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BIPOLARITY AND THE FIVE FACTOR MODEL OF PERSONALITY DISORDER

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BIPOLARITY AND THE FIVE FACTOR MODEL OF PERSONALITY DISORDER

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DISSERTATION
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A dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor of
Philosophy in the College of Arts and Sciences
at the University of Kentucky

By

Cristina Crego

Lexington, Kentucky

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2018

ABSTRACT OF DISSERTATION

BIPOLARITY AND THE FIVE FACTOR MODEL OF PERSONALITY DISORDER

The predominant model of general personality structure is arguably the Five Factor Model (FFM), consisting of the five broad domains of neuroticism, extraversion, openness, agreeableness, and conscientiousness. The FFM of personality disorder (FFMPD) has proposed maladaptive variants at both poles of the FFM. The purpose of the current study was to identify a subset of FFMPD scales, utilizing factor analysis, that illustrate, and provide a potential measure of, the bipolarity present in the FFMPD. All of the FFMPD scales were administered to 443 community participants recruited from Amazon Mechanical Turk. Bipolarity was evident in a series of factor analyses of subsets of FFMPD scales, with the exception of openness. The current study also demonstrated that the presence of bipolarity is impaired by a number of concerns, including the presence of non-diametric scales, bloated specific factors, general factor of personality disorder, and occupation of interstitial space.

KEYWORDS: five factor model, personality disorder, personality, DSM

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BIPOLARITY AND THE FIVE FACTOR MODEL OF PERSONALITY DISORDER

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CHAPTER ONE: INTRODUCTION

The predominant model of general personality structure is arguably the Five Factor Model (FFM), consisting of the five broad domains of neuroticism, extraversion, openness, agreeableness, and conscientiousness (John, Naumann, & Soto, 2008). A growing empirical base of evidence has also demonstrated that the FFM accounts well for maladaptive personality traits, as represented within the personality disorders section of the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; APA, 2013; Widiger, Gore, Crego, Rojas, & Oltmanns, 2017). The five-factor model of personality disorder (FFMPD) hypothesizes that all ten poles of the FFM include maladaptive variants (Samuel, 2011; Trull, 2012; Widiger & Trull, 2007). The purpose of the current study is to illustrate this bipolar maladaptive personality structure, as well as some of the reasons it can be difficult to verify.

The hypothesis that personality disorders are best conceptualized as heterogeneous constellations of maladaptive personality traits has now been formally recognized within the fifth edition of the APA diagnostic manual (DSM-5; APA, 2013) and within the proposals for the 11th edition of the World Health Organization's international classification (ICD-11; International Advisory Group for the Revision of ICD-10, 2011). DSM-5 includes a five domain, dimensional trait model within Section III, for emerging measures and models. The domains consist of negative affectivity, detachment, psychoticism, antagonism, and disinhibition. As stated in DSM-5, "these five broad domains are maladaptive variants of the five domains of the extensively validated and replicated personality model known as the 'Big Five,' or the Five Factor Model of personality" (APA, 2013, p. 773). Proposed for ICD-11 is a comparable trait model,

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consisting of negative affective, detachment, dissocial, disinhibition, and anankastic (Tyrer, Reed, & Crawford, 2015). These domains are likewise aligned with the FFM: "Negative Affective with neuroticism, Detachment with low extraversion, Dissocial with low agreeableness, Disinhibited with low conscientiousness and Anankastic with high conscientiousness" (Mulder, Horwood, Tyrer, Carter, & Joyce, 2016, p. 85). A notable feature of both models is that they are largely unipolar with respect to maladaptive personality structure. As expressed in DSM-5. "There are healthy, adaptive, and resilient personality traits identified as the polar opposite of these traits" (APA, 2013, p. 773); more specifically, "emotional stability, extraversion, lucidity, agreeableness, and conscientiousness" (APA, 2013, p. 773). The same point largely applies to the ICD-11 trait model proposal (albeit with one notable exception, discussed further below).

It would appear self-evident that it is generally better to be emotionally stable than unstable, to be extraverted than introverted, or to be agreeable than antagonistic. It is then not surprising that most existing measures of the FFM are largely unipolar with respect to the assessment of adaptivity versus maladaptivity, with little to no effort to assess (for instance) maladaptive extraversion or agreeableness. However, if it was always or invariably better to be agreeable than antagonistic there would no value in ever being antagonistic and such dispositions would naturally dissipate through the course of evolution (Widiger et al., 2017). Instead, there exists a considerable range in the individual differences of personality traits because "each of the Big Five dimensions of human personality can be seen as the result of a trade-off between different fitness costs and benefits" (Nettle, 2006, p. 622). "As there is no unconditionally optimal value of these trade-offs, it is to be expected that genetic diversity will be retained in the

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population" (Nettle, 2006, p. 622). It is apparent across multiple evolutionary and/or sociobiological models of the FFM that there are both potential costs of presumably adaptive traits, such as conscientiousness and agreeableness, and potential benefits for what is generally considered maladaptive traits, such as antagonism and introversion (e.g., MacDonald, 1995; Nettle, 2006; Penke, Denissen, & Miller, 2007).

Nettle (2006), for example, suggested maladaptive variants or implications for all 10 poles of all five domains of the FFM. For instance, extraversion, although largely adaptive with respect to exploration, activity, and sexual pursuit, also carries with it risk-taking and maladaptive sensation-seeking. As suggested by Wilt and Revelle (2017), "People falling at this end of the continuum are more likely to be sexually promiscuous, emotionally intrusive, and engage in excessive self-disclosure and thrill-seeking behaviors" (p.73). The benefits of conscientious self-control, orderliness, and achievement-striving are also self-evident, but Nettle suggested that this domain of personality can also have significant costs, as in perfectionism and missed opportunities (due to excessive constraint). Agreeableness is generally quite desirable, but "very high agreeableness, if it led to an excessive attention to the needs and interests of others, or excessive trusting, would be detrimental to fitness" (Nettle, 2006, p. 627). Openness is a divergent cognitive style that seeks novelty, creativity, and complexity. "Though such a cognitive style might appear purely beneficial, it is conceptually very similar to components of schizotypy" (Nettle, 2006, p. 626). "The unusual thinking style characteristic of openness can lead to non-veridical ideas about the world, from supernatural or paranormal belief systems to the frank break with reality" (Nettle, 2006, p. 627).

Even low levels of neuroticism can be maladaptive, contributing to a failure to avoid hazards and anticipate negative outcomes (Nettle, 2006). Neuroticism exists as a universal trait in part because it does have certain benefits for adaptive functioning (Crespi, 2014). The absence of an ability to feel anxious is analogous to the inability to feel physical pain, as in the case of congenital analgesia, a very debilitating and life-threatening disease. Persons who are abnormally low in anxiousness are unlikely to avoid dangerous activities, or respond to cues of social and physical harm.

There is also empirical support for maladaptive variants of extraversion, openness, agreeableness, conscientiousness, and even low neuroticism (Widiger et al., 2017). The FFM is aligned with the lexical studies of the trait terms within the language. It is apparent that the five broad domains of surgency (extraversion), agreeableness, conscientiousness, emotional instability (neuroticism), and intellect (openness) comprehensively cover the trait terms within the English language (De Raad & Mlačić, 2017; Goldberg, 1993). Coker, Samuel, and Widiger (2002) conducted a lexical study of the presence and extent of socially undesirable, maladaptive traits within the English language. They coded each of the 1,710 trait terms identified by Goldberg with respect to their undesirability and then considered their location within the Big Five. Many undesirable, maladaptive trait terms were identified for agreeableness, extraversion, openness, conscientiousness, and even for low neuroticism. In fact, 43% of the extraversion traits were considered to be undesirable.

For extraversion there was long-winded, blustery, showy, flaunty and exaggerative (Coker et al., 2002); for conscientiousness there was over bookish, overcautious, leisureless, stringent, and tight; and for agreeable there was deceivable, dependent, soft-

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shelled, and ingratiating. These three sets of traits are quite suggestive of the histrionic, obsessive-compulsive, and dependent personality disorders (respectively) which, not coincidentally, do appear to be defined in large part by the FFM domains of extraversion, conscientiousness, and agreeableness, respectively, as suggested in a survey of researchers (Lynam & Widiger, 2001), a survey of clinicians (Samuel & Widiger, 2004), and FFM-personality disorder research (Samuel & Widiger, 2008; Saulsman & Page, 2004).

In sum, there does appear to be maladaptive variants of agreeableness, extraversion, conscientiousness, openness, and even low neuroticism. However, existing measures of the FFM, for the most part, include few items for their assessment. The NEO PI-R (Costa & McCrae, 1992) is arguably the most predominant, frequently used, and influential measure of the FFM (Simms, Williams, & Simms, 2017). The NEO PI-R does include a few such items, such as "I'm something of a 'workaholic'" for the assessment of conscientiousness, but their relative frequency is quite low. Haigler and Widiger (2001) coded each of the 240 NEO PI-R items with respect to maladaptivity (or social undesirability). They reported that only 2% of the NEO-PI-R items keyed for low neuroticism, 10% for high extraversion, 12% for openness, 17% for agreeableness, and 10% for high conscientiousness were referring to maladaptive, undesirable behavior. Some measures of the FFM, such as the Big Five Inventory (BFI; John & Srivastava, 1999), include no such items at all.

There is also though the development of a series of Five Factor Model Personality Disorder (FFMPD) scales (Bagby & Widiger, in press; Widiger, Lynam, Miller, & Oltmanns, 2012). Each was constructed by first identifying which facets of the FFM

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appear to be most relevant for a respective personality disorder. The facet selections were based on researchers' FFM descriptions of each personality disorder (i.e., Lynam & Widiger, 2001), clinicians' descriptions (i.e., Samuel & Widiger, 2004), and FFM-personality disorder research (e.g., Samuel & Widiger, 2008). Scales were then constructed to assess the maladaptive variants of each facet that were specific to each personality disorder. This effort has resulted in seven scales assessing maladaptive variants of conscientiousness (e.g., Workaholism, Perfectionism, and Ruminative Deliberation), five for maladaptive agreeableness (e.g., Gullibility, Subservience, and Timorousness), nine for maladaptive extraversion (e.g., Exhibitionism, Thrill-Seeking, and Authoritative), six for maladaptive openness (e.g., Aberrant Ideas and Odd & Eccentric), and even four for low neuroticism (e.g., Indifference and Invulnerability). Table 1 provides a comprehensive list of all 99 FFMPD scales and their location within the FFM.

A reasonable concern is that the authors of these measures simply created maladaptive trait scales, annexing them into the FFM without empirical support. However, all of the initial validation studies for these measures provided strong empirical support for their convergent (and discriminant) validity with the respective pole of the FFM domain (e.g., Lynam et al., 2011), and these relationships have been cross-validated in subsequent studies (Bagby & Widiger, 2018). Crego, Samuel, and Widiger (2015), for instance, related the six Five Factor Obsessive Compulsive (FFOCI) scales hypothesized to be assessing maladaptive conscientiousness (i.e., Ruminative Deliberation, Perfectionism, Workaholism Fastidiousness, Punctiliousness, and Doggedness) to four alternative measures of normal conscientiousness. All six FFOCI maladaptive conscientiousness

scales related robustly with all four alternative measures of normal conscientiousness. For example, the correlations with the International Personality Item Pool-NEO (IPIP-NEO; Goldberg et al., 2006) Conscientiousness scale ranged from .52 (for Ruminative Deliberation) to .70 (for Perfectionism). Their correlations with any one of the other four domains of the FFM were never higher than .26.

