HI	--	--	--	--
310	IN	IN	--	HI	--	HI	HI	HI	HI	--	--	--	IN	--	--	IN	--	HI	--	--
311	--	LO	LO	HI	--	LO	--	HI	--	LO	--	HI	HI	--	--	HI	LO	IN	IN	--
312	HI	--	IN	--	HI	--	HI	--	--	--	HI	--	HI	IN	IN	--	HI	--	LO	HI
314	--	--	--	LO	IN	--	HI	LO	HI	HI	--	LO	LO	--	HI	LO	--	--	LO	IN

AB to UN refer to the 20 PRF traits. Identification numbers 003-314 refer to 56 female subjects. LO, HI, and IN refer to low extreme traits, high extreme traits, and intermediate traits. Note that subject 040 was lost because she did not have any extreme traits. In addition, subjects 005, 071, and 119 were lost after the Subjects x Subjects Matrices were set up.

Table 9

Number Of Pairs Sharing Only Extreme Or Intermediate Traits
(Before Matrices Are Set Up)

Trait	Extreme	Intermediate
AB	38	38
AC	22	22
AF	36	36
AG	24	24
AU	10	10
CH	38	38
CS	24	24
DE	58	58
DO	34	34
EN	21	21
EX	16	16
HA	28	28
IM	25	25
NU	15	15
OR	27	27
PL	23	23
SE	23	23
SR	5	5
SU	22	22
UN	33	33

Note. Mean number of pairs per trait is 26.1. In addition, note that the actual pairs are not listed in this table nor are the number of shared traits for each pair. However, when the Levels x Traits Matrix is set up, pairs sharing only extreme or intermediate traits and the number of shared traits for each pair are determined by referring back to the Traits x Subjects Matrix.

Table 10

Number Of Pairs Sharing Only Extreme Or Intermediate Traits (After Matrices Are Set Up)

Trait	Extreme	Intermediate
AB	34	31
AC	19	22
AF	29	28
AG	21	24
AU	9	4
CH	35	38
CS	20	17
DE	50	45
DO	31	34
EN	18	15
EX	14	16
HA	28	28
IM	19	16
NU	11	15
OR	21	18
PL	21	16
SE	23	18
SR	5	5
SU	18	14
UN	23	24

Note. Mean number of pairs sharing only extreme traits is 22.5. Mean number of pairs sharing only intermediate traits is 21.4. In addition, note that the actual pairs are not listed in this table nor are the number of shared traits for each pair. However, when the Levels x Traits Matrix is set up, pairs sharing only extreme or intermediate traits and the number of shared traits for each pair are determined by referring back to the Traits x Subjects Matrix.

Table 11a

"Extreme" Matrix

003 9 MATCHES
003-015 003-021 003-038 003-044 003-050 003-066 003-075 003-094
003-121
004 19 MATCHES
004-011 004-015 004-016 004-023 004-038 004-044 004-045 004-051
004-057 004-073 004-074 004-091 004-092 004-094 004-121 004-122
004-131 004-311 004-312
007 1 MATCH
007-066
008 5 MATCHES
008-015 008-042 008-085 008-303 008-311
011 22 MATCHES
004-011 011-023 011-041 011-051 011-058 011-066 011-072 011-073
011-077 011-079 011-080 011-089 011-092 011-094 011-126 011-129
011 131 011-135 011-303 011-308 011-310 011-314
015 18 MATCHES
003-015 004-015 008-015 015-023 015-044 015-050 015-073 015-074
015-075 015-085 015-091 015-092 015-094 015-121 015-122 015-123
015-303 015-312
016 13 MATCHES
004-016 016-042 016-055 016-058 016-074 016-075 016-077 016-080
016-094 016-126 016-131 016-135 016-314
021 11 MATCHES
003-021 021-023 021-050 021-073 021-079 021-094 021-122 021-123
021-135 021-311 021-314
023 23 MATCHES
004-023 011-023 015-023 021-023 023-046 023-049 023-055 023-057
023-066 023-073 023-074 023-079 023-080 023-085 023-094 023-122
023-123 023-126 023-131 023-135 023-308 023-310 023-314
025 11 MATCHES
025-046 025-050 025-057 025-058 025-079 025-080 025-094 025-122
025-126 025-131 025-135
038 17 MATCHES
003-038 004-038 038-044 038-046 038-050 038-055 038-057 038-075
038-079 038-080 038-085 038-122 038-126 038-135 038-303 038-311
038-314
041 6 MATCHES
011-041 041-042 041-046 041-058 041-079 041-131
042 8 MATCHES
008-042 016-042 041-042 042-045 042-080 042-126 042-312 042-314
044 8 MATCHES
003-044 004-044 015-044 038-044 044-080 044-085 044-303 044-311
045 8 MATCHES
004-045 042-045 045-085 045-091 045-094 045-131 045-311 045-314
046 10 MATCHES
023-046 025-046 038-046 041-046 046-066 046-075 046-080 046-091
046-094 046-305

