

PSYCHOPATHY AND DECEPTION: DO PSYCHOPATHIC
PERSONALITY TRAITS MODERATE THE ABILITY
TO AVOID DETECTION OF DISSIMULATION?

by

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ABSTRACT

Individuals high on psychopathic personality traits (e.g., callousness, impulsivity, grandiosity) are likely to commit a high degree of criminal infractions, especially those of a violent nature. When undergoing a forensic evaluation, these individuals may be motivated to present themselves in an overly positive or negative light in order to obtain a favorable verdict or sentence. Many personality inventories, such as the Minnesota Multiphasic Personality Inventory – 2 – Restructured Form (MMPI-2-RF; Ben-Porath & Tellgen, 2008), contain validity scales which are designed to detect such response bias. Study 1 of the current investigation sought to determine whether psychopathy moderates the utility of the MMPI-2-RF’s over-reporting (F-r, F_p-r) and under-reporting (L-r, and K-r) validity scales in differentiating between individuals asked to feign good, feign bad, or respond honestly. Study 2 replicated the over-reporting (F-r and F_p-r) analyses in a forensic pre-trial sample, in which individuals were classified as malingering or not malingering using the Structured Interview of Reported Symptoms (SIRS; Rogers et al., 1992). Combined results for the over-reporting analyses indicated that psychopathy did not moderate the utility of the MMPI-2-RF’s validity scales in differentiating between honest responders and those feigning symptoms of psychopathology. The under-reporting analyses indicated no moderating effects for L-r; however, the “meanness” factor of psychopathy moderated the utility of K-r in detecting those feigning psychological adjustment, such that K-r was better able to detect individuals high on rather than low on psychopathy when under-reporting. Implications of these results, as well as future directions, are discussed.

DEDICATION

This thesis is dedicated to my mentor, Martin Sellbom, PhD., who has supported me through every stage of this project. I am deeply appreciative of his encouragement, patience, and understanding throughout this strenuous process. His never-ending dedication to intellectual pursuits has inspired me to strive for excellence in my own life.

LIST OF ABBREVIATIONS AND SYMBOLS

d	Cohen's d effect size estimate
df	Degrees of freedom
F	Fisher's F ratio
M	Mean
p	Probability
R^2	Coefficient of determination
T	Standardized T-score
χ^2	Pearson's chi-square statistic
<	Less than
=	Equal to
%	Percentage of variance explained

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Introduction

The psychopathic personality is characterized by an array of maladaptive attributes and behaviors (Hare, 1996). These are usually classified as affective-interpersonal features (i.e., callousness, superficiality, and lack of remorse or empathy) and antisocial behavior styles (i.e., sensation seeking, impulsivity, and lack of responsibility; Hare, 1996). On the surface, psychopaths often appear normal or even charming, while in reality they tend to be guiltless, with no regard for the feelings or welfare of other people (Hare, 1996). Coupled with the impulsivity and thrill seeking components, the psychopath's lack of concern for societal rules increases the likelihood of criminal behavior (Hare, 1996; Hart & Hare, 1997). Psychopaths are more likely to engage in criminal behavior at a young age, and are responsible for a large proportion of violent crime and violent recidivism (Salekin, Rogers, & Sewell, 1996; Walters, 2003). Once incarcerated, psychopaths commit a large number of institutional infractions (Hart, 1998; Widiger, 2006).

Because psychopaths are often involved in the criminal justice system, they frequently undergo forensic psychological evaluations (Hare, 2003). These individuals pose significant threats to society; thus, it is vital that psychologists accurately evaluate these individuals (Edens, 2006). Even in forensic evaluations that assess psychopathic traits, it is not apparent how individuals high on psychopathy may respond differently from those low on psychopathy on other parts of the evaluation. By examining how individuals high on psychopathic personality traits respond during psychological evaluations, researchers can improve methods for accurately

assessing these individuals for things relevant in a forensic evaluation, such as psychopathology and personality traits.

Psychopathy and Deceitfulness

Deceitfulness is a key behavioral component of psychopathy. Psychopaths frequently use deception as a means to manipulate others for their own personal gain (Hare, 1993). Some psychopaths even lie for the thrill of it (Hare, 1993), or for what Eckman (1985) refers to as “duping delight.” They often show no shame when caught in a lie, but are proud of their ability to deceive others without being discovered (Hare, 1993).

Psychopaths may also be motivated to use deception in a variety of situations where they must undergo some sort of forensic psychological evaluation (Rogers & Cruise, 2000). For example, in both forensic and clinical contexts, individuals may attempt to affect the outcome of assessments by presenting themselves in an overly negative or positive light. Individuals may accomplish this by engaging in various forms of response distortion (i.e., malingering or defensiveness) on psychological assessments (Bagby, Marshall, Bury, Bacchiochi, & Miller, 2006). Psychopaths’ tendencies to lie and manipulate others may have serious implications for the validity of forensic evaluations if these individuals are able to successfully represent themselves in an overly positive or negative light. The broad explanation below of the definition and measurement of response bias is followed by a discussion of the link between psychopathy and deception in forensic evaluations is explored further.

Malingering

Feigning bad, often referred to as malingering in light of an external incentive, involves over-reporting psychological problems in order to appear mentally ill (Rogers, 2008). For instance, defendants standing trial could attempt to present themselves in an overly negative light

to gain the sympathy of a jury or to be declared not guilty by reason of insanity (Iverson, Franzen, & Hammond, 1995). Personal injury litigants, employees claiming workers' compensation benefits, and/or social security disability applicants may over-report or exaggerate symptoms of mental illness in order to gain compensation (Bagby et al., 2006; Iverson et al., 1995; Wygant et al., 2009). Prisoners may over-report psychological problems in order to affect the length of their sentence, placement (i.e., lower security level, or a mental health facility), and responsibilities in prison (i.e., work detail) (Iverson et al., 1995).

Defensiveness

On the other hand, feigning good, commonly referred to as defensiveness, can involve under-reporting, minimizing, or denying psychopathology, as well as claiming unlikely virtues (Bagby et al., 2006; Rogers, 2008). Incarcerated individuals might minimize psychological problems or aggressive proclivities in order to be granted parole. Parents may deny psychological problems and endorse unlikely virtues (e.g., minor personal faults and shortcomings that most people will admit) in order to sway the decision of a judge during child custody litigation. Job applicants may underreport problems or highlight their strengths in order to increase the probability of being hired (Sellbom & Bagby, 2008b).

Detection of Response Bias Via Self-Report Inventories

Some psychological test instruments have been developed specifically to assess different response styles, such as malingering and defensiveness. One example is the Structured Interview of Reported Symptoms (SIRS; Rogers, Bagby, & Dickens, 1992), which uses eight subscales to measure various types of replies related to an over-reporting response style. The SIRS subscales focus on a variety of detection strategies, such as: Rare Symptoms (bona fide symptoms that are infrequently endorsed in clinical populations); Blatant Symptoms (those that are obvious signs of

a mental disorder); and Symptom Severity (symptoms which are unbearably severe) (Rogers, Gillis, Dickens, & Bagby, 1991).

In addition to measures designed solely to assess response styles, a number of widely used omnibus personality inventories, such as the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1983, 1987, 1997) and Personality Assessment Inventory (PAI; Morey, 1991, 2007), employ validity scales to detect various forms of response bias, such as over- and under-reporting (see Sellbom & Bagby, 2008a, for a review). Of these, the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1940) was one of the first self-report measures to include validity scales (Baer & Miller, 2002). Its successor, the MMPI-2 (Butcher, Graham, Ben-Porath, Tellegen, Dahlstrom, & Kaemmer, 2001), includes validity scales designed to assess over-reporting (e.g., the Infrequency [F], Back F [F_B], and Infrequency Psychopathology [F_p] scales) and under-reporting (e.g., the Lie [L] and Correction [K] scales). A meta-analysis of the utility of MMPI-2 validity scales in detecting over-reporting indicated mean effect sizes (Cohen's *d*) of 2.21 (F), 1.62 (F_B) and 1.90 (F_p) (Rogers et al., 2003). A meta-analysis conducted by Baer and Miller (2002) reported a mean effect size of 1.25 (Cohen's *d*) for MMPI-2 validity scales in detecting under-reporting. The MMPI-2 is one of the most commonly employed multi-scale inventories utilized in both clinical and forensic settings to assess personality and psychopathology (Archer, Buffington-Vollum, Stredny, & Handel, 2006; Camara, Nathan, & Puente, 2000).

The MMPI-2 Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008) was designed to capture the same important clinical information as the MMPI-2, but in a more efficient manner. The MMPI-2-RF is comprised of six sets of scales, which can be derived from the original MMPI-2 item pool: Higher-Order (H-O), Restructured Clinical (RC), Specific

Problem (SP), Interest, Personality Psychopathology Five (PSY-5), and Validity scales. The eight Validity scales on the MMPI-2-RF include revised versions of MMPI-2 scales (with one new scale, Fs), which are specifically designed to detect over- and under-reporting of psychological problems (Gervais, Ben-Porath, Wygant, & Sellbom, 2010; Sellbom & Bagby, 2008b; Sellbom & Bagby, 2010; Sellbom, Toomey, Wygant, Kucharski, & Duncan, 2010; Wygant et al., 2009; Wygant et al., 2010).

The MMPI-2-RF offers two such validity scales that were designed to detect over-reporting of psychopathology and will be used in the current study. The Infrequent Responses (F-r) scale is used as a general indicator of over-reporting of psychological problems (Wygant et al., 2009). F-r is a 32-item scale containing items endorsed by less than 10% of both men and women in the normative sample (Ben-Porath & Tellegen, 2008). These include a variety of psychological, somatic, and cognitive complaints. The 21-item Infrequent Psychopathology Responses (F_p-r) scale is based on the MMPI-2's F_p scale, which was designed by Arbisi and Ben-Porath (1995) to help identify over-reporting of severe psychopathology (Sellbom et al., 2010). F_p-r retains 17 items from the original F_p scale, along with four additional items which showed incremental predictive power for over-reporting (Ben-Porath & Tellegen, 2008).

Two MMPI-2-RF scales designed to detect under-reporting on a test instrument will be used in the current study. The Uncommon Virtues (L-r) and Adjustment Validity (K-r) scales were developed by Ben-Porath and Tellegen (2008) via factor analyses of the items from the L, K, S, & Wiggins Social Desirability scales of the original MMPI-2. Items that consistently loaded on two primary factors, and those that did not cross-load on the opposite factor were selected for the L-r and K-r scales, which are each comprised of 14 items. Elevated scores on L-r suggest denial of minor personal faults and shortcomings to which most people will admit.