Crego and Widiger (2016) administered 36 of the FFMPD scales, along with the comparable scales from the CAT-PD and PID-5. They demonstrated the convergent (and discriminant) validity among the respective scales from these three inventories, as well indicating that FFMPD Invulnerability loaded negatively on a neuroticism factor; FFMPD Timorousness loaded negatively on an antagonism factor; FFMPD Attention-Seeking and Flirtatiousness, as well as CAT-PD Exhibitionism, loaded negatively on a detachment factor; and FFMPD and CAT-PD Workaholism and Perfectionism loaded negatively on disinhibition. Helle and Mullins-Sweatt (in press) reported comparable results with 26 FFMPD scales, including (for instance) Attention-Seeking and Thrill-Seeking aligning with extraversion, Subservience with agreeableness, and Doggedness and Perfectionism with conscientiousness.

A clear bipolar factor structure though will not always be obtained, for multiple reasons. One problem is that maladaptive trait scales at opposite poles of the FFM will at times be positively correlated with one another, or at least not strongly negatively correlated, due to sharing similar implications with respect to maladaptivity (e.g., all of the scales sharing a common general factor of personality disorder). Pettersson, Turkheimer, Horn, and Menatti (2012) demonstrated that traits that are conceptually opposite to one another (some of which are assessed by FFMPD scales), such as gullible

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and suspicious, self-deprecating and conceited, sluggish and manic, grim and frivolous, orderly and flexible, modest and assertive, and easy-going and driven, loaded in the same direction on the same general factor of personality disorder because they share comparable implications for maladaptive versus adaptive functioning. If traits that are conceptually opposite to one another will load on the same general factor in the same direction because they have the same implications for adaptive versus maladaptive functioning (e.g., gullible and suspicious), it will clearly be difficult for these traits to load in the opposite direction on the same specific FFM factor.

An additional concern is that the FFM lacks perfect simple structure. This is most clearly evident for the domains of extraversion and agreeableness, which are arguably arbitrary axes within the continuously distributed interpersonal circular structure (Louie, Kurtz, & Markey, 2018; McCrae & Costa, 1989; Wiggins & Pincus, 1989). For example, assertiveness is a well-established trait of extraversion (Costa & McCrae, 1992), but opposite to assertiveness would be meekness, timidity, and/or unassertiveness, which can be understood as maladaptive variants of agreeableness (Gore et al., 2012). Maladaptive trait scales from agreeableness and extraversion do often load on both factor domains (e.g., Crego et al., 2018; Oltmanns & Widiger, 2016).

A third concern is with respect to the occurrence of bloated specific factors (BSFs). Traits that are well understood to be facets of a respective domain can be separated from that domain if a particular facet is represented excessively relative to the other facets (DeYoung, 2011). They will bind together to form their own unique factor (Crego et al., 2018; Wright, 2017). For example, there is no dispute that social withdrawal is a facet of introversion. However, Oltmanns and Widiger, 2016) demonstrated that one could

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separate social withdrawal from FFM introversion by including enough scales such that they bound together to form their own factor distinct from introversion.

Finally, simple structure will also be compromised when scales that occupy opposite poles of the same FFM domain are not in fact opposite to one another; that is, they concern different facets of a respective FFM domain (i.e., non-diametric scales). Widiger et al. (2012) placed all 99 FFMPD scales within its respective domain and facet of the FFM (see Table 1). Ten FFMPD scales were placed within openness, six for high openness (e.g., Odd & Eccentric) and four for low openness (e.g., Inflexibility). However, there are only two facets in which there are FFMPD scales opposite to one another. FFMPD Constricted and Dogmatism are hypothesized to be maladaptive variants of low openness, whereas FFMPD Odd-Eccentric and Aberrant Ideas are hypothesized to involve maladaptive variants of high openness. There is empirical support for both hypotheses (Edmundson et al., 2012; Samuel et al., 2012). However, these scales involve different facets of FFM openness (the former concern openness to feelings and values, whereas the latter concern openness to actions and ideas), a phenomenon of "non-diametric" scales. As a result, they are unlikely to be strongly negatively correlated with one another. In addition, the scales that are on opposite poles of the same facet are also not well understood to be actually opposite in meaning to one another (i.e., Odd & Eccentric and Inflexibility).

In sum, the purpose of the present study was to identify a subset of FFMPD scales, utilizing factor analysis, that will optimally illustrate and provide a potential measure of the bipolarity present in the FFMPD. The current study may also illustrate though illustrate several problems with respect to obtaining this bipolar factor structure,

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including the occupation of interstitial space, bloated specific factors, and non-diametric

scales.

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Table 1.1 *List of Scales for Maladaptive Variants of the Five Factor Model*

FFM Domains and Facets	Five Factor Personality Disorder Scales							
	Avoidant	Borderline	Dependent	Histrionic	Narcissistic	Obsessive-Compulsive	Psychopathic	Schizotypal
Neuroticism								
Anxious ness	Evaluation Apprehension	Anxious Uncertainty	Separation Insecurity			Excessive Worry	Unconcern (-)	Social Anxiousness
Angry hostility		Dysregulated Anger			Reactive Anger		Anger	
Depressiveness	Despair	Despondence	Pessimism				Self-Content (-)	
Self-consciousness	Mortified	Self Disturbance	Shamefulness		Shame & Indifference (-)		Self-Assurance (-)	Social Discomfort
Impulsiveness		Behavioral Dysregulation					Urgency	
Vulnerability	Overcome	Affective Dysregulation & Fragility	Helplessness	Neediness for Attention & Rapidly Shifting Emotions	Need for Admiration		Invulnerability (-)	

Table 1.1 (continued)

Extraversion								
Warmth			Intimacy Needs	Intimacy Seeking		Detached Coldness (-)	Coldness (-)	Social Anhedonia (-)
Gregariousness	Social Dread (-)			Attention Seeking	Exhibitionism			Social Isolation and Withdrawal (-)
Assertiveness	Shrinking (-)		Unassertive (-)		Authoritative		Dominance	
Activity								
Excitement-Seeking	Risk Averse (-)			Flirtatious & Social Butterfly	Thrill-Seeking (from EPA)	Risk Aversion (-)	Thrill-Seeking	
Positive Emotionality	Joylessness (-)							Physical Anhedonia (-)
Openness								
Fantasy		Dissociative Tendencies		Romantic Fantasies				Aberrant Perceptions
Aesthetics								
Feelings				Touchy Feely		Constricted (-)		
Actions	Rigidity (-)					Inflexibility (-)		Odd-Eccentric

Table 1.1 (continued)

Ideas								Aberrant Ideas
Values						Dogmatism (-)		
Agreeableness								
Trust		Distrustfulness (-)	Gullibility	Suggestibility	Cynicism (-) (from EPA)		Cynicism (-)	Interpersonal Suspicioness (-)
Straightforwardness		Manipulative (-)		Melodramatic Emotionality (-)	Manipulation (-)		Manipulation (-)	
Altruism			Selflessness		Exploitative (-) & Entitlement (-)		Self-Centered (-)	
Compliance		Oppositional (-)	Subservience				Opposition (-)	
Modesty	Timorous		Self-Effacing	Vanity (-)	Arrogance (-) & Grandiose Fantasies (-)		Arrogance (-)	
Tender-Minded					Lack of Empathy (-)		Callous (-)	
Conscientiousness								

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Table 1.1 (continued)

Competence			Ineptitude (-)			Perfectionism		
Order				Disorderliness (-)		Fastidious		
Dutifulness						Punctilious	Disobliged (-)	
Achievement Striving					Acclaim-Seeking	Workaholism		
Self-Discipline			Negligence (-)			Doggedness	Impersistence (-)	
Deliberation		Rashness (-)		Impressionistic Thinking (-)		Ruminative Deliberation	Rashness (-)	

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CHAPTER TWO: METHODS

Participants.

A total of 443 community participants (307 females) were recruited from Amazon Mechanical Turk (MTurk), an online service where requesters recruit persons to complete tasks for financial compensation (Paolacci, Chandler, & Ipeirotis, 2010). The mean age of participants was 34.8 (*SD* =12.50). For ethnicity, 80.4% were white/Caucasian, 5.7% were Asian, 5.2% were black/African American, 3.4% were Hispanic/Latino, 1.1% American Indian or Alaskan Native, 0.5% were Native Hawaiian or Pacific Islander, and 3.6% were other. For marital status, 42.2% were single, 33.1% married, 14.2% cohabitating, 9.4% divorced, and 1.1% widowed. Forty-six percent of participants were currently in or had previously received mental health treatment. Twenty-three percent of the sample was currently taking some form of psychotropic medication; 42% at some point in their lifetime.

Materials.

All participants completed a demographics form, all 99 FFMPD scales (Widiger et al., 2012), the Five Factor Form (Rojas & Widiger, 2014), and a careless responding scale.

Demographics Questionnaire. This instrument consisted of questions assessing the participants' age, gender, marital status, race and ethnicity, and whether the participant has ever received mental health treatment.

Five Factor Model of Personality Disorder scales (Widiger et al., 2012). The 99 FFMPD scales (each consisting of 7-10 items) which were administered are from the Elemental Psychopathy Assessment (EPA; Lynam et al., 2011), the Five Factor Borderline Inventory (FFBI; Mullins-Sweatt et al., 2012), the Five Factor Obsessive

Compulsive Inventory (FFOCI; Samuel et al., (2012), the Five Factor Schizotypal Inventory (FFSI; Edmundson et al., 2011), the Five Factor Dependency Inventory (FFDI; Gore et al., 2012), the Five Factor Narcissism Inventory (FFNI; Glover et al., 2012), the Five Factor Histrionic Inventory (FFHI; Tomiatti et al., 2012), and the Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012). All items were answered using a 5-point scale ranging from *strongly disagree* to *strongly agree*. These scales assess maladaptive, extreme, and/or PD specific manifestation for 28 of the 30 FFM facets. Reliabilities for the domain of Neuroticism ranged from .91 for FFNI Shame to .84 for FFAvA Overcome; for the domain of Extraversion reliabilities ranged from .91 for EPA Thrill Seeking to .80 for FFSI Social Anhedonia; for the domain of Openness reliabilities ranged from .95 for FFSI Odd and Eccentric to .83 for FFOCI Inflexibility; for the domain of Agreeableness reliabilities ranged from .86 for EPA Distrust to .70 for FFAvA Timorousness; and reliabilities for the domain of Conscientiousness ranged from .88 for EPA Rashness to .77 for EPA Disobliged.

The Five Factor Form (FFF; Rojas & Widiger, 2014). This instrument is a one-page rating form, consisting of 30 items, with six items for each of the five domains of the FFM: neuroticism, extraversion, agreeableness, conscientiousness, and openness. Items are coded on a 1-5 point scale, where scores of 1 and 5 indicate a maladaptively extreme variant of each respective pole, scores of 2 and 4 are within the more normal range (albeit in some cases still problematic), and a score 3 indicates that the person is "neutral". Scores of 1, 2, 4, and 5 are provided explicit anchors for each facet. For example, for the facet of trust, 1 = *cynical, suspicious*, 2 = *cautious, skeptical*, 3= *neutral*, 4 = *trusting*, and 5 = *gullible*. For the facet of competence, 1 = *disinclined, lax*, 2 =

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casual, 3 = *neutral*, 4 = *efficient, resourceful*, and 5 = *perfectionistic*. Cronbach alpha for the domain of Neuroticism was .78, .75 for Extraversion, .68 for Openness, .59 for Agreeableness, and .71 for Conscientiousness.

Careless responding scale. A five-item careless responding scale was also administered. Each item describes a behavior that was very unlikely to be true (e.g., "I am currently in the Guinness Book of World Records" and, reverse coded, "I have used a computer in the past 2 years"), thus an endorsement suggests the individual is not attending to the item's content. The items are rated on a five-point Likert scale whose values range from *strongly disagree* to *strongly agree*. These items were dispersed among the items within the other measures.

Procedure.

The self-report measures were administered on MTurk, an online service where requesters recruit persons to complete tasks for financial compensation (Paolacci, Chandler, & Ipeirotis, 2010). Research has indicated that MTurk provides more demographically diverse samples than is obtained through traditional college samples, at least with respect to age, education, and income (albeit not with respect to ethnicity). Studies have also found that the data quality is equal to (if not more valid) than the data obtained through traditional methods (e.g., Paolacci et al. 2010; Shapiro, Chandler, & Mueller, 2013). The integrity of findings is due in part to the fact that one can confine data collection to persons who have previously received high scores for quality of participation, as was the case in the current study.