049 1 MATCH
023-049
050 16 MATCHES
003-050 015-050 021-050 025-050 038-050 050-051 050-066 050-074
050-085 050-091 050-094 050-121 050-122 050-134 050-303 050-314
051 7 MATCHES
004-051 011-051 050-051 051-073 051-074 051-126 051-135
055 14 MATCHES
016-055 023-055 038-055 055-073 055-075 055-079 055-091 055-094
055-131 055-134 055-135 055-305 055-311 055-312
057 10 MATCHES
004-057 023-057 025-057 038-057 057-066 057-079 057-080 057-091
057-131 057-303
058 10 MATCHES
011-058 016-058 025-058 041-058 058-079 058-085 058-091 058-122
058-126 058-311
066 14 MATCHES
003-066 007-066 011-066 023-066 046-066 050-066 057-066 066-075
066-085 066-121 066-131 066-135 066-303 066-311
070 1 MATCH
070-085
072 1 MATCH
011-072
073 17 MATCHES
004-073 011-073 015-073 021-073 023-073 051-073 055-073 073-074
073-080 073-084 073-091 073-094 073-122 073-129 073-131 073-135
073-312
074 15 MATCHES
004-074 015-074 016-074 023-074 050-074 051-074 073-074 074-075
074-085 074-094 074-122 074-129 074-303 074-305 074-314
075 14 MATCHES
003-075 015-075 016-075 038-075 046-075 055-075 066-075 074-075
075-079 075-094 075-122 075-303 075-311 075-314
077 2 MATCHES
011-077 016-077
079 20 MATCHES
011-079 021-079 023-079 025-079 038-079 041-079 055-079 057-079
058-079 075-079 079-080 079-084 079-085 079-094 079-122 079-131
079-135 079-310 079-311 079-312
080 18 MATCHES
011-080 016-080 023-080 025-080 038-080 042-080 044-080 046-080
057-080 073-080 079-080 080-085 080-089 080-091 080-121 080-122
080-126 080-311
084 7 MATCHES
073-084 079-084 084-085 084-131 084-134 084-308 084-314
085 24 MATCHES
008-085 015-085 023-085 038-085 044-085 045-085 050-085 058-085
066-085 070-085 074-085 079-085 080-085 084-085 085-091 085-126
085-129 085-131 085-134 085-135 085-308 085-310 085-312 085-314
089 3 MATCHES
011-089 080-089 089-091

091 17 MATCHES
004-091 015-091 045-091 046-091 050-091 055-091 057-091 058-091
073-091 080-091 085-091 089-091 091-092 091-121 091-123 091-303
091-311
092 6 MATCHES
004-092 011-092 015-092 091-092 092-122 092-311
094 22 MATCHES
003-094 004-094 011-094 015-094 016-094 021-094 023-094 025-094
045-094 046-094 050-094 055-094 073-094 074-094 075-094 079-094
094-122 094-123 094-126 094-305 094-311 094-314
121 7 MATCHES
003-121 004-121 015-121 050-121 066-121 080-121 091-121
122 19 MATCHES
004-122 015-122 021-122 023-122 025-122 038-122 050-122 058-122
073-122 074-122 075-122 079-122 080-122 092-122 094-122 122-135
122-303 122-308 122-312
123 6 MATCHES
015-123 021-123 023-123 091-123 094-123 123-303
126 17 MATCHES
011-126 016-126 023-126 025-126 038-126 042-126 051-126 058-126
080-126 085-126 094-126 126-131 126-135 126-303 126-308 126-311
126-312
129 4 MATCHES
011-129 073-129 074-129 085-129
131 18 MATCHES
004-131 011-131 016-131 023-131 025-131 041-131 045-131 055-131
057-131 066-131 073-131 079-131 084-131 085-131 126-131 131-308
131-311 131-314
134 6 MATCHES
050-134 055-134 084-134 085-134 134-303 134-311
135 16 MATCHES
011-135 016-135 021-135 023-135 025-135 038-135 051-135 055-135
066-135 073-135 079-135 085-135 122-135 126-135 135-303 135-314
303 17 MATCHES
008-303 011-303 015-303 038-303 044-303 050-303 057-303 066-303
074-303 075-303 091-303 122-303 123-303 126-303 134-303 135-303
303-314
305 4 MATCHES
046-305 055-305 074-305 094-305
308 8 MATCHES
011-308 023-308 084-308 085-308 122-308 126-308 131-308 308-314
310 7 MATCHES
011-310 023-310 079-310 085-310 310-311 310-312 310-31
311 19 MATCHES
004-311 008-311 021-311 038-311 044-311 045-311 055-311 058-311
066-311 075-311 079-311 080-311 091-311 092-311 094-311 126-311
131-311 134-311 310-311
312 11 MATCHES
004-312 015-312 042-312 055-312 073-312 079-312 085-312 122-312
126-312 310-312 312-314

314 19 MATCHES
011-314 016-314 021-314 023-314 038-314 042-314 045-314 050-314
074-314 075-314 084-314 085-314 094-314 131-314 135-314 303-314
308-314 310-314 312-314

The "extreme" matrix consists of 52 subjects, with pairs of subjects matched on at least one extreme trait and no intermediate traits. Each subject has at least one pair matched on one or more extreme traits.

Note. Table 11a is analogous to Table 3, the Subjects x Subjects Extreme Matrix (Construct Overlap Matrix/Number of Shared Traits). However, it does not list construct overlap scores or number of shared traits. Rather, it lists the number of matches for each subject (number of pairs matched on one or more extreme traits and no intermediate traits) and the actual matched pairs.

Table 11b
"Extreme" Matrix
for 44 Subjects with Pairs Matched on One Trait

003 1 MATCH
003-038
004 2 MATCHES
004-011 004-051
008 2 MATCHES
008-085 008-303
011 3 MATCHES
004-011 011-092 011-303
015 4 MATCHES
015-023 015-075 015-123 015-312
016 3 MATCHES
016-058 016-080 016-135
021 1 MATCH
021-123
023 3 MATCHES
015-023 023-057 023-123
025 5 MATCHES
025-057 025-080 025-126 025-131 025-135
038 4 MATCHES
003-038 038-075 038-080 038-314
042 1 MATCH
042-045
045 3 MATCHES
042-045 045-091 045-131
046 3 MATCHES
046-066 046-080 046-305
050 3 MATCHES
050-051 050-121 050-314
051 3 MATCHES
004-051 050-051 051-135
055 3 MATCHES
055-134 055-305 055-311
057 3 MATCHES
023-057 025-057 057-303
058 3 MATCHES
016-058 058-122 058-311
066 2 MATCHES
046-066 066-075
073 2 MATCHES
073-091 073-129
074 4 MATCHES
074-075 074-085 074-129 074-303
075 5 MATCHES
015-075 038-075 066-075 074-075 075-122
080 6 MATCHES
016-080 025-080 038-080 046-080 080-089 080-126

