Correlates of Measures of Adaptive and Pathological Narcissism

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Abstract

Social scientists have exhibited increased interest in narcissism in recent years and lively debates and discussion abound about potential narcissism cohort effects and their implications. The most widely used measure of narcissism has been the Narcissistic Personality Inventory (NPI), which has a history of being considered a measure of adaptive, subclinical trait narcissism. However, increasing evidence suggests that the NPI captures elements of both adaptive and maladaptive narcissism. In an attempt to better define the nomological network of narcissism and the boundaries between adaptive and maladaptive narcissism, the current studies included multiple self-report measures of many relevant constructs and also included experimental manipulation and behavioral measures. Analyses conducted on data gathered from two university undergraduate samples (Sample 1, N = 227; Sample 2, N = 148) provided increasing evidence that the NPI does indeed measure some maladaptive or pathological aspects of narcissism. Narcissistic Entitlement, Exploitativeness, and Exhibitionism, as captured by the NPI, were associated with a multitude of negative, maladaptive outcomes (e.g., elements of psychopathy and pathological narcissism, Machiavellianism, and various forms of aggression). Thus, these studies have provided increased clarity regarding narcissism's nomological network, with special emphasis on maladaptive and pathological elements and associations. The scientific community continues to debate and present competing evidence of possible narcissism cohort effects in recent decades. The current studies have provided increased clarity with respect to one aspect of such debates; if NPI scores have indeed been increasing across recent decades, this is a cause for significant societal concern.

Keywords: narcissism, psychopathology, psychopathy, aggression, emerging adulthood

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"A narcissist is someone better looking than you are."

Gore Vidal, The New York Times, 1981

Introduction

Much Ado About Narcissism

Who do we think we are? For millennia philosophers and social scientists have examined the nature of the mind, and recent centuries have seen a rise in the study of self-perception and phenomenology. At present, social scientists are actively researching *ego-focused* topics such as identity formation and change (e.g., Azmitia et al., 2008; McLean & Pasupathi, 2012; Syed & Azmitia, 2009), self-esteem (Mehdizadeh, 2010; Steinfield et al., 2008), ability self-estimates (Freund & Kasten, 2012; Syzmanowicz & Furnham, 2011; Visser et al., 2008) and self-monitoring (Ickes et al., 2006; Hall et al., 2010). However, in recent years the subject of narcissism seems to have taken center stage in the popular press, and has been the focus of a steadily growing body of scientific research. We live in the age of the *selfie* (i.e., a digital self-portrait captured via a mobile device), with each person acting as a self-promoting public relations assistant in front of an internet audience. The advent of social media, for many, means presenting the self to the world in a manner unprecedented in human history. Given these advances in technology and changes in popular culture, it comes as no surprise that the boundaries of self-presentation (i.e., the difference between normative and pathological self-focus) has emerged as a popular point of discussion and inquiry. Indeed, social scientists, mass media, and the general public have all recently increased focus on the personality variable *narcissism*.

Two popular mass media publications on narcissism of the past decade are the books *Generation Me* (Twenge, 2006) and *The Narcissism Epidemic: Living in the Age of Entitlement* (Twenge, 2010). These works are foreboding, full of warnings about the harmful effects of an inflated view of the self. *The Narcissism Epidemic* warns of narcissism as a harbinger of materialism, incivility, antisocial behavior, and relationship troubles; the back cover mentions that some of the aims of the book are to help readers "identify narcissism, minimize the forces that sustain and transmit it, and treat it or manage it where we find it." Needless to say, these books primarily examine the potentially harmful effects of narcissism.