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Participants did not need to complete the entire set of measures at one time, but it was estimated that study completion took about three hours. Consistent with other studies on MTurk, participants received \$3.00 for their time.

Participants were first deleted (*N*=25) if they had not completed at least 80% of each of the administered questionnaires. A conservative threshold for subject participation was used to err in the direction of eliminating any potentially invalid protocols; 16 participants were therefore excluded on the basis of the careless responding scale. After these deletions, the sample consisted of 443 community adults with 307 females and 136 males. Upon completion of the study protocol, each participant received a debriefing document and payment was received within 7 business days.

A few participants failed to respond to a small number of items (i.e., at most, 1-2% of the items for any scale). These missing data were imputed using the expectation maximization procedure, which has been shown to produce more accurate estimates of population parameters than other methods, such as deletion of missing cases or mean substitution (Enders, 2006).

CHAPTER THREE: RESULTS

Correlations of Conceptually Opposite FFMPD Scales

   Table 3.1 provides the correlations of FFMPD scales hypothesized to be opposite to one another with each other as well as with the respective domain of the FFF. The strongest bipolarity can be seen for the domain of neuroticism with all traits correlating at an absolute level of .63 or higher. The domains of extraversion and conscientiousness also demonstrated strong bipolar relationships with correlations between traits falling in the .50 to .75 range for most traits. Most of the traits in these domains also obtained large effect size relationships with their respective FFF domain. Moderate effect size relationships were found for the conceptually bipolar traits within the domain of agreeableness. Some of the strongest relationships for a subset of agreeableness traits (i.e., FFAvA Timorous and FFDI Subservience) were found with EPA Dominance, a trait that conceptually falls within the domain of extraversion, potentially demonstrating the inherent interstitial space present between these two domains. There were only two sets of traits within the domain of openness that were considered opposite to one another and in both cases, small to moderate effect sizes were found for their relationship with one another and the FFF.

Factor Analyses

   Two FFMPD trait scales per domain. Three different factor analyses were performed with two FFMPD trait scales per domain. In the first factor analysis ten of the FFMPD scales, two trait scales from each domain considered to be opposite to each other, were submitted to an exploratory factor analysis, specifying five factors, with an oblique Geomin rotation. Table 3.2 provides the pattern factor solution which emphasizes

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the unique contribution of each scale to a respective factor. For Table 3, the correlations ranged from -.03 (Factor 3 with Factor 4) to .49 (Factor 1 with Factor 5), with a median value of -.09.

The two FFMPD Openness scales did actually load opposite to one another. However, both also loaded on Agreeableness, with Odd-Eccentric obtaining its highest loading on Agreeableness. The Agreeableness factor was itself though not well defined by the FFF, which loaded only .19, obtaining its highest loading on Extraversion (albeit that was weak as well). The Neuroticism and Conscientiousness factors were well defined.

In the second factor analysis with two FFMPD scales per domain, two opposite trait scales from each domain were included with the exception of including only two high openness trait scales, again specifying five factors, with an oblique Geomin rotation. Table 3.3 provides the pattern factor solution. For Table 3.3, the correlations ranged from -.09 (Factor 2 with Factor 4) to -.30 (Factor 2 with Factor 5), with a median value of -.08. Table 3.3 includes bipolar scales for all of the domains with the exception of Openness. It is evident from Table 3.3 that all of the FFM domains are largely well defined, including openness. The only exception was seen with FFF Agreeableness cross loading on both the Extraversion and Agreeableness domains.

In the third factor analysis with two scales from each domain, the same two scales considered to be conceptually opposite to one another were again included, but this time with two low openness trait scales. Tables 5 provides the pattern factor solution. For Table 3.4, the correlations ranged from .01 (Factor 1 with Factor 5) to -.23 (Factor 1 with Factor 3), with a median value of .03. Table 3.4 includes bipolar scales for all of the domains with the exception of openness. It is evident from Table 3.4 that all but one of

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the FFM domains are well defined, particularly the domains of neuroticism, conscientiousness, and openness. The domain of extraversion was well defined, albeit FFF Extraversion loaded about as highly on the Agreeableness factor, and FFF Agreeableness loaded more highly on the Extraversion factor.

Four FFMPD trait scales per domain. An exploratory factor analysis, specifying five factors with an oblique Geomin rotation was performed with four FFMPD trait scales per domain, two of them considered to be opposite to one another, with the exception of openness which was contained to the three FFMPD high openness trait scales. Table 3.5 provides the pattern factor solution. For Table 3.5, the correlations ranged from -.06 (Factor 3 with Factor 4) to .35 (Factor 1 with Factor 2), with a median value of .01.

All but one of the FFMPD scales predicted to be opposite loaded in a bipolar manner on their respective domain. FFMPD Unconcern and Self-Contentment loaded opposite to Excessive Worry and Despondence within the Neuroticism factor; FFMPD Doggedness and Fastidious loaded opposite to Impersistence and Disorderly within the Conscientiousness factor; FFMPD Selfless and Timorous loaded opposite to Self-Centeredness and Arrogance within the Agreeableness factor (albeit Selfless loaded more highly on the Neuroticism factor); and FFMPD Exhibitionism and Authoritative loaded opposite to Social Dread and Shrinking on the Extraversion factor. Two of the FFMPD Agreeableness scales, EPA Arrogance and FFAvA Timorous, also cross loaded on the Extraversion factor with loadings of .42 and -.43 respectively.

Six FFMPD trait scales per domain. An exploratory factor analysis, specifying five factors with an oblique Geomin rotation was performed with six FFMPD trait scales per

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domain with the exception of openness which was contained to the three FFMPD high openness trait scales. Table 3.6 provides the pattern factor solution. For Table 3.6, the correlations ranged from -.04 (Factor 3 with Factor 4) to -.39 (Factor 1 with Factor 5), with a median value of -.19.

All but two of the FFMPD scales predicted to be opposite to one another obtained their primary loading in a bipolar fashion within their respective domain. FFMPD Unconcern, Self-Contentment, and Invulnerability loaded opposite to Excessive Worry, Despondence, and Overcome within the Neuroticism factor; FFMPD Doggedness, Fastidious, and Punctiliousness loaded opposite to Impersistence, Disorderly, and Disobliged within the Conscientiousness factor; and FFMPD Exhibitionism, Authoritative, and Thrill-Seeking loaded opposite to Social Dread, Shrinking, and Risk Aversion on the Extraversion factor. The findings though were relatively weaker for scales from agreeableness. FFAvA Timorous obtained equivalent loadings on both the Agreeableness factor and the Extraversion factor and FFDI Selfless loaded primarily on Neuroticism with a cross-loading on Agreeableness. EPA Arrogance, while obtaining its primary loading with the Agreeableness factor, also cross-loaded on the Extraversion factor.

Eight FFMPD trait scales per domain. An exploratory factor analysis, specifying five factors with an oblique Geomin rotation was performed with eight FFMPD trait scales per domain for neuroticism, extraversion, and conscientiousness, six trait scales for agreeableness, and three of the FFMPD high openness trait scales. Table 3.7 provides the pattern factor solution. For Table 3.7, the correlations ranged from .02 (Factor 1 with Factor 4) to .26 (Factor 2 with Factor 5), with a median value of -.01.

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It is evident from Table 3.7 that the bipolar structure is breaking down, particularly for the domains of extraversion and agreeableness. There was good bipolar structure for the domains of neuroticism and conscientiousness. FFMPD Unconcern, Self-Contentment, Invulnerability, and Indifference loaded opposite to Excessive Worry, Despondence, Overcome, and Shame within the Neuroticism factor; and FFMPD Doggedness, Fastidious, Punctiliousness, and Perfectionism loaded opposite to Impersistence, Disorderly, Disobliged, and Rashness within the Conscientiousness factor. However, several of the FFMPD scales predicted to be bipolar obtained primary or secondary loadings in other domains. FFAvA Shrinking obtained its highest loading with the Neuroticism factor. Two extraversion scales (FFDI Intimacy Needs and FFSI Social Anhedonia) obtained their primary loading in the Agreeableness factor at .46 and -.56, respectively. These scales loaded at .33 and -.42 on the Extraversion factor. Two agreeableness scales (FFAvA Timorous and EPA Arrogance) obtained their primacy loading on the Extraversion factor at -.53 and .60, respectively. These two scales loaded .35 and -.53 on the Agreeableness factor.

In an attempt to reduce cross loadings and obtain a clearer bipolar structure, a second factor analysis, specifying five factors with an oblique Geomin rotation, was performed with eight FFMPD trait scales per domain for neuroticism and conscientiousness, six traits for extraversion and agreeableness, and three of the FFMPD high openness trait scales. Table 3.8 provides the pattern factor solution. For Table 3.8, the correlations ranged from -.01 (Factor 2 with Factor 3) to -.29 (Factor 1 with Factor 5), with a median value of -.10.

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It is evident from Table 3.8 that all but one of the FFMPD scales predicted to be opposite to one another obtained their primary loading in a bipolar fashion within their respective domain. FFMPD Unconcern, Self-Contentment, Invulnerability, and Indifference loaded opposite to Excessive Worry, Despondence, Overcome, and Shame within the Neuroticism factor; FFMPD Doggedness, Fastidious, Punctiliousness, and Perfectionism loaded opposite to Impersistence, Disorderly, Disobliged, and Rashness within the Conscientiousness factor; and FFMPD Exhibitionism, Authoritative, and Thrill-Seeking loaded opposite to Social Dread, Shrinking, and Risk Aversion on the Extraversion factor. However, FFDI Selfless loaded primarily within the Neuroticism factor at .47 and had a secondary loading with the Agreeableness factor at .33. Two of the traits from the domain of agreeableness (EPA Arrogance and FFAvA Timorous) obtained significant cross loadings within the Extraversion factor at .43 and -.42, respectively.

Attempts to demonstrate bloated specific factor. In an attempt to demonstrate how bloated specific factors can influence the bipolar structure of the FFMPD scales, an exploratory factor analysis, specifying six factors with an oblique Geomin rotation, was performed with six bipolar FFMPD trait scales per domain, five additional FFMPD scales from the facet of anxiousness from the neuroticism domain, and three of the FFMPD high openness trait scales. Table 3.9 provides the pattern factor solution. For Table 3.9, the correlations ranged from -.02 (Factor 5 with Factor 6) to -.42 (Factor 1 with Factor 5), with a median value of -.02.

However, none of the FFMPD scales from the facet of anxiousness, however, defined the sixth factor (titled as "N1" in the hope that it would be anxiousness), loaded on the sixth factor. Four out of the five FFMPD anxiousness scales obtained their primary factor

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loading with the Neuroticism factor. FFSI Social Anxiousness obtained its primary loading on the Extraversion factor.

 On the other hand, it is also evident that the sixth factor is defined by the maladaptive agreeableness scales of Suggestibility and Selfless, along with FFF Agreeableness. FFF Agreeableness obtained a secondary loading on the fourth factor, which was defined largely by maladaptive antagonism, including Self-Centeredness, Arrogance, and Distrust. In this regard, this could be an illustration of a bloated specific (Crego et al., 2018).

One potential reason that the FFMPD anxiousness scales did not separate to form their own factor is that the FFF Neuroticism scale includes an anxiousness item. Therefore, a second exploratory factor analysis, specifying six factors with an oblique Geomin rotation, was performed with six bipolar FFMPD trait scales per domain, five additional FFMPD scales from the facet of anxiousness from the neuroticism domain, the six individual neuroticism facet items from the FFF, and three of the FFMPD high openness trait scales. Table 3.10 provides the pattern factor solution. For Table 3.10, the correlations ranged from .03 (Factor 2 with Factor 6) to -.39 (Factor 1 with Factor 5), with a median value of -.05.