084 2 MATCHES
084-134 084-314
085 3 MATCHES
008-085 074-085 085-314
089 2 MATCHES
080-089 089-091
091 6 MATCHES
045-091 073-091 089-091 091-092 091-121 091-123
092 2 MATCHES
011-092 091-092
094 1 MATCH
094-311
121 2 MATCHES
050-121 091-121
122 3 MATCHES
058-122 075-122 122-135
123 4 MATCHES
015-123 021-123 023-123 091-123
126 2 MATCHES
025-126 080-126
129 2 MATCHES
073-129 074-129
131 4 MATCHES
025-131 045-131 131-308 131-311
134 3 MATCHES
055-134 084-134 134-311
135 5 MATCHES
016-135 025-135 051-135 122-135 135-314
303 4 MATCHES
008-303 011-303 057-303 074-303
305 2 MATCHES
046-305 055-305
308 2 MATCHES
131-308 308-314
310 1 MATCH
310-312
311 5 MATCHES
055-311 058-311 094-311 131-311 134-311
312 2 MATCHES
015-312 310-312
314 6 MATCHES
038-314 050-314 084-314 085-314 135-314 308-314

Table 11c

"Extreme" Matrix
for 44 Subjects with Pairs Matched on Two or more Traits

003 7 MATCHES
003-015 003-021 003-050 003-066 003-075 003-094 003-121
004 16 MATCHES
004-015 004-016 004-023 004-038 004-045 004-057 004-073 004-074
004-091 004-092 004-094 004-121 004-122 004-131 004-311 004-312
008 3 MATCHES
008-015 008-042 008-311
011 15 MATCHES
011-023 011-051 011-058 011-066 011-073 011-080 011-089 011-094
011-126 011-129 011 131 011-135 011-308 011-310 011-314
015 13 MATCHES
003-015 004-015 008-015 015-050 015-073 015-074 015-085 015-091
015-092 015-094 015-121 015-122 015-303
016 9 MATCHES
004-016 016-042 016-055 016-074 016-075 016-094 016-126 016-131
016-314
021 9 MATCHES
003-021 021-023 021-050 021-073 021-094 021-122 021-135 021-311
021-314
023 18 MATCHES
004-023 011-023 021-023 023-046 023-055 023-066 023-073 023-074
023-080 023-085 023-094 023-122 023-126 023-131 023-135 023-308
023-310 023-314
025 5 MATCHES
025-046 025-050 025-058 025-094 025-122
038 11 MATCHES
004-038 038-046 038-050 038-055 038-057 038-085 038-122 038-126
038-135 038-303 038-311
042 6 MATCHES
008-042 016-042 042-080 042-126 042-312 042-314
045 5 MATCHES
004-045 045-085 045-094 045-311 045-314
046 6 MATCHES
023-046 025-046 038-046 046-075 046-091 046-094
050 13 MATCHES
003-050 015-050 021-050 025-050 038-050 050-066 050-074 050-085
050-091 050-094 050-122 050-134 050-303
051 4 MATCHES
011-051 051-073 051-074 051-126
055 10 MATCHES
016-055 023-055 038-055 055-073 055-075 055-091 055-094 055-131
055-135 055-312
057 6 MATCHES
004-057 038-057 057-066 057-080 057-091 057-131

058 5 MATCHES
011-058 025-058 058-085 058-091 058-126
066 11 MATCHES
003-066 011-066 023-066 050-066 057-066 066-085 066-121 066-131
066-135 066-303 066-311
073 15 MATCHES
004-073 011-073 015-073 021-073 023-073 051-073 055-073 073-074
073-080 073-084 073-094 073-122 073-131 073-135 073-312
074 11 MATCHES
004-074 015-074 016-074 023-074 050-074 051-074 073-074 074-094
074-122 074-305 074-314
075 8 MATCHES
003-075 016-075 046-075 055-075 075-094 075-303 075-311 075-314
080 10 MATCHES
011-080 023-080 042-080 057-080 073-080 080-085 080-091 080-121
080-122 080-311
084 4 MATCHES
073-084 084-085 084-131 084-308
085 18 MATCHES
015-085 023-085 038-085 045-085 050-085 058-085 066-085 080-085
084-085 085-091 085-126 085-129 085-131 085-134 085-135 085-308
085-310 085-312
089 1 MATCH
011-089
091 11 MATCHES
004-091 015-091 046-091 050-091 055-091 057-091 058-091 080-091
085-091 091-303 091-311
092 4 MATCHES
004-092 015-092 092-122 092-311
094 20 MATCHES
003-094 004-094 011-094 015-094 016-094 021-094 023-094 025-094
045-094 046-094 050-094 055-094 073-094 074-094 075-094 094-122
094-123 094-126 094-305 094-314
121 5 MATCHES
003-121 004-121 015-121 066-121 080-121
122 15 MATCHES
004-122 015-122 021-122 023-122 025-122 038-122 050-122 073-122
074-122 080-122 092-122 094-122 122-303 122-308 122-312
123 2 MATCHES
094-123 123-303
126 15 MATCHES
011-126 016-126 023-126 038-126 042-126 051-126 058-126 085-126
094-126 126-131 126-135 126-303 126-308 126-311 126-312
129 2 MATCHES
011-129 085-129
131 12 MATCHES
004-131 011-131 016-131 023-131 055-131 057-131 066-131 073-131
084-131 085-131 126-131 131-314
134 3 MATCHES
050-134 085-134 134-303