While some popular press books address the negative effects of narcissism and warn of the impending societal swell of self-obsession and its concomitant pathologies, others are aimed at self-help for family, friends, partners, and coworkers of narcissists. Several popular books offer advice on how to cope with narcissists: *Why is it always about you: The seven deadly sins of narcissism* (Hotchkiss, 2003); *The object of my affection is in my reflection: Coping with narcissists* (Lerner, 2008); and *Disarming the narcissist: Surviving and thriving with the self-absorbed* (Behary, 2013). Another category of popular press books on narcissism is self-help for those who have suffered from *narcissistic abuse* or weathered various conflicts with narcissists: *Psychopath free (expanded edition): Recovering from emotionally abusive relationships with narcissists, sociopaths, and other toxic people* (MacKenzie, 2015); *Will I ever be good enough?: Healing the daughters of narcissistic mothers* (McBride, 2009); *Will I ever be free of you?:* and *How to navigate a high-conflict divorce from a narcissist and heal your family* (McBride, 2015). Thus, in approximately the past decade, most popular press books on

narcissism have been of three varieties: 1) warnings about the negative effects of narcissism and its rise in recent cohorts of young people, 2) strategies for dealing with "narcissists", and 3) self-help for those whose lives have been negatively affected by narcissists and have suffered *narcissistic abuse*. Furthermore, much of the narcissism-related content generated by mainstream news sites seems to echo the content found in mass media book publications (e.g., Caprino, 2015). Few popular press books place significant emphasis on narcissism as a healthy, positive, adaptive trait (*n.b.*, Malkin, 2015, aims for a relatively balanced treatment of the subject).

Mass media and popular culture overwhelmingly view narcissism as a negative, maladaptive personality trait. From these accounts, individuals labeled as highly narcissistic by friends, family, coworkers, or people in general have the capacity to inflict severe emotional distress, to manipulate others, and to be generally interpersonally abusive. Given this information, increases in narcissism in a society would be significant cause for alarm. However, popular culture and mass media treatment of narcissism tend to view it as a unidimensional trait, with high levels being maladaptive and pathological. This pop culture conceptualization of narcissism is quite different from conceptualizations of narcissism in social science research.

This study addresses an important question at the heart of a long-running debate among social scientists: Would a rise in narcissism be such a bad thing? To investigate this question, this study examines primarily the more worrisome aspects of narcissism, including its relationships with constructs such as psychopathy, aggression, and Machiavellianism. However, narcissism has also consistently exhibited positive associations with constructs like subjective well-being, self-esteem, and negative

associations with constructs such as anxiety and depression. Thus, further exploring these relationships and better defining the role of narcissism as a potential protective, preventive, or mitigating factor with respect to negative psychological outcomes such as stress, anxiety, and depression is necessary. First, a review of the literature concerning the nature of narcissism as a psychological construct will be presented, with special focus on the distinctions between normal, adaptive narcissism and narcissism as psychopathology. Then the results of two studies will be presented that aim to explore and better define the construct of narcissism as it relates to both adaptive and maladaptive aspects of the lives of emerging adults.

What is Narcissism?

Modern pop culture and popular media cast the personality variable narcissism in particularly negative terms. This is consistent with multiple historical western cultural traditions. For example, the Greek tale of Narcissus (Νάρκισσος), whence came our English term *narcissism*, describes an individual so self-obsessed that he could not bear to part with the majesty of his own reflection (see Caravaggio, 1597). Some tales of Narcissus see him die due to unimaginable sorrow, whereas others report that he committed suicide; in either case, his tale is a warning of the destructive and toxic nature of self-obsession. The Ancient Greeks referred to this sort of destructive self-obsession as hubris (ὕβρις). Aristotle described hubristic behavior as "the affirmation of one's superiority by disgracing or humiliating another person" (Cohen, 1991, p. 174). Even before the rise of the Greek literary tradition, Homer warned about the dangers to society posed by individuals with an inflated sense of self who were also prone to anger and hostility (e.g., Achilleus [Ἀχιλλεύς]; Homer, 1990). Likewise, the later Roman concept of

superbia was used to describe a brand of haughty superiority, wanton self-assertion, and abusive arrogance (Dunkle, 1967). Modern popular conceptualizations of narcissism echo these ancient traditions, primarily seeing narcissism as maladaptive and a threat to the individual and to society. However, in modern psychology, narcissism in commonly conceptualized as a multifaceted construct with both adaptive and pathological variants.