Elevated scores on K-r indicate that the individual presented him- or herself as well-adjusted. When used to differentiate between under-reporters and honest responders, L-r and K-r have shown large effect sizes similar to those obtained for the MMPI-2, indicating that L-r and K-r work just as well as their original counterparts (Sellbom & Bagby, 2008b).

Psychopathy and the Ability to Feign

Now that psychopathy and response bias have been defined and discussed in broad terms, the link between the two will be further elaborated. Kucharski, Duncan, Egan, and Falkenbach (2006) reported that inmates with psychopathy scored higher on certain over-reporting indices (specifically the MMPI-2's F and F-K, the Negative Impression Management [NIM] scale of the PAI, and the SIRS) than did those low on psychopathy, but the former group did not score significantly higher on other indices (i.e., the MMPI-2's F_B and F_p , and the PAI's Rogers' Discriminant Function Scale [RDF; Rogers, Sewell, Morey, & Ustad, 1996] and Malingering Index [MAL; Morey, 1996]). Of those high on psychopathy, however, a high percentage were not identified as malingerers. Kucharski et al. (2006) concluded that this provides evidence that psychopathy should not be a diagnostic indicator of malingering, because not all individuals high on psychopathy appear to malingering. However, it is also possible that a higher percentage of individuals high on psychopathic personality traits actually *did* malingering, but were not detected and identified as malingerers, as individuals with such traits might be more adept at deception.

Edens, Buffington, Tomicic, and Riley (2001) administered the Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996), a self-report measure designed to assess psychopathic personality traits in non-incarcerated populations, to a sample of college students ($n = 186$). These participants first completed the PPI under standard instructions, then under instructions to present themselves in a positive light. Results indicated that those high on

psychopathic personality traits (i.e., those who scored above the mean on the PPI under standard instructions) significantly lowered their PPI scores when asked to present themselves in a positive light. However, those low on psychopathic personality traits (i.e., those who scored below the mean on the PPI under standard instructions) were not able to significantly lower their PPI when asked to present themselves in a positive light.

Book, Holden, Starzyk, Wasylkiw, and Edwards (2006) administered Levenson's Self-Report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995), a 26-item self-report measure of psychopathy, to a sample of college students ($n=201$) under standard instruction. Participants were then instructed to either "fake bad" or "fake good" on the Holden Psychological Screening Inventory (HPSI; Holden, 1996). Individuals in the "fake good" group who successfully faked good (i.e., scored below cut off on the HPSI's validity index) scored significantly higher on psychopathy than those who were identified as faking good (i.e., scored above cut off on the HPSI's validity index), but those who successfully faked bad did not score significantly higher on psychopathy than those who were identified as faking bad. These findings suggest that while individuals high on psychopathic personality traits are better able to present themselves in a positive light than those low on such traits, there is no difference in level of psychopathic personality traits for individuals able to successfully present themselves in a negative light.

In another undergraduate sample ($n = 200$), MacNeil and Holden (2006) found no significant differences in level of general psychopathy (as measured by PPI Total score) between individuals who successfully and unsuccessfully faked good or bad on the HPSI (as classified using cutoff scores on the HPSI's validity index as well as the Impression Management [IM] scale of the Balanced Inventory of Desirable Responding [BIDR; Paulhus, 1998]). However,

participants who avoided detection while faking good scored higher on the Machiavellian Egocentricity and Blame Externalization and lower on Stress Immunity subscales of the PPI. This finding indicates that various traits or aspects of the psychopathy construct may have differential influence on an individual's ability to avoid detection when feigning symptoms of psychopathology.

In a small sample of prison inmates ($n = 55$), Poythress, Edens, and Watkins (2001) examined relations between psychopathy (measured by PPI scores) and scores on malingering indices (i.e., SIRS; PAI's NIM, MAL, and RDF; and the Structured Inventory of Malingered Symptomatology [SIMS; Smith & Burger, 1997]). Using a "known-groups" design, participants were classified as either malingerers or nonmalingerers by prison staff. Nonmalingerers were instructed to feign psychosis while completing the malingering indices. Scores from the malingering and nonmalingerer groups were compared to inmates from the general population (honest responders who had not been classified as malingerers during their admission procedure) who completed the same measures under standard instructions. Results indicated that known malingerers who scored high on the PPI were better able than nonmalingerers and honest responders to avoid detection on the PAI's RDF scale; however, known malingerers who were high on psychopathic personality traits were unable to avoid detection on the PAI's NIM scale.

Statement of the Problem

Previously cited investigations have yielded inconsistent results regarding the associations between psychopathy and response bias (i.e., malingering and defensiveness), and most of these studies have significant methodological limitations. Some of the previously cited studies (e.g., Poythress et al., 2001) had small sample sizes, which could have resulted in Type II errors. Other studies (e.g., Book et al., 2006; MacNeil & Holden, 2006) used measures without

well-established utility in detecting response styles (e.g., HPSI Validity Index), which could have resulted in substantial misclassification of participants. Poythress and colleagues (2001) relied on previously established clinician classifications of malingering of unknown reliability, instead of using a standardized methodology, which also could have resulted in misclassification.

Furthermore, all previous studies have used only one measure to index psychopathy, which does not account for the variety in conceptualization of this construct. Some of these studies used a within-subjects design (e.g., Edens et al., 2001; MacNeil & Holden, 2006), which provides the potential for practice effects. Most of these studies (except Poythress et al., 2001) relied on an analogue simulation design, which Rogers (2008) indicates may decrease generalizability, because the individuals may not have sufficient motivation to over- or under-report.

The Current Investigation

The goal of this investigation was to examine the association between psychopathy and response bias. Previous studies have shown inconclusive results, with some indicating that psychopathy may be linked to increased ability to successfully present themselves in a positive light (e.g., Book et al., 2006; Edens et al., 2001), but others finding the opposite (e.g., MacNeil and Holden, 2006). Contradictory evidence has also been found in regard to feigning bad, with some research indicating that psychopathy is not associated with the ability to successfully fake bad (e.g., Book et al., 2006; MacNeil & Holden, 2006). Other research indicates that those high on psychopathy scored higher than those low on psychopathy on measures of malingering (e.g., Kucharski et al., 2006; Poythress et al., 2001).

To address the inconclusive results in the literature to date, the current study employed an innovative design. No study to date has specifically investigated whether psychopathy moderates the utility of validity scales (i.e., MMPI-2-RF F-r, Fp-r, L-r, and K-r scales) in differentiating

between individuals who over- or under-report and honest respondents, such that individuals higher on psychopathic personality traits would be better at avoiding detection than individuals low on such traits. Such moderation would indicate that those high on psychopathy are more adept at deception.

The first hypothesis stated that for individuals asked to over-report symptoms of psychopathology, psychopathy would not moderate the validity scale (F-r and F_p -r) scores' utility in differentiating over-reporters from honest responders. Although psychopaths have been shown to be more prone to engage in deceptive tactics during psychological assessments (Edens et al., 2001) and intuition might suggest that they would be more successful at doing so because of practice in deception (MacNeil & Holden, 2006), most of the available literature investigating this topic (albeit inconsistent) suggests that psychopaths are not better able to feign psychopathology than non-psychopaths (e.g., Poythress et al., 2001).

The second hypothesis argued that for individuals asked to under-report symptoms of psychopathology, psychopathy would moderate the validity scale (L-r and K-r) scores' utility in differentiating under-reporters from honest responders more so than for those asked to over-report symptoms. Some investigations indicate that psychopaths are better able to under-report than over-report psychopathology (Book et al., 2006; Edens et al., 2001; MacNeil & Holden, 2006). In accordance with such evidence, it was hypothesized that individuals high on psychopathic personality traits would be better able to under-report symptoms of psychopathology without being detected than they would be able to over-report psychopathology.

These hypotheses were tested using two studies, which utilized using two samples drawn from two different populations with two different methodologies: an analogue simulation design

(undergraduate students) and a known-groups design (criminal defendants). Research conducted using known groups of over-reporters (or those responding defensively) is likely more generalizable to clinical populations, whereas an analogue simulation design allows for greater internal control (Rogers, 2008). Randomly assigning individuals to groups and instructing them to respond in a certain way (e.g., feign good, feign bad, or respond honestly) reduces the possibility of group differences on possible confounding variables (Rogers, 2008). For example, if individuals in the over-reporting group were significantly higher on psychopathy than individuals in the honest group, they may be more motivated to feign in the first place.

The current investigation sought to address some of the limitations from previous research. These studies included two samples sufficiently large enough for the planned statistical analyses. Over-reporting (in both studies) and under-reporting (Study 1 only) of psychopathology was assessed using the MMPI-2-RF Validity scales, which have proven utility in detecting such response styles (e.g., Gervais et al., 2010; Marion, Sellbom, & Bagby, 2011; Sellbom & Bagby, 2008b; Sellbom & Bagby, 2010; Sellbom et al., 2010; Wygant et al., 2009; Wygant et al., 2010). Study 1 used a control group of individuals who completed the MMPI-2-RF under standard instructions. Both studies utilized a cross-sectional, between-subjects approach in order to reduce practice effects that might have been encountered in previous studies where participants completed the same inventory under different sets of instructions (e.g., Edens et al., 2001; MacNeil & Holden, 2006). The first study included multiple means of assessing psychopathy, in order to obtain an accurate reflection of psychopathic personality traits for each participant. In contrast, the second study used the well-established Psychopathy Checklist-Revised (PCL-R; Hare, 1991; 2003). Due to the fact that there is no “gold standard” self-report psychopathy measure for use in non-incarcerated populations, Study 1 utilized a combined score

from several psychopathy measures, to ensure that a comprehensive assessment of psychopathy was obtained. The PCL-R is the “gold standard” for use with incarcerated samples, and was, therefore, most appropriate for use in Study 2.

Only one study (MacNeil & Holden, 2006) to date has specifically examined different facets of psychopathy (as measured by the eight subscales of the PPI) and their relationship to detection avoidance. The current investigation assessed psychopathy using multiple measures and examined the three major domains (affective, interpersonal, and behavioral) of psychopathy to determine if any increased detection avoidance could be attributable to one particular facet.

Study 1

Method

This study implemented an analog simulation design to determine if psychopathy moderates the utility of the MMPI-2-RF's F-r, F_p-r, L-r, and K-r Validity scales to differentiate between individuals asked to either over- or under-report from those who took the test honestly.

