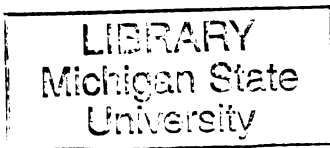This is to certify that the
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DEVELOPING MEASURES OF PSYCHOPATHIC PERSONALITY TRAITS FROM THE INTERNATIONAL PERSONALITY ITEM POOL

By

Edward August Witt

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Psychology

2009

ABSTRACT

DEVELOPING MEASURES OF PSYCHOPATHIC PERSONALITY TRAITS FROM
THE INTERNATIONAL PERSONALITY ITEM POOL

By

Edward August Witt

The purpose of this research was to create new measures of the psychopathic personality

traits of Fearless Dominance and Impulsive Antisociality from the item content of the

international personality item pool. In the first study 400 college students filled out

measures of psychopathic personality traits and a short form of the IPIP-NEO for the

purpose of creating the initial scales. In the second study 317 college students filled out

these newly created measures as well as measures of psychopathy, narcissism,

Machiavellianism, the Big Five traits, and socially desirable responding. The purpose of

this study was to establish the nomological network of these traits, and to compare it to

the nomological network of these traits as measured by a different measurement

instrument. Finally, the third study involved 167 focal participants participating in a

laboratory aggression paradigm. In this paradigm participants are insulted by a partner

and then given the opportunity to retaliate by preparing a sample of hot sauce for the

offending party to consume. The purpose of this study was to establish the predictive

validity of these new measures using an observable outcome (i.e., hot sauce allocated). In

addition, 111 informant reports were collected to establish self-other agreement for these

newly created scales. Overall, the results suggest that these new scales are reliable and

valid measures of psychopathic personality characteristics.

For my parents, Gerald and Vickie Witt

ACKNOWLEDGEMENTS

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INTRODUCTION

The image of an impulsive and aggressive individual who can maintain the façade of normality is captured by the title of Hervey Cleckley's (1941, 1955, 1982) seminal work on psychopathy, *The Mask of Sanity*. To be sure, traditional accounts describe psychopathic individuals as erratic, antisocial, and generally free from nervousness, anxiety, and interpersonal insecurities (Cleckley, 1941; Karpman, 1941). Although these classic descriptions tend to treat psychopathy as a discrete disorder, recent work indicates that it is difficult to draw clear distinctions between psychopaths and non-psychopaths (Edens, Marcus, Lilienfeld, & Poythress, 2006; Marcus, John, & Edens, 2004; Murrie, Marcus, Douglas, Lee, Salekin, & Vincent, 2007). These studies instead support a dimensional representation of psychopathy that involves multiple attributes, each existing on its own continuum. Contemporary researchers have even suggested that psychopathy can be understood as a constellation of extreme scores on certain, normally occurring personality traits (Benning, Patrick, Blonigen, Hicks, & Iacono, 2005; Lynam & Widiger, 2007; Miller, Lynam, Widiger, & Leukefeld, 2001; Miller & Lynam, 2003). All in all, there is increasing interest in identifying the core personality traits that are associated with psychopathy.

The goal of the present set of three studies is to develop and validate a new set of measures of psychopathic personality traits from the items contained in an existing public domain item pool for assessing "normal" personality – The International Personality Item Pool (IPIP; Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006). These measures will provide researchers with additional options for studying psychopathic personality traits because the items are widely used and non-proprietary, unlike many of

the commonly used measures that currently dominate the literature on psychopathic personality attributes. Moreover, the process of constructing and validating these measures will provide additional insight into the nature of psychopathic personality traits. Specifically, the objective of Study 1 is to create measures of psychopathic traits from a 120 item IPIP inventory designed to measure the Big Five Personality Traits (i.e., The *IPIP-NEO*). The goal of Study 2 is to provide evidence of convergent and discriminant validity for these newly created scales by examining how they are associated with existing measures of psychopathic traits and with measures of other conceptually related personality constructs. The aim of Study 3 is to provide criterion-related validity information for the newly constructed measures using both self- and informant reports to predict affective and behavioral reactions in a laboratory task designed to elicit aggressive responses.

<center>What is Psychopathy?</center>

The most influential study of psychopathic individuals was conducted by Cleckley (e.g., 1941) who generated a profile of psychopathy from a series of case studies. According to Cleckley, the psychopath possesses 16 attributes that are displayed in Table 1. These attributes converge into a paradoxical profile of a person who seems psychologically well adjusted (e.g., "absence of delusions," "good intelligence") but engages in impulsive and aggressive behavior (e.g., "inadequately motivated antisocial behavior," "failure to learn by experience"). As can be seen in the table, not all of the descriptors are explicit markers of personality. Some of the descriptors may be considered kinds of antisocial behaviors that could arguably arise because of more fundamental features of temperament or personality. For example, "sex life impersonal,

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trivial, and poorly integrated" (characteristic #15, Table 1) may be the result of general tendency to be "unresponsive in general interpersonal relations" (characteristic #12 in Table 1). Nonetheless, there is a strong representation of personality attributes in Cleckley's writings (see also Lilienfeld & Andrews, 1996).

These personality descriptions formed much of the basis for the development of one of most widely used self-report measures of psychopathic personality attributes – the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) and its revised version, the PPI-R (Lilienfeld & Widows, 2005)[1]. Rather than simply assessing antisocial behavior per se, the PPI was developed to comprehensively assess the personality attributes associated with psychopathy drawing on clinically-informed perspectives resulting in eight core traits, each represented by its own content scale (see Table 2).

Although not explicitly designed to measure higher-order constructs, factor analytic work on the PPI and PPI-R indicates that the majority of the content scales cohere into two higher order dimensions along with a single factor indicated by the Coldheartedness scale (see Benning, Patrick, Hicks, Blonigen, & Krueger, 2003; Berardino, Meloy, Sherman, & Jacobs, 2005; Lilienfeld & Widows, 2005; Patrick, Edens, Poythress, Lilienfeld, & Benning, 2006; Ross, Benning, Patrick, Thompson, & Thurston, 2009; Uzieblo, Verschuere, & Crombez, 2007; Witt, Donnellan, Blonigen, Krueger, & Conger, in press; but see Neumann, Malterer, & Newman, 2008). The first factor captures a socially dominant orientation, lack of stress (internalizing problems), and low anxiety/fear. The second factor captures a willingness to manipulate others, egocentricity,

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[1] It should be mentioned that the most widely used clinical measure of psychopathy – The Psychopathy Checklist-Revised – was also largely based on Cleckley's writings (Patrick & Bernat, in press).

unwillingness to adhere to rules or norms, inability to plan ahead, and a tendency to displace the onus of responsibility for misdeeds from the self to others. Benning et al. (2003) labeled the first PPI factor "Fearless Dominance" and the second PPI factor "Impulsive Antisociality."

There is evidence to support the idea that the PPI and its revised version are valid measures of psychopathic personality traits. In general PPI total scores have been found to be associated with self and informant reports of antisocial behavior as well as alcohol and drug use (Lilienfeld & Andrews, 1996). With regard to the specific factors, PPI-I (Fearless Dominance) has been found to be positively associated with interviewer reports of Adult antisocial behavior and PPI-II (Impulsive Antisociality) has been found to exhibit moderate positive associations with both informant and self-reports of antisocial behavior, informant and self-reports of childhood antisocial behavior, and alcohol abuse-dependence (Benning et al. 2003).

Several other studies have provided evidence of distinct personality and behavioral correlates for Fearless Dominance and Impulsive Antisociality. For example, Benning et al. (2005) reported that Fearless Dominance was positively correlated with narcissism and negatively associated with social phobia, whereas Impulsive Antisociality was positively associated with conduct disorder, adult antisocial behavior, and substance dependence. Impulsive Antisociality is also positively associated with both aggressive and nonaggressive infractions in prisoners (Edens, Poythress, Lilienfeld, Patrick, & Test, 2008). Patrick et al. (2006) reported that Fearless Dominance was negatively related to symptoms of anxiety disorders and positively linked with social dominance, whereas Impulsive Antisociality was positively associated with measures of trait aggression.

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In sum, it appears that many of the personality characteristics associated with psychopathy cohere into the two broad factors of Fearless Dominance and Impulsive Antisociality. Table 2 displays the considerable overlap between the conceptual descriptions provided by Cleckley and the higher-order constructs measured by the PPI-R. As such, there is reason to believe that Fearless Dominance and Impulsive Antisociality capture the dispositional constructs that are considered most important to classical conceptualizations of the psychopathy.

The Relation between the Empirically Derived "Big Two" Psychopathy Traits and the Two-Process Model of Psychopathy

The psychometrically-based factors of Fearless Dominance and Impulsive Antisociality converge with the constructs in Patrick and Bernat's (in press) recently proposed two-process model of psychopathy. According to this model, psychopathy stems from deficits in two underlying neurobiological systems. The first deficit is an under-reactivity of the brain's defensive motivational system that manifests itself as trait fearlessness. Specifically, this system governs affective responses and is related to risks of internalizing problems (e.g., anxiety and depression). Physiologically, the functioning of this system is often assessed via startle potentiation (often considered an index of amygdala reactivity to explicit fear cues). The second deficit associated with psychopathy is reflected in impairments in areas of the brain associated with higher-order processing (e.g., planfulness, behavioral control) and manifest as a propensity towards deviance or externalizing behaviors. Specifically, a reduced P300 amplitude in event-related potential seems to be the most likely candidate as an underlying etiological mechanism for this manifest tendency toward externalizing problems. Across several studies this specific

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deficit has been found to be associated with a host of externalizing behaviors including substance dependence, child conduct disorder, and adult antisocial personality disorder (Patrick & Bernat, in press). According to Patrick and Bernat (in press), the higher-order factors of the PPI-R can be viewed as "imperfect manifest (phenotypic) indicators of these two underlying etiologic (genotypic) dispositions" (p. 14).

An advantage of the two-process model of psychopathy is that it clarifies the somewhat contradictory nature of the clinical syndrome. As previously noted, there is an undeniable dichotomy in the defining characteristics of the disorder as characterized in the clinical literature. Psychopaths present themselves as psychologically well-adjusted individuals who engage in the kinds of antisocial behaviors that suggest severe psychopathology. The dual process model accounts for this pattern by explaining that these different behavioral and affective responses stem from separate neurobiological systems. According to this perspective, individuals classified as psychopaths happen to be rare individuals who have extreme standing on both of these attributes or extreme impairment in the functioning of these systems.