Normative Versus Pathological Narcissism

Perhaps the most foundational point of agreement among modern narcissism theorists and researchers is this: Whether narcissism is described or conceptualized as a trait, a trait constellation, or a psychological construct, narcissism is thought to exist in both adaptive and pathological natures, considered to be distinct taxa with distinguishable, although partially overlapping, phenotypic expressions. The dichotomy of adaptive and maladaptive narcissism can be traced back to the psychoanalytic perspective of Sigmund Freud. Freud (1925) conceived of narcissism as existing in two varieties, which he termed *primary narcissism* and *secondary narcissism*. He described primary narcissism as a form of adaptive, normative, positive self-regard and self-focus that is present to some degree in every mentally healthy human being. Freud described secondary narcissism as a maladaptive, pathological form of primary narcissism; Freud conceived of a taxonomic distinction with some potential overlap in phenotype. Thus, although significant advances have been made with respect to the study of narcissism since Freud, the basic distinction between healthy, adaptive narcissism and pathological narcissism persists, with continued conceptual and empirical support (see Cain et al., 2008, and Pincus & Luckowitsky, 2010, for reviews).

Important to note, however, is that not all theorists agree with the conceptualization of adaptive and pathological narcissism being distinct dimensions of personality; some theorists propose a continuum model, wherein narcissism is a single dimension and individuals range from normal to pathological (e.g., Paulhus, 1998; Watson, 2005). However, Pincus and Lukowitsky (2010) raised an important point, stating, "We do not believe it is possible to define normal and pathological narcissism as opposite poles of a single continuum because the absence of pathological narcissism is not equivalent to the presence of normal narcissism…Although normal and pathological narcissism may share similar relationships with general models of personality, they tend to exhibit opposite patterns of correlations with measures of well-being and maladjustment" (p.436). Thus, theory and empirical evidence support the conceptualization of narcissism as having both a normal and pathological nature. These two types of narcissism are described next.

Normative Narcissism

Narcissism has been conceptualized as a normative feature of human personality development. Theorists such as Kohut (1971, 1977) and Kernberg (1984, 1998) theorized that healthy, normal adults have narcissistic needs that assist them in maintaining a positive general sense of self and stable self-esteem. Features of normative narcissism include a tendency toward positive evaluations and expectations of the self, competitiveness, confidence, ambition, low avoidance motivation, and extraversion. Individuals exhibiting what can be termed *subclinical narcissism* (i.e., high narcissism that does not qualify as psychopathology) tend to be manipulative, self-centered, and dominant (see Sedikides et al., 2004, for a review). When conceptualizing narcissism

within the Big Five personality traits framework (Costa & McCrae, 1995; Goldberg, 1990; John & Srivastava, 1999), Paulhus (2001) reported that narcissism manifested as a high level of extraversion and a low level of agreeableness. Further, there is evidence to suggest that the self-report questionnaire responses and laboratory behaviors of those scoring higher on narcissism are also borne out in their daily behaviors; they tend to engage in more extroversion-consistent social behaviors and be less interpersonally agreeable in their daily lives and interactions (Holtzman et al., 2010). Thus, high levels of normal, subclinical narcissism appear to manifest as a sort of disagreeable extroversion.

Normal narcissism has been found to be negatively associated with anxiety (Watson & Binderman, 1993) and depression (Watson & Binderman, 1993; Wink, 1992), and positively associated with subjective well-being (Rose, 2002) and self-esteem (e.g., Campbell et al., 2002; Raskin & Terry, 1988; Sedikides et al., 2004). Sedikides et al. reported on a series of five studies showing significant positive linear associations between narcissism and good psychological health, which were found to be mediated by self-esteem. Specifically, self-esteem mediated the relations between narcissism and both depression and subjective well-being, and partially mediated the relation between narcissism and loneliness. Furthermore, the authors provided evidence that the observed results were not due to a narcissistic response bias (i.e., presenting the self in an overly favorable manner). In sum, Sedikides et al. presented evidence that "the self-esteem component of normal narcissism accounts for the link between normal narcissism and psychological health. However, self-esteem may not account exclusively for that link" (p. 413).

When taken together, research and theory on normal narcissism paint a picture of a normal narcissism as containing a combination of the following: confidence, extraversion, interpersonal dominance, competitiveness, ambition, low avoidance motivation, low agreeableness, and high, stable self-esteem. One begins to form an image of a person who is upfront, outgoing, perhaps appears arrogant and somewhat interpersonally abrasive and dominant in conversations, yet maintains a relatively high level of subjective well-being and whose personality does not cause them significant impairment in any of their major life domains (e.g., interpersonal, academic, occupational).