Participants. Potential participants were 777 undergraduate students. MMPI-2-RF protocols are generally deemed invalid for interpretation if an individual has produced too many unscorable responses (i.e., left items blank or marked items both true and false), or if the individual has engaged in random or indiscriminant fixed responding. Thus, I excluded protocols with these response styles, based on elevated Cannot Say (CNS) > 17, VRIN-r (>79T) or TRIN-r (>79T) scores, respectively, as recommended by Ben-Porath and Tellegen (2008). After excluding MMPI-2-RF profiles based non-content invalid responding, the sample size was reduced to 627 participants. To determine if those who were excluded differed significantly from those who were not excluded, demographic information (including baseline psychopathy scores on each measure) was compared using t-tests (continuous variables) and chi-square tests (categorical variables). The 149 individuals excluded based on MMPI-2-RF guidelines differed from those not excluded in regard to ethnicity, $\chi^2(6, N = 777) = 26.94, p < .001$, with those excluded being more likely to be African American, Hispanic, Asian American Indian, or Alaska native than those not excluded. However, the effect size for this difference ($r = .19$) was small (Cohen, 1988). No other significant differences ($p < .01$) in demographic information (including

baseline psychopathy scores on all measures) between those excluded based on MMPI-2-RF guidelines and the remaining participants.

Profiles were also excluded if individuals reported inadequate understanding of the study or poor compliance with instructions, as determined by responses on the post-test questionnaire. Profiles were excluded if they contained any of the following responses: incorrect answer for Question 1; “A” for Question 6; or “A”, “B”, “C”, “D”, or “E” for Question 7. Beginning with the 627 participants remaining after MMPI-2-RF invalid profiles were dropped, excluding based on Question 1 reduced the sample size to 499, and Question 6 reduced the sample size to 488. Using all three questions resulted in a final sample size of $n = 465$. Participants who were excluded based on each question of the post-test questionnaire did not evidence significant differences ($p < .01$) in demographic information (including baseline psychopathy scores on all measures) as compared to those in the final sample.

After excluding invalid protocols based on MMPI-2-RF validity scales and the MMPI-2-RF post-test questionnaire, the final sample consisted of male ($n = 154$) and female ($n = 311$) undergraduate students age 18 or older ($M = 19.08$, $SD = 1.84$). In regards to ethnicity, participants were primarily Caucasian (84.3%) or African American (11.0%), with the remaining 4.7% of other or mixed ethnicities. Most participants were freshmen (66.0%) or sophomores (21.9%). The majority of this sample (98.3%) reported being single and never married. Based on a power analysis, this sample size of $n = 465$ is sufficient to give enough statistical power ($1 - \beta = 0.86$) to yield a meaningful effect size increment of .02 (ΔR^2) (Cohen, 1988)¹. Subjects were randomly assigned to the Feign Good ($n = 100$), Feign Bad ($n = 119$) and Honest ($n = 246$) conditions.

¹ This meaningful effect size involves a Nagelkerke estimated r^2 change based on a logit function, as I conducted logistic regression analyses.

Measures.

Psychopathic Personality Inventory – Revised (PPI-R; Lilienfeld & Widows, 2005). The original PPI (Lilienfeld & Andrews, 1996) is a 187-item self-report questionnaire designed to measure psychopathic personality traits in non-incarcerated samples using eight subscales. These subscales load primarily onto two factors, with the exception of the Coldheartedness subscale (Benning, Patrick, Hicks, Blonigen, & Krueger, 2003). The Fearless Dominance factor includes subscales measuring Social Potency, Fearlessness, and Stress Immunity, while the Impulsive Antisociality factor includes subscales measuring Carefree Nonplanfulness, Impulsive Nonconformity, Machiavellian Egocentricity, and Blame Externalization. Participants indicate the degree to which they agree with statements on the following scale: 1 (false), 2 (mostly false), 3 (mostly true), or 4 (true). The PPI has well-established reliability and validity (e.g., Lilienfeld & Hess, 2001; Mullins-Nelson, Salekin, & Leistico, 2006; Vaughn, Newhill, DeLisi, Beaver, & Howard, 2008). PPI Total Scores have shown moderately high correlations with Total (.54, $p < .001$), Factor I (.54, $p < .001$), and Factor II (.40, $p < .01$) of Hare's (1991, 2003) Psychopathy Checklist – Revised (PCL-R), the gold standard of psychopathy assessments (Poythress, Edens, & Lilienfeld, 1998). Various studies have reported internal consistencies (Cronbach's alphas) ranging from .85 to .94 for PPI total scores (Cale & Lilienfeld, 2006; Edens, Poythress, & Lilienfeld, 1999; Lilienfeld & Andrews, 1996; Lilienfeld & Hess, 2001). The PPI-R was designed to capture the same information (including all eight subscales) as the PPI, in a shorter, 154-item version. Internal consistency (Cronbach's alpha) for the Total score in the current sample was .93, and internal consistencies for the subscales ranged from .81 (Coldheartedness) to .89 (Fearlessness). The PPI-R is a copyrighted, proprietary instrument and could therefore not be included in the appendices.

Triarchic Inventory. Patrick's (2008) Triarchic Inventory is a 58-item measure designed to measure psychopathy according to a triarchic conceptualization of psychopathy (Patrick, Fowles, & Krueger, 2009). This conceptualization seeks to integrate differing historical perspectives of psychopathy by focusing on recurring themes. The scale emphasizes three separate facets of psychopathy: boldness, meanness, and disinhibition. The scale is currently in its infancy, but initial research has shown promising reliability and validity for this measure (Patrick, 2010). Internal consistencies (Cronbach's alpha) for the current sample were: .89 (Total), .84 (Boldness), .88 (Meanness), and .84 (Disinhibition). A copy of the Triarchic Inventory items are included in Appendix A.

Self-Report Psychopathy Scale – 2nd Edition (SRP-II). Hare's (1985) SRP-II is a self-report inventory designed to assess the same characteristics of psychopathy as the PCL-R. Participants respond to each of the 60 items on a scale from 1 (strongly disagree) to 7 (strongly agree). In addition to a total score, the SRP-II yields four factor scores: Interpersonal, Affective, Lifestyle, and Antisocial (Williams, Paulhus, & Hare, 2007). The SRP-II has shown moderate to high correlations with other measures of psychopathy, such as the PCL-R (.54; Hare, 1991) and the PPI (.77; Williams & Paulhus, 2004). Internal consistency (Cronbach's alpha) for the Total score in the current sample was .88. A copy of the SRP-II items are included in Appendix B.

Levenson's Self-Report Psychopathy Scale (LSRP). The LSRP (Levenson, Kiehl, & Fitzpatrick, 1995) is a 26-item self-report inventory of psychopathic personality traits designed for use in noninstitutionalized populations. In addition to a Total Score, investigations (e.g., Brinkley, Diamond, Magaletta, & Heigel, 2008; Sellbom, 2010) have indicated that the LSRP yields three factor scores (Egocentricity, Callous, and Antisocial) which were examined in the current study. Brinkley, Schmitt, Smith, and Newman (2001) showed that the LSRP correlates

moderately with the PCL-R, and other studies have shown more general support for its construct validity (Levenson et al., 1995; Lynam, Whiteside, & Jones, 1999; Sellbom, 2010). Internal consistencies (Cronbach's alpha) for the current sample were: .86 (Total), .84 (Factor 1), .68 (Factor 2), and .65 (Factor 3). A copy of the LSRP items are included in Appendix C.

Minnesota Multiphasic Personality Inventory – Restructured Form (MMPI-2-RF). The MMPI-2-RF (Ben-Porath & Tellegen, 2008) consists of 338 items derived from the 567-item MMPI-2 (Butcher, et al., 2001). Participants select either “true” or “false” for each item, as it applies to them. Ben-Porath and Tellegen (2008) provide extensive reliability and validity information for the MMPI-2-RF in the technical manual. For this study, the F-r, F_p-r, L-r, and K-r scales were employed. All scales have shown significant correlation with their MMPI-2 counterparts in a variety of samples, with correlation coefficients above .90 for F-r, F_p-r, and L-r, and ranging from .84-.88 for K-r (Sellbom & Bagby, 2008b; Sellbom et al., 2010). F-r and F_p-r have significantly differentiated between malingerers and non-malingerers in multiple samples, with large effect sizes (Cohen's *d*) ranging from 2.11-2.37 for F-r and 2.07-2.34 for F_p-r (Sellbom et al., 2010). L-r and K-r have significantly differentiated under-reporters from honest responders across multiple samples, with large effect sizes (Cohen's *d*) ranging from .65-1.13 and .76-1.44, respectively (Sellbom & Bagby, 2008). The MMPI-2-RF is a copyrighted, proprietary instrument and could not be included in the appendices.

MMPI-2-RF Post-Test Questionnaire. This 10-item questionnaire was designed for this study. It was designed to assess participants' understanding of the study and their level of compliance with instructions (see Appendix D).

Procedure. I recruited participants at The University of Alabama through the Department of Psychology's subject pool. Students in introductory psychology courses are required to either

participate through subject pool research or complete an alternative assignment for course credit. Participants signed up for the study online and reported to Room 408, Gordon Palmer Hall, at the specified date and time. Participation took approximately two hours, and students received three hours of research credit, in accordance with departmental policy. It was expected that, as students admitted to the University of Alabama, participants would have the ability to read at or above a 5th grade reading level (Flesch-Kincaid Grade Level; Flesch, 1949). This is the highest reading level required to complete any of the questionnaires (i.e., the MMPI-2-RF; Pearson Education, Inc., 2009).

Before participants arrived, the researcher set up questionnaire administration on lab computers and entered an ID number into each computer. Numbers were given in sequential order, beginning with 1000 (“Honest” condition), 2000 (“Under-reporting” condition), or 3000 (“Over-reporting” condition). All participants in each session were in the same condition, and order of condition administration was randomized. No personal or identifying information was collected from participants and ID numbers were not linked to the participants in any way. ID numbers were used only as a reference to link together the data from the questionnaires completed by each participant.

Participants were informed of their rights as research participants, the purpose of the study, and what would be expected of them should they choose to participate. They were informed that they could complete an alternative assignment to receive credit for class if they declined to participate in this study, and that they were free to leave the study at any time without penalty. Participants were told that they may be asked to respond in a manner that does not accurately reflect their personality, but that they would receive specific instructions if asked to do so. They were advised that their results will remain anonymous and kept protected by the

primary investigator. Participants experienced no risks greater than those experienced during everyday living.