135 10 MATCHES
011-135 021-135 023-135 038-135 055-135 066-135 073-135 085-135
126-135 135-303
303 12 MATCHES
015-303 038-303 050-303 066-303 075-303 091-303 122-303 123-303
126-303 134-303 135-303 303-314
305 2 MATCHES
074-305 094-305
308 6 MATCHES
011-308 023-308 084-308 085-308 122-308 126-308
310 5 MATCHES
011-310 023-310 085-310 310-311 310-31
311 12 MATCHES
004-311 008-311 021-311 038-311 045-311 066-311 075-311 080-311
091-311 092-311 126-311 310-311
312 8 MATCHES
004-312 042-312 055-312 073-312 085-312 122-312 126-312 312-314
314 13 MATCHES
011-314 016-314 021-314 023-314 042-314 045-314 074-314 075-314
094-314 131-314 303-314 310-314 312-314

Table 12a

"Intermediate" Matrix

003 4 MATCHES
003-007 003-049 003-129 003-312
004 4 MATCHES
004-008 004-046 004-070 004-310
007 29 MATCHES
003-007 007-008 007-015 007-016 007-021 007-025 007-044 007-045
007-046 007-049 007-050 007-055 007-057 007-058 007-070 007-072
007-074 007-075 007-080 007-084 007-091 007-092 007-121 007-123
007-134 007-135 007-303 007-305 007-310
008 18 MATCHES
004-008 007-008 008-044 008-045 008-050 008-055 008-058 008-070
008-072 008-079 008-084 008-089 008-123 008-129 008-135 008-305
008-312 008-314
011 1 MATCH
011-025
015 5 MATCHES
007-015 015-046 015-055 015-129 015-310
016 9 MATCHES
007-016 016-025 016-038 016-051 016-070 016-089 016-121 016-134
016-308
021 8 MATCHES
007-021 021-049 021-070 021-072 021-077 021-121 021-129 021-134
023 1 MATCH
023-070
025 13 MATCHES
007-025 011-025 016-025 025-049 025-051 025-070 025-072 025-074
025-084 025-129 025-305 025-308 025-310
038 7 MATCHES
016-038 038-049 038-070 038-072 038-305 038-308 038-310
041 6 MATCHES
041-057 041-077 041-084 041-089 041-092 041-121
042 9 MATCHES
042-051 042-070 042-072 042-089 042-121 042-129 042-131 042-135
042-308
044 12 MATCHES
007-044 008-044 044-045 044-049 044-070 044-073 044-074 044-077
044-084 044-089 044-123 044-126
045 11 MATCHES
007-045 008-045 044-045 045-049 045-077 045-084 045-121 045-123
045-126 045-129 045-134
046 12 MATCHES
004-046 007-046 015-046 046-049 046-070 046-072 046-077 046-089
046-123 046-126 046-135 046-308

049 27 MATCHES
003-049 007-049 021-049 025-049 038-049 044-049 045-049 046-049
049-051 049-057 049-066 049-070 049-072 049-075 049-080 049-085
049-089 049-091 049-121 049-123 049-134 049-303 049-305 049-308
049-310 049-311 049-312
050 5 MATCHES
007-050 008-050 050-070 050-077 050-084
051 11 MATCHES
016-051 025-051 042-051 049-051 051-058 051-072 051-084 051-092
051-131 051-134 051-310
055 7 MATCHES
007-055 008-055 015-055 055-057 055-072 055-077 055-084
057 12 MATCHES
007-057 041-057 049-057 055-057 057-058 057-070 057-072 057-074
057-077 057-123 057-129 057-314
058 13 MATCHES
007-058 008-058 051-058 057-058 058-070 058-072 058-077 058-084
058-121 058-123 058-305 058-308 058-312
066 3 MATCHES
049-066 066-123 066-314
070 36 MATCHES
004-070 007-070 008-070 016-070 021-070 023-070 025-070 038-070
042-070 044-070 046-070 049-070 050-070 057-070 058-070 070-072
070-073 070-075 070-077 070-079 070-080 070-084 070-089 070-091
070-092 070-094 070-121 070-123 070-126 070-131 070-134 070-135
070-303 070-305 070-310 070-312
072 24 MATCHES
007-072 008-072 021-072 025-072 038-072 042-072 046-072 049-072
051-072 055-072 057-072 058-072 070-072 072-075 072-077 072-091
072-121 072-122 072-126 072-129 072-134 072-303 072-305 072-308
073 2 MATCHES
044-073 070-073
074 8 MATCHES
007-074 025-074 044-074 057-074 074-084 074-089 074-135 074-310
075 6 MATCHES
007-075 049-075 070-075 072-075 075-134 075-308
077 17 MATCHES
021-077 041-077 044-077 045-077 046-077 050-077 055-077 057-077
058-077 070-077 072-077 077-079 077-084 077-121 077-134 077-310
077-312
079 5 MATCHES
008-079 070-079 077-079 079-089 079-123
080 5 MATCHES
007-080 049-080 070-080 080-129 080-134
084 14 MATCHES
007-084 008-084 025-084 041-084 044-084 045-084 050-084 051-084
055-084 058-084 070-084 074-084 077-084 084-092
085 2 MATCHES
049-085 085-123