It is important to note that the correlates of Fearless Dominance and Impulsive Antisociality map well to this dual process model (e.g., Benning et al. 2003, Blonigen et al., 2005; Edens, et al., 2006; Ross et al., 2009). PPI-I (Fearless Dominance) is associated with measures of adjustment but also measures of narcissism, low empathy, and thrill-seeking; whereas PPI-II (Impulsive Antisociality) is associated with impulsiveness, aggressiveness, child and adult antisocial deviance, alcohol and drug problems, and suicidal ideation. These results challenge the idea that all of the behaviors traditionally associated with psychopathy stem from the same underlying mechanism. In short, the

dual-process model helps to explain the so-called "Mask of Sanity" associated with psychopathy and focuses research attention on two core dimensions of personality.

The Need for Additional Measures of Fearless Dominance and Impulsive Antisociality

Although the PPI-R is one of the best validated self-report psychopathy measures, there are reasons – both practical and theoretical – that call for alternative measures of Fearless Dominance and Impulsive Antisociality. On a practical level, the PPI-R is a relatively new measure and has yet to be included into many existing longitudinal and community studies. This makes it largely impossible to evaluate important research questions regarding these traits such as their stability over time (but see Blonigen et al., 2006; Witt et al., in press). On a theoretical level, it is important to establish that Fearless Dominance and Impulsive Antisociality transcend a particular inventory and can be assessed by alternative measures.

One potentially useful starting point for creating new measures of these constructs is to use existing inventories of normal personality. Recent research supports what Eysenck (1994) referred to as the "*continuity hypothesis*," specifically, that abnormal traits lie on the same continuum as normal traits. This idea is often referred to as a *spectrum association* by researchers interested in the link between normal personality and psychopathology (Caspi & Shiner, 2008). The central thesis is that psychopathology is best viewed as an extreme expression of common personality dimensions. This may mean that instruments that are used to measure normal personality could be useful for assessing more pathological aspects of personality (see Walton, Roberts, Krueger, Blonigen, & Hicks, 2008).

In other words, it should be possible to construct measures of Fearless Dominance

and Impulsive Antisociality by "re-engineering" commonly used measures of normal personality to create targeted measures of these constructs. One advantage of this approach is that researchers can use such newly created measures to exploit existing datasets in which the parent personality inventories have already been administered. Researchers can also use the new measures in future studies where conditions preclude the use of the PPI-R (i.e., limited time and financial resources). Such versatility increases the opportunities for researchers to further the scientific understanding of psychopathic personality traits in a relatively inexpensive fashion.

Researchers have already successfully utilized this "re-engineering" approach with items taken from the Multidimensional Personality Questionnaire (MPQ; Tellegen, in press). Benning et al. (2003) found that MPQ scales accounted for a substantial amount of variability in the PPI factors assessed 4 to 6 years prospectively in a large, longitudinal sample of twins. In addition, Walton et al. (2008) found that items from the MPQ can adequately represent six of the eight PPI subscales using item response theory techniques. Drawing on the work of Benning et al. (2003), Blonigen et al. (2006) used items from the MPQ to create targeted measures of Fearless Dominance and Impulsive Antisociality, and Witt et al. (in press) demonstrated convergence between these scales and their corresponding factors from the PPI-R in a sample of college students (i.e., $rs > .70$). Thus, previous work suggests that it is possible to construct valid and reliable measures of Fearless Dominance and Impulsive Antisociality from at least one existing measure of "normal" personality.

The measures of Fearless Dominance and Impulsive Antisociality derived from the MPQ appear to hold similar positions in the nomological network as do the two

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higher-order PPI factors (Benning et al., 2005a; Witt & Donnellan, 2008; Witt et al., in press; Blonigen et al., 2006). Specifically, MPQ-Fearless Dominance is associated with a reduced genetic risk of internalizing psychopathology, whereas MPQ-Impulsive Antisociality is associated with an increased risk for externalizing psychopathology (Blonigen et al., 2005). Additionally, MPQ-Fearless Dominance is negatively associated with internalizing symptoms and fearfulness, and positively associated with thrill and adventure seeking, sociability, activity, and narcissism; whereas MPQ-Impulsive Antisociality is negatively associated with socialization and positively associated with externalizing symptoms, impulsivity, disinhibition, boredom susceptibility, trait anxiety, and negative emotionality (Benning, et al., 2005a). Witt et al. (in press) showed that MPQ-Fearless Dominance was associated with narcissism whereas MPQ-IA was associated with Machiavellianism. And finally, Witt and Donnellan (2008) reported that MPQ-Impulsive Antisociality was positively associated with counterproductive school behaviors, displaced aggression, risk for infidelity, and psychological entitlement, and negatively associated with self-control, self-esteem, and relationship quality.

More broadly, work with these factors has expanded to include physiological variables and developmental trends. Benning et al. (2005b) demonstrated differential associations between each factor and physiological responses to fear. Individuals with high scores on MPQ-Fearless Dominance showed deficient fear-potentiated startle, whereas those with high scores on MPQ-Impulsive Antisociality showed normal fear-potentiated startle. Individuals with high scores on MPQ-Impulsive Antisociality showed deficient overall skin conductance magnitudes across picture valence (i.e. pleasant, neutral, aversive), whereas Individuals high on MPQ-Fearless Dominance showed

evidence of a deficient skin conductance magnitude only when viewing aversive pictures. Finally, these traits exhibit differential patterns of mean-level stability over the period from late adolescence to early adulthood, such that MPQ-Fearless Dominance shows greater mean-level stability over this time period whereas MPQ-Impulsive Antisociality shows a much larger decline (Blonigen et al., 2006; Witt et al., in press). Thus it appears that the MPQ-Based measures of Fearless Dominance and Impulsive Antisociality occupy similar positions in the nomological net as their parent scales.

Although the MPQ measures have proven to be efficient measures of psychopathic traits, there are still a couple of issues which motivate the need for additional measures of Fearless Dominance and Impulsive Antisociality. First, the MPQ is a proprietary measure of normal personality and thus researchers may need to pay the University of Minnesota press to use this measure. Second, the MPQ is based on a specific structural model of personality (Tellegen's three factor structural model of personality; see Tellegen & Waller, in press) and demonstrating that these "big two" psychopathic traits could be measured via items designed to measure another structural model would reinforce the idea that these personality attributes are robust individual differences.

In particular, there are strong indications that it should be possible to use items associated with the Five Factor Model (FFM) to assess Fearless Dominance and Impulsive Antisociality. Specially, Ross et al. (2009) found that the 30 facets of the NEO PI-R (Costa & McCrae, 1992) explained a substantial amount of variability in these constructs as measured by the PPI (R = .71 for FD and R = .79 for IA). They reported that Fearless Dominance was predicted by low Neuroticism and high Extraversion,

whereas Impulsive Antisociality was predicted by low Agreeableness, low Conscientiousness, and to a lesser extent, high Neuroticism (especially Angry Hostility and Impulsiveness). In a separate line of research, Miller, Lynam, and their colleagues have used the facets of the Five Factor Model to generate the personality profile of the "prototypical psychopath" through consensus ratings provided by experts (Miller et al., 2001; Lynam & Widiger, 2007). This expert-generated personality profile describes psychopathic individuals as low in Agreeableness and aspects of Conscientiousness (facets such as Dutifulness, Self-Discipline, and Deliberation). These individuals are also described as high in aspects of Extraversion (except for low scores on Warmth), low in aspects of Neuroticism (except for high scores on Angry Hostility and Impulsiveness), and reasonably high in most aspects of Openness). Collectively these findings suggest that it should be possible to use items associated with FFM-based inventories to create targeted measures of Fearless Dominance and Impulsive Antisociality

The Present Studies

The goal of the studies presented here is to create targeted measures of psychopathic traits from items contained in the *International Personality Item Pool* (IPIP; Goldberg, 1999; Goldberg et a., 2006) and to conduct initial validation studies of these measures. For the "parent inventory" I chose the 120 items contained in the FFM-based IPIP measure created by Johnson (2000). This inventory had the desirable property of having item content that was sufficiently broad without being excessively long. In Study 1, measures of Fearless Dominance and Impulsive Antisociality were created from the IPIP-NEO using the Blonigen et al. (2006) MPQ-based scales as the referent (see Witt et al., in press for further validation of these measures). I selected these scales because they

are considerably shorter than the PPI-R scales, making them suitable for administering in conjunction with fairly long omnibus measures of normal personality. I also attempted to construct an analogue measure of PPI Coldheartedness scale using the IPIP items but I was not optimistic given that Walton et al. (2008) were not able to construct such a scale using the MPQ item pool. In Study 2, I examined the convergent and discriminant validity of these newly created measures with a number of measures of other theoretically-relevant (and presumably irrelevant) constructs. In Study 3, I examined the criterion-related validity the newly created measures by assessing self-other agreement and associations with observable aggressive behavior in the laboratory.

<div align="center">Study 1</div>

<div align="center">*Scale Creation*</div>

The goal of Study 1 was to create measures of Fearless Dominance, Impulsive Antisociality, and Coldheartedness from the short form of the IPIP-NEO (Johnson, 2000). The International Personality Item Pool (IPIP; http://ipip.ori.org/) is a scientific collaboratory designed to share and evaluate public domain measures of personality constructs. The IPIP-NEO is one such public domain measure designed to capture the same constructs as the proprietary NEO PI-R. Goldberg (1999) compared the correlations between the 30 facets of the IPIP-NEO and the corresponding facets from the NEO PI-R and found a mean correlation of .73, thus although differences exist in the names applied to facets across both inventories (e.g., Immoderation vs. Impulsiveness), the scales appear to capture the same psychological constructs.

<div align="center">Method</div>

Sample

<div align="center">12</div>

Four hundred students enrolled in psychology courses at a Michigan State University participated in exchange for course credit. Participants were predominantly women (70.5%) and in their first, second, or third year of college (86.9%).

Measures

For measures in the studies presented here all items were rated on a five-point scale (1= "strongly disagree" to 5 = "strongly agree") unless otherwise noted.