However, again, none of the FFMPD scales from the facet of anxiousness loaded on their own Anxiousness factor. All six of the FFF trait scales, including FFF Anxiousnessness and four out of the five FFMPD anxiousness scales obtained their primary factor loading with the Neuroticism factor. FFSI Social Anxiousness again obtained its primary loading on the Extraversion factor. The sixth factor though was again defined by maladaptive agreeableness (i.e., Suggestibility and Selfless, along with

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FFF Agreeableness), separating from maladaptive antagonism (Self-Centeredness and Arrogance).

General factor of personality disorder. In an attempt to demonstrate how a general factor can influence the bipolar structure of the FFMPD scales, an exploratory factor analysis, specifying one factor with an oblique Geomin rotation was performed with eight bipolar FFMPD trait scales per domain for neuroticism, extraversion, and conscientiousness, six bipolar FFMPD trait scales per domain for Agreeableness, and three FFMPD high openness trait scales. Table 3.11 provides the pattern factor solution.

The bipolarity of the FFMPD scales did maintain for the scales from neuroticism. However, the bipolar structure, which had been evident in the earlier factor analyses, was now largely lost for the scales from the other domains. From neuroticism, FFMPD Unconcern, Self-Contentment, Invulnerability, and Indifference loaded opposite to Excessive Worry, Despondence, Overcome, and Shame; and FFMPD Exhibitionism, Authoritative, and Thrill-Seeking loaded opposite to Social Dread, Shrinking, and Risk Aversion on the Extraversion factor.

The bipolar structure that had been clearly evident for the extraversion scales is no longer so strongly apparent. The introversion scales of Social Dread, Shrinking, and Social Anhedonia load strongly positive, but the extraversion traits of Intimacy Needs and Thrill-Seeking do not load in the opposite direction. Their loadings are weak but they in fact are loading in the same direction. Similarly, for the scales of agreeableness versus antagonism, Arrogance and Distrust load positively, but the traits opposite to these, such as Selfless and Suggestibility do not load opposite to them and in fact also have a positive loading. The scales for low conscientiousness, such as Disorderly, Impersistence, and

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Disobliged, load strongly positive, but the scales for high conscientiousness, Fastidious, Punctiliousness, and Perfectionism load very weakly (albeit in this case in the correct direction).

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Table 3.1 *Correlations of FFMPD Traits with their Opposite Traits and the FFF Domain*

	FFF	Each Other	FFF	
Neuroticism				
FFOCI Excessive Worry	.66	-.86	-.63	EPA Unconcern
FFAvA Despair	.70	-.79	-.67	EPA Self-Content
FFNI Shame	.50	-.79	-.37	FFNI Indifference
FFSI Social Discomfort	.60	-.81	-.46	EPA Self-Assurance
FFAvA Mortified	.58	-.65		
FFDI Helplessness	.66	-.63	-.53	EPA Invulnarability
FFAvA Overcome	.57	-.84		
Extraversion				
FFHI Intimacy Seeking	.42	-.65	-.52	FFSI Social Anhedonia
FFDI Intimacy Needs	.18	-.38		
FFNI Exhibitionism	.52	-.57	-.64	FFAvA Social Dread
FFHI Attention-Seeking	.46	-.41	-.59	FFSI Social Iso/With
EPA Dominance	.42	-.61	-.43	FFDI Unassertive
FFNI Authoritative	.43	-.66	-.46	FFAvA Shrinking
EPA Thrill-Seeking	.29	-.73	-.40	FFOCI Risk Aversion
		-.79	-.38	FFAvA Risk Averse
Openness				
FFSI Odd-Eccentric	.38	-.06	-.48	FFOCI Inflexibility
FFHI Touchy Feely	.32	-.35	-.32	FFOCI Constricted
Agreeableness				
FFDI Gullibility	.47	-.05	-.25	FFSI Suspiciousness
		-.02	-.22	FFBI Distrustfulness
FFHI Suggestibility	.40	-.24	-.29	EPA Cynicism
		.09	-.34	EPA Manipulative
FFDI Selflessness	.39	-.30	-.44	EPA Self-Centered
		-.08	-.31	FFNI Exploitative
FFDI Subservience	.25	-.08	-.30	EPA Opposition
		-.48	-29	EPA Dominance
FFAvA Timorous	.28	-.64	-.27	FFNI Arrogance
		-.54	-.29	EPA Dominance
FFDI Self-Effacing	.12	-.14	-.27	FFNI Arrogance
Conscientiousness				

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Table 3.1 (continued)

FFOCI Perfectionism	.46	-.14	-.39	FFDI Ineptitude
FFOCI Fastidious	.51	-.57	-.61	FFHI Disorderliness
FFOCI Punctilious	.46	-.48	-.46	EPA Disobliged
FFOCI Doggedness	.57	-.75	-.58	EPA Impersistence
		-.53	-.48	FFDI Negligence
FFOCI Workaholism	.50	-.32	-.48	FFDI Negligence
FFOCI Ruminative Deliberation	.39	-.45	-.49	FFHI Impressionistic
		-.60	-.50	EPA Rashness

Note: FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011); FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al., 2012), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012).

Table 3.2 *Two FFMPD Traits Per Domain with Both High and Low O Scales*

FFMPD Trait Scales	Factor				
	N	O	C	A	E
FFOCI Excessive Worry	**1.00**	-0.01	0.09	0.00	-0.08
EPA Unconcern	**-0.91**	0.03	0.00	0.17	0.01
FFF Neuroticism	**0.67**	0.09	-0.07	0.04	0.05
FFAVA Shrinking	0.12	-0.10	-0.07	0.11	**0.81**
FFNI Authoritative	-0.01	0.13	0.13	0.17	**-0.66**
FFF Extraversion	-0.21	<u>0.35</u>	0.15	0.10	**-0.26**
FFOCI Inflexibility	0.14	**-0.48**	0.29	<u>0.35</u>	0.29
FFSI Odd-Eccentric	0.23	**0.34**	-0.24	<u>0.41</u>	0.11
FFF Openness	0.09	**0.96**	0.05	0.08	0.01
EPA Arrogance	-0.06	0.00	0.06	**0.80**	-0.13
FFAVA Timorous	0.22	-0.09	0.02	**-0.58**	0.28
FFF Agreeableness	-0.03	0.15	0.09	**-0.19**	0.28
FFOCI Fastidious	0.18	0.02	**0.87**	0.18	0.05
FFHI Disorderly	0.08	0.05	**-0.75**	<u>0.32</u>	0.16
FFF Conscientiousness	-0.13	0.04	**0.67**	0.00	-0.02

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.3 *Two FFMPD Traits Per Domain with Only High O Scales*

FFMPD Trait Scales	Factor				
	N	O	C	E	A
FFOCI Excessive Worry	**1.00**	0.00	0.05	-0.05	-0.08
EPA Unconcern	**-0.87**	0.03	0.02	0.03	-0.12
FFF Neuroticism	**0.63**	0.15	-0.07	0.03	0.06
FFSI Social Anhedonia	<u>0.31</u>	0.15	-0.05	**0.78**	0.03
FFDI Intimacy Needs	0.28	0.05	-0.07	**-0.64**	-0.04
FFF Extraversion	-0.29	0.09	0.09	**-0.47**	-0.23
FFSI Aberrant Ideas	0.05	**0.91**	-0.03	0.11	0.00
FFSI Odd-Eccentric	0.08	**0.85**	-0.10	0.18	-0.02
FFF Openness	-0.09	**0.53**	0.05	<u>-0.30</u>	-0.02
EPA Arrogance	0.10	0.01	0.07	-0.07	**-0.79**
FFAVA Timorous	0.17	-0.04	0.06	0.03	**0.68**
FFF Agreeableness	0.03	-0.01	0.03	<u>-0.35</u>	**0.32**
FFOCI Fastidious	0.23	0.05	**0.81**	0.06	-0.09
FFHI Disorderly	0.15	0.16	**-0.78**	0.00	-0.16
FFF Conscientiousness	-0.12	0.01	**0.69**	-0.01	0.00

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.4 *Two FFMPD Traits Per Domain with Only Low O Scales*

FFMPD Trait Scales	Factor				
	N	C	O	A	E
FFOCI Excessive Worry	**0.97**	0.05	0.00	0.03	0.02
EPA Unconcern	**-0.89**	-0.02	-0.05	0.19	-0.01
FFF Neuroticism	**0.67**	-0.13	-0.02	0.00	0.03
FFDI Intimacy Needs	0.21	-0.10	-0.02	0.09	**0.70**
FFSI Social Anhedonia	<u>0.38</u>	-0.16	-0.19	-0.03	**-0.62**
FFF Extraversion	-0.27	0.10	0.19	<u>0.34</u>	**0.37**
FFOCI Inflexibility	0.14	0.03	**-0.88**	0.05	0.03
FFOCI Dogmatism	0.00	0.11	**-0.67**	0.19	0.09
FFF Openness	0.18	0.04	**0.57**	0.28	0.13
EPA Arrogance	0.04	0.04	-0.04	**0.77**	-0.03
FFAVA Timorous	0.21	0.08	0.01	**-0.68**	0.09
FFF Agreeableness	0.00	0.00	-0.07	**-0.26**	<u>0.47</u>
FFHI Disorderly	0.11	**-0.89**	-0.10	0.22	0.07
FFOCI Fastidious	0.23	**0.74**	-0.22	0.15	0.01
FFF Conscientiousness	-0.09	**0.68**	-0.02	0.04	0.01

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.5 *Four FFMPD Traits Per Domain with only High O Scales*

FFMPD Trait Scales	N	O	C	A	E
			Factor		
FFOCI Excessive Worry	**0.91**	-0.01	0.07	0.09	-0.09
EPA Unconcern	**-0.82**	0.05	0.03	0.05	0.21
EPA Self-Contentment	**-0.77**	-0.02	0.18	0.04	0.07
FFBI Despondence	**0.66**	0.18	-0.15	0.02	-0.11
FFF Neuroticism	**0.68**	0.10	-0.07	0.01	-0.06
FFAVA Social Dread	0.14	0.17	0.08	0.11	**-0.80**
FFNI Exhibitionism	0.02	0.05	-0.05	0.18	**0.76**
FFF Extraversion	-0.07	0.01	0.08	-0.13	**0.72**
FFNI Authoritative	-0.07	0.09	0.13	0.19	**0.61**
FFAVA Shrinking	<u>0.32</u>	-0.02	-0.07	-0.04	**-0.52**
FFSI Aberrant Ideas	-0.03	**0.96**	-0.03	0.02	-0.06
FFSI Odd-Eccentric	-0.02	**0.87**	-0.08	0.13	-0.16
FFSI Aberrant Perceptions	0.26	**0.66**	0.02	0.11	0.03
FFF Openness	-0.01	**0.47**	-0.03	-0.21	<u>0.33</u>
EPA Self-centeredness	0.06	0.05	-0.01	**0.79**	-0.02
EPA Arrogance	0.18	0.04	0.05	**0.71**	<u>0.42</u>
FFAVA Timorous	0.12	-0.06	0.04	**-0.51**	<u>-0.43</u>
FFF Agreeableness	0.16	-0.07	0.02	**-0.48**	0.10
FFDI Selfless	<u>0.44</u>	0.11	0.06	**-0.33**	0.11
FFOCI Doggedness	-0.03	0.00	**0.88**	0.07	0.02
FFOCI Fastidious	0.24	0.03	**0.85**	0.14	-0.04
EPA Impersistence	<u>0.30</u>	-0.02	**-0.72**	0.18	-0.01
FFF Conscientiousness	-0.08	-0.01	**0.67**	-0.04	0.03
FFHI Disorderly	0.11	0.22	**-0.65**	0.13	0.04

Note. N=443; FFMPD=Five Factor Model of Personality Disorder
(Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014);
EPA=Elemental Psychopathy Assessment (Lynam et al., 2011),
FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al.,
(2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al.,
2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al.,
2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011),
FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five
Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor
Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location
where FFMPD belongs; Underline=cross loadings at ≥.30.