089 15 MATCHES
008-089 016-089 041-089 042-089 044-089 046-089 049-089 070-089
074-089 079-089 089-092 089-121 089-123 089-134 089-303
091 6 MATCHES
007-091 049-091 070-091 072-091 091-305 091-308
092 9 MATCHES
007-092 041-092 051-092 070-092 084-092 089-092 092-135 092-308
092-310
094 3 MATCHES
070-094 094-134 094-308
121 13 MATCHES
007-121 016-121 021-121 041-121 042-121 045-121 049-121 058-121
070-121 072-121 077-121 089-121 121-135
122 1 MATCH
072-122
123 18 MATCHES
007-123 008-123 044-123 045-123 046-123 049-123 057-123 058-123
066-123 070-123 079-123 085-123 089-123 123-129 123-134 123-308
123-311 123-312
126 5 MATCHES
044-126 045-126 046-126 070-126 072-126
129 15 MATCHES
003-129 008-129 015-129 021-129 025-129 042-129 045-129 057-129
072-129 080-129 123-129 129-134 129-303 129-305 129-312
131 3 MATCHES
042-131 051-131 070-131
134 19 MATCHES
007-134 016-134 021-134 045-134 049-134 051-134 070-134 072-134
075-134 077-134 080-134 089-134 094-134 123-134 129-134 134-305
134-308 134-310 134-312
135 8 MATCHES
007-135 008-135 042-135 046-135 070-135 074-135 092-135 121-135
303 6 MATCHES
007-303 049-303 070-303 072-303 089-303 129-303
305 11 MATCHES
007-305 008-305 025-305 038-305 049-305 058-305 070-305 072-305
091-305 129-305 134-305
308 14 MATCHES
016-308 025-308 038-308 042-308 046-308 049-308 058-308 072-308
075-308 091-308 092-308 094-308 123-308 134-308
310 12 MATCHES
004-310 007-310 015-310 025-310 038-310 049-310 051-310 070-310
074-310 077-310 092-310 134-310
311 2 MATCHES
049-311 123-311
312 9 MATCHES
003-312 008-312 049-312 058-312 070-312 077-312 123-312 129-312
134-312
314 3 MATCHES
008-314 057-314 066-314

The "intermediate" matrix consists of 52 subjects, with pairs of subjects matched on at least one intermediate trait and no extreme traits. Each subject has at least one pair matched on one or more intermediate traits.

Note. Table 12a is analogous to Table 4, the Subjects x Subjects Intermediate Matrix (Construct Overlap Matrix/Number of Shared Traits). However, it does not list construct overlap scores or number of shared traits. Rather, it lists the number of matches for each subject (number of pairs matched on one or more intermediate traits and no extreme traits) and the actual matched pairs.

Table 12b

"Intermediate" Matrix
for 39 Subjects with Pairs Matched on One Trait

004 3 MATCHES
004-008 004-046 004-310
007 11 MATCHES
007-008 007-016 007-044 007-050 007-055 007-072 007-091 007-092
007-135 007-303 007-310
008 12 MATCHES
004-008 007-008 008-044 008-050 008-055 008-072 008-079 008-089
008-129 008-135 008-305 008-312
016 8 MATCHES
007-016 016-025 016-038 016-070 016-089 016-121 016-134 016-308
021 4 MATCHES
021-072 021-077 021-129 021-134
025 3 MATCHES
016-025 025-129 025-310
038 4 MATCHES
016-038 038-072 038-305 038-308
042 5 MATCHES
042-072 042-089 042-121 042-129 042-135
044 9 MATCHES
007-044 008-044 044-049 044-070 044-074 044-077 044-089 044-123
044-126
045 1 MATCH
045-129
046 5 MATCHES
004-046 046-049 046-072 046-089 046-135
049 6 MATCHES
044-049 046-049 049-075 049-089 049-310 049-312
050 3 MATCHES
007-050 008-050 050-077
051 2 MATCHES
051-092 051-310
055 4 MATCHES
007-055 008-055 055-057 055-077
057 5 MATCHES
055-057 057-058 057-072 057-074 057-129
058 5 MATCHES
057-058 058-072 058-123 058-305 058-308
070 7 MATCHES
016-070 044-070 070-072 070-075 070-091 070-303 070-312
072 13 MATCHES
007-072 008-072 021-072 038-072 042-072 046-072 057-072 058-072
070-072 072-075 072-077 072-126 072-303
074 5 MATCHES
044-074 057-074 074-089 074-135 074-310

075 5 MATCHES
049-075 070-075 072-075 075-134 075-308
077 7 MATCHES
021-077 044-077 050-077 055-077 072-077 077-310 077-312
079 2 MATCHES
008-079 079-089
080 1 MATCH
080-134
089 10 MATCHES
008-089 016-089 042-089 044-089 046-089 049-089 074-089 079-089
089-134 089-303
091 2 MATCHES
007-091 070-091
092 4 MATCHES
007-092 051-092 092-135 092-308
094 2 MATCHES
094-134 094-308
121 3 MATCHES
016-121 042-121 121-135
123 4 MATCHES
044-123 058-123 123-308 123-312
126 2 MATCHES
044-126 072-126
129 8 MATCHES
008-129 021-129 025-129 042-129 045-129 057-129 129-305 129-312
134 7 MATCHES
016-134 021-134 075-134 080-134 089-134 094-134 134-312
135 7 MATCHES
007-135 008-135 042-135 046-135 074-135 092-135 121-135
303 4 MATCHES
007-303 070-303 072-303 089-303
305 4 MATCHES
008-305 038-305 058-305 129-305
308 7 MATCHES
016-308 038-308 058-308 075-308 092-308 094-308 123-308
310 7 MATCHES
004-310 007-310 025-310 049-310 051-310 074-310 077-310
312 7 MATCHES
008-312 049-312 070-312 077-312 123-312 129-312 134-312

Table 12c

"Intermediate" Matrix
for 39 Subjects with Pairs Matched on Two or more Traits

004 1 MATCH
004-070
007 15 MATCHES
007-021 007-025 007-045 007-046 007-049 007-057 007-058 007-070
007-074 007-075 007-080 007-121 007-123 007-134 007-305
008 4 MATCHES
008-045 008-058 008-070 008-123
016 1 MATCH
016-051
021 4 MATCHES
007-021 021-049 021-070 021-121
025 8 MATCHES
007-025 025-049 025-051 025-070 025-072 025-074 025-305 025-308
038 3 MATCHES
038-049 038-070 038-310
042 3 MATCHES
042-051 042-070 042-308
044 1 MATCH
044-045
045 9 MATCHES
007-045 008-045 044-045 045-049 045-077 045-121 045-123 045-126
045-134
046 6 MATCHES
007-046 046-070 046-077 046-123 046-126 046-308
049 17 MATCHES
007-049 021-049 025-049 038-049 045-049 049-051 049-057 049-070
049-072 049-080 049-091 049-121 049-123 049-134 049-303 049-305
049-308
050 1 MATCH
050-070
051 7 MATCHES
016-051 025-051 042-051 049-051 051-058 051-072 051-134
055 1 MATCH
055-072
057 5 MATCHES
007-057 049-057 057-070 057-077 057-123
058 7 MATCHES
007-058 008-058 051-058 058-070 058-077 058-121 058-312
070 25 MATCHES
004-070 007-070 008-070 021-070 025-070 038-070 042-070 046-070
049-070 050-070 057-070 058-070 070-077 070-079 070-080 070-089
070-092 070-094 070-121 070-123 070-126 070-134 070-135 070-305
070-310
072 10 MATCHES
025-072 049-072 051-072 055-072 072-091 072-121 072-129 072-134
072-305 072-308