After providing informed consent, participants were administered a series of self-report questionnaires. All participants completed the PPI, SRP-II, LSRP, and Triarchic Inventory under standard instructions. They were then presented with instructions for the MMPI-2-RF. The “Honest” condition was presented with standard instructions; the “Under-reporting” condition was presented with instructions to present themselves in a positive light; and the “Over-reporting” condition was presented with instructions to present themselves in a negative light. Instructions for the “Under-reporting” and “Over-reporting” conditions are included in Appendices E and F, respectively. Upon finishing the MMPI-2-RF, participants completed a 10-item questionnaire designed specifically for this study to assess their understanding of the study and their level of compliance with instructions (see Appendix D). Once participants completed the self-report measures, they were debriefed. The researcher addressed any questions or concerns they had and provided contact information for the Primary Investigator, Faculty Advisor, and the University of Alabama’s Office of Research Compliance.

Results

Calculation of Psychopathy Scores. To obtain psychopathy factor scores for each participant, I first conducted an exploratory factor analysis (EFA) using maximum likelihood estimation to extract the optimal number of factors. For this analysis, I entered all subscales (the eight subscales of the PPI, the three factor scales of the Triarchic Inventory, and the three factor scales of the LSRP) from the psychopathy measures used in this study, examining factor solutions in which all factors met the Kaiser (1960) criterion of an eigenvalue of 1.00 or greater. I considered a maximum of four factors, as no previous empirical research has found support for

a factor model of psychopathy that extends beyond four factors. Eigenvalues for the first four unrotated factors were 5.04, 2.59, 1.48, and .97, respectively. A two-factor structure appeared to assess affective-impulsive features (Factor 1) and bold/fearless features (Factor 2). In regard to Factor 1, it would make little conceptual sense for scales assessing a cold, mean affective style and scales measuring a carefree or disinhibited personality to be included on the same factor, as these sets of traits typically load on different factors on virtually all psychopathy measures (e.g., PCL [Hare, 1991; 2003], LSRP [Levenson, Kiehl, & Fitzpatrick, 1995; Sellbom, 2010], SRP-II [Hare, 1985; Williams, Paulhus, & Hare, 2007], and Antisocial Process Screening Device [APSD][Frick & Hare, 2001; Sadeh, Verona, Javdani, & Olson, 2009]). With this two-factor structure, all three factors of the LSRP were included on Factor 1, and only four subscales loaded on Factor 2. Thus, this two-factor model did not appear to differentiate well between the various components of psychopathy. A four-factor structure was not considered, as only three factors met the Kaiser (1960) criterion of an eigenvalue of 1.00. The three-factor model was conceptually most defensible and was therefore chosen. Subscales loading on the first rotated factor captured content indicative of disinhibitory and impulsive personality characteristics; those loading on the second factor measured a mean or coldhearted interpersonal style; and those loading on the third factor assessed content indicative of a bold or fearless personality. This factor structure lined up well with the Triarchic model of psychopathy (e.g., Patrick, 2010), which includes the three domains of Disinhibition, Meanness, and Boldness. Indeed, each of the three factors were anchored by one of these scales, and the additional subscales loading on each factor capture similar or relevant material to each of these domains. The resulting structure was rotated according to an oblique promax method. Table 1 displays the results of the EFA, indicating which subscales loaded on each of the three factors.

Table 1.

Eigenvalues and Factor Loadings for Exploratory Factor Analysis of Psychopathy Scales

	Disinhibition (35.96%)	Meanness (18.49%)	Boldness (10.57%)
Triarchic Disinhibition	.83		
LSRP Factor 3	.77		
PPI-R Blame Externalization	.61		
PPI-R Rebellious Nonconformity	.57		
PPI-R Carefree Nonplanfulness	.53		
PPI-R Coldheartedness	-.32	.95	
Triarchic Meanness		.78	
LSRP Factor 1		.63	
LSRP Factor 2		.61	
PPI-R Machiavellian Egocentricity	.40	.47	
Triarchic Boldness			1.01
PPI-R Social			.75
PPI-R Stress Immunity	-.30		.62
PPI-R Fearless Dominance			.54

Note. Only factor loadings equal to or greater than .30 are shown.

I used a cutoff of .30 for factor loadings to determine if a scale loaded on a factor. Subscales that loaded on more than one factor were only included in the factor score for which they had the highest loading. To generate scores for each participant on overall psychopathy as well as the factor scores, I standardized and averaged the scores on each subscale (i.e., an average of z-scores for subscales comprising the respective factors) for each participant.

Group Differences in Validity Scale and Psychopathy Scores. I next conducted one-way Analyses of Variance (ANOVA) using three groups (“Over-reporting”, “Under-reporting”, and “Honest”) to determine if group differences were present for validity scale (F-r, F_{p-r}, L-r, and K-r) and psychopathy scores (Total score, Meanness factor, Disinhibition factor, and Boldness factor). Cohen’s *d* effect size estimates were used to characterize meaningful differences, with .20 indicating a small effect, .50 a medium effect, and .80 a large effect (Cohen, 1988). Table 2 displays these results.

Table 2.

Means, Standard Deviations, F-tests, and Effect Sizes for Honest, Under-reporting, and Over-reporting Groups

	Honest	Under-reporting	Over-reporting	<i>F</i>	<i>d</i> ₁	<i>d</i> ₂	<i>d</i> ₃
	(n = 246)	(n = 100)	(n = 119)				
F-r	58.73 _a (14.09)	49.63 _b (8.64)	148.36 _c (30.00)	786.71***	.66	-3.70	-3.48
F _{p-r}	61.15 _a (8.18)	56.88 _a (5.91)	159.35 _b (23.64)	669.93***	.35	-3.46	-3.05
L-r	52.40 _a (9.66)	59.65 _b (14.01)	52.40 _a (11.11)	17.48***	-.67	.02	.60
K-r	46.04 _a (8.93)	52.56 _b (9.97)	34.72 _b (6.53)	125.90***	-.71	1.39	2.18
Disinhibition	.15 (3.51)	.27 (4.16)	-.53 (3.61)	1.71	-.03	.19	.21
Meanness	.19 (3.92)	-.20 (4.65)	-.23 (3.88)	.58	.09	.11	.01
Boldness	.18 (3.09)	-.30 (3.67)	-.13 (3.11)	.97	.15	.10	-.05
Psychopathy Total	.21 (3.38)	-.13 (4.23)	-.33 (3.51)	1.00	.09	.16	.05

Note. Means with different subscripts are significantly different at $p < .05$. d_1 = Effect size for Honest vs. Under-reporting groups, d_2 = Effect size for Honest vs. Over-reporting groups, d_3 = Effect size for Over-reporting vs. Under-reporting groups. *** $p < .001$.

As expected, scores on F-r and F_p-r were significantly higher in the “Over-reporting” group relative to the other groups (all Cohen’s *ds* > 3.04), whereas scores on L-r and K-r were significantly higher in the “Under-reporting” group relative to the other groups (all Cohen’s *ds* > .59). The over-reporting scales (F-r and F_p-r) differentiated over-reporters from honest responders very well (Cohen’s *d* = -3.70 and -3.46, respectively). The under-reporting scales (L-r and K-r) also differentiated under-reporters from honest responders well (Cohen’s *d* = -.67 and -.71, respectively), though the effect size estimates were not nearly as high as those for the over-reporting scales. Also as expected, the “Over-reporting”, “Under-reporting”, and “Honest” groups were not significantly different on any of the psychopathy scores, due to random assignment of participants to groups.

Psychopathy as a Moderator. I next conducted a series of hierarchical binomial logistic regression analyses to determine if psychopathy moderated the ability to avoid detection by the MMPI-2-RF validity scales. Table 3 displays the results of these analyses.

Table 3.

Hierarchical Logistic Regression Analyses Predicting Over-reporting vs. Not Over-reporting, or Under-reporting vs. Not Under-reporting, Using Validity Scale, Psychopathy, and Psychopathy X Validity Scale.

Full Model						
Psychopathy Score	F-r	Psychopathy	F-r X Psychopathy	R^2	ΔR^2	χ^2 chg
Disinhibition	.42***	-.24**	-.01	.85	.00	.89
Meanness	.39***	-.16*	.01	.84	.00	.24
Boldness	.38***	-.13	.02	.84	.00	2.08
Total	.40***	-.23**	.01	.85	.00	.39
Full Model						
	F _p -r	Psychopathy	F _p -r X Psychopathy	R^2	ΔR^2	χ^2 chg
Disinhibition	.63***	-.12	.02	.83	.00	.62
Meanness	.65***	-.10	.04	.83	.00	3.27
Boldness	.64***	-.11	.04	.83	.01	2.95
Total	.68***	-.15*	.05*	.83	.01	4.07*
Full Model						
	L-r	Psychopathy	L-r X Psychopathy	R^2	ΔR^2	χ^2 chg
Disinhibition	.29***	.05	.01	.12	.00	.50
Meanness	.28***	-.03	.02	.12	.01	1.98
Boldness	.26***	-.03	-.03	.12	.00	1.81
Total	.28***	-.01	.02	.12	.01	1.15
Full Model						
	K-r	Psychopathy	K-r X Psychopathy	R^2	ΔR^2	χ^2 chg
Disinhibition	.28***	.04	.02	.16	.01	2.91
Meanness	.26***	-.10*	.04**	.17	.04	9.58**
Boldness	.30***	-.11*	-.02	.18	.01	1.40
Total	.26***	-.09	.03*	.15	.02	5.47*

Note. Nagelkerke R^2 estimation was used for logistic regression. ΔR^2 = change in R^2 between Step 1 (validity scale and psychopathy scale entered) and Step 2 (validity scale X psychopathy

scale interaction entered). χ^2 chg = change in χ^2 between Step 1 and Step 2. * $p < .05$, ** $p < .01$, *** $p < .001$.

Separate regression analyses were conducted for the four MMPI-2-RF scales and the psychopathy scores (total and three factors). For this purpose, I created centered interaction terms. For example, for the interaction term between F-r and the total psychopathy score, I subtracted the mean F-r score from each participant's F-r score, and subtracted the mean total psychopathy score from each participant's total psychopathy score. I then multiplied these scores together to produce a centered interaction term. This method helps reduce the potential for multicollinearity (correlation between the interaction term and the main effects variables)(e.g., Cohen, Cohen, West, & Aiken, 2003).

In terms of over-reporting, one of the two MMPI-2-RF over-reporting scales (F-r and F_p-r) and the psychopathy score (total or factor score) were entered in the first step, and the centered interaction term (i.e., cross-product) of the psychopathy score and MMPI-2-RF scale score in the second step, as predictors for the dichotomous outcome of either "Over-reporting" or "Not Over-reporting." The same procedure was used for under-reporting analysis, except the MMPI-2-RF L-r and K-r scales were used. Any a moderation effect was deemed present by a statistically significant increase in model fit (i.e., χ^2 change) and a Nagelkerke-estimated $\Delta R^2 \geq .02$. Because there is no standard set for a meaningful incremental change in a nonparametric test such as logistic regression, I used Cohen's (1988) recommendation that this level of incremental change is meaningful in ordinary least squares estimated regression.