Table 3.6 *Six FFMPD Traits Per Domain with only High O Scales*

FFMPD Trait Scales	Factor				
	N	E	C	A	O
FFOCI Excessive Worry	**0.90**	-0.07	0.13	0.06	-0.03
EPA Unconcern	**-0.81**	0.21	0.00	0.06	-0.02
EPA Self-Contentment	**-0.79**	0.05	0.14	0.02	0.03
FFBI Despondence	**0.68**	-0.08	-0.12	0.04	-0.19
FFF Neuroticism	**0.70**	-0.04	-0.03	0.04	-0.11
EPA Invulnerability	**-0.61**	<u>0.30</u>	0.18	0.06	-0.04
FFAVA Overcome	**0.60**	<u>-0.36</u>	-0.15	0.06	-0.03
FFNI Exhibitionism	0.00	**0.76**	0.00	0.14	-0.03
FFAVA Social Dread	0.16	**-0.74**	0.05	0.11	-0.19
FFF Extraversion	-0.08	**0.70**	0.09	-0.13	0.02
FFNI Authoritative	-0.10	**0.67**	0.17	0.18	-0.08
FFOCI Risk Aversion	0.14	**-0.53**	<u>0.37</u>	0.06	0.29
FFAVA Shrinking	<u>0.36</u>	**-0.52**	-0.06	-0.04	0.01
EPA Thrill-Seeking	0.07	**0.44**	-0.20	0.23	<u>-0.39</u>
FFSI Aberrant Ideas	-0.05	-0.09	0.00	-0.02	**-0.98**
FFSI Odd-Eccentric	-0.03	-0.17	-0.06	0.07	**-0.90**
FFSI Aberrant Perceptions	0.24	0.02	0.06	0.08	**-0.69**
FFF Openness	-0.03	<u>0.31</u>	-0.04	-0.24	**-0.47**
EPA Self-centeredness	0.06	0.07	-0.03	**0.86**	-0.03
EPA Arrogance	0.14	<u>0.45</u>	0.08	**0.63**	-0.05
FFF Agreeableness	0.18	0.06	0.07	**-0.51**	0.07
EPA Distrust	<u>0.41</u>	-0.13	0.10	**0.49**	-0.23
FFAVA Timorous	0.16	<u>-0.44</u>	0.03	**-0.44**	0.06
FFDI Selfless	<u>0.46</u>	0.12	0.13	**-0.34**	-0.13
FFHI Suggestibility	<u>0.16</u>	0.11	-0.16	**-0.17**	-0.01
FFOCI Fastidious	0.20	0.01	**0.88**	0.11	-0.06
FFOCI Doggedness	-0.08	0.07	**0.86**	0.05	-0.01
FFOCI Punctiliousness	0.24	0.00	**0.83**	0.06	0.07
EPA Impersistence	<u>0.34</u>	-0.04	**-0.66**	0.20	0.02
FFF Conscientiousness	-0.12	0.06	**0.63**	-0.07	0.01
FFHI Disorderly	0.15	0.00	**-0.60**	0.12	-0.22
EPA Disobliged	0.23	0.08	**-0.54**	<u>0.36</u>	-0.14

Table 3.6 (continued)

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al., 2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.7 *Eight FFMPD Traits Per Domain (N, E, C), Six FFMPD Traits Per Domain (A), and only High O Scales*

| | **Factor** | | | | |
FFMPD Trait Scales	**N**	**O**	**C**	**A**	**E**
FFOCI Excessive Worry	**0.86**	0.11	0.13	-0.07	-0.06
FFNI Shame	**0.80**	-0.02	0.07	-0.03	0.02
EPA Unconcern	**-0.79**	-0.05	-0.01	-0.03	0.23
EPA Self-Contentment	**-0.75**	-0.13	0.13	0.01	0.09
FFNI Indifference	**-0.73**	0.16	-0.03	-0.13	-0.03
FFAVA Overcome	**0.68**	0.03	-0.15	-0.07	-0.26
EPA Invulnerability	**-0.65**	0.01	0.17	-0.05	0.26
FFBI Despondence	**0.65**	0.27	-0.12	-0.07	-0.10
FFF Neuroticism	**0.64**	0.19	-0.03	-0.06	-0.08
FFNI Exhibitionism	-0.08	0.08	0.02	-0.02	**0.75**
FFAVA Social Dread	0.29	0.13	0.05	-0.22	**-0.64**
FFF Extraversion	-0.20	0.04	0.09	0.24	**0.61**
FFNI Authoritative	-0.25	0.14	0.17	-0.13	**0.58**
EPA Thrill-Seeking	0.00	<u>0.44</u>	-0.20	-0.18	**0.44**
FFOCI Risk Aversion	0.24	<u>-0.35</u>	<u>0.36</u>	-0.11	**-0.43**
FFSI Social Anhedonia	0.22	0.19	-0.03	<u>-0.56</u>	**-0.42**
FFAVA Shrinking	<u>0.52</u>	-0.06	-0.07	0.01	**-0.38**
FFDI Intimacy Needs	<u>0.41</u>	0.06	0.04	<u>0.46</u>	**0.33**
FFSI Aberrant Ideas	-0.05	**0.98**	0.00	0.01	-0.12
FFSI Odd-Eccentric	0.02	**0.87**	-0.06	-0.09	-0.13
FFSI Aberrant Perceptions	0.21	**0.71**	0.05	-0.07	0.01
FFF Openness	-0.12	**0.53**	-0.02	0.28	0.18
EPA Self-centeredness	0.08	0.01	-0.02	**-0.84**	0.27
EPA Distrust	<u>0.40</u>	0.25	0.10	**-0.54**	-0.05
EPA Arrogance	0.10	0.06	0.08	**-0.53**	<u>0.60</u>
FFF Agreeableness	0.16	-0.04	0.05	**0.52**	-0.04
FFDI Selfless	<u>0.45</u>	0.18	0.13	**0.38**	0.08
FFAVA Timorous	0.20	-0.06	0.02	**0.35**	<u>-0.53</u>
FFHI Suggestibility	0.24	0.00	-0.17	**0.25**	0.19
FFOCI Fastidious	0.17	0.06	**0.90**	-0.10	0.06
FFOCI Perfectionism	0.21	0.12	**0.85**	-0.07	0.11
FFOCI Doggedness	-0.13	-0.01	**0.83**	-0.05	0.08
FFOCI Punctiliousness	0.23	-0.08	**0.83**	-0.05	0.06
EPA Impersistence	<u>0.42</u>	0.00	**-0.63**	-0.17	0.06
FFF Conscientiousness	-0.17	-0.02	**0.63**	0.07	0.02
FFHI Disorderly	0.21	0.23	**-0.60**	-0.11	0.07
EPA Rashness	0.14	0.27	**-0.54**	-0.12	<u>0.35</u>
EPA Disobliged	0.25	0.17	**-0.52**	<u>-0.33</u>	0.17

Table 3.7 (continued)

Note. N=443; FFMPD=Five Factor Model of Personality Disorder
(Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014);
EPA=Elemental Psychopathy Assessment (Lynam et al., 2011),
FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al.,
(2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al.,
2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012),
FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011),
FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five
Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor
Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location
where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.8 *Eight FFMPD Traits Per Domain (N, C), Six FFMPD Traits Per Domain (E, A), and only High O Scales*

FFMPD Trait Scales	Factor				
	N	E	C	A	O
FFOCI Excessive Worry	**0.85**	-0.10	0.14	0.08	-0.10
EPA Unconcern	**-0.78**	0.24	-0.01	0.05	0.05
FFNI Shame	**0.78**	-0.03	0.07	0.06	0.03
EPA Self-Contentment	**-0.77**	0.08	0.13	0.00	0.10
FFNI Indifference	**-0.73**	-0.02	-0.03	0.10	-0.17
FFBI Despondence	**0.65**	-0.10	-0.11	0.06	-0.25
FFF Neuroticism	**0.64**	-0.08	-0.03	0.06	-0.17
FFAVA Overcome	**0.61**	<u>-0.36</u>	-0.15	0.07	-0.06
EPA Invulnerability	**-0.61**	<u>0.31</u>	0.17	0.05	0.00
FFNI Exhibitionism	-0.02	**0.75**	0.03	0.15	-0.04
FFAVA Social Dread	0.20	**-0.71**	0.04	0.11	-0.17
FFF Extraversion	-0.11	**0.69**	0.10	-0.12	0.01
FFNI Authoritative	-0.16	**0.63**	0.18	0.19	-0.09
FFOCI Risk Aversion	0.15	**-0.53**	<u>0.35</u>	0.04	<u>0.31</u>
FFAVA Shrinking	<u>0.44</u>	**-0.46**	-0.07	-0.04	0.02
EPA Thrill-Seeking	0.05	**0.45**	-0.19	0.25	<u>-0.40</u>
FFSI Aberrant Ideas	-0.07	-0.10	0.00	-0.02	**-0.99**
FFSI Odd-Eccentric	-0.03	-0.16	-0.06	0.08	**-0.88**
FFSI Aberrant Perceptions	0.19	0.00	0.05	0.09	**-0.71**
FFF Openness	-0.06	0.28	-0.01	-0.23	**-0.50**
EPA Self-centeredness	0.03	0.05	-0.02	**0.87**	0.00
EPA Arrogance	0.09	<u>0.43</u>	0.09	**0.64**	-0.05
EPA Distrust	<u>0.37</u>	-0.16	0.10	**0.50**	-0.24
FFF Agreeableness	0.20	0.08	0.05	**-0.50**	0.05
FFAVA Timorous	0.19	<u>-0.42</u>	0.02	**-0.44**	0.05
FFDI Selfless	<u>0.47</u>	0.15	0.13	**-0.33**	-0.16
FFHI Suggestibility	0.22	0.17	-0.17	**-0.15**	0.00
FFOCI Fastidious	0.16	0.00	**0.91**	0.12	-0.06
FFOCI Perfectionism	0.23	0.10	**0.86**	0.08	-0.11
FFOCI Doggedness	-0.12	0.07	**0.83**	0.04	0.01
FFOCI Punctiliousness	0.22	0.01	**0.83**	0.06	0.08
FFF Conscientiousness	-0.15	0.05	**0.63**	-0.08	0.02
EPA Impersistence	<u>0.38</u>	-0.03	**-0.62**	0.21	-0.01
FFHI Disorderly	0.18	0.03	**-0.59**	0.14	-0.23
EPA Rashness	0.17	0.35	**-0.54**	0.18	-0.24
EPA Disobliged	0.23	0.07	**-0.52**	<u>0.38</u>	-0.16

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Table 3.8 (continued)

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al., 2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.9 *Lack of Bloated Specific with All FFMPD Anxiousness Scales and FFF N total scale*