Psychopathic Traits. Fearless Dominance (24 items: M = 3.26, SD = .38, α = .77) and Impulsive Antisociality (34 items: M = 2.65, SD = .43, α = .87) were assessed using the Blonigen et al. (2006) scales derived from the MPQ. These scales were not correlated (r = -.01, p = ns). Witt et al. (in press) reported strong convergence between these scales and the two factors of the PPI-R (i.e., rs > .70). Coldheartedness (16 items: M = 2.30, SD = .43, α = .80) was assessed using the original Coldheartedness scale from the PPI-R (Lilienfeld & Widows, 2005). Coldheartedness was not significantly correlated with Fearless Dominance (r = .03) but it had a small and significant correlation with Impulsive Antisociality (r = .12, p < .05).

The International Personality Item Pool – NEO inventory (IPIP-NEO; Johnson, 2000). The 120-item short version of the IPIP-NEO was used to measure the big five traits: Extraversion (24 items: M = 3.49, SD = .41, Factor α = .86, Facets α = .55-.83), Agreeableness (24 items: M = 3.53, SD = .41, Factor α = .85, Facets α = .63-.81), Conscientiousness (24 items: M = 3.49, SD = .42, Factor α = .86, Facets α = .52-.86), Neuroticism (24 items: M = 2.88, SD = .47, Factor α = .87, Facets α = .64-.80), and Openness (24 items: M = 3.33, SD = .39, Factor α = .79, Facets α = .53-.72).

Scale Creation Strategy

I adopted a general scale creation strategy similar to those used by previous researchers (e.g., Walton et al., 2008). First, I calculated correlations between all of IPIP-NEO items and the total scores on the measures of Fearless Dominance, Impulsive Antisociality, and Coldheartedness. Next, I selected the IPIP-NEO items that correlated at least relatively moderately with the target scale (i.e., $\geq$ .25) and had less strong associations (i.e., $\leq$ .20) with the other scales. This yielded an initial pool of items that were then winnowed into final scales according to the following guidelines.

1. The final scales should contain items that exhibit face validity with respect to the original conceptualizations of Fearless Dominance, Impulsive Antisociality, and Coldheartedness.

2. The final scales could contain no more items than the original target scale from the MPQ (i.e., 24 items for Fearless Dominance, 34 items for Impulsive Antisociality, and 16 items for Coldheartedness) with an ideal length of 15-20 items or less.

3. The final scales should exhibit acceptable internal consistency in light of the construct breadth and measure length (i.e., αs > .80).

4. The final scales should show convergence with their original target scale (r > .70).

Results and Discussion

Descriptive statistics for all variables are presented in Table 3.

Associations between Psychopathic Personality Traits and the IPIP-NEO

Table 4 displays the associations between psychopathic personality traits and the facets of the Big Five as assessed by the IPIP-NEO. As can be seen in the table, Fearless Dominance appears to be strongly positively associated with Extraversion and strongly

negatively associated with Neuroticism, Impulsive Antisociality was strongly negatively associated with Agreeableness and Conscientiousness, and Coldheartedness was almost exclusively associated with Low Agreeableness. These patterns of associations are similar to those reported in previous research with the actual PPI-R (e.g., Ross et al., 2009).

Creation of IPIP-NEO versions of Psychopathic Traits

Using the scale creation procedures outlined previously, I attempted to create measures of Fearless Dominance, Impulsive Antisociality, and Coldheartedness from the IPIP-NEO item pool. Unfortunately, these guidelines were too stringent to allow for the creation of a Coldheartedness scale. Quite simply, it was difficult to find IPIP-NEO items that correlated highly with the Coldheartedness scale while also maintaining smaller associations with both Fearless Dominance and Impulsive Antisociality. This result is perhaps not surprising given Walton et al. (2008) were unsuccessful in their attempt to find MPQ items that could adequately tap this trait. Thus, it appears that there may be some traits associated with psychopathy that are not adequately tapped by measures of normal personality. In light of this, I elected to focus on creating new measures of Fearless Dominance and Impulsive Antisociality as these traits are more prominent in the psychopathy literature.

Fortunately, I was able to create measures of Fearless Dominance and Impulsive Antisociality. The item level and scale level statistics for the new measures of Fearless Dominance and Impulsive Antisociality are presented in Table 5. These scales demonstrated appreciable convergence with their parent scales (rs = .76 and .75 for Fearless Dominance and Impulsive Antisociality, respectively) and the new measures

were basically orthogonal ($r = -.03$, $p = ns$). The final Fearless Dominance scale consisted of twenty items that yielded appreciable consistency in this sample ($\alpha = .84$) and Impulsive Antisociality scale also consisted of twenty items with a similar level of internal consistency ($\alpha = .89$). In addition, both scales were more or less normally distributed.

Study 2

Convergent and Discriminant Validity

The purpose of Study 2 was to demonstrate the convergent and divergent validity of the newly created measures of Fearless Dominance and Impulsive Antisociality using a separate sample. For strict convergence, the original MPQ measures of Fearless Dominance and Impulsive Antisociality as well as separate measures of Fearless Dominance and Impulsive Antisociality derived from the NEO PI-R were administered (see Witt, Donnellan, & Blonigen, 2009). In addition, two other widely used self-report measures of psychopathy were also administered to examine convergent validity - the Levenson Self-Report Psychopathy Scale (Levenson, Kiehl, & Fitzpatrick, 1995) and the Self-Report Psychopathy Scale (Paulhus, Hemphill, & Hare, 2007). To be sure, the vast majority of research using self-report of psychopathic traits uses the PPI, the Levenson elf-Report Psychopathy Scale, or the Self-Report Psychopathy Scale (see Lilienfeld & Fowler, 2006). Psychopathy is considered one of the members of the so-called "Dark Triad" of personality traits (Paulhus & Williams, 2002) along with the traits of Narcissism (a sense of superiority over others, excessive confidence, and entitlement) and Machiavellianism (a tendency to manipulate others for personal gain). Accordingly, I administered widely used measures of these other two constructs to establish how they

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were related to Fearless Dominance and Impulsive Antisociality. Last, a popular measure of the Big Five Personality Traits, and a measure of socially desirable responding were also included. For all analyses I first examined the correlates of Fearless Dominance and Impulsive Antisociality in isolation and then tested their interaction. However, given the general pattern of null results in the existing literature, I did not expect to find evidence for interactions.

Hypotheses

First, I expected levels of convergence similar to those found in previous studies (i.e., $rs > .70$; Witt et al., in press) for associations between measures of Fearless Dominance and Impulsive Antisociality. Based on previous work with the MPQ measures (Witt & Donnellan, 2008; Witt et al., in press) and the PPI-R (Gaughan, Miller, Pryor, and Lynam, in press), I expected that Fearless Dominance (regardless of measure) would exhibit small positive or even nonsignificant associations with the Self-Report Psychopathy Scale and the Levenson Self-Report Psychopathy Scales, moderate to large positive associations with Narcissism, and small negative or non-significant associations with Machiavellianism. In contrast, I expected Impulsive Antisociality (regardless of measure) to exhibit strong positive correlations with the Self-Report Psychopathy Scale and the Levenson Self-Report Psychopathy Scale, a moderate to strong positive correlation with Machiavellianism, and small to moderate positive correlation with Narcissism. Fearless Dominance is important to the construct of psychopathy but it does not necessarily correlate with many of the traditionally examined psychopathy outcomes in a manner one would expect. With regard to the Big Five, I expected all Fearless Dominance scales to be negatively associated with Neuroticism and positively associated

with Extraversion whereas I expected all Impulsive Antisociality Scales to be selectively negatively associated with Conscientiousness and Agreeableness.

Method

Sample

Three hundred seventeen students enrolled in psychology courses at Michigan State University participated in exchange for course credit. They were primarily women (81.4%) and in their first or second year of college (92.5%). With regard to ethnicity 85.8% identified themselves as Caucasian, 5.0% as Asian American, 4.1% as African American, 2.2% as Latino/a, and 2.8% did not specify an ethnicity. Participants completed all measures through a secure internet web site maintained by the Psychology Department.

Measures

Descriptive Statistics for all variables in this study are presented in Table 6.

Fearless Dominance Fearless Dominance was measured via the 20-item IPIP-based scale (M = 3.40, SD = .49, α = .88), the original 24 item MPQ measure (M =3.27, SD = .41, α = .80; Blonigen et al., 2006), and a 17 item NEO PI-R (Costa & McCrae, 1992) measure of Fearless Dominance developed by Witt et al., (2009) using the same procedures as described in Study 1 (M =3.34, SD = .47, α = .83).

Impulsive Antisociality Impulsive Antisociality was measured via the 20-item IPIP-based scale (M = 2.36, SD = .58, α = .93). The scales were uncorrelated (r = -.09, ns), the original 34 item MPQ measure (M = 2.59, SD = .41, α = .86; Blonigen et al., 2006), and a 17 item NEO PI-R (Costa & McCrae, 1992) measure of Impulsive Antisociality developed by Witt et al., (2009) using the same procedure as Study 1 (M =

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Measures

Descriptive Statistics for all variables in this study are presented in Table 6.

Fearless Dominance Fearless Dominance was measured via the 20-item IPIP-based scale (M = 3.40, SD = .49, α = .88), the original 24 item MPQ measure (M =3.27, SD = .41, α = .80; Blonigen et al., 2006), and a 17 item NEO PI-R (Costa & McCrae, 1992) measure of Fearless Dominance developed by Witt et al., (2009) using the same procedures as described in Study 1 (M =3.34, SD = .47, α = .83).

Impulsive Antisociality Impulsive Antisociality was measured via the 20-item IPIP-based scale (M = 2.36, SD = .58, α = .93). The scales were uncorrelated (r = -.09, *ns*), the original 34 item MPQ measure (M = 2.59, SD = .41, α = .86; Blonigen et al., 2006), and a 17 item NEO PI-R (Costa & McCrae, 1992) measure of Impulsive Antisociality developed by Witt et al., (2009) using the same procedure as Study 1 (M =

2.60, SD = .46, α = .83).