Narcissism as Psychopathology

Literature concerning pathological narcissism can be categorized into three main bodies: 1) clinical theories and research on psychotherapeutic interventions, 2) theories and research from social and personality psychology, and 3) research conducted based on diagnostic criteria found in the DSM (APA, 2000, 2013) (Cain et al., 2008). Unfortunately, a degree of disconnect between these three areas exists, with no gold standard definition of the construct, leading to a *criterion problem*: "thus, whether it is clinically described or empirically measured, it can be difficult to synthesize among and across clinical observations and empirical findings" (Pincus & Lukowitsky, 2010, p. 437).

Cain et al. (2008) reviewed phenotypic descriptions of pathological narcissism over approximately 35 years of clinical psychology, social/personality psychology, and psychiatry literature and collected over 50 labels used to describe behavior. The authors reported that the various labels were best described by two broad themes, termed

Grandiosity and *Vulnerability*. Similarly, a strong base of empirical evidence and a rich history of theory suggest that pathological narcissism consists of two broad phenotypes, grandiosity and vulnerability (see Cain et al., 2008 and Pincus & Lukowitsky, 2010, for more thorough review).

The DSM-5 (APA, 2013) diagnostic criteria for Narcissistic Personality Disorder (NPD) are heavily focused on the grandiose narcissism phenotype. NPD diagnostic criteria include: grandiose sense of self-importance; preoccupation with fantasies of unlimited success, power, brilliance, beauty, or ideal love; a belief that one is special and can only be understood by or associate with other special people or institutions; desire for excessive admiration; sense of entitlement; lack of empathy; often envious of others or convinced that others are envious of her or him; and haughty, arrogant behaviors and attitudes.

Despite the focus of the DSM-5's (APA, 2013) diagnostic criteria on the theme of grandiosity, according to Pincus and Lukowitsky (2010), "the core feature of pathological narcissism is not grandiosity, but rather defective self-regulation leading to grandiose and vulnerable self and affect states" (p. 436). Although not specifically mentioned in the diagnostic criteria, the DSM-5 does make mention of the vulnerability inherent in pathological expressions of narcissism and the concomitant self-regulatory deficits. Indeed, individuals with NPD are extremely sensitive to negative feedback, criticism, or other ego threats or challenges to their inflated self-image. Individuals with NPD may be unwilling to take risks or to accept feedback, and thus struggle in academic or occupational settings. The entitlement, need for admiration, and lack of empathy can significantly impair the interpersonal and relational functioning of individuals with NPD.

Additionally, individuals with NPD may react aggressively (overtly or covertly) and impulsively to criticism, perceived slight, or other ego-threats. NPD is also associated with major depressive disorder, dysthymia, anorexia nervosa, and substance use disorders (APA, 2000, 2013).

Narcissism as psychopathology is perhaps best summed up with a quote from Pincus and Lukowitsky (2010):

> All individuals have normal narcissistic needs and motives…however, pathologically narcissistic individuals appear particularly troubled when faced with disappointments and threats to their positive self-image. Since no one is perfect and the world is constantly providing obstacles and challenges to desired outcomes, pathological narcissism involves significant regulatory deficits and maladaptive strategies to cope with disappointments and threats to positive self-image. (p. 426).

Narcissism and Self-Esteem

The relationship between narcissism and self-esteem is quite complex. Prima facie, the research literature on the relationships between narcissism and self-esteem seems to have produced somewhat inconsistent results. However, as research in this area has progressed, social scientists have put forth models and hypotheses in an attempt to account for a body of seemingly disparate findings. A relative consensus exists among social scientists that narcissism and self-esteem are indeed different constructs and that narcissism is not simply the high end of a self-esteem spectrum. However, many questions remain to be answered about the way that general self-esteem, domains of self-

esteem, or components of self-esteem relate to different forms of narcissism or components of narcissism.