	Factor					
FFMPD Trait Scales	**N**	**O**	**C**	**A**	**E**	**N1?**
FFBI Anxious Uncertainty	0.98	-0.01	-0.04	0.05	0.07	**-0.08**
FFOCI Excessive Worry	0.91	0.00	0.13	-0.04	-0.05	**0.00**
EPA Unconcern	-0.89	0.07	0.00	-0.12	0.13	**0.08**
EPA Self-Contentment	**-0.83**	-0.01	0.14	-0.06	0.00	0.03
FFBI Despondence	**0.77**	0.15	-0.13	0.03	0.00	-0.10
FFDI Separation Insecurity	0.76	-0.01	-0.05	-0.10	0.11	**0.21**
FFF Neuroticism	**0.70**	0.09	-0.02	-0.02	-0.03	0.00
FFAVA Evaluation Apprehension	**0.70**	0.05	0.02	-0.09	-0.29	**0.14**
EPA Invulnerability	**-0.55**	0.06	0.17	-0.05	0.28	-0.15
FFAVA Overcome	**0.49**	0.02	-0.13	-0.09	-0.40	0.22
FFSI Social Anxiousness	0.45	0.18	0.05	-0.02	-0.56	**-0.05**
FFAVA Social Dread	0.11	0.19	0.06	-0.03	**-0.80**	-0.10
FFNI Exhibitionism	-0.04	0.06	0.02	-0.27	**0.69**	0.18
FFNI Authoritative	0.00	0.08	0.16	-0.18	**0.67**	-0.21
FFF Extraversion	-0.09	0.02	0.10	0.03	**0.67**	0.16
FFAVA Shrinking	0.17	0.01	-0.02	-0.03	**-0.64**	0.37
FFOCI Risk Aversion	0.05	-0.31	0.37	-0.05	**-0.53**	0.08
EPA Thrill-Seeking	0.08	0.42	-0.19	-0.24	**0.36**	-0.03
FFSI Aberrant Ideas	-0.02	**0.96**	-0.01	0.02	-0.08	-0.02
FFSI Odd-Eccentric	-0.08	**0.91**	-0.04	-0.10	-0.23	0.10
FFSI Aberrant Perceptions	0.24	**0.67**	0.06	-0.10	0.01	0.04
FFF Openness	0.03	**0.48**	-0.05	0.22	0.33	-0.04
EPA Self-centeredness	-0.02	0.05	-0.02	**-0.81**	-0.08	-0.15
EPA Arrogance	0.03	0.06	0.11	**-0.74**	0.31	0.13
FFAVA Timorous	0.17	-0.06	0.02	**0.50**	-0.37	0.00
EPA Distrust	0.47	0.20	0.09	**-0.38**	-0.14	-0.33
FFF Agreeableness	0.08	-0.04	0.10	**0.38**	0.06	0.46
FFDI Selfless	0.40	0.14	0.17	**0.23**	0.11	0.37
FFHI Suggestibility	-0.06	0.06	-0.10	**-0.04**	0.00	0.70
FFOCI Fastidious	0.13	0.07	**0.87**	-0.12	-0.03	-0.02
FFOCI Doggedness	-0.13	0.02	**0.86**	-0.08	0.04	0.00
FFOCI Punctiliousness	0.11	-0.05	**0.86**	-0.13	-0.07	0.18
EPA Impersistence	0.27	-0.01	**-0.63**	-0.22	-0.10	0.16
FFF Conscientiousness	-0.13	0.00	**0.62**	0.06	0.06	-0.06
FFHI Disorderly	0.06	0.24	**-0.57**	-0.20	-0.07	0.29
EPA Disobliged	0.20	0.15	**-0.52**	-0.35	0.01	0.01

Table 3.9 (continued)

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al., 2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); N1=Five Factor Model Anxiousness; Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.10 *Lack of Bloated Specific with All FFMPD Anxiousness Scales and FFF N1-N6*

	Factor					
FFMPD Trait Scales	**N**	**O**	**C**	**A**	**E**	**N1?**
FFBI Anxious Uncertainty	<u>0.95</u>	0.01	-0.06	0.06	0.03	**-0.03**
FFOCI Excessive Worry	<u>0.87</u>	0.01	0.11	-0.04	-0.08	**0.05**
EPA Unconcern	<u>-0.86</u>	0.06	0.02	-0.13	0.16	**0.03**
EPA Self-Contentment	**-0.81**	-0.02	0.16	-0.07	0.02	0.01
FFBI Despondence	**0.75**	0.16	-0.15	0.04	-0.02	-0.08
FFDI Separation Insecurity	<u>0.73</u>	0.01	-0.07	-0.09	0.09	**0.25**
FFF Anxiousness N1	<u>0.73</u>	-0.02	0.00	0.08	-0.07	**0.01**
FFAVA Evaluation Apprehension	<u>0.68</u>	0.06	0.01	-0.08	<u>-0.31</u>	**0.18**
FFF Depressiveness N3	**0.65**	0.07	-0.01	0.05	-0.06	-0.16
EPA Invulnerability	**-0.54**	0.07	0.18	-0.06	0.28	-0.16
FFF Vulnerability N6	**0.53**	-0.03	-0.08	-0.03	0.01	0.18
FFAVA Overcome	**0.48**	0.02	-0.14	-0.09	<u>-0.41</u>	0.23
FFF Self-Consciousness N4	**0.46**	0.06	0.04	0.07	-0.28	0.08
FFSI Social Anxiousness	<u>0.44</u>	0.18	0.04	-0.01	<u>-0.58</u>	**-0.02**
FFF Angry Hostility N2	**0.44**	0.05	0.09	-0.14	0.12	-0.13
FFF Impulsivity N5	**0.16**	0.25	-0.21	-0.06	0.19	0.05
FFAVA Social Dread	0.12	0.18	0.05	-0.03	**-0.81**	-0.10
FFF Extraversion	-0.09	0.02	0.11	0.03	**0.69**	0.15
FFNI Exhibitionism	-0.07	0.08	0.02	-0.26	**0.68**	0.18
FFNI Authoritative	-0.01	0.10	0.16	-0.18	**0.64**	-0.21
FFAVA Shrinking	0.17	0.01	-0.02	-0.03	**-0.63**	<u>0.38</u>
FFOCI Risk Aversion	0.07	<u>-0.33</u>	<u>0.37</u>	-0.05	**-0.51**	0.09
EPA Thrill-Seeking	0.06	<u>0.44</u>	-0.19	-0.24	**0.34**	-0.03
FFSI Aberrant Ideas	-0.04	**0.97**	0.00	0.02	-0.10	-0.02
FFSI Odd-Eccentric	-0.10	**0.92**	-0.03	-0.11	-0.25	0.10
FFSI Aberrant Perceptions	0.22	**0.68**	0.06	-0.10	-0.01	0.06
FFF Openness	0.02	**0.49**	-0.04	0.23	<u>0.32</u>	-0.05
EPA Self-centeredness	-0.02	0.05	-0.03	**-0.81**	-0.10	-0.14
EPA Arrogance	0.01	0.07	0.11	**-0.74**	0.28	0.15
FFAVA Timorous	0.18	-0.07	0.02	**0.50**	<u>-0.36</u>	0.00
FFF Agreeableness	0.08	-0.04	0.11	**0.39**	0.09	<u>0.46</u>
EPA Distrust	<u>0.46</u>	0.20	0.07	**-0.38**	-0.18	-0.29
FFDI Selfless	<u>0.37</u>	0.15	0.17	**0.24**	0.11	<u>0.40</u>
FFHI Suggestibility	-0.07	0.07	-0.09	**-0.03**	0.02	<u>0.69</u>
FFOCI Fastidious	0.13	0.07	**0.87**	-0.13	-0.04	0.00
FFOCI Doggedness	-0.11	0.02	**0.86**	-0.08	0.04	0.00
FFOCI Punctiliousness	0.12	-0.05	**0.86**	-0.13	-0.07	0.20
EPA Impersistence	0.25	-0.01	**-0.64**	-0.22	-0.11	0.16
FFF Conscientiousness	-0.11	-0.01	**0.63**	0.07	0.07	-0.06

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Table 3.10 (continued)

FFHI Disorderly	0.04	0.24	**-0.57**	-0.20	-0.08	0.29
EPA Disobliged	0.19	0.15	**-0.53**	<u>-0.35</u>	-0.01	0.02

Note. N=443; FFMPD=Five Factor Model of Personality Disorder (Lynam, 2012); FFF =five factor form (Rojas & Widiger, 2014); EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al., 2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); N1=Five Factor Model Anxiousness; Bold = location where FFMPD belongs; Underline=cross loadings at $\geq$.30.

Table 3.11 *P-factor demonstration*

FFMPD Trait Scales	Factor 1
EPA Unconcern	-0.86
FFOCI Excessive Worry	0.85
FFBI Despondence	0.81
EPA Self-Contentment	-0.85
FFAVA Overcome	0.82
EPA Invulnerability	-0.77
FFNI Shame	0.72
FFNI Indifference	-0.60
FFF Neuroticism	0.74
FFNI Authoritative	-0.45
FFAVA Shrinking	0.63
FFAVA Social Dread	0.58
FFNI Exhibitionism	-0.35
EPA Thrill-Seeking	**0.07**
FFOCI Risk Aversion	**0.16**
FFDI Intimacy Needs	**0.21**
FFSI Social Anhedonia	**0.51**
FFF Extraversion	-0.46
FFSI Odd-Eccentric	0.40
FFSI Aberrant Ideas	0.35
FFSI Aberrant Perceptions	0.44
FFF Openness	-0.01
FFAVA Timorous	0.33
EPA Arrogance	-0.09
FFDI Selfless	**0.37**
EPA Self-centeredness	**0.06**
EPA Distrust	**0.52**
FFHI Suggestibility	**0.16**
FFF Agreeableness	0.08
FFOCI Fastidious	-0.08
FFHI Disorderly	0.42
FFOCI Doggedness	-0.38
EPA Impersistence	0.56
FFF Conscientiousness	-0.36
FFOCI Punctiliousness	-0.07
EPA Disobliged	0.42
FFOCI Perfectionism	-0.04
EPA Rashness	0.25

Note. N=443; FFMPD=Five Factor Model
of Personality Disorder (Lynam, 2012); FFF
=five factor form (Rojas & Widiger, 2014);

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Table 3.11 (continued)

EPA=Elemental Psychopathy Assessment (Lynam et al., 2011), FFOCI=Five Factor Obsessive Compulsive Inventory (Samuel et al., (2012), FFBI=Five Factor Borderline Inventory (Mullins-Sweatt et al., 2012), FFDI=Five Factor Dependency Inventory (FFDI; Gore et al., 2012), FFSI=Five Factor Schizotypal Inventory (Edmundson et al., 2011), FFNI=Five Factor Narcissism Inventory (Glover et al., 2012), FFHI=Five Factor Histrionic Inventory (Tomiatti et al., 2012), FFAvA=Five Factor Avoidant Assessment (FFAvA; Lynam et al., 2012); Bold = location where FFMPD trended towards general factor of personality

CHAPTER FOUR: DISCUSSION

The FFMPD scales demonstrated the expected bipolarity in the vast majority of cases. Within the domain of neuroticism, EPA Unconcern, Self-Contentment, Invulnerability, and FFNI Indifference loaded opposite to FFOCI Excessive Worry, FFNI Shame, FFBI Despondence, and FFAvA Overcome. Within the domain of extraversion, FFNI Exhibitionism, Authoritative, and EPA Thrill Seeking loaded opposite to FFAvA Social Dread, FFOCI Risk Aversion, and FFAvA Shrinking. For agreeableness, EPA Self-Centeredness, Arrogance, and Distrust loaded opposite to FFAvA Timorous, FFDI Selfless, and FFHI Suggestibility. Within conscientiousness, FFOCI Fastidious, Perfectionism, Doggedness, and Punctiliousness loaded opposite to EPA Impersistence, Rashness, Disobliged, and FFHI Disorderly. The one clear exception to the FFMPD scales demonstrating bipolarity can be seen with the domain of openness. However, this lack of bipolarity will be addressed further when discussing the issue of non-diametrics.

These findings suggest a model of maladaptive personality trait structure that is not being recognized in the current diagnostic system (APA, 2013). The DSM-5 Section III trait model is presented as a unipolar structure, as if there is no maladaptive agreeableness or maladaptive extraversion. The DSM-5 trait model includes only one scale that loads negatively within its dimensional structure, Rigid Perfectionism.

The lack of maladaptive agreeableness, extraversion, conscientiousness, and low neuroticism is also a significant hindrance for the DSM-5 trait model to adequately cover personality disorder. Research has suggested that the absence of scales within the DSM-5 Section III for maladaptive conscientiousness and agreeableness has limited its ability to provide adequate coverage of the obsessive-compulsive and dependent personality

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disorders, respectively. Crego et al. (2015) demonstrated that the FFMPD scales for maladaptive conscientiousness (e.g., Fastidious, Doggedness, and Punctiliousness, along with Perfectionism) contributed to an incremental validity of the FFOCI over the DSM-5 PID-5 in covering the obsessive-compulsive personality disorder. Gore and Widiger (2015) and Wright et al. (2012) similarly indicated that the DSM-5 trait model fails to recognize many central traits of the dependent personality disorder, such as selflessness, gullibility, and subservience.