Other Measures of Psychopathy. Two other widely used measures of psychopathy were used to establish convergent validity with the newly created measures – the 64-item *Self-Report Psychopathy Scale III*-R12 hereafter SRP-III; Paulhus et al., 2007) and the 26-item *Levenson Self-Report Psychopathy Scale* (LSRP; Levenson et al., 1995). The SRP-III yields an overall scale (M = 2.31, SD = .39, α = .92) as well as four 16-item subscales: *Interpersonal Manipulation* (M = 2.61, SD = .51, α = .81), *Callous Affect* (M = 2.27, SD = .46, α = .78), *Erratic Life Style* (M = 2.68, SD = .53, α = .80), and *Criminal tendencies* (M = 1.59, SD = .50, α = .83). The sub-scale inter-correlations ranged from .46 to .64. The LSRP total score (M = 2.36, SD = .46, α = .87) can be broken into "primary" and "secondary" scales. The primary scale (16 items: M = 2.27, SD = .54, α = .88) was designed to assess interpersonal attitudes whereas the secondary scale (10 items: M = 2.50, SD = .52, α = .71) was designed to assess an impulsive lifestyle. The primary and secondary scales were moderately to strongly correlated (r = .48). The LSRP and SRP total scores were strongly correlated (r = .75).

Narcissism. A 16 item short form of the Narcissistic Personality Inventory (NPI-16; Ames, Rose, and Anderson, 2006) was used to measure narcissism. The NPI is a forced choice inventory where participants are asked to choose which of two statements best describes them. Scores are calculated so that the individual score reflects the percentage of narcissistic items endorsed (M = .36, SD = .21, α = .75). Ames et al. (2006) reported that the correlation between their measure and the 40-item NPI was .90

Machiavellianism. The 20 item MACH-IV inventory (Christie & Geis, 1970) was used to measure a willingness to manipulate others for personal gain (20 items: M = 2.74,

SD = .36, α = .73).

The Big Five. The 44 item Big Five Inventory (BFI; John & Srivistava, 1999; John et al., 1991) was administered to assess the broad factors of Extraversion (α = .86), Agreeableness (α = .76), Conscientiousness (α = .78), Neuroticism (α = .82), and Openness (α = .73).

Socially Desirable Responding. The 40 item Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1984, 1988, 1991) was administered to measure two constructs related to socially desirable responding: Self-Deceptive Positivity and Impression Management. The BIDR can be used to control for response bias and as a measure of a general tendency to fake responses that may be predicted by these traits. The Self-Deceptive Positivity scale measures a tendency to give honest, but positively skewed responses. The Impression Management scale measures the extent to which participants over-report desired behaviors and under-report undesirable behaviors. All items were measured on a seven point Likert-type scale (1= "not true", 7 = "very true") and all reversed items were keyed in the positive direction. Participants were given a point for extreme values (i.e. "6" or "7") and an average was taken. Internal consistency estimates were .68 and .71 for the Self-Deceptive Positivity and Impression Management scales, respectively. Both scales can also averaged together to create an overall index of socially desirable responding (.77).The Self-Deceptive Positivity and Impression Management scales were moderately correlated in this sample (*r* = .41), but they were kept separate for primary analyses. However, results were similar using a composite that was the average of the two scales.

Results and Discussion

Convergence between Different Measures of Fearless Dominance and Impulsive

Antisociality

Convergent associations between measures of Fearless Dominance and

Impulsive Antisociality are reported in Table 7. As the table clearly illustrates, most of

the convergent associations were of the strength and direction hypothesized (i.e., $rs >$

.70). One coefficient – the association between MPQ-Impulsive Antisociality and IPIP-

NEO-Impulsive Antisociality – barely missed this threshold ($r = .68$). However, Witt et

al., (2009) reported correlations between MPQ-Impulsive Antisociality and IPIP-NEO-

Impulsive Antisociality ranging from .68-.78 across three studies and thus the average

was above the .70 threshold. These results suggest that regardless of the inventory of

origin, these measures of Fearless Dominance and Impulsive Antisociality seem to

converge with each other to a reasonable degree, given the attenuating effects of

measurement error. Table 7 also presents these associations controlling for Self

Deceptive Positivity, Impression Management, and gender. As can be seen in the Table 7,

controlling for these variables reduced most correlations, but these changes were small

and in no case did the correlation change signs. Results were similar when controlling for

BIDR constructs only.

Convergence and Divergence between Measures of Fearless Dominance, Impulsive

Antisociality, and the Dark Triad

Associations between Fearless Dominance, Impulsive Antisociality, and the dark

triad are reported in Table 8. Fearless Dominance was largely unrelated to the Self-

Report Psychopathy Scale and the Levenson Self-Report Psychopathy Scale. This is

consistent with predictions and with previous research examining the correlation between

measures of Fearless Dominance and measures of these constructs (Witt et al., in press; Witt & Donnellan, 2008). Also consistent with predictions, Fearless Dominance was moderately positively associated with narcissism and exhibited small negative associations with Machiavellianism. Impulsive Antisociality was strongly associated with both the Self-Report Psychopathy Scale and the Levenson Self-Report Psychopathy Scale, consistent with past studies (Witt et al., in press; Witt & Donnellan, 2008). In contrast to Fearless Dominance, Impulsive Antisociality was more strongly associated with Machiavellianism than narcissism. Specifically, the scale had moderate to large positive associations with Machiavellianism and small to moderate positive associations with narcissism. Perhaps most impressively, the general pattern of results for Fearless Dominance and Impulsive Antisociality was quite similar across all three measures of these traits.

All in all, these results provide additional evidence of the construct validity of the IPIP-NEO measures of Fearless Dominance and Impulsive Antisociality and help to position these constructs in the nomological network linking the so-called "Dark Triad" traits (Paulhus & Williams, 2002). Also reported in Table 8 are these associations controlling for Self Deceptive Positivity, Impression Management, and gender. Controlling for these variables attenuated most correlations, but these changes were small and generally inconsequential. Results were similar when controlling for BIDR constructs only.

Associations between Fearless Dominance, Impulsive Antisociality, and the Big Five Personality Traits

Associations between Fearless Dominance, Impulsive Antisociality, and the Big

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Five Inventory are presented in Table 9. As can be seen in the table, these traits showed similar levels of associations to those found in Study 1 and elsewhere (e.g., Ross et al., 2009; Witt et al., in press) regardless of the inventory used. Consistent with my hypotheses, Fearless Dominance was strongly positively associated with Extraversion and strongly negatively associated with Neuroticism. Surprisingly, Fearless Dominance also yielded small positive correlations with Agreeableness, Conscientiousness, and Openness. Although these unexpected correlations are intriguing, they need replication before being interpreted. Tentatively, it could be argued that these associations, taken together with the strong associations for Extraversion and Neuroticism, suggest a profile of psychological adjustment, consistent with the notion of a "Mask of Sanity." Further, a series of regressions were carried out predicting Fearless Dominance and Impulsive Antisociality (measured by the MPQ, NEO, and IPIP) by the Big Five to control for overlap between the Big Five scales and to determine unique associations for the Big Five traits. Fearless Dominance, regardless of inventory, was strongly positively associated with Extraversion (βs = .51 to .61) and strongly negatively associated with Neuroticism (βs = -.22 to -.35). Impulsive Antisociality, regardless of inventory, was strongly negatively associated with Agreeableness (βs = -.29 to -.37) and Conscientiousness (βs = -.31 to -.47). Ross et al. (2009) reported similar results using a mixed sample of college students and prisoners. Also reported in Table 9 are the partial correlations between variables controlling for Self-Deceptive Positivity, Impression Management, and gender. Again, adding these controls resulted in a slight attenuation of the relevant associations.

Associations between Fearless Dominance, Impulsive Antisociality, and Constructs

Related to Socially Desirable Responding

Finally, I directly examined the association between these traits and the constructs measured by the BIDR. The zero-order correlations indicated that Fearless Dominance was positively associated with both Self-Deception and Impression Management whereas Impulsive Antisociality was negatively associated with both constructs. The BIDR scales were originally thought to be orthogonal (Paulhus, 1984), but they were correlated in this sample ($r = .41$). In fact, Lanyon and Carle (2007) reported a similar weighted correlation of .34 for college samples. Thus, I re-examined the associations between these constructs by regressing Fearless Dominance and Impulsive Antisociality onto Self-Deceptive Positivity and Impression Management in two separate analyses. The first regression yielded cleaner results with Fearless Dominance being selectively positively associated with Self-Deceptive Positivity ($\beta = .39$) and unrelated to Impression Management ($\beta = -.02$, *ns*), this association is consistent with the contention that people with higher scores on this measure often claim mental health adjustment and personal superiority (Lanyon & Carle, 2007). The second regression yielded an opposite pattern of associations with Impulsive Antisociality being selectively negatively associated with Impression Management ($\beta = -.50$) and not associated with Self-Deceptive Positivity ($\beta = -.04$, *ns*); a finding that was not surprising, as many of the items from this scale sound like reverse-scored psychopathy items (e.g., "I never swear," "I always obey laws, even if I am unlikely to get caught") and higher scores on Impulsive Antisociality require that the participant endorse items that are not generally socially desirable. However, as illustrated in Tables 8 and 9 controlling for these socially desirable responding variables did not change the pattern of associations

between Fearless Dominance, Impulsive Antisociality, and the variables of interest.

The Interaction between Fearless Dominance and Impulsive Antisociality

For all analyses reported in Tables 7, 8, and 9, I also tested whether the interaction between Fearless Dominance and Impulsive Antisociality was statistically significant. Only one interaction reached significance: the model predicting the criminal tendencies content scale of the Self-Report Psychopathy Scale III ($p =.02$). An examination of the simple slopes revealed that a higher standing on Fearless Dominance is associated with less overt antisocial behavior (e.g., stealing cars) and a weaker association between Impulsive Antisociality and overt antisocial behavior. However, many interactions were tested and no effort was made to correct for family-wise error. Thus, this interaction should be interpreted with caution. As a preliminary test of the sensitivity of this finding, I also examined the same interaction for the MPQ and NEO PI-R scales. Neither of these analyses resulted in a significant interaction. Thus, I do not further comment on this interaction.