074 2 MATCHES
007-074 025-074
075 1 MATCH
007-075
077 8 MATCHES
045-077 046-077 057-077 058-077 070-077 077-079 077-121 077-134
079 3 MATCHES
070-079 077-079 079-123
080 4 MATCHES
007-080 049-080 070-080 080-129
089 4 MATCHES
070-089 089-092 089-121 089-123
091 4 MATCHES
049-091 072-091 091-305 091-308
092 3 MATCHES
070-092 089-092 092-310
094 1 MATCH
070-094
121 9 MATCHES
007-121 021-121 045-121 049-121 058-121 070-121 072-121 077-121
089-121
123 11 MATCHES
007-123 008-123 045-123 046-123 049-123 057-123 070-123 079-123
089-123 123-129 123-134
126 3 MATCHES
045-126 046-126 070-126
129 5 MATCHES
072-129 080-129 123-129 129-134 129-303
134 12 MATCHES
007-134 045-134 049-134 051-134 070-134 072-134 077-134 123-134
129-134 134-305 134-308 134-310
135 1 MATCH
070-135
303 2 MATCHES
049-303 129-303
305 7 MATCHES
007-305 025-305 049-305 070-305 072-305 091-305 134-305
308 7 MATCHES
025-308 042-308 046-308 049-308 072-308 091-308 134-308
310 4 MATCHES
038-310 070-310 092-310 134-310

Table 13

Two Subsets of the 52 Subjects in the Study

	Extreme		Intermediate	
	1	2	1	2
Subject				
004	S	S	S	S
008	S	S	S	S
016	S	S	S	S
021	S	S	S	S
025	S	S	S	S
038	S	S	S	S
042	S	S	S	S
045	S	S	S	S
046	S	S	S	S
050	S	S	S	S
051	S	S	S	S
055	S	S	S	S
057	S	S	S	S
058	S	S	S	S
074	S	S	S	S
075	S	S	S	S
080	S	S	S	S
089	S	S	S	S
091	S	S	S	S
092	S	S	S	S
094	S	S	S	S
121	S	S	S	S
123	S	S	S	S
126	S	S	S	S
129	S	S	S	S
134	S	S	S	S
135	S	S	S	S
303	S	S	S	S
305	S	S	S	S
308	S	S	S	S
310	S	S	S	S
312	S	S	S	S
003	S	S	-	-
007	-	-	S	S
011	S	S	-	-
015	S	S	-	-
023	S	S	-	-
041	-	-	-	-

044	-	-	S	S
049	-	-	S	S
066	S	S	-	-
070	-	-	S	S
072	-	-	S	S
073	S	S	-	-
077	-	-	S	S
079	-	-	S	S
084	S	S	-	-
085	S	S	-	-
122	S	S	-	-
131	S	S	-	-
311	S	S	-	-
314	S	S	-	-

Note. Two subsets of the 52 subjects in the study were obtained. The first subset included 44 subjects matched on 1 versus 2 or more extreme traits. The second subset included 39 subjects matched on 1 versus 2 or more intermediate traits. S indicates that a subject has a score for a given condition whereas - indicates that there is no score for the condition. The four conditions are Extreme 1, Extreme 2, Intermediate 1, Intermediate 2. When the subset of 44 subjects matched on 1 versus 2 or more extreme traits was combined with the subset of 39 subjects matched on 1 versus 2 or more intermediate traits, 32 subjects remained in the new subset prior to elimination of any pairs matched with subjects eliminated from the sample. After these pairs were also eliminated from the new subset, the N of the new subset was reduced to zero. This procedure was iterative. As subjects were eliminated, more pairs were eliminated. As more pairs were eliminated, more subjects were eliminated, etcetera until the N was reduced to zero.

Table 14

Grand Mean D scores for "Extreme" and "Intermediate" Matrices

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
EXTREME	52	7.69	.71	.10
INTERMEDIATE	52	7.52	1.07	.15

$t(51) = 1.41$, ns.

Table 15

The Number of Constructs and Movies Generated

by 52 Subjects

Subject ID	Total Number of Constructs Generated	Total Number of Movies Generated
003	47	20
004	36	13
007	25	15
008	33	6
011	61	19
015	49	15
016	56	15
021	38	15
023	50	15
025	48	15
038	51	15
041	28	15
042	49	16
044	35	16
045	35	18
046	45	15
049	30	16
050	48	15
051	36	15
055	38	15
057	46	17
058	57	13
066	28	15
070	50	15
072	42	15
073	57	11
074	37	14
075	31	11
077	24	15
079	36	15
080	45	16
084	35	15
085	43	17
089	47	17
091	47	7
092	38	15
094	60	17

121	41	13
122	42	15
123	46	12
126	30	15
129	47	14
131	41	11
134	38	6
135	41	3
303	43	15
305	43	15
308	34	15
310	49	15
311	38	16
312	39	15
314	41	16

Mean number of constructs generated for 52 subjects = 41.81 (SD = 9).

Mean number of movies generated for 52 subjects = 14.33 (SD = 3).

