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Neurotic Styles and the Five Factor Model of Personality

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Abstract ~ This study investigates the relationship between David Shapiro's (1965) concept of neurotic styles (a categorical model) and the five-factor model of personality (a dimensional model). Although the neurotic styles are often thought of as being discrete categories, Shapiro's description of these categories can be interpreted as being organized along a dimension called mode of cognition, with diffuseness at one end and rigidity at the other. Shapiro's description of diffuseness and rigidity parallels certain facet scales that make up the Openness to Experience and Conscientiousness domain scales of the five-factor model. Therefore, a traditional categorical model and the modern dimensional model may be integratable. To test this pos-

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sibility, three scales were used: the NEO Personality Inventory (NEO-PI-R; Costa and McCrae, 1992), the Clinical Multiaxial-Inventory (MCMI-III; Millon's, 1997) and a new scale constructed for this study called the Cognitive Diffuseness Questionnaire (CDQ). The results provide mixed support for the current model in the context of the five-factor model. This study provides limited support for the existence of a single continuum with diffuseness on one end and rigidity on another. Instead, diffuseness and rigidity appear to best be described as two separate continua.

Introduction

The Diagnostic and Statistical Manual of the American Psychiatric Association (DSM III, 1980; DSM-IV, 1994) is based on a categorical model that classifies various disorders as discrete entities. Because of theoretical and methodological problems with conceptualizing personality as discrete entities, many researchers believe that the categorical model is ineffective with the Axis II personality disorders. For example, there is much overlap among Axis II personality disorders. On average, when individuals are diagnosed with a personality disorder, they are diagnosed with more than one (Costa & Widiger, 1994). Such redundancy suggests that there is overlap between the categories; they are not discrete entities. This problem has led some theorists to suggest that personality can be better conceptualized dimensionally, as a collection of traits that exist on various continua. Personality can be understood as where individuals lie on various continua.

Recently there has been growing support for the five-factor model of personality, a model that conceptualizes personality in terms of the "Big Five" trait dimensions of personality (Costa & Widiger, 1994). The five-factor model is supposedly a universal model of personality and other models of personality can, in theory, be understood within the "Big Five" structure. The "Big

Five" traits are Neuroticism, Extraversion, Openness to Experience, Conscientiousness, and Agreeableness. Whether the five-factor model can also be used to understand psychopathology has become an important question. A growing body of research supports the contention that personality disorders can be viewed as maladaptive variants of everyday personality (Widiger & Costa, 1993).

The question is "what happens to the old categories?" For example, David Shapiro (1965) developed a categorical model of psychopathology based on an individual's characteristic and enduring style of functioning. Shapiro (1965) defines a style as a person's characteristic way of thinking, perceiving, and experiencing. Shapiro (1965) identifies four categories of psychopathology he calls "neurotic styles." Neurotic styles were a forerunner of today's concept of personality disorder, and like other categorical models, their fate in the era of the "big five" factor dimensions is uncertain.

As is true of psychodynamic models in general, however, Shapiro (1965) thinks in terms of dimensions. For example, Shapiro believes (1965) that an individual's characteristic mode of cognition creates the matrix for one's personality style, influencing a person's general subjective experience and degree to which that person may distort reality. Shapiro's (1965) primary dimension, mode of cognition, can be conceptualized as a continuum from a rigid mode of cognition to a diffuse mode of cognition. A rigid mode of cognition is characterized by adjectives such as acute, intense, narrowly focused, directed, purposeful, and intentional. A diffuse mode of cognition is characterized by adjectives such as suggestible, transient, impressionable, non-directed, and distractible. In addition, Shapiro (1965) distinguishes the neurotic styles based on severity along this continuum, another dimensional trait. He (Shapiro, 1965) states that sometimes the less severe types of neurotic styles (such as obsessive-compulsive

style and hysterical style) are the premorbid state of the more severe type of neurotic style such as the paranoid and impulsive styles.

The implicit dimensionality in Shapiro's model suggests possible room for integrating traditional categories and the five-factor model. This study investigates the overlap between Shapiro's categorical model and the five-factor model. Shapiro's primary dimension discussed in his model of psychopathology, mode of cognition, seems to encompass some of the facet scales of the big five factor of Conscientiousness (C) and some of the facet scales on the Openness to Experience factor (O). It may be that traditional psychiatric categories are not as opposed to dimensional models as some have suggested.

However, past studies using the five-factor model have found no correlation or only a minor correlation between personality disorders and the Openness to Experience factor (Costa & McCrae, 1989). In contrast, Costa and McCrae (1989), speculate that individuals can be too open. Excessive high levels of Openness with particularly low levels of Conscientiousness may contribute to a personality disorder. The current study investigates the role that the Openness to Experience and Conscientiousness factors and their facet scales, may play in the domain of personality disorders.

In general, this study investigates whether or not the five-factor model provides a structure for elaborating on Shapiro's mode of cognition dimension. Widiger and Costa (1994) note that even committed proponents of the five-factor model agree that it may lack the detail needed for clinical purposes. The mapping of Shapiro's mode of cognition dimension onto the five-factor model could therefore bring the five-factor model increased clinical relevance.