Study 3

Criterion-related validity and self-other agreement

To this point, the associations reported have relied exclusively on self-report measures and thus any associations may be subject to concerns over shared method biases. The purpose of Study 3 is to remedy these concerns by examining the predictive validity of these newly created measures of Fearless Dominance and Impulsive Antisociality with regard to observed behavior. To accomplish this, a modified version of the "Hot Sauce Paradigm" (Lieberman, Solomon, Greenberg, & McGregor, 1999) was conducted to measure observable retaliatory aggression. In addition, Study 3 sought to

examine self-other convergence for these scales. I included the Aggression

Questionnaire (Buss & Perry, 1992) to serve as a benchmark for comparing validity

coefficients, as it is widely accepted as one of the most reliable and valid self-report

assessments of aggression in the social and personality literature. For all analyses I first

examined the correlates of Fearless Dominance and Impulsive Antisociality in isolation

and then tested their interaction.

Hypotheses

There are reasons to expect that each of the "Big Two" psychopathic traits will

have differential relations with the psychological processes involved in a laboratory

aggression paradigm. Specifically, these traits should yield differential predictions for

both the behavioral and affective reactions to negative feedback. Previous work has

found that Fearless Dominance and Impulsive Antisociality are associated with

internalizing and externalizing behaviors, respectively (Blonigen, Hicks, Krueger,

Patrick, and Iacono, 2005). Given this and other work, I expected positive associations

between Impulsive Antisociality and laboratory based measures of aggression (hot sauce

allocation) and interpersonal animosity (essay ratings and ratings of likeability). I did not

expect Fearless Dominance to predict these measures because very little evidence has

linked this trait with explicitly antisocial behaviors or attitudes (see Witt et al., in press)

and it was not correlated with the Criminal Tendencies subscale of the SRP-III in Study 2

– a measure that seems to tap explicit antisocial behaviors (Witt & Donnellan, 2008).

However, I expected that individuals high in Fearless Dominance would report more

positive affect and less negative affect in response to provocation. In terms of informant

reports, I expected self-other convergence and similar associations to those described

previously in the personality literature (i.e., between .30 - .60; Funder, 1999). I also

expected that Impulsive Antisociality would be negatively associated with informant

reports of relationship satisfaction whereas I did not expect Fearless Dominance to be

related to informant reports of relationship satisfaction, given previous work linking these

traits to interpersonal relationships (e.g., Study 2; Witt & Donnellan, 2008).

Method

Focal Participants

Two hundred and six students enrolled in psychology courses at Michigan State

University participated in exchange for course credit. One hundred sixty-seven (81%) of

these participants completed both the preliminary questionnaire and the laboratory

portion of the study.[2] The majority of laboratory sample were women (71.9%) in their

first, second, or third year of college (91%).

Informants

At the end of the preliminary questionnaire participants were asked to provide

contact information and nature of their relationship for up to five informants. One

hundred thirty-seven participants (82%) provided information for at least one informant.

Informants were contacted in successive waves beginning with the first person nominated

on the list provided by participants. I attempted to obtain one informant rating per focal

participant. In total, I was able to successfully obtain 111 informant reports (81%).

Informants were typically friends (40.5%), parents (20.7%), or siblings (9.0%).

Informants completed all measures through a secure web site and were paid $5 each.

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[2] I investigated whether there were differences between participants who attended and those who did not. Results indicted significant differences for the Aggression Questionnaire $t(204) = 2.65$, $p < .05$ and Impulsive Antisociality $t(204) = 4.18$, $p < .05$ such that individuals who did not show up for the laboratory session scored higher on both measures ($ds = .46$ and .75, respectively), no other differences were significant.

Procedure

The procedure presented here is largely a modified version of the "Hot Sauce Paradigm" (Lieberman et al., 1999) and much of the procedure and materials were closely adapted from those used in Webster and Kirkpatrick (2005). Participants signed up for a study called "Personality and Taste Preferences." Upon signing up, participants completed measures of psychopathic personality traits and trait aggression through the Human Participation in Research Subject Pool web site and chose a date and time to come into the lab for the second portion of the study. Participants typically completed the questionnaire 1-2 days prior to participating in the laboratory portion of the study.

As participants arrived they were separated into two separate rooms divided by a hallway. They typically participated in groups of 4-8 people. Although participants initially expected to participate in a single study, they were informed by research assistants on the day of their lab visit that they would actually be completing two separate studies – one about writing evaluation and the other about "personality and taste preferences". This was done as an attempt to separate the provocation and retaliation aspects of the study. The cover story provided by assistants was that the additional study had been added to increase the total number of credits for participants and to eliminate poor participation rates.

For the "writing evaluation study" participants were told that they were paired with a partner in the other room and that they would first write an essay and then evaluate each other's work. In reality, all materials and actions related to the partner were fake and identical for all participants. After writing their own essay on "What I would like to be doing five years from now," participants read and rated what they believed to be their

"partner's" essay. Finally, participants received negative feedback from their "partner" on their own essay (i.e., low numerical ratings and the words "Poor essay. I didn't like it" written on the bottom). This served as the provocation.

Shortly thereafter, participants were then told it was time to move on to the "Personality and Taste Preferences" study – a study where each person and her or his partner would be preparing and assessing food samples. Participants then completed a mood measure under the guise that mood might affect taste preferences. However, the real purpose was to measure individual difference in affective reactions following the same objective negative feedback or provocation. Participants then completed a taste preference questionnaire and were told to wait quietly while the experimenter delivered this questionnaire to their partners to be used in the food sample preparation. After a short while, Participants received a "dry" sample (a single saltine cracker) to consume that they were told was prepared for them by their "partner." A few minutes after consuming the sample, participants drew a slip of paper from a box and were told to prepare that kind of sample for their partner. This was done to make the assignment of food type appear random even though all slips were marked "spicy."

Participants were given their "partner's" taste preference inventory (indicating a very low preference for spicy food) and instructed to taste the hot sauce, spoon a sample into a Styrofoam container for their partner to consume, and to mark the number of spoonfuls on bottom of the lid before sealing it. They were told to put as much or as little of the sample in the container as they liked and that all quantities of food were important to the study. In the last step of study, a research assistant asked participants to fill out a "likability" questionnaire regarding their partner with the cover story that they had

neglected to administer it at the end of the "writing evaluation" study. Participants then completed a response to participation questionnaire, were fully debriefed, and were given the option to have their data withdrawn because of the use of deception. No participant withdrew her or his data.

On-Line Questionnaire Measures

IPIP-NEO Measures of Fearless Dominance and Impulsive Antisociality. The measures created in Study 1 were used to measure Fearless Dominance (M = 3.52, SD = .46, α = .86) and Impulsive Antisociality (M = 2.35, SD = .53, α = .90). The two scales were negatively correlated (r = -.17, p = .03).

Trait Aggression. The 29-item Aggression Questionnaire (Buss & Perry, 1992) was used to assess trait aggression (M = 2.49, SD = .50, α = .90). The correlation between Impulsive Antisociality and the total score for the Aggression Questionnaire was .55.

Laboratory Measures

State Positive and Negative Affect. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to assess positive (10 items: M = 2.85, SD = .70, α = .86) and negative affect (10 items: M = 1.56, SD = .48, α = .76) after receiving bogus negative feedback. The instructions read, "To what extent do you feel this way right now?"

Essay Ratings. Participants rated their "partner's" essay using a questionnaire adapted from Webster and Kirkpatrick (2005) on the following 6 dimensions: Organization, Content, Writing Style, Clarity of Expression, Thoughtfulness, and Overall Quality (M = 1.85, SD = .77, α = .88). Items were measured on a seven point scale from (-3 = "Poor" to +3 = "Excellent").

Likability. The 11-item Reysen Likability Scale (Reysen, 2005) was administered at the end of the laboratory session to assess the participants perceptions of the likability of their partner (M = 2.10, SD = .64, α = .91). Essay ratings and likability ratings were not significantly correlated (r = .15, p = ns).

Informant Report Measures

Informant Reports of Fearless Dominance and Impulsive Antisociality. The same IPIP items used to measure Fearless Dominance (M = 3.47, SD = .46, α = .83) and Impulsive Antisociality (M = 2.15, SD = .60, α = .92) were modified for informants. The two informant report scales were not significantly correlated (r = -.13, p = ns).

Relationship Quality. Informants completed the 7-item *Relationship Assessment Scale* (e.g., Hendrick, Dicke, & Hendrick, 1998) to measure the quality and satisfaction of their relationship with the focal participant (M = 4.40, SD = .70, α = .90).

Results and Discussion

Although 167 participants successfully completed the laboratory observation, 20 had to be eliminated due to a failure to follow directions (e.g., they drew a "spicy" slip but prepared a sample of a different kind of food). There were no statistically detectable differences between these discarded participants and the group who followed directions. Moreover, an additional four participants were eliminated because they indicated "yes" to the question "have you ever heard of a 'hot sauce' study before?" on the response to participation survey. This left a total of 143 participants for primary analysis. The descriptive statistics for all variables are reported in Table 10.

Aggression

The hot sauce samples prepared by participants were measured in grams (M =

16.91, SD = 14.36) and in self-reported spoonfuls (M = 1.82, SD = 1.31). These measures were strongly positively correlated (r = .88) and the results were nearly identical when using either self-reports or actual hot sauce allocated. As such, actual hot sauce allocation is used for the analyses reported herein because it is an objective measure. The hot sauce variable was positively skewed so it was transformed via a square root transformation. Correlations between the independent variables of Fearless Dominance, Impulsive Antisociality, Trait Aggression, and hot sauce allocation are reported in Table 11[3]. Consistent with predictions, self-reported Impulsive Antisociality predicted hot sauce allocation. Moreover, the comparability of the effect sizes with Trait Aggression suggests that Impulsive Antisociality performs as well as a reasonable benchmark individual difference predictor of laboratory aggression.

Interpersonal Animosity

Correlations between psychopathic traits and both the essay and likability ratings are also displayed in Table 11. Recall that all participants rated the same essay and partner, so any systematic variation in these ratings must be attributed to individual differences. Consistent with predictions, Impulsive Antisociality was negatively correlated with essay ratings. Moreover, because these ratings were made prior to receiving negative feedback, they can be considered as estimates of "unprovoked" interpersonal animosity. Likewise, Impulsive Antisociality was negatively related to likeability ratings at the end of the study after "provocation."

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[3] I examined all associations reported in Table 11 for moderation by gender. Of the 30 comparisons I found one significant interaction for the association between informant-reported IPIP-IA and hot sauce allocation. Although the overall effect was not significant as reported in the table, the effect was detectable for women (r = .24, p < .05) but it was actually negative in sign and not statistically significant for men. I am cautious about over-interpretation of this finding because I did not have a large enough sample of men to truly examine such an effect (n = 18).