Table 16b

Mean Construct Overlap Scores
for 52 Subjects with Pairs Matched on Extreme or Intermediate PRF Scores

ID	EXTREME	INTERMEDIATE
003	15.22	12.25
004	11.05	11.25
007	2.00	8.17
008	10.60	11.00
011	14.55	21.00
015	13.72	13.20
016	13.00	13.00
021	12.55	12.13
023	15.61	22.00
025	15.18	13.08
038	12.12	14.14
041	9.83	8.33
042	12.13	12.33
044	12.75	10.58
045	10.00	9.91
046	14.00	12.00
049	18.00	10.04
050	13.69	13.20
051	11.14	10.45
055	9.29	8.86
057	13.80	12.50
058	13.50	13.54
066	7.93	11.00
070	10.00	16.06
072	16.00	12.25
073	13.94	15.50
074	10.40	9.00
075	9.14	10.50
077	9.00	9.71
079	10.15	9.60
080	12.06	13.00
084	11.71	11.14
085	10.54	10.00
089	15.00	12.00
091	12.18	10.67
092	9.50	7.00
094	16.50	16.33

121	11.14	12.00
122	13.00	12.00
123	12.83	12.06
126	8.94	9.00
129	11.00	13.07
131	9.94	11.33
134	13.17	14.42
135	9.31	9.50
303	11.06	11.17
305	15.00	13.64
308	10.50	10.86
310	12.57	14.17
311	7.53	4.50
312	9.91	12.00
314	12.21	12.33
Total Means	615.89	618.77
Grand Means	11.84	11.90

Table 17b

Mean Movie Overlap Scores
for 52 Subjects with Pairs Matched on Extreme or Intermediate PRF Scores

ID	EXTREME	INTERMEDIATE
003	2.22	1.75
004	1.58	2.00
007	1.00	1.28
008	1.60	1.17
011	2.32	2.00
015	.17	.20
016	.77	.89
021	2.36	2.63
023	1.87	2.00
025	.82	1.00
038	1.65	2.14
041	2.33	1.67
042	2.50	2.22
044	1.25	.75
045	2.75	1.73
046	2.30	1.83
049	1.00	.96
050	2.25	2.20
051	1.29	1.09
055	1.79	1.43
057	.20	.75
058	1.10	.85
066	1.79	1.67
070	2.00	1.33
072	4.00	2.21
073	.82	1.50
074	2.13	.88
075	.93	.50
077	1.00	1.53
079	.60	.40
080	.44	.60
084	.71	.79
085	1.21	1.00
089	.67	.60
091	.35	.67
092	.67	1.22

094	2.14	1.67
121	.00	1.08
122	1.05	2.00
123	.17	.22
126	.76	.60
129	3.25	1.80
131	1.22	1.67
134	1.50	.84
135	.06	.13
303	.88	.67
305	3.50	2.55
308	1.88	1.50
310	1.71	.67
311	1.63	1.50
312	1.18	.44
314	1.89	2.00
Total Means	75.26	66.78
Grand Means	1.45	1.28

Table 18a

Grand Mean D Scores
for 44 Subjects with Pairs Matched on One Extreme Trait
or Two or more Extreme Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme 1	44	8.26	1.27	0.19
Extreme 2	44	7.58	0.74	0.11

$t(43) = 4.06$, $p < .01$.

Table 18b

Mean D Scores
for 44 Subjects with Pairs Matched on One Extreme Trait
or Two or more Extreme Traits

ID	EXTREME 1	EXTREME 2
003	7.16	7.12
004	9.17	7.84
008	7.48	5.79
011	11.42	8.14
015	9.44	7.74
016	8.15	7.09
021	6.56	8.86
023	10.65	8.56
025	7.56	6.84
038	8.63	8.56
042	5.78	6.84
045	7.46	7.28
046	7.21	6.61
050	7.95	7.81
051	6.56	8.11
055	9.52	8.45
057	9.74	7.85
058	8.62	7.62
066	8.35	8.05
073	9.79	8.39
074	8.11	7.82
075	8.63	7.60
080	8.28	8.10
084	7.65	5.61
085	9.43	7.91
089	6.84	7.92
091	8.08	7.98
092	9.85	7.78
094	10.05	7.79
121	7.41	6.78
122	9.24	8.91
123	7.55	6.16
126	9.00	8.37
129	7.32	7.49
131	7.98	7.47
134	8.17	7.38

135	7.45	7.83
303	9.57	7.88
305	6.17	6.39
308	7.77	7.39
310	5.72	6.89
311	9.53	7.70
312	7.67	7.58
314	8.79	7.25
Total Means	363.46	333.53
Grand Means	8.26	7.58

Table 19a

Grand Mean D Scores
for 39 Subjects with Pairs Matched on One Intermediate Trait
or Two or more Intermediate Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Interm 1	39	7.42	1.02	0.16
Interm 2	39	6.90	0.95	0.15

$t(38) = 3.37$, $p < .005$.

Table 19b

Mean D Scores
for 39 Subjects with Pairs Matched on One Intermediate Trait
or Two or more Intermediate Traits

ID	INTERMEDIATE 1	INTERMEDIATE 2
004	7.74	7.18
007	6.14	5.57
008	6.86	6.05
016	7.93	8.66
021	7.72	7.32
025	7.10	6.22
038	9.18	8.22
042	6.02	6.45
044	8.35	8.20
045	7.63	6.55
046	6.76	6.76
049	6.41	6.16
050	7.36	6.07
051	6.41	7.00
055	8.67	7.36
057	9.66	8.01
058	7.21	7.22
070	5.70	5.47
072	6.05	5.78
074	9.32	7.36
075	7.03	6.59
077	6.39	6.22
079	7.73	8.50
080	9.04	6.68
089	6.96	6.37
091	6.36	7.73
092	7.89	7.57
094	8.57	6.22
121	7.10	6.03
123	7.24	6.64
126	8.52	8.39
129	6.75	6.42
134	8.47	6.74
135	7.43	4.91
303	7.43	7.52
305	6.48	5.59
308	8.42	7.84