Narcissism is commonly conceptualized as having two *natures* (normal and pathological), two phenotypes (grandiosity and vulnerability), two modes of expression (overt and covert), and researchers have expressed a range of opinions regarding the construct's *structure* (category, dimension, prototype) (see Pincus & Lukowitsky, 2010). Likewise, conceptualization regarding self-esteem contains diverse perspectives. Some researchers distinguish between *implicit* (automatic, uncontrollable, perhaps unconscious feelings toward the self) and *explicit* (purposeful, controllable, deliberate feelings toward the self) self-esteem (Bosson et al., 2008), asserting that narcissism reflects a high explicit self-esteem masking a low implicit self-esteem.

The works of Freud (1925), Kohut (1966, 1977), and Kernberg (1975) produced conceptualizations of narcissism that evolved into the *Mask Model* of self-esteem. The Mask Model of self-esteem posits that those exhibiting pathological narcissism develop a fragile, empty, weakened, and under-stimulated sense of self beginning early in childhood and develop narcissistic grandiosity as a defense strategy, masking underlying feelings of inadequacy and inferiority. Such individuals develop overly positive self-views, which they maintain using a variety of strategies such as overestimating their abilities, manipulating and devaluing others, and generally viewing themselves as superior to other people. However, this grandiose outward presentation is thought to be a defensive strategy that can break down in the face of ego threats and result in a variety of maladaptive behaviors (e.g., violence, verbal or emotional abuse, substance use) on the part of the highly narcissistic individual. This fragile grandiose self-image requires

continued reinforcement. When narcissists are faced with ego threats, they can have trouble self-regulating, and engage in maladaptive behaviors that result in negative outcomes for themselves (e.g., substance abuse) and for those around them (e.g., verbal, emotional, or physical abuse, aggression, and violence). "The Mask Model predicts that people who score high on the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) should reveal very high levels of explicit self-esteem combined with relatively low levels of implicit self-esteem" (Bosson et al., 2008, p. 1418).

Tests of the Mask Model by researchers have yielded inconsistent results, leaving the model with a lack of general support (see Boson et al., 2008). One possible reason for inconsistent results is the relative unreliability of measures of implicit self-esteem (Bosson et al., 2008). Another potential reason for inconsistent findings is that the NPI measures primarily normal, adaptive narcissism (see Pincus & Lukowitsky, 2010); perhaps significant differences between implicit and explicit self-esteem only arise in those exhibiting clinical, pathological narcissism, which is not captured by the NPI. Although the Mask Model of self-esteem and narcissism has thus far failed to garner significant support, researchers continue to investigate the relationships between different components or types of narcissism and different aspects of self-esteem.

Brown and Zeigler-Hill (2004) reported that the correlations between the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) and the NPI ranged between r = .09 and r = .41, with a mean of r = .26. The authors described these results as contrary to expectations, given that narcissists are arrogant and self-inflating. Yet, the RSES aims to capture the degree to which a person felt approximately *equal* in worth to others, not the

degree of superiority felt toward others (Rosenberg, 1965). Given that, the somewhat low correlations between the NPI and the RSES make sense.

Indeed, one difficulty in integrating the literature on self-esteem and narcissism is that different measures of self-esteem seem to measure different things. Various measures of self-esteem differ in whether they ask participants their perceptions of themselves as being 1) *as good as* most other people, 2) *not inferior to* other people, or 3) *better than* other people (Brown & Zeigler-Hill, 2004). Brown and Zeigler-Hill hypothesized that narcissism would be more strongly related to measures of self-esteem that contain a theme of dominance (e.g., that one is somehow special or superior to others) than measures not focused on dominance but rather parity with others, such as the RSES (e.g., that one is of equal worth to other people). The authors included multiple measures of self-esteem, the NPI, as well as a measure of dominance in their study. Indeed, the NPI was more highly correlated with measures of self-esteem that were themselves more highly correlated with dominance. Furthermore, when controlling for dominance, the correlations between the NPI and each self-esteem measure were significantly reduced. Brown and Zeigler-Hill's "dominance hypothesis" added significantly to the understanding of why self-esteem has exhibited differential relationships with narcissism throughout the body of research literature. According to this hypothesis, measures of self-esteem that capture a sense of dominance or superiority (as opposed to parity with others) are more likely to exhibit stronger correlations with measures of narcissism. Measures of self-esteem that also capture a sense of dominance - of being "superior" to others as opposed to "of equal worth" - are likely capturing some of the grandiosity that is commonly associated with narcissism; this has potential to create a sort of tautology in

which researchers are essentially correlating narcissism with narcissism instead of correlating general self-esteem with narcissism. The RSES items assess the degree to which the respondent feels that she or he is of *equal worth* to others, as opposed to assessing a sense of *superiority* to others. Thus, using a measure of self-esteem less correlated with the theme of dominance should produce data in which narcissism and healthy self-esteem are less confounded.