Affective Reactions to Negative Feedback

Consistent with my hypotheses, Fearless Dominance was positively correlated with positive affect and negatively correlated with negative affect after receiving negative feedback. Impulsive Antisociality was positively associated with negative affect which might be explained by the fact that the PANAS negative affect scale includes hostility-related content (e.g., "hostile"). However, self-reported affect was not a statistically significant predictor of hot sauce allocation.

Informant Reported Variables

Self-reports of Fearless Dominance and Impulsive Antisociality showed good convergence with informant-reports: $r = .48$ and $.31$, respectively. Although these correlations are far from unity, they are within the expected range for self-other agreement on other personality traits (i.e., .30 to .60; Funder, 1999). Furthermore, these associations were not moderated by any of the single item measures of length of acquaintance, closeness of relationship, or whether the informant knew the participant "well." Table 11 contains associations between informant reports of psychopathic traits and the dependent variables. Informant reported Impulsive Antisociality was significantly negatively associated with essay ratings, positive affect, and informant reports of relationship quality. Self-reported Impulsive Antisociality was negatively associated with informant reported relationship quality as was self-reported Trait Aggression. In other words, individuals who reported higher scores on these measures nominated an informant who reported lower scores on measures of relationship quality with that individual. Finally, I did not find that observer reports predicted hot sauce allocation.

The Interaction between Fearless Dominance and Impulsive Antisociality

I tested the interaction between Fearless Dominance and Impulsive Antisociality for all results reported in Table 11. There were no significant interactions for self-reported Fearless Dominance and Impulsive Antisociality. There was evidence of one significant interaction between the informant reports of Fearless Dominance and Impulsive Antisociality for predicting informant reports of relationship quality. An examination of the simple slopes revealed that when individuals were rated as higher on Fearless Dominance by an informant, those informants reported greater levels of relationship quality; however, there was less of a pronounced relationship between Impulsive Antisociality and informant reported relationship quality. As in study 2, many comparisons were made and no effort was taken to correct for family-wise error. Thus, this interaction should be interpreted with caution.

General Discussion

The objective of these studies was to create reliable and valid measures of the psychopathic personality traits of Fearless Dominance and Impulsive Antisociality using items from a common measure of the Big Five. My efforts were largely successful in that the newly created scales have impressive levels of convergent validity (Study 2) and showed good self-other convergence and predictive validity in a laboratory aggression paradigm. Study 3 is perhaps the most important study of the three as it provides evidence that these scales predict observable, aggressive responses with a similar level of fidelity to that of the Aggression Questionnaire (Buss & Perry, 1992). Furthermore, Study 3 points to acceptable levels of convergence between self- and informant reports and that variance shared between these reports is a reasonable predictor of aggressive responses.

Accordingly, with further validation, I believe that these scales can serve as useful tools for future research on a wide range of psychopathic personality attributes, particularly in those cases where research budgets are constrained. These measures might also be particularly useful in those contexts in which researchers do not have a lot of time to administer longer measures of psychopathic traits. Finally, because I derived these measures from an existing inventory, researchers could use them to revisit existing datasets to contribute new knowledge about psychopathic attributes.

In addition to the practical contribution of creating new measures, the current set of studies may also have substantive value for the study of psychopathic personality attributes. First, the convergence and divergence between these measures and the existing measures of psychopathy presented in Study 2 suggests that measures of Impulsive Antisociality do a good job of tapping characteristics that are already measured by other self-report inventories. Indeed, the present findings and those of Gaughan et al. (in press) reveal that these other inventories capture attributes closely aligned with Impulsive Antisociality but not Fearless Dominance. Such findings indicate that these existing self-report psychopathy scales preferentially tap the antisocial deviance dimension of psychopathy but seem to miss aspects of personality associated with Fearless Dominance such as an absence of nervousness, social dominance, and positive adjustment. Critics may rightfully point to Fearless Dominance's lack of association with measures of overt antisocial behavior as reason for dropping it as a measure of a psychopathy altogether. However, not all features of psychopathy need be related to antisocial behavior to consider them as defining features of the syndrome. Some features should be correlated with signs of positive adjustment and the appearance of mental

health given the historical roots of the construct of psychopathy as discussed in the Introduction.

Indeed, Fearless Dominance emerged from factor analytic work on the PPI and PPI-R, measures that were developed from classical conceptualizations of psychopathy. Before Fearless Dominance is dismissed as unimportant to psychopathy it is necessary to thoroughly examine its nomological network. Fearless Dominance is negatively associated with trait (e.g., negative emotionality, neuroticism) and diagnostic (e.g., anxiety disorders, depression, suicide) indicators of internalizing distress, and positively associated with narcissism, social dominance, and traits of extraversion and positive emotionality (Benning et al., 2003, 2005; Blonigen et al., 2005; Ross et al., 2009; Witt et al., in press). This pattern of positive adjustment was replicated in the current studies and it is prominently featured in classic clinical descriptions of the psychopath (e.g., superficial charm; absence of "nervousness" or psychoneurotic manifestations; suicide rarely carried out; see Hare & Neumann, 2008). One might even make the argument that Fearless Dominance is "The Mask of Sanity" as it is this aspect of the syndrome that sets it apart from other disorders such as antisocial personality disorder (Patrick, 2007; Patrick & Bernat, in press). Even if some researchers dispute the contention that Fearless Dominance is a "core" feature of psychopathy, it is imperative that researchers make such a determination based on a number of considerations and not simply an absence of evidence that this trait predicts aggression or antisocial behavior. All in all, these studies provide further evidence for the construct validity of the two-factor model of psychopathic attributes and I believe that there are several advantages of parsing the characteristics associated with psychopathy into broad dimensions. As mentioned

previously, psychopathy is an inherently contradictory syndrome involving signs of relative psychological adjustment and signs of severe problems with impulse control. Studying the relatively distinct personality attributes associated with psychopathy helps researchers understand which features are relevant for certain outcomes and which characteristics are largely unrelated to particular outcomes. The personality attributes contributing to the absence of suicide observed in psychopaths may not be the same attributes that contribute to unreliability. To borrow an analogy, if a person routinely becomes sick from eating a peanut butter and jelly sandwich, it makes no sense to only study a particular mixture of peanut butter and jelly in the search for the underlying causes of the illness. Instead it would be advantageous to also separate the peanut butter from the jelly and examine whether one component or the other generates illness, in addition to whether the combination of the two is particularly toxic. Likewise, researchers may find it valuable to separately examine the correlates of Fearless Dominance and Impulsive Antisociality. One contribution of the present study is that I have created two short measures of both constructs.

In addition to furthering the study of psychopathy, this project may have some broader implications for the interface between personality and clinical psychology. The fact that reliable and valid measures of these traits could be created from measures of "normal personality" lends more support to the contention that personality traits associated with psychopathy are likely to be variants of normally occurring personality attributes. On the one hand, this means that personality items not explicitly written to measure psychopathic tendencies can be used to measure these constructs. That is, psychopathy and perhaps other abnormal personality characteristics can be understood as

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a constellation of extreme scores on normally occurring personality traits. This has important implications for the way researchers conceptualize personality pathology. For example, it helps explain the co-morbidity that plagues the current scheme utilized by the DSM-IV (e.g., Widiger & Costa, 1994). Many of the behaviors listed as separate symptoms of different personality disorders might overlap because they are related to common, underlying dimensions of personality or temperament. This perspective makes comorbidity itself a psychologically interesting topic rather than a diagnostic nuisance as it perhaps points to a potential common "cause" for such overlap in symptoms (Krueger & Markon, 2006). One potential common cause is an underlying diathesis or personality-based risk factor for certain kinds of disorders and this realization may help to unite personality and clinical psychology. Research on "normal" personality traits may help inform the understanding of abnormal personality pathology.

Limitations

This work has several limitations that should be mentioned. First, the referents for scale creation were the measures of Fearless Dominance and Impulsive Antisociality created from the MPQ items rather than the original scales from the PPI-R. It is possible that this could have lead to some content "slippage" in the steps from PPI-R to MPQ to IPIP-NEO. That said, Witt et al. (2009) administered these IPIP-NEO scales concurrently with the PPI-R to a large sample of college undergraduates and found levels of convergence (*r*s of .59 and .73, for Fearless Dominance and Impulsive Antisociality, respectively) that were similar to those reported by Witt et al. (in press) for the MPQ scales and the PPI-R.

Another limitation of this work is that I was unable to successfully create a

measure of Coldheartedness from the IPIP-NEO content. It was difficult to create a "pure" measure of this construct because items that correlated with this scale also tended to correlate highly with Impulsive Antisociality. This is consistent with work by Walton and colleagues (2008) suggesting that items in the MPQ could also not adequately tap the Coldheartedness scale. Thus it is possible that Coldheartedness cannot be measured via normal personality measures or that measures of Impulsive Antisociality already tap much of the content contained in the Coldheartedness scale. It appears that the hallmark feature of Coldheartedness is low Agreeableness (See table 4) and measures of Impulsive Antisociality seem to capture low Agreeableness quite well. Thus far, there is little in the research literature to suggest that Coldheartedness exhibits differential correlations with variables of interest and as a result much of the research literature now ignores Coldheartedness and chooses to focus on the broader "big two" traits of Fearless Dominance and Impulsive Antisociality instead. For this reason, the inability to create measures of Coldheartedness may not be as detrimental to the understanding of Psychopathy as it might first appear. Nonetheless, there is reason to believe that the Coldheartedness scale captures content that is historically and empirically important to the study of psychopathy (see Lilienfeld & Andrews, 1996) and it is an area of research that deserves further scrutiny.

This work is also limited in that it relies on samples of relatively young, healthy, college students. This places a serious limitation on the generalizability of these findings and they should be interpreted with caution and replicated with more diverse populations. This is not so say that these measures are likely to lack utility in other settings. For instance, the MPQ versions of these traits have been shown to predict relevant criterion

variables in longitudinal community samples (e.g., Blonigen et al., 2006; Witt et al., in press). It just suggests that these measures need to be evaluated for use with different samples. Furthermore, as mentioned previously, the literature consistently supports a dimensional representation of psychopathy. Therefore, it should be possible to study these traits in many diverse samples, including college students.