Further, traits of extraversion and low neuroticism are also not included within the DSM-5 trait model, limiting the ability of the DSM-5 Section III to adequately identify and cover key traits of psychopathy. To address the issue of coverage for psychopathy, the authors of DSM-5 suggested reverse-keying existing traits and/or PID-5 scales. "High attention-seeking and low withdrawal capture the social potency (assertive/dominant) component of psychopathy, whereas low anxiousness captures the stress immunity (emotional stability/resilience) component" (APA, 2013, p. 765). However, Crego and Widiger (2014) raised concerns with respect to this proposal, indicating that the absence of a maladaptive trait does not necessarily suggest the presence of its maladaptive opposite. The absence of maladaptive anxiousness can suggest instead simply the presence of a normal calmness rather than a maladaptive fearlessness. Similarly, the absence of social withdrawal can simply suggest the presence of normal assertiveness without necessarily suggesting the presence of a social boldness. These findings raise the questions of whether the structure provided in the DSM-5 trait model is accurate or even adequate to provide coverage for maladaptive personality trait functioning.

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The results of the current study are perhaps not entirely surprising. While the DSM-5 trait model limits its bipolarity to the trait of Rigid Perfectionism, additional bipolar, maladaptive structure, is evident in many existing studies that have explored the structure among measures of maladaptive personality traits (e.g., O'Connor, 2002, 2005; Samuel & Widiger, 2008; Saulsman & Page, 2004; Watson, Clark, & Chmielewski, 2008). For example, in Markon, Krueger, and Watson (2005) Workaholism and Propriety scales from the Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, Simms, Wu, & Casillas, 2014) loaded at one pole (along with NEO Personality Inventory-Revised [NEO PI-R] Conscientiousness; Costa & McCrae, 1992), whereas SNAP Disinhibition and Impulsivity loaded negatively. In Clark, Livesley, Shroeder, and Irish (1996), SNAP Impulsivity and SNAP Disinhibition, along with Stimulus-Seeking from the Dimensional Assessment of Personality Pathology –Basic Questionnaire (DAPP-BP; Livesley & Jackson, 2009), loaded positively on a common factor, whereas DAPP-BQ Compulsivity, SNAP Workaholism, and SNAP Propriety load negatively. In Clark, Vorhies, and McEwen (2002), NEO PI-R Conscientiousness and SNAP Workaholism loaded positively together on one factor, whereas SNAP Impulsivity loaded negatively.

Maladaptive agreeableness and extraversion have also been well recognized when these FFM domains are considered from the perspective of the interpersonal circumplex (IPC). FFM agreeableness and extraversion are readily understood as approximately 45 degree rotations of the IPC dimensions of agency and communion (Wiggins & Pincus, 1989). This has not received any significant dispute. And, it is also well established that there are maladaptive variants of all eight octants of the IPC (Pincus & Hopwood, 2012), including the locations occupied by agreeableness and extraversion. There are even well

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validated measures of the maladaptive variants for every octant of the circumplex, such as the Inventory of Interpersonal Problems (Horowitz, Alden, Wiggins, & Pincus, 2000). Wright et al. (2012) reviewed the DSM-5 dimensional trait model from the perspective of the IPC, and noted the inadequate representation of maladaptive variants of the gregarious-extraverted, warm-agreeable, and even the unassuming-ingenuous octants. To suggest that there are no meaningful maladaptive variants of extraversion and agreeableness would be to neglect the considerable body of IPC personality disorder literature and research (see Pincus & Hopwood, 2012).

Most other dimensional trait models and/or measures do include at least some degree of bipolar maladaptivity, and some more so than others. For example, as noted earlier, one-third of the 12 SNAP scales (Clark et al., 2014) assess for maladaptive variants of extraversion (i.e., Exhibitionism and Entitlement) or conscientiousness (i.e., Propriety and Workaholism). A more recently developed measure, the Computerized Adaptive Test of Personality Disorder (CAT-PD; Simms et al., 2011, 2017) includes one scale to assess for maladaptive extraversion (i.e., Exhibitionism) and three scales for maladaptive conscientiousness (i.e., Perfectionism, Rigidity, and Workaholism, which aligns with FFM conscientiousness). A self-report measure of the ICD-11 dimensional trait proposal has been developed, the Personality Inventory for ICD-11, and initial research with this measure has confirmed a bipolar relationship of the anankastic and disinhibition domains (Oltmanns & Widiger, in press). However, obtaining or demonstrating a bipolar structure can be difficult due to a variety of statistical and methodological issues, such as non-diametrics, interstitial space, the general factor of personality, and bloated specific factors. Each of these will be discussed in turn.

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Non-Diametrics

The factor structure became compromised when both high and low traits from openness were included. This likely occurred because the FFMPD Openness scales are non-diametric, or not actually opposite to one another. The scales occupy the opposite poles, but only two of the six facets of FFM openness have scales on both poles of the same facet (see Table 1) and even in these cases the traits assessed by these scales would not be said to be actually opposite to one another. FFMPD Odd & Eccentric and Inflexibility do occupy the same facet of openness (i.e., openness to ideas) but they are not conceptually opposite to one another in a manner like FFMPD Excessive Worry and Unconcern. While there is empirical support for their placement within the facet of openness to ideas (Edmundson et al., 2011; Samuel et al., 2012), these scales did not demonstrate a strong negative effect size correlation with one another (see Table 3.1). In Tables 4 and 5 the traits associated with both poles of openness relate strongly to the domain itself, but as seen in table 3, when examined together, these scales were not in fact opposite to one another (with FFSI Odd-Eccentric loading primarily on the Agreeableness factor).

The problematic nature of FFM openness may reflect in part on how this construct has been conceptualized and assessed (Ashton & Lee, 2012; Chmielewski, Bagby, Markon, Ring, & Ryder, 2014; Gore & Widiger, 2013). The NEO Personality Inventory-Revised (NEO PI-R; Costa & McCrae, 1992) is the predominant measure of the FFM. However, this instrument might not be providing the optimal assessment of openness, especially if one is concerned with its maladaptive variants (Gore & Widiger, 2013). Haigler and Widiger (2001) demonstrated empirically that when NEO PI-R openness items are

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revised to assess maladaptive variants of the same openness content, correlations with schizotypy emerged, but still only at a marginal level, whereas the relationship of agreeableness with dependency and conscientiousness with obsessive-compulsive personality disorder improved substantially.

The NEO PI-R Openness scale was constructed prior to any knowledge of Costa or McCrae regarding the lexical Big Five as described by Goldberg (1982). Costa and McCrae (1980) began with just a three-factor model, assessed by the NEO Inventory (e.g., McCrae & Costa, 1983). At the time, they did not consider openness to have maladaptive variants. On the contrary, they suggested that openness concerns such ideal personality traits as self-actualization, an open mind, and self-realization, citing humanism papers and texts by Coan (1974), Rogers (1961), and Rokeach (1960). NEO Inventory Openness to Experience included an openness to aesthetics, feelings, values, and activities that suggested an actualized, accomplished, and fulfilled person (Coan, 1974; Rogers, 1961; Rokeach, 1960). Soon after the development of the NEO Inventory, Costa and McCrae became aware of the Big Five lexical model as described by Goldberg (1982) and they extended their instrument to include the domains of agreeableness and conscientiousness. However, they did not revise their scales for neuroticism, extraversion, or openness. This does not appear to have been significantly problematic for neuroticism or extraversion, but they subsequently acknowledged that NEO PI-R Openness did not align as well with the Big Five (McCrae 1990).

There is indeed little reason to expect a meaningful relationship of schizotypal cognition with an openness to aesthetics, feelings, or even ideas, particularly as these facets are conceptualized as humanistic ideals (Coan, 1974; McCrae, 1990; McCrae &

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Costa, 1983; Rogers, 1961; Rokeach, 1960). Odd and eccentric thinking can be understood to be a maladaptive variant of openness to ideas, but it is certainly not opposite to a rigidity in thinking. Opposite to rigidity would be more like a careless, excessive, or dyscontrolled openness to all manner of ideas.

Alternative measures and models of openness have since been developed, including for instance Openness to Experience within Lee and Ashton's (2004) HEXACO-Personality Inventory (HEXACO-PI), Unconventionality within Tellegen's Inventory of Personal Characteristics (IPC; Tellegen & Waller, 1987), and the Experiential Permeability Index (EPI) of Piedmont et al. (2009. EPI was constructed by Piedmont et al. (2009) to assess for maladaptive variants of both high and low FFM openness. One of the subscales for maladaptive high openness is Odd and Eccentric. IPC Unconventionality, according to Almagor, Tellegen and Waller (1995), "corresponds to the Big Five dimension of . . . (reversed) Openness" (p. 301). HEXACO PI-R Openness aligns as well with FFM openness (Lee & Ashton, 2004). The facet scales for HEXACO PI-R Openness are Aesthetic Appreciation, Creativity, and Inquisitiveness, comparable to NEO PI-R Openness, but as well Unconventionality. Comparable to IPC Unconventionality, HEXACO PI-R Unconventionality includes unusual, deviant, and aberrant expressions of openness. In sum, the bipolarity of the maladaptive structure of openness might be more readily apparent if one worked from these other models of general personality rather than the FFM.

Interstitial Space

Even at the earliest stages of analysis, interstitial space issues between extraversion and agreeableness began to emerge. In Table 3.3, when two traits per domain were

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considered, FFF Agreeableness obtained its highest loading on the Extraversion factor. The issue continued to emerge as more FFMPD scales were added to the factor analysis. In Table 3.5, two of the FFMPD Agreeableness scales, EPA Arrogance and FFAvA Timorous, cross-loaded on the Extraversion factor at .42 and -.43, respectively. In Table 3.6, these same scales can be seen occupying the same interstitial space, with EPA Arrogance cross-loading with Agreeableness and FFAvA Timorous obtaining dual primary loadings within both the Extraversion and Agreeableness factors. In Table 3.7, this issue becomes even more apparent as eight extraversion traits are added to the factor analysis. Both EPA Arrogance and FFAvA Timorous then obtained their primary loadings on the Agreeableness factor.

The occupation of interstitial space is a central feature of the locations of maladaptive interpersonal trait scales within the IPC (Pincus & Hopwood, 2012). As previously indicated, traits from FFM agreeableness and extraversion can be understood as approximately 45 degree rotations of the IPC dimensions of agency and communion (Wiggins & Pincus, 1989). It has also been established that there are maladaptive variants of all eight octants of the IPC (Pincus & Hopwood, 2012), including the locations occupied by agreeableness and extraversion. These agreeableness and extraversion scales in and of themselves occupy interstitial space of the IPC.

A useful metaphor for the Big Five trait domains has been a galaxy of stars, suggesting that there are five basic galaxies in the universe of trait terms. However, this is a very misleading metaphor because galaxies of stars have tremendous simple structure (i.e., separated by empty space) whereas the galaxies of trait terms shade into one another, complicating any effort to obtain simple structure. Indeed, at one time the

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validity of the FFM structure was tested with confirmatory factor analyses that presumed simple structure (i.e., no cross-loading whatsoever). It is now recognized that this simple structure is unrealistic when considering multiscale inventories (Marsh, Morin, Parker, & Kaur, 2014). The Big Five lexical model includes all of the trait terms that persons have developed to describe themselves and other persons. Persons would not confine their development of trait terms only for neuroticism, extraversion, and agreeableness (for instance). They would also develop terms for combinations of these domains or at least the space in between them.