Method

Participants

This study used 128 volunteer participants composed of undergraduate students registered for psychology classes at Auburn University Montgomery. The sample was composed of 50 men and 74 women (4 persons did not indicate gender). Ages ranged from 19 to 56. Eighty-nine (89) participants were between 19 and 23 years old, 30 participants were between 24 and 34 years old, and 9 participants were 35 years old or older.

Instruments

The instruments used for the study were the following: (a) the NEO PI-R Form S (Costa and McCrae, 1992), (b) the Millon Clinical Multiaxial Inventory III (Millon, 1997), (c) the Cognitive Diffuseness Scale.

The NEO PI-R Form S (Costa & McCrae, 1992) is a 240-item questionnaire developed through rational and factor analytic methods to measure the dimensions of the five-factor model. The five factors are Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. These factors are orthogonal. Each factor (or domain) is composed of six facet scales, which offer more detailed analyses of specific traits within those factors.

In the current sample, the internal consistency reliabilities for the relevant Form S facet scores in the domain of Conscientiousness were .43 for *Dutifulness*, .71 for *Self-Discipline*, and .71 for *Deliberation*. The reliabilities for the relevant facet scores in the domain of Openness to Experience were .78 for *Fantasy* and .67 for *Feelings*.

The Millon Clinical Multiaxial Inventory (MCMI) was devel-

oped to measure DSM-III personality disorders. Because Millon was influential in the definition of personality disorders adopted in DSM-III, these scales generally parallel the disorders officially recognized by the American Psychiatric Association. The MCMI scales have been widely used by clinicians and researchers, and a considerable body of research has supported their validity (Millon, 1983).

This research used the latest version of the test, titled the MCMI-III, which was constructed to correspond to DSM-IV personality disorders. For the current sample, the internal consistency reliabilities for the MCMI-III scales were .79 for *Histrionic*, .75 for *Antisocial*, .73 for *Compulsive*, and .80 for *Paranoid*.

The Cognitive Diffuseness Questionnaire is made up of thirty questions based on Shapiro's model of psychopathology. The questions are derived from the three levels of Shapiro's model: mode of cognition, subjective experience, and reality distortion for each of his cognitive styles: *Paranoid* (very rigid), *Obsessive-compulsive* (rigid), *Hysterical* (diffuse) and *Impulsive* (very diffuse).

By examining the three levels of Shapiro's model, the overall cognitive style is examined. For example, the obsessive-compulsive individual's rigid mode of cognition is measured by the question "I'm very set in my ways." The obsessive-compulsive individual's subjective experience of deliberate and purposeful action, influenced by their mode of cognition, is targeted by the question "I always feel like I have to do something". The obsessive-compulsive individual's tendency to distort reality through logical absurdities, also influenced by their mode of cognition, is measured by the question "People don't understand why I believe some of the things I do". In the current sample the internal consistency reliabilities were .49 for *Paranoid*, .54 for *Obsessive-Compulsive*, .59 for *Hysterical* and .48 for *Impulsive*.

Although the Cognitive Diffuseness scale examines specific neurotic styles, it also measures a general style. This variable, called *Mode of cognition*, is designed to test Shapiro's bipolar dimension of cognitive style from rigid to diffuse. *Mode of cognition* was analyzed by summing the score of the diffuse items (Antisocial and Impulsive) and the inverse of the score for the rigid items (Paranoid and Compulsive). A high score reflects a diffuse style of cognition while a low score reflects a rigid style of cognition. For the current sample, the internal consistency reliability for the *Mode of cognition* scale was .34.

To test the validity of the bipolar dimension, two variables; rigidity and diffuseness, were constructed. The rigidity scale includes the sum of the Compulsive items and Paranoid items. A high score is more rigid. The diffuseness scale was constructed by summing the Hysterical items and Impulsive items. A high score is more diffuse. The internal consistency reliabilities for the current sample were .69 for *Diffuse* and .68 for *Rigid*.

Procedures

The participants were given an informed consent form, in which they were told that their participation is voluntary and they may withdraw at any time without penalty. All the measures were distributed to the participants in one sitting. To avoid ordering effects, complete counterbalanced test forms were used. Each of the six forms presented the tests in a different order.

Results

Correlation Matrix of the Relevant MCMI-III Scales with the Deliberation, Self-discipline, Dutifulness, Fantasy and Feelings Facet Scales on NEO PI-R (Form S).

		NEO PI-R Facets				
		Deliberation	**Self-discipline**	**Dutifulness**	**Fantasy**	**Feelings**
MCMI Scales	**Paranoid**	-.07	-.07	-.14*	-.09	-.14*
	Compulsive	.54**	.49**	.43**	-.27**	-.00
	Antisocial	-.37**	-.31**	-.31**	.16*	-.08
	Histrionic	.13	.22**	-.01	-.05	.13

** p < .01. (1-tailed).
* p < .05. (1-tailed).

Correlation Matrix of the MCMI-III Scales with the Diffuseness, Rigidity and Mode of Cognition Scales Measured by the Cognitive Diffuseness Questionnaire.