Implications and Future Directions

One implication of this work is that it is possible to measure psychopathic traits using items from any broadband measure of normal personality. Witt et al. (2009) provided further support for this contention by successfully creating measures of Fearless Dominance and Impulsive Antisociality from the item content of the NEO Personality Inventory-Revised (Costa & McCrae, 1992) and the HEXACO Personality Inventory-Revised (Lee & Ashton, 2004). They then examined convergence between the MPQ, IPIP-NEO, NEO PI-R, and HEXACO PI-R measures of these traits using confirmatory factor analysis and found high primary factor loadings (i.e., .81 - .92) for each of these composites. These results provide strong evidence to suggest that these items, regardless of inventory of origin, are tapping the same underlying construct. Nonetheless, work on the construct validity of these measures still needs to be done, but these preliminary studies are promising.

Such measures as the ones created here can be used to mine existing studies to contribute to the literature on psychopathic attributes. Accordingly, Hopwood, Witt, and Donnellan (2009) examined the associations between NEO PI-R estimates of these traits (derived in Witt et al., 2009) and a variety of clinical outcomes such as diagnoses of personality disorders and internalizing/externalizing behaviors. This work is important

because the sample were drawn from the Collaborative Longitudinal Personality Disorders Study – a sample of 733 patients diagnosed with either personality disorders or major depressive disorder. Results with this sample largely mirror research done previously with non-clinical studies. For example, Fearless Dominance and Impulsive Antisociality were found to be relatively stable in this sample over a period of six years and they exhibited similar patterns of associations with internalizing and externalizing problems to those found with college students (e.g., Witt et al., in press). This work is important for two reasons. First, it suggests that these measures work similarly in clinical and community samples. Second, it demonstrates the value of creating measures of psychopathic traits from existing inventories so that researchers can conduct secondary analyses in large existing resources.

Another useful quality of many of these newly derived measures is the flexibility they afford researchers. For instance, the IPIP-NEO measures derived in this set of studies are non-proprietary. This is in stark contrast to the PPI-R which costs approximately two dollars per administration. Thus, researchers can use these measures without incurring any costs. Further, these scales are relatively short (i.e., 40 items relative to the 154 item PPI-R) which means they can be used in lots of situations with time constraints. Finally, these items were derived from a short form of the IPIP-NEO that is encompassed by the 300 item IPIP-NEO. Therefore it is possible to create measures of these traits in any study that has already administered either the 120 or 300 item version of the IPIP-NEO.

In sum, these newly created scales provide researchers with yet another way to successfully tap two of the major personality constructs associated with psychopathy.

Given that researchers now have a wide variety of assessment options at their fingertips, research examining the many correlates and implications of this psychological syndrome can accumulate at an even faster pace. Such research may hold the promise of offering a greater understanding of a clinically significant syndrome that has captured the attention of researches and the general public for decades. The results of these studies may ultimately have policy and public health implications in the form of enhanced treatment and intervention efforts.

APPENDICES

APPENDIX A

Tables

Table 1

Cleckley's Original Clinical Profile of the Psychopath

1. Superficial charm and good "intelligence"
2. Absence of delusions and other signs of irrational thinking
3. Absence of "nervousness" or psychoneurotic manifestations
4. Unreliability
5. Untruthfulness and insincerity
6. Lack of remorse or shame
7. Inadequately motivated antisocial behavior
8. Poor judgment and failure to learn by experience
9. Pathologic egocentricity and incapacity for love
10. General poverty in major affective relations
11. Specific loss of insight
12. Unresponsiveness in general interpersonal relationships
13. Fantastic and uninviting behavior with drink and sometimes without
14. Suicide rarely carried out
15. Sex life impersonal, trivial, and poorly integrated
16. Failure to follow any life plan

Note. Descriptors here are derived from Cleckley, 1941, 1955. Quotation marks are from original source.

Table 2

Conceptual Matching of PPI-R Factors and Scales with Cleckley's Original Descriptions

Factor	Impulsive Antisociality (Self-centered Impulsivity)				Fearless Dominance			Coldheartedness
PPI-R Content Scale	Machiavellian Egocentricity	Rebellious Nonconformity	Blame Externalization	Carefree Nonplanfulness	Social Influence	Fearlessness	Stress Immunity	Coldheartedness
Description	Manipulative, self-centered in interactions with others	Impulsive flouting of authority and tradition	Blames others rationalizes own transgressions	Acts on own impulses with little concern for consequences; present oriented, lacks forethought and planning	"Agentic" component of extraversion; able to manipulate and influence others	Willingness to take risks; lacks concern for harmful consequences	Experiences minimal anxiety; trait anxiety	Unsentimental; lacks imaginative capacity; paucity of social emotions
Cleckley Criteria	"untruthfulness and insincerity" "unreliability" "lack of remorse or shame" "failure to follow any life plan" "inadequately motivated antisocial behavior" "specific loss of insight" "poor judgment and failure to learn by experience"				"superficial charm" "fantastic and uninviting behavior with drink and sometimes without" "absence of nervousness or psychoneurotic reactions" "suicide rarely carried out" "pathologic egocentricity" "absence of delusions and other signs of irrational thinking"			"general poverty in major affective reactions" "unresponsive in general interpersonal relations" "incapacity for love" "sex life impersonal, trivial, and poorly integrated"

Note. The information here was derived from several sources (Lilienfeld & Andrews, 1996; Lilienfeld & Widows, 2005; Benning et al., 2003; Cleckley, 1941, 1955, 1982) but was organized by the author into this table. Not included in the Cleckley criteria is "good intelligence" as this was not necessarily used for diagnosis so much as to differentiate the psychopath from other forms of psychopathology and mental impairment.

Table 3

Descriptive Statistics (Study 1)

Inventory	M	SD	α
Psychopathic Traits			
MPQ – Fearless Dominance	3.26	.38	.77
MPQ – Impulsive Antisociality	2.65	.43	.87
PPI-R – Coldheartedness	2.30	.43	.80
IPIP-NEO Factors and Facets			
Extraversion	3.49	.41	.86
Friendliness	3.71	.58	.68
Gregariousness	3.45	.70	.68
Assertiveness	3.50	.66	.83
Activity Level	3.17	.56	.55
Excitement	3.36	.58	.63
Cheerfulness	3.78	.60	.76
Agreeableness	3.53	.41	.85
Trust	3.45	.68	.81
Morality	3.75	.58	.73
Altruism	3.89	.57	.74
Co-operation	3.58	.72	.76
Modesty	2.96	.63	.70
Sympathy	3.56	.61	.63
Conscientiousness	3.49	.42	.86
Self-Efficacy	3.82	.43	.70
Orderliness	3.29	.83	.81
Dutifulness	3.80	.46	.52
Achievement Striving	3.63	.57	.69
Self-Discipline	3.24	.59	.61
Cautiousness	3.17	.80	.86
Neuroticism	2.89	.47	.87
Anxiety	3.27	.75	.72
Anger	2.91	.77	.80
Depression	2.40	.71	.82
Self-Consciousness	2.88	.67	.65
Immoderation	2.99	.65	.64
Vulnerability	2.83	.67	.67
Openness	3.33	.39	.79
Imagination	3.53	.63	.66
Artistic Interests	3.51	.69	.72
Emotionality	3.66	.60	.66
Adventurousness	3.00	.57	.53
Intellect	3.25	.73	.70
Liberalism	3.02	.65	.55

Note. N = 398-400 due to pairwise deletion. MPQ = Multidimensional Personality Questionnaire, PPI-R = Psychopathic Personality Inventory-Revised.

Table 4

Correlations between IPIP-NEO and Psychopathic Traits (Study 1)

	Fearless Dominance	Impulsive Antisociality	Coldheartedness
Extraversion	.66	.01	-.27
Friendliness	.47	-.25	-.24
Gregariousness	.49	.01	-.17
Assertiveness	.53	.02	-.07
Activity Level	.26	-.01	-.29
Excitement	.40	.42	-.05
Cheerfulness	.51	-.15	-.26
Agreeableness	-.01	-.60	-.53
Trust	.23	-.30	-.21
Morality	.01	-.58	-.33
Altruism	.11	-.36	-.65
Co-operation	-.01	-.65	-.26
Modesty	-.33	-.14	-.17
Sympathy	-.03	-.27	-.54
Conscientiousness	.16	-.60	-.14
Self-Efficacy	.35	-.27	-.20
Orderliness	.03	-.31	.04
Dutifulness	.08	-.51	-.29
Achievement Striving	.26	-.34	-.34
Self-Discipline	.22	-.37	-.06
Cautiousness	-.09	-.55	.02
Neuroticism	-.52	.35	-.30
Anxiety	-.47	.17	-.50
Anger	-.24	.32	-.14
Depression	-.42	.38	-.09
Self-Consciousness	-.53	.05	-.08
Immoderation	.02	.24	-.10
Vulnerability	-.47	.26	-.29
Openness	.27	-.04	-.25
Imagination	.16	.22	-.19
Artistic Interests	.20	-.10	-.23
Emotionality	-.03	-.21	-.58
Adventurousness	.38	-.01	.12
Intellect	.26	-.11	-.01
Liberalism	-.01	.09	-.02

Note. All correlations greater than |.10| significant at $p < .05$.