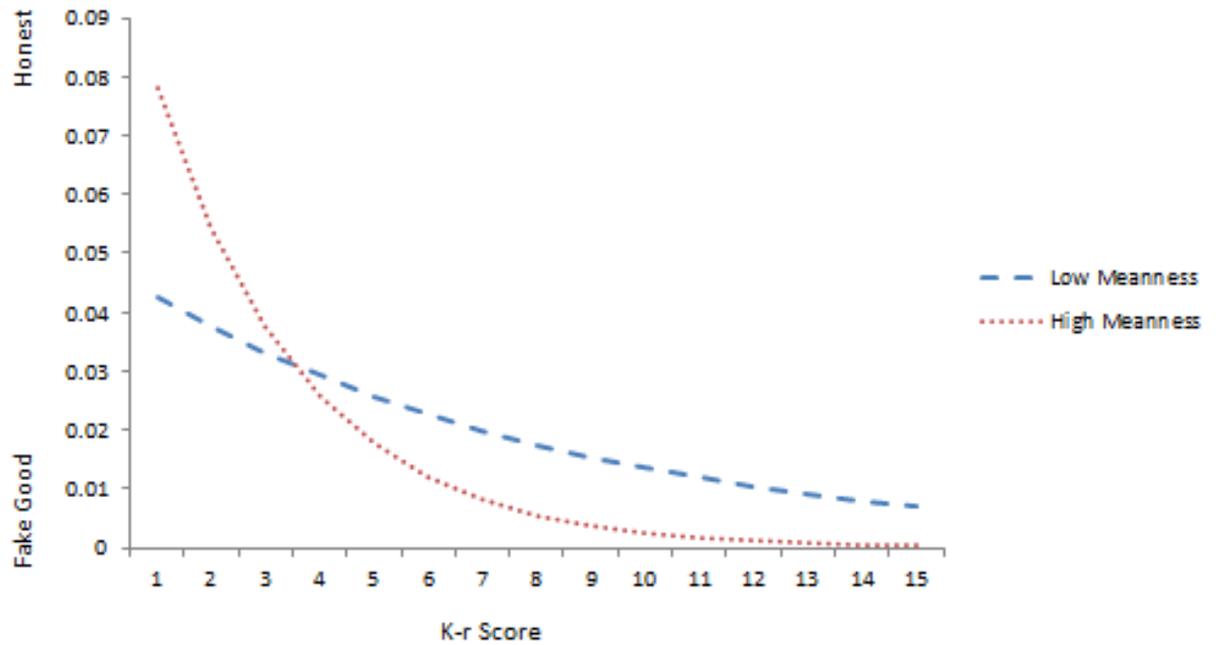
I first hypothesized that psychopathy would not moderate the validity scale (F-r and F_p-r) scores' utility in differentiating between over-reporters and honest responders. For the over-reporting analyses, the interaction terms were not associated with meaningful incremental change in predictive utility, indicating that psychopathy did not moderate the validity scale scores' utility

in differentiating over-reporters from honest responders. These findings support my first hypotheses, insofar that for individuals asked to over-report psychopathology, psychopathy did not moderate the validity scale (F-r and F_{p-r}) scores' utility in differentiating over-reporters from honest responders.

My second hypothesis stated that psychopathy would moderate the validity scale (L-r and K-r) scores' utility in differentiating under-reporters from honest responders more so than for those asked to over-report symptoms. For the under-reporting scales, no meaningful incremental change was present for L-r. Only two regressions, both for the K-r scale, met the criteria for a meaningful incremental change provided by the interaction term between validity scale and psychopathy score. This interaction evidenced incremental utility when Meanness and Total psychopathy scores (both $\Delta R^2 > .02$, both χ^2 chg significant at $p < .05$) were predictors, indicating that psychopathy did moderate the validity scale scores' utility in differentiating under-reporters from honest responders. Figure 1 displays the interaction between Meanness and K-r when predicting individuals' group membership (under-reporting vs. honest).

Figure 1.

Interaction Between Meanness and K-r Score in Predicting Honest vs. Feign Good Groups.



These results do not support my second hypothesis. Although moderating effects were found for this scale, they were actually in the opposite direction from what was expected. That is, psychopathy (with an emphasis on the Meanness factor) was associated with a poorer ability to avoid detection by the K-r validity scale. This counterintuitive effect will be considered in detail later.

Study 2

The primary goal of this study was to replicate a portion of the results from Study 1 using an alternative methodology and setting. This study implemented a known-groups design to determine if psychopathy moderates the utility of the MMPI-2-RF F-r and F_{P-r} Validity scales to differentiate between individuals who engaged in over-reporting from those who approached the test honestly. Because this study utilized a sample of convenience, I was only able to investigate over-reporting in this study.

Method

Participants and procedure. I used an archival sample of 122 male criminal defendants who were referred by Federal court between 1994 and 2004 for a forensic psychological evaluation (i.e., competency to stand trial, criminal responsibility, or aid-in-sentencing). This sample has been used in previous studies examining the MMPI-2 and MMPI-2-RF Validity scales (Sellbom et al., 2010; Toomey, Kucharski, & Duncan, 2009). Although I recognize that this sample size is not powerful enough to detect a small increment in χ^2 change, previous research has indicated that MMPI-2-RF validity scales are associated with very large effect sizes in differentiating between over-reporting and honest individuals in this sample (i.e., Cohen's d s > 2.00; Sellbom et al., 2010). Thus, it is reasonable to expect that an orthogonalized cross-product that involves scales with such large effect sizes would be associated with a greater than minimum meaningful effect, if present.

Each participant completed the MMPI-2, SIRS, and PCL-R as part of their evaluation. In a similar fashion as Study 1, I excluded individuals with invalid MMPI-2-RF profiles, based on

the same guidelines described for Study 1 (i.e., CNS > 17, VRIN-r > 79T, or TRIN-r > 79T indicates an invalid profile), which resulted in a final sample size of 99. Participants ranged from 20 to 64 years of age ($M = 37$). In regards to ethnicity, participants were primarily Caucasian (58%) or African American (39%), with the remaining 3% of Hispanic or other origin. Ninety-one percent had previous felony convictions. In regard to mental health treatment, 67% reported receiving previous mental health treatment, and 44% had at least one previous psychiatric hospitalization. The most common primary diagnosis was Antisocial Personality Disorder (35%).

Participants were classified as “Over-reporting” or “Not Over-reporting” based on the SIRS manual guidelines (Rogers et al., 1992). Participants who scored in the “probable” range on 3 or more subscales on the SIRS, or in the “definite” range on 1 or more subscales, were classified as “Over-reporting.” The remaining participants were classified as “Not Over-Reporting.” I examined PCL-R Total scores, as well as scores for Factors I and II and Facets 1-4.

Measures.

Psychopathy Checklist – Revised (PCL-R). Hare’s (1991, 2003) PCL-R is considered the “gold standard” of psychopathy assessment (Lilienfeld & Fowler, 2006). It involves a semi-structured interview format, where the examiner rates the individual on 20 items indicative of psychopathic characteristics. In addition to a Total Score, the PCL-R yields two factor scores; Factor I assesses affective-interpersonal characteristics, while Factor II indexes social deviance aspects of psychopathy (e.g., impulsivity, sensation-seeking, and lack of responsibility). Hare (2003) has also described four facets underlying Factors I and II. Facets 1 and 2 separate Factor I into affective and interpersonal features, whereas Facets 3 and 4 separate Factor II into lifestyle instability and antisocial behavior features, respectively. Internal consistencies (Cronbach’s

alpha) for the current sample were: .91 (Total), .89 (Factor I), .83 (Factor II), .74 (Interpersonal facet), .90 (Affective facet), .61 (Antisocial facet), and .79 (Lifestyle facet).

SIRS. The SIRS (Rogers et al., 1992) is a structured interview that contains 172 items designed to index malingering and over-reporting. Four classifications can be made (honest, indeterminate, probable faking, and definite faking) from each of the following eight scales: Rare Symptoms, Improbable and Absurd Symptoms, Symptom Combinations, Blatant Symptoms, Subtle Symptoms, Symptom Severity, Symptom Selectivity, and Reported vs. Observed Symptoms. The SIRS has shown utility as an external criterion measure in other known-groups studies examining over-reporting (e.g., Edens, Poythress, & Watkins-Clay, 2007; Sellbom et al., 2010). Previous studies have indicated that the SIRS is reliable, with internal consistencies ranging from .77 to .96, and inter-rater reliability coefficients ranging from .97 to 1.00 (e.g., Rogers et al., 1992; Vitacco, Rogers, Gabel, & Munizza, 2007).

MMPI-2-RF. For this sample, I scored the MMPI-2-RF validity scales using data from MMPI-2 administrations. Scores obtained from administration of the 338-item MMPI-2-RF booklet are interchangeable with MMPI-2-RF scores derived from administration of the 567-item MMPI-2 booklet (Ben-Porath & Tellegen, 2008; Sellbom et al., 2010).

Results

Group Differences in Validity Scale and Psychopathy Scores. As with Study 1, I began with one-way ANOVAs to examine group differences in over-reporting validity scale scores (F_r and F_p-r) and psychopathy scores between “Over-reporting” and “Not Over-Reporting” groups. Table 4 displays the results of these analyses.

Table 4.

Means, Standard Deviations, F-tests, and Effect Sizes for Honest and Over-reporting Groups

	Honest	Over-reporting	<i>F</i>	<i>d</i>
	(n = 78)	(n = 21)		
F-r	8.55 (6.51)	21.71 (5.39)	72.31***	-2.09
F _{p-r}	3.14 (2.73)	9.76 (3.85)	80.93***	-2.21
PCL-R Total	22.80 (10.10)	27.90 (7.76)	4.62*	-.53
PCL-R Factor 1	8.96 (5.05)	11.38 (3.26)	4.31*	-.51
PCL-R Factor 2	11.17 (4.33)	13.03 (3.83)	3.19	-.44
PCL-R Interpersonal Facet	4.04 (2.83)	5.05 (1.66)	2.44	-.38
PCL-R Affective Facet	5.05 (2.71)	6.38 (1.94)	4.44*	-.52
PCL-R Antisocial Facet	5.29 (2.54)	6.43 (2.75)	3.23	-.44
PCL-R Lifestyle Facet	7.68 (2.96)	8.57 (2.23)	1.65	-.32

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

As expected, scores on F-r and F_{p-r} were significantly higher in the “Over-reporting” group relative to the honest group, with large effect size estimates associated with these differences (both Cohen’s *ds* > 2.08). Such differences were expected given that Sellbom et al. (2010) used part of the current sample to examine the utility of the MMPI-2-RF validity scales in differentiating between SIRS-defined groups of over-reporting and non-over-reporting individuals. A few differences were present in psychopathy scores as well, such that individuals in the “Over-reporting” group had significantly higher PCL-R Total, Factor 1, and Affective Facet scores compared to those in the “Honest” group (all *F*s > 4.30, all *p*s < .05). Unlike in

Study 1, these individuals were not randomly assigned to groups or asked to over-report symptoms of psychopathology. Given the forensic context in which these individuals were evaluated, it makes intuitive sense that individuals who malingered are more likely to be psychopathic.