		Cognitive Diffuseness Questionnaire		
		Diffuse	**Rigid**	**Mode of Cognition**
MCMI Scales	**Antisocial**	.50*	.09	.39**
	Histrionic	-.10	-.13	.03
	Paranoid	.30**	.30*	-.00
	Compulsive	-.43**	.13	-.54**

** p < .01. (1-tailed).
* p < .05. (1-tailed).

Correlation Matrix of the Rigid and Diffuse Scales Measured by the CDQ and the Relevant Conscientiousness (C) Facet Scales and Openness to Experience (O) Facet Scales on NEO PI-R (Form S).

		Openness to Experience Facets		Conscientiousness Facets		
		Fantasy	**Feelings**	**Dutifulness**	**Self-Discipline**	**Deliberation**
CDQ Scales	**Rigid**	-.15*	-.03	.13	-.01	.01
	Diffuse	.15*	.00	-.39**	-.43**	-.56**

** p < .01. (1-tailed).
* p < .05. (1-tailed).

Correlation Matrix of Shapiro's Neurotic Styles as Measured by the CDQ and the Relevant Conscientiousness (C) Facet Scales and Openness to Experience (O) Facet Scales on NEO PI-R (Form S).

		Openness to Experience Facets		Conscientiousness Facets		
		Fantasy	**Feelings**	**Dutifulness**	**Self-Discipline**	**Deliberation**
CDQ Scales	**Paranoid**	-.07	.02	.20**	.06	.08
	Obsessive	.18*	-.06	.05	-.06	-.05
	Hysterical	.19*	.04	-.40**	-.49**	-.47**
	Impulsive	.05	-.05	-.25**	-.22**	-.49**

** p < .01. (1-tailed).
* p < .05. (1-tailed).

Discussion

The first issue to discuss is bipolar dimensionality from rigid to diffuse. When operationalizing Shapiro's constructs of rigid and diffuse in terms of NEO-PI facets there is limited support for the model. This is seen in the expected negative correlation between the Fantasy facet on the Openness to Experience factor and the relevant Conscientiousness facets (Self-discipline, Deliberation, and Dutifulness). However, the major finding with the Cognitive Diffuseness Questionnaire is that rigid and diffuse are positively correlated.

Compulsiveness as measured by Millon, does demonstrate some of the patterns of correlations that Shapiro's model predicts. For example, it is positively correlated with the Conscientiousness facets and negatively correlated with the fantasy facet on the openness factor. Furthermore, it is negatively correlated with diffuseness as measured by the CDQ (-.43). This suggests that Shapiro's notion of the obsessive-compulsive style has some merit. Other findings with the Millon scales do not follow the hypothesized patterns. Although the Compulsive scale is negatively correlated with the Antisocial scale as expected (-.69), it is also negatively correlated with the paranoid scale, contrary to the model.

With respect to paranoia, the model appears less adequate. For both the MCMI-III and CDQ, the paranoid scales do not demonstrate the hypothesized patterns of correlations. Although this style is high on rigidity as measured by the CDQ, it is also high on diffuseness. Upon reflection, this may make sense. People who are paranoid have a tendency to take cognitive leaps and act on hunches, which parallels what Shapiro means by diffuseness.

Hysteria as measured by the CDQ does exhibit the patterns the

model suggests, i.e., it is positively correlated with Fantasy and negatively correlated with the relevant Conscientiousness facets. However the correlations for the Histrionic scale as measured by Millon do not reflect expected correlations. Millon defines the histrionic personality as an emotional extravert. It is likely that what Shapiro means by hysterical and what Millon means by histrionic do not match. It may be that the CDQ betters measures Shapiro's motion of hysteria then does the MCMI-III.

Similar to the positive findings for the compulsive personality, the antisocial personality exhibits the pattern predicted by Shapiro's model. As expected, there is some parallel between Shapiro's notion of the impulsive style and the antisocial personality. For example, the antisocial personality is negatively correlated with the relevant Conscientiousness facets and positively correlated with the Fantasy facet on the Openness to Experience factor. In addition, Impulsiveness as measured by the CDQ was negatively correlated with the relevant Conscientiousness facets. Furthermore, the antisocial personality was positively correlated with diffuseness, although it was not correlated with rigidity.

One possible limitation of this study is investigating pathological traits in a non-clinical sample. Using Millon's diagnostic cut-off, the participants in this study can not be labeled "disordered". It is possible that someone who is clinically paranoid would demonstrate the kinds of patterns that Shapiro suggested. Another possible limitation is that rigidity, diffuseness, and the neurotic styles as measured by the CDQ do not adequately operationalize Shapiro's constructs. To better test Shapiro's model, a more explicit test construction strategy using a high number of initial items would be required. Another limitation was sample size. It is likely that some of the obtained correlations are unstable, particularly those that barely made the .01 and .05 cutoffs.

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