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Table 5

Final IPIP-NEO Item and Scale Characteristics (Study 1)

	Fearless Dominance			Impulsive Antisociality		
<u>Item Characteristics</u>				<u>Item Characteristics</u>		
	<u>Avg.</u>	<u>Min – Max</u>			<u>Avg.</u>	<u>Min – Max</u>
Item Means	3.40	2.30 - 4.12		*Item Means*	2.48	2.04 -2.91
Inter-Item r	.22	-.04 - .66		*Inter-Item r*	.29	.11-.65
<u>Item-Total Characteristics</u>				<u>Item-Total Characteristics</u>		
<u>Item #</u>	<u>Item-Total *r*</u>	<u>α if item deleted</u>		<u>Item #</u>	<u>Item-Total *r*</u>	<u>α if item deleted</u>
1	.24	.85		1	.47	.88
2	.41	.84		2	.47	.88
3	.52	.83		3	.51	.88
4	.59	.83		4	.52	.88
5	.42	.84		5	.50	.88
6	.55	.83		6	.62	.87
7	.54	.83		7	.48	.88
8	.44	.84		8	.57	.88
9	.52	.83		9	.53	.88
10	.32	.84		10	.53	.88
11	.39	.84		11	.47	.88
12	.52	.83		12	.44	.88
13	.48	.83		13	.55	.88
14	.38	.84		14	.54	.88
15	.21	.85		15	.50	.88
16	.41	.84		16	.49	.88
17	.56	.83		17	.48	.88
18	.38	.84		18	.49	.88
19	.31	.84		19	.45	.88
20	.45	.83		20	.48	.88
<u>Scale Characteristics</u>				<u>Scale Characteristics</u>		
Cronbach's α		.84		Cronbach's α		.89
Mean		3.40		Mean		2.49
Median		3.40		Median		2.49
Mode		3.35		Mode		2.10
Standard Deviation		.44		Standard Deviation		.50
Skewness		-.15		Skewness		.34
S.E. Skew		.12		S.E. Skew		.12
Kurtosis		-.14		Kurtosis		.20
S.E. Kurtosis		.24		S.E. Kurtosis		.24
Minimum		2.15		Minimum		1.20
Maximum		4.55		Maximum		4.05

Table 6

Descriptive Statistics (Study 2)

Inventory	*M*	*SD*	α
IPIP-NEO			
Fearless Dominance	3.40	.49	.88
Impulsive Antisociality	2.36	.58	.93
MPQ			
Fearless Dominance	3.27	.41	.80
Impulsive Antisociality	2.59	.41	.86
NEO PI-R			
Fearless Dominance	3.34	.47	.83
Impulsive Antisociality	2.60	.46	.83
Self Report Psychopathy Scale III (SRP-III)			
Total	2.31	.39	.92
Interpersonal Manipulation	2.61	.51	.81
Callous Affect	2.27	.46	.78
Erratic Lifestyles	2.68	.53	.80
Criminal Tendencies	1.59	.50	.83
Levenson Self-Report Psychopathy Scales			
Total	2.36	.46	.87
Primary	2.27	.54	.88
Secondary	2.50	.52	.71
Narcissistic Personality Inventory (NPI)	.36	.21	.75
Machiavellianism (*MACH-IV*)	2.74	.36	.73
Big Five Personality Inventory (BFI)			
Extraversion	3.35	.63	.86
Agreeableness	3.69	.47	.76
Conscientiousness	3.56	.51	.78
Neuroticism	3.01	.65	.82
Openness	3.48	.48	.73
Balanced Inventory of Desirable Responding (BIDR)			
Total	.25	.13	.68
Self-Deception	.25	.16	.77
Impression Management	.24	.16	.71

Note. N = 315-317 due to pair-wise deletion. IPIP-NEO = Short form International Personality Item Pool NEO inventory, MPQ = Multidimensional Personality Questionnaire, and NEO PI-R = NEO Personality Invetory-Revised.

Table 7

Convergence between Measures of Fearless Dominance and Impulsive Antisociality

(Study 2)

| | IPIP-NEO | | | |
| | Fearless Dominance | | Impulsive Antisociality | |
	r	$r_{partial}$	r	$r_{partial}$
Fearless Dominance				
NEO PI-R	**.84**	.81	-.08	-.01
MPQ	**.73**	.70	.05	.05
Impulsive Antisociality				
NEO PI-R	-.20	-.09	**.77**	.68
MPQ	-.17	-.12	**.68**	.60

Note. Correlations > |.10| significant at $p < .05$. $r_{partial}$ = partial correlation between variables controlling for gender, self-deceptive positivity, and impression management.

Table 8

Associations between the IPIP-NEO measures of Psychopathic Traits and the Dark Triad (Study 2)

| | Fearless Dominance | | | | | | Impulsive Antisociality | | | | | |
| | zero-order correlation | | | partial correlation | | | zero-order correlation | | | partial correlation | | |
	IPIP	MPQ	NEO	IPIP	MPQ	NEO	IPIP	MPQ	NEO	IPIP	MPQ	NEO
SRP-III	.00	.18	.02	.05	.16	.07	.71	.68	.66	.59	.60	.54
IPM	-.02	.14	.01	.00	.10	.03	.61	.55	.54	.49	.45	.41
CA	-.04	.14	.03	-.08	.03	-.01	.56	.53	.47	.44	.46	.38
ELS	.17	.28	.11	.27	.30	.18	.61	.61	.63	.48	.52	.52
CT	-.12	.02	-.06	-.07	.02	.00	.52	.51	.46	.38	.41	.28
LSRP	-.11	.01	-.08	-.04	.02	.00	.69	.61	.66	.59	.51	.53
Primary	-.02	.08	-.03	.04	.08	.10	.60	.42	.49	.48	.29	.34
Secondary	-.23	-.12	-.23	.15	-.09	-.15	.60	.70	.70	.52	.65	.62
NPI	.46	.54	.46	.43	.48	.43	.26	.15	.18	.18	.09	.13
MACH-IV	-.17	-.08	-.20	-.1	-.08	-.13	.46	.45	.56	.27	.31	.37

Note. All associations > |.10| significant at *p* < .05. partial correlation = partial correlation between variables controlling for gender, self-deceptive positivity, and impression management. SRP-III = Self-Report Psychopathy Scale total score, IPM = Interpersonal Manipulation, CA = Callous Affect, ELS = Erratic Life Style, CT = Criminal Tendencies, LSRP = Levenson Self-Report Psychopathy Scale, NPI = 16 item Narcissistic Personality Inventory, MACH-IV = Machiavellianism Scale version four.

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Table 9

Associations between Measures of Psychopathic Traits and the Big Five Personality Inventory (Study 2)

BFI	Fearless Dominance						Impulsive Antisociality					
	zero-order correlation			partial correlation			zero-order correlation			partial correlation		
	IPIP	MPQ	NEO	IPIP	MPQ	NEO	IPIP	MPQ	NEO	IPIP	MPQ	NEO
E	.74	.66	.73	.74	.66	.73	-.01	-.04	-.03	.02	-.02	.01
A	.20	.11	.17	.16	.13	.12	-.53	-.52	-.59	-.39	-.41	-.46
C	.27	.24	.33	.16	.20	.23	-.56	-.55	-.62	-.46	-.46	-.50
N	-.51	-.51	-.43	-.45	-.46	-.35	.18	.28	.33	.15	.27	.28
O	.29	.33	.23	.27	.32	.20	-.04	.07	-.05	.02	.13	.03

Note. Correlations > |.10| significant at *p* < .05. partial correlation = partial correlation between variables controlling for gender, self-deceptive positivity, and impression management. BFI = Big Five Inventory, E = Extraversion, A = Agreeableness, C = Conscientiousness, N = Neuroticism, and O = Openness.

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Table 10

Descriptive Statistics (Study 3)

Inventory	*M*	*SD*	α	N
Self-Reports				
IPIP-NEO Fearless Dominance	3.52	.48	.88	143
IPIP-NEO Impulsive Antisociality	2.35	.52	.88	143
Aggression Questionnaire	2.51	.48	.88	143
Essay Rating	1.89	.76	.88	141
Reysen Likability Scale	2.10	.66	.92	143
Positive Affect	2.85	.70	.85	142
Negative Affect	1.56	.49	.77	142
Informant Report				
IPIP-NEO Fearless Dominance	3.49	.45	.82	94
IPIP-NEO Impulsive Antisociality	2.18	.61	.92	94
Relationship Assessment Scale	4.35	.72	.91	94
Relationship Question 1	4.06	1.13	-	94
Relationship Question 2	4.48	.71	-	94
Relationship Question 3	4.61	.71	-	94
Hot Sauce				
Grams allocated	16.91	14.36	-	143
Self-Reported Spoonfuls	1.82	1.31	-	138

Note. Relationship Question 1 = "I have known the participant that nominated me for a long time," Relationship Question 2 = "I am close to the participant that nominated me," Relationship Question 3 = "I know the person who nominated me well." Grams allocated and Self-Reported Spoonfuls are reported in their original metrics but were transformed for analyses.

Table 11

Associations between Psychopathic Personality Traits and Laboratory Study Outcomes (Study 3)

	Observed Criteria		Self-Reported Criteria			Informant-Report Criterion
	Hot Sauce	Essay Rating	Partner Likability	Positive Affect	Negative Affect	Relationship Quality
Self-Reports						
Fearless Dominance	-.07	.14	.07	.33*	-.21*	.04
Impulsive	.33*	-.25*	-.18*	-.20	.26*	-.25*
Antisociality						
Trait Aggression	.31*	-.23*	-.32*	-.15*	.30*	-.27*
Informant Reports						
Fearless Dominance	-.00	.15*	.03	.19	-.16	.30*
Impulsive	.17	-.30*	-.04	-.27*	.09	-.69*
Antisociality						

Note. * $p < .05$, Self-Report N = 141-143, Informant Report N = 93-94.

APPENDIX B

IPIP-NEO Measures of Fearless Dominance and Impulsive Antisociality

Fearless Dominance
1. I worry about things.*
2. I love large parties.
3. I take charge.
4. I find it difficult to approach others.*
5. I love excitement.
6. I feel comfortable around people.
7. I talk to a lot of different people at parties.
8. I try to lead others.
9. I am afraid to draw attention to myself.*
10. I seek adventure.
11. I think highly of myself.
12. I have a lot of fun.
13. I take control of things.
14. I only feel comfortable with friends*
15. I get stressed out easily.*
16. I avoid crowds.*
17. I wait for others to lead the way.*
18. I am not bothered by difficult social situations.
19. I remain calm under pressure.
20. I look at the bright side of life.

Impulsive Antisociality
1. I use others for my own ends.
2. I love a good fight.
3. I jump into things without thinking.
4. I cheat to get ahead.
5. I make rash decisions.
6. I take advantage of others.
7. I break rules.
8. I insult people.
9. I do just enough work to get by.
10. I enjoy being reckless.
11. I waste my time.
12. I am not interested in other people's problems.
13. I rush into things.
14. I obstruct others' plans.
15. I take no time for others.
16. I break my promises.
17. I get back at others.
18. I put little time and effort into my work.
19. I boast about my virtues.
20. I act without thinking.

Items followed by an asterisk are reverse-keyed

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