Psychopathy as a Moderator. Next, I conducted a series of hierarchical binomial logistic regression analyses to determine if psychopathy acts as a moderator for the ability to avoid detection by the MMPI-2-RF validity scales. Table 5 displays the results for these regression analyses.

Table 5.

Hierarchical Logistic Regression Analyses Predicting Over-reporting vs. Not Over-reporting Using Validity Scale, Psychopathy, and Psychopathy X Validity Scale.

Full Model						
PCL-R Score	F-r	Psychopathy	F-r X Psychopathy	R^2	ΔR^2	χ^2 chg
Total	.26***	.00	.01	.60	.01	.67
Factor 1	.26***	.06	.01	.62	.01	.83
Factor 2	.26***	.00	.01	.59	.01	.12
Interpersonal Facet	.27***	.12	.02	.62	.01	1.06
Affective Facet	.26***	.07	.02	.61	.00	.81
Antisocial Facet	.26***	-.03	.02	.59	.00	.52
Lifestyle Facet	.27***	-.07	.00	.58	.00	.01
Full Model						
	F _{p-r}	Psychopathy	F _{p-r} X Psychopathy	R^2	ΔR^2	χ^2 chg
Total	.47***	.02	.00	.57	.00	.12
Factor 1	.47***	.07	.01	.58	.00	.05
Factor 2	.48***	.00	.02	.57	.00	.42
Interpersonal Facet	.48***	.13	.02	.58	.00	.15
Affective Facet	.48***	.13	.00	.57	.00	.01
Antisocial Facet	.49***	.00	.03	.58	.01	.73
Lifestyle Facet	.50***	-.02	.00	.57	.00	.01

Note. Nagelkerke R^2 estimation was used for logistic regression. ΔR^2 = change in R^2 between Step 1 (validity scale and psychopathy scale entered) and Step 2 (validity scale X psychopathy scale interaction entered). χ^2 chg = change in χ^2 between Step 1 and Step 2. * $p < .05$, ** $p < .01$, *** $p < .001$.

Separate regression analyses were conducted for the two over-reporting MMPI-2-RF scales (F-r and F_p-r) and the PCL-R scores (total, factor, and facet scores). One of the two MMPI-2-RF over-reporting scales (F-r and F_p-r) and the PCL-R score (total, factor, or facet) were entered in the first step, and the centered interaction term (i.e., cross-product) between PCL-R score and MMPI-2-RF scale in the second step, as predictors of the dichotomous outcome of either “Over-reporting” or “Not Over-reporting.” As with Study 1, a moderation effect was indicated by a statistically significant increase in model fit (i.e., χ^2 change) and a Nagelkerke-estimated $\Delta R^2 > .02$, as recommended by Cohen (1988) for ordinary least squares estimated regression. As in Study 1, these results indicate that psychopathy did not moderate the validity scale scores’ utility in differentiating over-reporters from honest responders.

General Discussion

The goal of this investigation was to examine the relation between psychopathy and response bias. More specifically, I investigated whether psychopathy acts as a moderator for the ability to avoid detection by the MMPI-2-RF validity scales when individuals over- or under-report symptoms of psychopathology, such that individuals high on psychopathic traits would be better able to avoid detection than individuals low on these traits.

The previous literature on this subject has been inconclusive thus far. Some studies have indicated that individuals high on psychopathic traits are better than individuals low on these traits at presenting themselves in a positive light (e.g., Book et al., 2006; Edens et al., 2001), though one study by MacNeil and Holden (2006) found that individuals who successfully faked good scored higher on a few specific facets of psychopathy. Others have found that individuals high on psychopathic traits are not better able than individuals low on these traits to present themselves in a negative light (e.g., Book et al., 2006, MacNeil & Holden, 2006). However, other studies have found that individuals high on psychopathic traits score higher than those low on these traits on some measures of malingering (e.g., Kucharski et al., 2006, and Poythress et al., 2001). Overall, these results do not show a general consensus regarding whether individuals high on psychopathic personality traits are better able to successfully feign either good or bad than those low on these traits.

In light of the majority of evidence from the literature previously cited, I had first hypothesized that psychopathy would not moderate the validity scale (F-r and F_p-r) scores' utility in differentiating between over-reporters and honest responders. The results from both Study 1

and Study 2 support my first hypothesis. When individuals were asked to over-report symptoms of psychopathology in Study 1, psychopathy did not moderate the utility of the MMPI-2-RF validity scales in differentiating between over-reporters and honest responders. In Study 2, psychopathy did not moderate the utility of the MMPI-2-RF validity scales in differentiating between known malingerers and honest responders (as classified by the SIRS). Individuals higher on psychopathic personality traits were not better able than individuals low on these traits to avoid detection on the MMPI-2-RF validity scales.

These findings are consistent with those of Book et al. (2006), who found that individuals who successfully faked bad did not score significantly higher on psychopathy than those who were detected. The current findings are also consistent with those from Kucharski et al. (2006), who found that inmates high on psychopathy did not score significantly higher than those low on psychopathy on the MMPI-2's F_p scale, but did score higher on the MMPI-2's F scale than did those low on psychopathy. Thus, while individuals high on psychopathic traits may attempt to mangle more frequently than those low on these traits, they are not more successful at doing so. The current findings partially contradict those from Poythress et al. (2001), who found that malingerers high on psychopathic traits were able to avoid detection on the PAI's RDF scale, but not on the NIM scale. The contradictory results between these two studies and the current investigation could be due to methodological differences, such as use of different measures. For example, the NIM scale is very similar to F_p -r in its development (e.g., Morey, 2007), but the RDF scale is not similar to any of the MMPI-2-RF validity scales. As described earlier, F -r and F_p -r were constructed by examining specific items that were infrequently endorsed by normal and psychiatric populations. The RDF was developed by conducting a discriminant function analysis to look at 20 scales of the PAI and determine whether or not an individual's pattern is

similar to that of a bona fide patient (Rogers, Sewell, Morey, & Ustad, 1996). This difference in detection strategies between the MMPI-2-RF scales and the PAI's RDF could explain the inconsistent findings between Poythress et al. (2001) and the current study. It should be noted, however, that some research has indicated that the RDF is of questionable validity in forensic settings (Hawes & Boccaccini, 2009; Sellbom & Bagby, 2008a); thus, the results that use better established validity scales such as NIM and Fp-r are more likely to be trusted at this point.

My second hypothesis was that psychopathy would moderate the validity scale (L-r and K-r) scores' utility in differentiating under-reporters from honest responders more so than for those asked to over-report symptoms. In Study 1, I found results which contradict my second hypothesis. When individuals were asked to under-report symptoms of psychopathology, psychopathy did not moderate the utility of the MMPI-2-RF's L-r validity scale in differentiating between under-reporters and honest responders. However, psychopathy did moderate the utility of the MMPI-2-RF's K-r scale in differentiating between under-reporters and honest responders. I had hypothesized that this moderation effect would indicate that individuals high on psychopathic traits would be better able than those low on these traits to under-report symptoms of psychopathology without being detected; however, the results indicated that this moderation effect was in the opposite direction. Individuals low on certain psychopathic personality traits (e.g., meanness, callousness, coldheartedness) were actually better able than those high on such traits to avoid detection on the MMPI-2-RF's K-r scale. These results contradict Edens et al. (2001) and Book et al.'s (2006) findings that those who successfully faked good were significantly higher on psychopathic traits than were those who were detected. The results of the current study also contradict MacNeil and Holden's (2006) findings that individuals who successfully faked good were higher on Machiavellian egocentricity and blame externalization,

and lower on stress immunity, than individuals who were detected. It is possible that these results contradict those from the current investigation due to the use of measures without well-established utility in detecting response bias (e.g., the HPSI used in both Book et al.[2006] and MacNeil and Holden [2006]). Holden and Evoy (2005) reported that the HPSI validity scale correlated strongly (-.59 to -.88) with the Social Desirability scale of the Personality Research Form (PRF; Jackson, 1984), which more closely resembles the L-r scale than the K-r scale. Thus, these two different methods of assessing feigning good could account for the differences in findings between MacNeil and Holden (2006) and the current study. In addition, MacNeil and Holden (2006) classified individuals as “successful” or “not successful” fakers based on cut scores. It is possible that this method resulted in misclassification of individuals. Also, MacNeil and Holden (2006) conducted *t*-tests to determine significant differences in mean psychopathy scores between faking and honest groups. While they did find some significant results (e.g., for Machiavellian egocentricity, blame externalization, and stress immunity), the effect sizes were generally small to moderate (e.g., $d_s = .40-.60$), and not consistent across any one domain of the psychopathic personality (i.e., in the current study, each of these PPI scales loaded on three separate domains). Another possible reason for the contradictory results is the use of different assessments of psychopathy. It is possible that my three-factor model captures a more comprehensive conceptualization of psychopathy as compared to the measures used in these other studies, especially with regard to the mean, cold characteristics of psychopathy (i.e., the PPI does not fully capture meanness; see Patrick, Fowles, & Krueger, 2009).

One possible explanation for the current findings for K-r could be that “mean” or coldhearted psychopaths might have more difficulty feigning psychological adjustment than do individuals low on such psychopathic traits. Perhaps the emotional detachment and poor

perspective-taking ability that individuals high on this psychopathy factor exhibit make it difficult for them to take the perspective of what emotional adjustment look like in others. Thus, when attempting to appear more psychologically adjusted than they really are, they over-compensate in their presentations and therefore score higher on K-r while doing so. Further research is needed to elaborate on these hypotheses.

As discussed earlier, psychopathy was not associated with any better or worse ability to avoid detection by the L-r scale, which assesses unlikely virtues, that is, common and obvious personal flaws that most individuals would be willing to endorse. These are potentially easier to feign successfully given the fact that this is a less sophisticated and more superficial method of feigning. Indeed, Baer and Miller (2002) demonstrated in a meta-analysis on the MMPI-2 validity scales that when individuals are coached on the validity scales, L is associated with a much smaller effect size in differentiating under-reporting from honest participants relative to K. Thus, individuals who score high on the meanness domain of psychopathy are more likely to avoid detection by a scale that focuses on uncommon virtuous than psychological adjustment.