310	6.23	7.14
312	6.99	8.47
Total Means	289.25	269.18
Grand Means	7.42	6.90

Table 20b

Mean Construct Overlap Scores
for 44 Subjects with Pairs Matched on One Extreme Trait
or Two or more Extreme Traits

ID	EXTREME 1	EXTREME 2
003	18.00	15.14
004	11.00	11.06
008	8.50	12.00
011	11.33	15.87
015	13.75	13.46
016	12.33	13.78
021	8.00	13.56
023	15.67	15.61
025	13.60	17.20
038	13.75	10.91
042	9.00	13.00
045	10.00	10.00
046	12.33	15.67
050	11.67	14.15
051	9.00	12.75
055	11.67	8.70
057	16.67	12.67
058	10.00	15.60
066	8.50	8.36
073	17.00	13.53
074	8.25	11.18
075	8.20	10.00
080	12.17	12.30
084	13.50	10.75
085	8.33	11.00
089	14.50	16.00
091	11.83	12.36
092	11.00	8.75
094	7.00	17.20
121	9.50	11.80
122	11.33	13.53
123	12.00	14.50
126	10.00	8.80
129	12.00	10.00
131	8.75	10.50
134	12.00	14.33
135	10.40	8.60
303	11.00	10.92

305	13.50	16.50
308	10.00	10.67
310	7.00	14.80
311	8.00	7.50
312	11.50	10.00
314	11.33	12.62
Total Means	494.86	547.63
Grand Means	11.25	12.45

Table 21b

Mean Movie Overlap Scores
for 44 Subjects with Pairs Matched on One Extreme Trait
or Two or more Extreme Traits

ID	EXTREME 1	EXTREME 2
003	4.00	2.00
004	2.50	1.50
008	.50	2.33
011	2.00	2.27
015	.25	.15
016	.33	1.00
021	0.00	2.67
023	0.00	2.22
025	.40	1.40
038	2.25	1.55
042	4.00	2.00
045	3.00	2.60
046	3.00	1.83
050	2.00	2.31
051	2.33	.50
055	2.33	1.70
057	0.00	.33
058	1.33	1.40
066	2.00	1.82
073	.50	.87
074	3.50	1.64
075	1.00	1.00
080	.50	.40
084	1.00	.50
085	2.33	.89
089	0.00	2.00
091	.17	.45
092	.50	.75
094	2.00	2.25
121	0.00	0.00
122	1.33	1.00
123	0.00	.50
126	.50	.80
129	3.00	3.50
131	2.00	1.08
134	2.33	.67
135	0.00	.10

303	1.25	.75
305	3.50	3.50
308	2.00	1.83
310	2.00	2.00
311	2.40	1.50
312	1.50	1.25
314	2.00	1.85
Total Means	67.53	62.66
Grand Means	1.53	1.42

Table 22b

Mean Construct Overlap Scores
for 39 Subjects with Pairs Matched
on One Intermediate Trait
or Two or more Intermediate Traits

ID	INTERMEDIATE 1	INTERMEDIATE 2
004	10.67	13.00
007	7.82	7.93
008	10.50	12.00
016	13.13	12.00
021	13.25	11.00
025	16.00	11.25
038	14.75	13.33
042	11.60	14.67
044	10.33	9.00
045	10.00	9.44
046	11.00	12.33
049	10.67	10.29
050	11.33	19.00
051	8.50	11.57
055	8.50	11.00
057	13.80	12.20
058	15.80	12.14
070	15.71	15.84
072	12.31	12.20
074	10.00	7.00
075	11.00	8.00
077	9.71	10.25
079	8.00	10.67
080	13.00	13.00
089	11.70	14.00
091	11.50	10.25
092	4.75	9.00
094	14.00	21.00
121	12.67	12.00
123	14.00	12.00
126	8.50	9.33
129	12.88	12.80
134	14.00	14.67
135	9.14	12.00
303	11.50	10.50
305	14.75	13.00

308	9.43	12.29
310	12.86	15.00
312	11.71	13.00
Total Means	450.77	469.95
Grand Means	11.56	12.05

Table 23b

Mean Movie Overlap Scores
for 39 Subjects with Pairs Matched
on One Intermediate Trait
or Two or more Intermediate Traits

ID	INTERMEDIATE 1	INTERMEDIATE 2
004	2.00	2.00
007	1.18	1.27
008	1.25	1.00
016	.75	2.00
021	3.00	2.25
025	.67	1.00
038	2.50	1.67
042	2.00	2.67
044	.78	1.00
045	3.00	1.67
046	2.40	1.67
049	.50	.88
050	2.33	4.00
051	1.00	1.14
055	1.25	2.00
057	1.00	.40
058	.80	.86
070	1.00	1.36
072	2.31	2.10
074	1.00	1.00
075	.60	0.00
077	1.71	1.50
079	0.00	.67
080	0.00	.75
089	.60	.25
091	1.50	.25
092	1.50	.67
094	1.00	3.00
121	1.00	1.00
123	0.00	.27
126	.50	.67
129	2.00	1.80
134	.29	1.17
135	.14	0.00
303	.25	1.50

305	2.25	2.71
308	1.43	1.57
310	.43	1.25
312	.57	0.00
Total Means	46.49	50.97
Grand Means	1.19	1.31

Table 24

Grand Mean Consistency Scores

for Extreme and Intermediate Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme	52	4.78	1.98	0.28
Intermediate	52	6.63	2.82	0.39

$t(51) = -.6.82$, $p < .001$.

Table 25

Grand Mean Importance Scores

for Extreme and Intermediate Traits

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
Extreme	52	6.12	1.38	0.19
Intermediate	52	5.98	1.60	0.22

$t(51) = 0.53$, ns.

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