General Factor of Personality

When maladaptivity is present in personality trait scales, it is possible to negate or at least compromise the expected bipolar structure. Maladaptivity tends to correlate positively with other indicators of maladaptivity, and to correlate negatively with indicators of adaptivity, no matter the source or content of the trait. This has been most clearly evident within the research of Pettersson et al. (2014). Pettersson et al. "suggest that there is some degree of bipolarity in most, if not all, traits in terms of both their adaptive and their maladaptive qualities" (p. 444). However, Pettersson et al. (2012) demonstrated that traits that are conceptually opposite to one another, such as suspicious and gullible, and self-deprecating and conceited\can load in the same direction on the same general factor because they share comparable implications for maladaptive versus adaptive functioning. If traits that are conceptually opposite to one another will load on the same factor in the same direction because they have the same implications for adaptive versus maladaptive functioning, it will likely be difficult for conceptually

aligned traits that have opposite implications for adaptive versus maladaptive functioning to load in the same direction on the same factor.

The current study did still obtain a good deal of bipolarity within the general (first) factor of personality disorder (particularly for the domain of neuroticism). However, there was also some degree of dismantling of the bipolarity consistent with Pettersson et al. (2012, 2014). In Table 3.11 one can begin to see elements of the bipolar structure that was so evident in earlier tables now being lost. In this table, traits such as FFDI Intimacy Needs and Social Anhedonia can be seen loading .21 and .51, respectively, in the same direction, whereas in Table 3.7, these same traits loaded .33 and -.42, respectively.

How best to understand the general factor of personality, though, is heavily disputed in the literature. In the FFM, traits align in a conceptual manner. Traits that are opposite in meaning anchor opposing poles (e.g., introversion vs. extraversion). However, this conceptual arrangement is disrupted when considering the general factor of personality. One hypothesis, already noted, is that the general factor is artefactual, reflecting a tendency to evaluate oneself in a positive or negative manner (Pettersson et al., 2012). The rationale for this understanding is that since traits that are opposite in meaning are loading in the same direction persons cannot be providing an accurate self-description. The evaluation bias explanation is an extension of the social desirability hypothesis. This hypothesis, though, was ultimately discredited (McCrae & Costa, 1983). It is evident that most people are providing reasonably accurate and honest self-descriptions when reporting on behavior or personality characteristics. The general factor accounts for most of the variance within the assessment of personality. It is highly unlikely that most

persons are predominately just attempting to present a positive (or negative) view of themselves, irrespective of the content of the questionnaire items.

The general factor of personality is more likely a reflection of adaptivity versus maladaptivity, or the impairments and dysfunction secondary to the maladaptive traits. One cannot take conceptually different traits and expect them to load together based on their shared meaning. Although there is a good deal of interstitial space occupation, the domains of neuroticism, introversion, antagonism, and low conscientiousness have very little in common. How can they then be aligned within one common factor? It is not that persons occupying the highest levels of the general factor have lots of personality and those occupying the lowest points have very little personality (albeit this is the common interpretation of the general factors of psychopathology and personality disorder). It is for this reason that many persons question the validity of the general factor of personality (Hopwood, Wright, & Donnellan, 2011).

However, an alternative view of the general factors of personality, personality disorder, and psychopathology is that the general factors reflect the secondary impairments. Every maladaptive trait will result in impairments to (for instance) social and occupational functioning. The traits have to be aligned in some manner on the general factor. What all the maladaptive traits have in common is some association with the social and occupational impairment that results from these very different traits. For example, laxness and perfectionism will both result in the inability to finish tasks on time, yet for opposite reasons. In sum, the general factor works against the bipolarity (e.g., laxness and perfectionism correlating in opposite directions to the general factor), as it is

perhaps defined largely by the secondary impairments rather than the source of the impairments.

The traits associated with the greatest impairments load the highest on the general factor. The highest loadings seen in Table 3.11 ranging from .60-.86 were largely from the domain that concerns the most obvious maladaptive functioning, neuroticism. A similar finding occurs for the general factor of personality disorder (dominated by the traits of borderline personality disorder; Wright, Hopwood, Skodol, & Morey, 2016) and the general factor of psychopathology (dominated by the symptoms of the psychotic disorders; Lahey et al., 2012).

Bloated Specific Factors

In the present study, an attempt to demonstrate how bloated specific factors can influence the bipolarity of the FFMPD was made by including all six FFMPD Anxiousness scales in the exploratory factor analysis. The bloated specific factor did not emerge from the addition of all of the FFMPD anxiousness scales. This, however, is consistent with Oltmanns and Widiger (2016) who also failed to get anxiousness scales to separate when the FFM was assessed by the International Item Pool Inventory. This is likely due to the fact that conceptually, there is a lot of anxiousness present within the other facets of neuroticism (e.g., vulnerability, self-consciousness, and depressiveness). However, it is important to consider the issue of bloated specific factors when attempting to demonstrate bipolarity because an artifactual factor can appear if it is inordinately represented by a relatively large number of narrowly defined scales, relative to the other submitted scales. Cattell and Tsujioka (1964) originally coined this as a "bloated specific factor."

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Bloated specific factors have since been commonly identified as problematic outcomes of a respective factor analysis when it includes a relatively large number of scales (or items) that define a considerably narrower, homogeneous construct relative to the other submitted variables (Giles, 2002; Kline, 2000). As expressed recently by DeYoung, Grazioplene, and Peterson (2012), "if multiple measures of a single lower-level trait are present among the variables to be factor analyzed, their intercorrelations may be strong enough to cause them to form a separate factor, even when the other factors recovered are at a higher level of the trait hierarchy and one of them should subsume the lower-level trait in question" (p. 65).

While a bloated specific factor of anxiousness did not emerge from the addition of all of the FFMPD anxiousness scales to the factor analysis, one can make the case that a bloated specific factor did emerge that has some consistencies with Crego et al. (2018). In Tables 10 and 11, FFF Agreeableness, FFDI Selfless, and FFHI Suggestability obtained their primary loadings on the additional sixth factor. While these traits are not from the same facet of agreeableness, these traits do encompass maladaptively high levels of agreeableness and could share some conceptual variance with one another. Indeed, Crego et al. identified this as a bloated specific factor involving features of dependency.

Limitations and Future Directions

A potential limitation of the current study is that the sample was not a purely clinical sample. Although an argument can be made that the sample is clinically relevant, with forty-six percent of participants reporting having been in treatment or currently seeking mental health treatment, there perhaps would have been better coverage of maladaptive

personality functioning if the entire sample had or was currently seeking mental health treatment.

In addition, a potential limitation was sampling from MTurk. Internet data collection has less control over research participation than would be available in face-to-face test administration. It was in part for this reason that a conservative threshold was used on the careless-responding scale. On the other hand, research has found that MTurk data quality is at least equal to findings obtained through traditional methods (Chandler & Shapiro, 2016; Shapiro et al., 2013). For example, Buhrmester, Kwang, and Gosling (2011) reported consistent psychometric properties with the general population on a variety of self-report inventories. Gore and Widiger (2015) reported a close replication of FFMPD findings across MTurk and student samples. Crego and Widiger (2016) similarly report replication of FFMPD findings across MTurk and student samples.

In the future, it may prove valuable to develop a single bipolar measure to assess for maladaptive personality functioning in a fashion similar to the FFF but covering the traits currently assessed by such measures as the PID-5 or CAT-PD-SF. One could simply administer the entire set of 17 FFMPD scales included in Table 3.7. This would be a rather unique measure in that it would be assessing for maladaptive variants of both poles for at least four of the five domains of the FFM. Alternatively, one might select the best performing items on each scale (i.e., that demonstrate the best bipolar structure) and then include within one scale items that assess opposite variants of the same trait. For example, one would obtain the five best performing items from Unconcern and Excessive Worry, and construct a ten-item scale that assesses maladaptivity at both poles within the

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same scale. One might even demonstrate better bipolarity than was obtained in the current study, given the selection of items with optimal bipolar performance.

Conclusions

In sum, the current study identified a subset of FFMPD scales, utilizing exploratory factor analysis, to illustrate the bipolarity present in the FFMPD. Bipolarity was evident in four out of the five domains in a series of factor analyses which evaluated two, four, six, and eight sets of bipolar FFMPD trait scales, with the exception of openness. The current study also demonstrated that the presence of bipolarity is impaired by a number of concerns, including the presence of non-diametric scales and occupation of interstitial space. These findings have significant implications for the conceptualization of personality disorder (e.g., the lack of bipolarity within the DSM-5 trait structure) and for the assessment of personality (the potential to create a bipolar measure of maladaptive personality functioning).

APPENDIX: Measures

Five-Factor Form					
Please write rating in blank on left below	**Maladaptive high (5)**	**Normal high (4)**	**Neutral (3)**	**Normal low (2)**	**Maladaptive low (1)**
NEUROTICISM					
Anxiousness	Fearful, Anxious	Vigilant, worrisome, wary		Relaxed, calm	Oblivious to signs of threat
Angry hostility	Rageful	Brooding, resentful, defiant		Even-tempered	Won't even protest exploitation
Depressiveness	Depressed, suicidal	Pessimistic, discouraged		Not easily discouraged	Unrealistic, overly optimistic
Self-Consciousness	Uncertain of self, ashamed	Self-conscious, embarrassed		Self-assured, charming	Glib, shameless
Impulsivity	Unable to resist impulses	Self-indulgent		Restrained	Overly restrained
Vulnerability	Helpless, overwhelmed	Vulnerable		Resilient	Fearless, feels invincible
EXTRAVERSION					
Warmth	Intense attachments	Affectionate, warm		Formal, reserved	Cold, distant
Gregariousness	Attention-seeking	Sociable, outgoing, personable		Independent	Socially withdrawn, isolated
Assertiveness	Dominant, pushy	Assertive, forceful		Passive	Resigned, uninfluential
Activity	Frantic	Energetic		Slow-paced	Lethargic, sedentary
Excitement-Seeking	Reckless, foolhardy	Adventurous		Cautious	Dull, listless
Positive Emotions	Melodramatic, manic	High-spirited, cheerful, joyful		Placid, sober, serious	Grim, anhedonic
OPENNESS					

Fantasy	Unrealistic, lives in fantasy	Imaginative		Practical, realistic	Concrete
Aesthetics	Bizarre interests	Aesthetic interests		Minimal aesthetic interests	Disinterested
Feelings	Intense, in turmoil	Self-aware, expressive		Constricted, blunted	Alexithymic
Actions	Eccentric	Unconventional		Predictable	Mechanized, stuck in routine
Ideas	Peculiar, weird	Creative, curious		Pragmatic	Closed-minded
Values	Radical	Open, flexible		Traditional	Dogmatic, moralistically intolerant
AGREEABLENESS					
Trust	Gullible	Trusting		Cautious, skeptical	Cynical, suspicious
Straightforwardness	Guileless	Honest, forthright		Savvy, cunning, shrewd	Deceptive, dishonest, manipulative
Altruism	Self-sacrificial, selfless	Giving, generous		Frugal, withholding	Greedy, self-centered, exploitative
Compliance	Yielding, subservient, meek	Cooperative, obedient, deferential		Critical, contrary	Combative, aggressive
Modesty	Self-effacing, self-denigrating	Humble, modest, unassuming		Confident, self-assured	Boastful, vain, pretentious, arrogant
Tender-Mindedness	Overly soft-hearted	Empathic, sympathetic, gentle		Strong, tough	Callous, merciless, ruthless
CONSCIENTIOUSNESS					
Competence	Perfectionistic	Efficient, resourceful		Casual	Disinclined, lax
Order	Preoccupied w/organization	Organized, methodical		Disorganized	Careless, sloppy, haphazard
Dutifulness	Rigidly principled	Dependable, reliable, responsible		Easy-going, capricious	Irresponsible, undependable, immoral

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Achievement	Workaholic, acclaim-seeking	Purposeful, diligent, ambitious		Carefree, content	Aimless, shiftless, desultory
Self-Discipline	Single-minded doggedness	Self-disciplined, willpower		Leisurely	Negligent, hedonistic
Deliberation	Ruminative, indecisive	Thoughtful, reflective, circumspect		Quick to make decisions	Hasty, rash

Copyright, Widiger (2009)

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