Overall, when integrating the results of the present investigation with the previous literature, the preponderance of well-designed studies tend to show that individuals high on psychopathic traits are no better able to avoid detection on validity scales than individuals low on these traits in terms of over-reporting. In terms of under-reporting, the combined evidence suggests that individuals high on psychopathic traits are no better able than individuals low in such traits to avoid detection on validity scales when attempting to make themselves appear socially desirable. However, specific features of psychopathy may affect an individual's ability to successfully feign psychological adjustment without being detected, such that some features (e.g., meanness) decrease this ability, while others (e.g., stress immunity) may increase it.

The current findings pose implications for forensic psychological evaluations. In general, individuals high on psychopathic traits are not better able to present themselves in an overly positive or negative light than those low on these traits, which is an encouraging finding. When individuals do try to present themselves in an inaccurate light, the MMPI-2-RF validity scales evidenced utility in distinguishing between those feigning and those who responded honestly. Because individuals in forensic evaluations often have an incentive to respond in an overly positive or negative manner (e.g., Rogers & Cruise, 2000), it is important that response bias be assessed in forensic evaluations to determine whether or not an individual is trying to provide an inaccurate picture of him- or herself. Given the information that individuals high in psychopathic traits may be more likely to malingering, it is especially important that these individuals be assessed for response bias. Individuals high on psychopathy may not be especially adept at over- or under-reporting psychological symptoms. However, if they engage in response bias on a more frequent basis than those low on psychopathic traits, the odds are that more individuals high in psychopathy will avoid detection on validity indices in forensic evaluations. This could result in a higher number of psychopathic individuals receiving favorable verdicts (e.g., not guilty by reason of insanity, custody, workers compensation benefits, etc.) and sentences (e.g., mental health facility vs. general population). Because individuals high on psychopathic traits often commit more violent crimes than those low on these traits, this could pose a significant threat to others (e.g., mental health workers and patients). It could also pose a significant financial burden (e.g., to insurance companies and taxpayers) to provide benefits, treatment, and housing for these individuals.

Though I have made significant efforts to address some of the methodological issues found in previous studies, the current investigation is nonetheless also associated with some

limitations. In regards to the under-reporting analyses, due to the fact that Study 2 utilized a sample of convenience, data were not available to re-test my second hypothesis in a second under-reporting sample. In regards to the over-reporting analyses, the sample in Study 2 was small and may not have been sufficiently powerful to detect a statistically significant moderation effect. However, the results were entirely consistent with Study 1 and the extant literature, and the actual effect size (which is not dependent on sample size) did not reach a meaningful level. Study 1 utilized a sample of convenience (university students), which limits the generalizability of these results to other samples. This sample was reduced based on exclusionary criteria (e.g., for random/inconsistent responding and poor understanding of instructions). One other possible limitation is that using different methods of assessment (e.g., PCL-R *vs.* PPI, SIRS *vs.* simulation instructions) makes it difficult to directly compare results from these two studies. However, these differences in assessment could also be considered a strength given replication across settings and assessment modalities, as well as the consistency of the findings.

Despite these limitations, the current investigation does have significant strengths. Use of two methodologies (analogue simulation and known-groups) allows for both internal control and generalizability to forensic clinical populations. The use of multiple measures of psychopathy (both several self-report inventories and the PCL-R) allowed me to examine some of the various conceptualizations of psychopathy that have been proposed to date, without relying on only one particular viewpoint. I also used measures with well-established utility in detecting over- and under-reporting (e.g., the MMPI-2-RF).

Future research in this area should investigate under-reporting in additional samples, such as forensic samples in which individuals might have significant motivation to present themselves in an overly positive light (e.g., individuals undergoing pre-employment or custody evaluations).

Focus on the “meanness” domain of psychopathy in such studies might, if replicated, provide further insight as to why they are less able than individuals high on other psychopathic traits and “normal” individuals to feign psychological adjustment. Because those high on meanness presented themselves differently than those high on boldness or disinhibition, it is possible that there may be other differential manifestations between the groups, such as degree or type of antisocial behaviors. Although psychopathy, in general, did not appear to moderate the ability to avoid detection on validity scales, it is possible that other variables may have such effects. An individual’s level of psychological knowledge and training does not appear to aid in avoiding detection when feigning (e.g., Marion, Sellbom, & Bagby, 2011). However, other forms of knowledge (e.g., verbal and quantitative abilities) may increase an individual’s ability to avoid detection on validity scales. There is also the possibility that an interaction could be present between psychopathy and another variable, such that individuals high in psychopathy and high in intelligence would be better able than individuals low on both of these constructs to avoid detection on validity scales when feigning. In a broader scope, it may be useful to examine feigning ability in the context of other areas of study. Some criminological theory rests heavily on the concept of self-control (e.g., Gottfredson & Hirschi, 1990). Low self-control, with resulting high risk for antisocial behavior, has been linked to traits of guiltlessness and narcissism (Vaugh, DeLisi, Beaver, Wright, & Howard, 2007). Future research should investigate the possibility that measures of self-control may capture incremental knowledge above and beyond psychopathy measures in predicting successful feigning ability.

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Appendices

Appendix A

Triarchic Inventory

Directions: This questionnaire contains statements that different people might use to describe themselves. Most of these statements are followed by four choices: 1-4. The meaning of these four different choices is given below:

1 = True 2 = Mostly True 3 = Mostly False 4 = False

For each statement, fill in the bubble next to the choice that describes you best. There are no right or wrong answers; just choose the answer that best describes you.

Like this: ● Not like this: ✓ ✗ /

Remember: Fill only one bubble per item. If you make a mistake cross out the incorrect answer with an X and fill in the correct option. Answer all of the items. Please work rapidly and do not spend too much time on any one statement.

- | | | | | | |
|----|--|----|----|----|----|
| 1. | I'm optimistic more often than not. | O1 | O2 | O3 | O4 |
| 2. | How other people feel is important to me. | O1 | O2 | O3 | O4 |
| 3. | I often act on immediate needs. | O1 | O2 | O3 | O4 |
| 4. | I have no strong desire to parachute out of an airplane. | O1 | O2 | O3 | O4 |
| 5. | I've often missed things I promised to attend. | O1 | O2 | O3 | O4 |
| 6. | I would enjoy being in a high-speed chase. | O1 | O2 | O3 | O4 |
| 7. | I am well-equipped to deal with stress. | O1 | O2 | O3 | O4 |
| 8. | I don't mind if someone I dislike gets hurt. | O1 | O2 | O3 | O4 |

9. My impulsive decisions have caused problems with loved ones. O1 O2 O3 O4
10. I get scared easily. O1 O2 O3 O4
11. I sympathize with others' problems. O1 O2 O3 O4
12. I have missed work without bothering to call in. O1 O2 O3 O4
13. I'm a born leader. O1 O2 O3 O4
14. I enjoy a good physical fight. O1 O2 O3 O4
15. I jump into things without thinking. O1 O2 O3 O4
16. I have a hard time making things turn out the way I want. O1 O2 O3 O4
17. I return insults. O1 O2 O3 O4
18. I've gotten in trouble because I missed too much school. O1 O2 O3 O4
19. I have a knack for influencing people. O1 O2 O3 O4
20. It doesn't bother me to see someone else in pain. O1 O2 O3 O4
21. I have good control over myself. O1 O2 O3 O4
22. I function well in new situations, even when unprepared. O1 O2 O3 O4
23. I enjoy pushing people around sometimes. O1 O2 O3 O4
24. I have taken money from someone's purse or wallet without asking. O1 O2 O3 O4
25. I don't think of myself as talented. O1 O2 O3 O4
26. I taunt people just to stir things up. O1 O2 O3 O4

27. People often abuse my trust. O1 O2 O3 O4
28. I'm afraid of far fewer things than most people. O1 O2 O3 O4
29. I don't see any point in worrying if what I do hurts someone else. O1 O2 O3 O4
30. I keep appointments I make. O1 O2 O3 O4
31. I often get bored quickly and lose interest. O1 O2 O3 O4
32. I can get over things that would traumatize others. O1 O2 O3 O4
33. I am sensitive to the feelings of others. O1 O2 O3 O4
34. I have conned people to get money from them. O1 O2 O3 O4
35. It worries me to go into an unfamiliar situation without knowing all the details. O1 O2 O3 O4
36. I don't have much sympathy for people. O1 O2 O3 O4
37. I get in trouble for not considering the consequences of my actions. O1 O2 O3 O4
38. I can convince people to do what I want. O1 O2 O3 O4
39. For me, honesty really is the best policy. O1 O2 O3 O4
40. I've injured people to see them in pain. O1 O2 O3 O4
41. I don't like to take the lead in groups. O1 O2 O3 O4
42. I sometimes insult people on purpose to get a reaction from them. O1 O2 O3 O4
43. I have taken items from a store without paying for them. O1 O2 O3 O4

44. It's easy to embarrass me. O1 O2 O3 O4
45. Things are more fun if a little danger is involved. O1 O2 O3 O4
46. I have a hard time waiting patiently for things I want. O1 O2 O3 O4
47. I stay away from physical danger as much as I can. O1 O2 O3 O4
48. I don't care much if what I do hurts others. O1 O2 O3 O4
49. I have lost a friend because of irresponsible things I've done. O1 O2 O3 O4
50. I don't stack up well against most others. O1 O2 O3 O4
51. Others have told me they are concerned about my lack of self-control. O1 O2 O3 O4
52. It's easy for me to relate to other people's emotions. O1 O2 O3 O4
53. I have robbed someone. O1 O2 O3 O4
54. I never worry about making a fool of myself with others. O1 O2 O3 O4
55. It doesn't bother me when people around me are hurting. O1 O2 O3 O4
56. I have had problems at work because I was irresponsible. O1 O2 O3 O4
57. I'm not very good at influencing people. O1 O2 O3 O4
58. I have stolen something out of a vehicle. O1 O2 O3 O4

Appendix B

Hare's Self-Report Psychopathy Scale – 2nd Edition (SRP-II)

Instructions:

On the following pages you will find a number of statements that have been used by people to describe their beliefs and behaviors, and the beliefs and behaviors of others. Read each statement carefully and decide whether you agree or disagree with each statement according to the following scale:

1	2	3	4	5	6	7
Disagree Strongly	Disagree Moderately	Disagree Slightly	Neutral	Agree Slightly	Agree Moderately	Agree Strongly

For example, if you disagree moderately with a statement, write down the number “2” next to it. If you neither agree nor disagree with the statement, write the number “4” indicating Neutral.

There are no right or wrong answers to any of these questions and none of the questions have any trick to them. Some of the questions are similar to one another, but judge each one separately. It does not matter if you have answered a similar question differently--simply indicate how you would respond to the current statement.

Be sure not to miss any of the questions.

1	2	3	4	5	6	7
Disagree Strongly	Disagree Moderately	Disagree Slightly	Neutral	Agree Slightly	Agree Moderately	Agree Strongly

1. I enjoy driving at high speed.
2. I enjoy giving "bossy" people a hard time.
3. I think I could "beat" a lie detector.
4. Sometimes you have to be crafty or sly.
5. It's best to be dominant and assertive because no-one else is going to look out for you.
6. I worry a lot about possible misfortunes.

7. I like to change jobs fairly often.
8. I can be fairly cunning if I have to be.
9. Everybody likes to hear my stories.
10. I am usually very careful about what I say to people.
11. I have often done something dangerous just for the thrill of it.
12. I wish I were more assertive.
13. I expect a great deal from other people.
14. I'm not at all calculating.
15. I think of myself as self-assured and confident.
16. I didn't get into much trouble at school.
17. I get a kick out of "conning" someone.
18. I get in trouble for the same things time after time.
19. I am very good at most things I try to do.
20. I was never in trouble with the police when I was a kid.
21. It's more effective to be straightforward and honest if you want people to do things for you.
22. Being unemployed would depress me.
23. I enjoy taking chances.
24. I wouldn't do anything dangerous just for the thrill of it.
25. I often worry unnecessarily.
26. I insist upon getting the respect that is due me.
27. The best way to get things done is to be forceful and persistent.
28. I got in a lot of trouble at school.
29. Rules are made to be broken.

30. I usually feel quite confident when meeting new people.
31. Not hurting others' feelings is important to me.
32. I would be good at a dangerous job because I like making fast decisions.
33. I have used few, if any, hallucinogenic drugs.
34. On average my friends would probably say I am a kind person.
35. I see myself as a good leader.
36. I can read people like a book.
37. I can usually talk my way out of anything.
38. I have used most of the hallucinogenic drugs.
39. I have sometimes broken an appointment because something more interesting came along.
40. I enjoy gambling for large stakes.
41. I have a strong will to power.
42. I would describe myself as a crafty individual.
43. I prefer having many sexual partners rather than just one.
44. I will never be satisfied until I get all that I deserve.
45. One must live only for the present and not worry about the future.
46. If I ruled the world it would be a much better place.
47. Sometimes at night I get so worried about something that my heart pounds and I can't fall asleep.
48. I don't think of myself as tricky or sly.
49. I almost never feel guilty over something I've done.
50. It's sometimes fun to see how far you can push someone before they catch on.
51. People can usually tell if I am lying.
52. I wouldn't describe myself as shy or timid.

53. Conning people gives me the "shakes."
54. When I do something wrong, I feel guilty even though nobody else knows it.
55. I always know what I am doing.
56. I find it easy to manipulate people.
57. I'm a soft-hearted person.
58. I enjoy drinking and doing wild things.
59. Ideally people should be undemanding.
60. I am the most important person in this world and nobody else matters.

Appendix C

Levenson's Self-Report Psychopathy Scale (LSRP)

Instructions: *Please respond to each item as honestly as you can. There are no right or wrong answers, and your answer will be completely anonymous. Using the scale below, place your response in the space provided next to each item below.*

Disagree strongly	Disagree somewhat	Agree somewhat	Agree strongly
1	2	3	4

- _____ 1. Success is based on survival of the fittest; I am not concerned about the losers.
- _____ 2. For me, what's right is whatever I can get away with.
- _____ 3. In today's world, I feel justified in doing anything I can get away with to succeed.
- _____ 4. My main purpose in life is getting as many goodies as I can.
- _____ 5. Making a lot of money is my most important goal.
- _____ 6. I let others worry about higher values; my main concern is with the bottom line.
- _____ 7. People who are stupid enough to get ripped off usually deserve it.
- _____ 8. Looking out for myself is my top priority.
- _____ 9. I tell other people what they want to hear so that they will do what I want them to do.
- _____ 10. I would be upset if my success came at someone else's expense.
- _____ 11. I often admire a really clever scam.
- _____ 12. I make a point of trying not to hurt others in pursuit of my goals.
- _____ 13. I enjoy manipulating other people's feelings.
- _____ 14. I feel bad if my words or actions cause someone else to feel emotional pain.
- _____ 15. Even if I were trying very hard to sell something, I wouldn't lie about it.
- _____ 16. Cheating is not justified because it is unfair to others.

- _____ 17. I find myself in the same kinds of trouble, time after time.
- _____ 18. I am often bored.
- _____ 19. I find that I am able to pursue one goal for a long time.
- _____ 20. I don't plan anything very far in advance.
- _____ 21. I quickly lose interest in tasks I start.
- _____ 22. Most of my problems are due to the fact that other people just don't understand me.
- _____ 23. Before I do anything, I carefully consider the possible consequences.
- _____ 24. I have been in a lot of shouting matches with other people.
- _____ 25. When I get frustrated, I often 'let off steam' by blowing my top.
- _____ 26. Love is overrated.

Appendix D

MMPI-2-RF Post-Test Questionnaire

ID #: _____ Sex: _____ Age: _____ Date: _____

This questionnaire asks questions about how closely you followed the instructions for completing the MMPI-2-RF test. Please respond HONESTLY *regardless* of the way you were asked to answer the questions on the MMPI-2-RF. Moreover, you will receive your participation points regardless of your answers to this questionnaire, so please be honest.

1. The instructions I received for completing the MMPI-2-RF were:
 - a. To give an overly positive impression of myself without being detected while taking the MMPI-2-RF
 - b. To give an overly negative impression of myself without being detected while taking the MMPI-2-RF.
 - c. To complete the MMPI-2-RF in an honest manner.

2. I followed the experimenter's instructions on how to take the MMPI-2-RF:
 - a. All of the time.
 - b. Most of the time.
 - c. Half of the time.
 - d. Less than half of the time.
 - e. Not at all.

3. I tried to appear as negatively as I could when I took the MMPI-2-RF:
 - a. All of the time.
 - b. Most of the time.
 - c. Half of the time.
 - d. Less than half of the time.
 - e. Not at all.

4. I tried to appear as positively as I could when I took the MMPI-2-RF:
 - a. All of the time.
 - b. Most of the time.
 - c. Half of the time.
 - d. Less than half of the time.
 - e. Not at all.

5. I tried to be completely honest when I took the MMPI-2-RF:
 - a. All of the time.
 - b. Most of the time.
 - c. Half of the time.
 - d. Less than half of the time.
 - e. Not at all.

This questionnaire asks questions about how closely you followed the instructions for completing the MMPI-2-RF test. Please respond HONESTLY *regardless* of the way you were asked to answer the questions on the MMPI-2-RF. Moreover, you will receive your participation points regardless of your answers to this questionnaire, so please be honest.

6. I got tired or bored and answered some of the MMPI-2-RF questions without reading them carefully:

- a. All of the time.
- b. Most of the time.
- c. Half of the time.
- d. Less than half of the time.
- e. Not at all.

7. I answered about _____ of the MMPI-2-RF questions without reading them carefully.

- a. 0-5
- b. 6-15
- c. 16-25
- d. 26-35
- e. 36-45
- f. 46-55
- g. More than 55

8. I believe that the people not involved with the research (like University Administrators):

- a. Will definitely see the results of my test.
- b. Will probably see the results of my test.
- c. Might see the results of my test.
- d. Will probably not see the results of my test.
- e. Will definitely not see the results of my test.

9. I believe that there are ways for psychologists to tell if I am answering the MMPI-2-RF honestly.

- a. True
- b. False

10. I believe that I was _____ to fake on the MMPI-2-RF.

- a. Definitely Able
- b. Probably Able
- c. Probably Unable
- d. Definitely Unable
- e. N/A – I was not asked to fake anything on the MMPI-2-RF

Appendix E

Instructions for Under-reporting Condition

Please try to fill out the following questionnaire in order to give a good impression of yourself. Please pretend that you have been convicted of a crime, and are being evaluated by a psychologist. You want to make sure that you present yourself in a positive light, so that the psychologist does not classify you as “difficult,” or “dangerous.” Your answers could decide whether you are placed in a maximum or minimum security facility. However, keep in mind that this questionnaire has scales designed to detect dishonest individuals. Thus, try to be as believable as you can in presenting yourself in a positive manner, without problems, so that you are not detected by the psychologist.

Appendix F

Instructions for Over-reporting Condition

Please try to fill out the following questionnaire in order to give a negative impression of yourself. Please pretend that you have committed a crime, and are being evaluated by a psychologist before you go to trial. You decide to fake mental illness, hoping that it will get you a lighter sentence (or maybe even get you off the hook completely). However, keep in mind that this questionnaire has scales designed to detect dishonest individuals. Thus, try to be as believable as you can in presenting yourself negatively, so that you are not detected by the psychologist.

Appendix G

Institutional Review Board Approval Form

IRB#: 09-02-362-21

UNIVERSITY OF ALABAMA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS
REQUEST FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

I. Identifying information

	Principal Investigator	Second Investigator	Third Investigator
Name:	Brandee Marion, B.A.	Martin Sellbom, Ph.D.	Tina Wall
Department:	Psychology	Psychology	Psychology
College:	Arts and Sciences	Arts and Sciences	Arts and Sciences
University:	University of Alabama	University of Alabama	University of Alabama
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FAX:		(205) 348-8648	
E-mail:	bemarion@crimson.ua.edu	msellbom@ua.edu	tdwall@crimson.ua.edu

Title of Research Project: Associations between personality and the ability to deceive

Date Printed: 12/03/10 Funding Source: None

Type of Proposal: New Revision Renewal Completed Exempt

Attach a renewal application

Attach a continuing review of studies form

Please enter the original IRB # at the top of the page

UA faculty or staff member signature: _____

II. NOTIFICATION OF IRB ACTION (to be completed by IRB):

Type of Review: Full board Expedited

IRB Action:

Rejected Date: _____

Tabled Pending Revisions Date: _____

Approved Pending Revisions Date: _____

Approved—this proposal complies with University and federal regulations for the protection of human subjects.

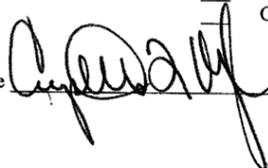
Approval is effective until the following date: 12/14/2011

Items approved: Research protocol: dated

Informed consent: dated

Recruitment materials: dated

Other: dated

Approval signature  Date 12/03/2010