Tracy and Cheng (2009) advanced a model for helping distinguish between narcissistic self-aggrandizement and genuine high self-esteem. Although they are both forms of self-favorability, narcissism and self-esteem are thought to be fueled by combinations of different emotions - *shame* and two facets of pride, *authentic* and *hubristic*. Shame is conceptualized as self-scrutiny and negative self-evaluation in the face of negative events, resulting in feelings of worthlessness and powerlessness (Gramzow & Tangney, 1992). "Authentic pride is the more socially desirable, achievement-oriented facet, associated with accomplishment and confidence. Hubristic pride is the more narcissistic facet, associated with arrogance and conceit" (p.197). Tracy et al. provided evidence that narcissistic self-aggrandizement and genuine self-esteem are distinct constructs. Authentic pride exhibited a positive linear relationship with genuine self-esteem. Hubristic pride exhibited a positive linear relationship with narcissism (as measured with the NPI, NPD diagnosis, or overestimation of the degree of social consensus with one's own beliefs), aggression, low perceived social support, rejection sensitivity, poor relationship quality, attachment insecurity, trait anxiety, social phobia, and Machiavellianism. "In fact, one of the major findings of the present research is that hubristic pride is a more explicitly maladaptive component of narcissism than the overall

trait assessed by the NPI" (Tracy & Cheng, 2009, p. 209). Essentially, hubristic pride correlated positively with the NPI, but also with other variables thought to be relevant to narcissism that, in this study, did not correlate significantly with the NPI. Thus, the authors suggested that hubristic pride captures something pathologically narcissistic that is not captured by the NPI.

Overall, the findings of Tracy and Cheng (2009) provided evidence for three important points. First, the NPI appears to measures normal, adaptive narcissism. Second, both normal and pathological narcissism appear to be distinct constructs from self-esteem and not merely the high end of a self-esteem spectrum. Lastly, although both narcissism and self-esteem involve holding favorable views of the self, the hubristic views common to narcissism are excessively favorable, and often socially toxic (i.e., these excessively favorable self-views are accompanied by self-regulatory deficits and a variety of maladaptive maintenance strategies).

In sum, self-esteem and narcissism are different yet overlapping constructs. In fact, the degree of their overlap appears to depend on how they are measured and which facets are measured. Brown and Zeigler-Hill (2004) reported that self-esteem measures that capture themes of dominance (as opposed to adequacy and equal worth) tend to correlate more strongly with the NPI. They suggested using measures such as the RSE, which measures an individual's sense of parity with others and general sense of worth, to minimize the shared variance between narcissism and self-esteem.

Narcissism, Psychopathy, and Machiavellianism: The Dark Triad

Narcissism and psychopathy are perhaps most often examined together in research on the Dark Triad personality traits (narcissism, psychopathy and

Machiavellianism). Past research has provided evidence that the Dark Triad constructs are distinct yet overlapping traits (e.g., Glenn & Sellbom, 2014; Jonason & Tost, 2010; Paulhus & Williams, 2002). Indeed, narcissism and psychopathy were found to exhibit an average correlation of $r = .39$ across a number of studies reviewed by Miller et al. (2010). Current research on the Dark Triad has generally accepted the constructs as meaningfully distinct, and has focused on attempting to describe the precise similarities and differences among narcissism, psychopathy, and Machiavellianism. One difficulty in studying narcissism and psychopathy is that both constructs are phenotypically diverse and multifaceted (e.g., grandiose and vulnerable narcissism, primary and secondary psychopathy; see Fossati et al., 2014, for a review). A brief summary on the background of psychopathy is necessary before discussing the relations between narcissism and psychopathy.

Cleckley (1941) used detailed clinical case descriptions to describe the concept of psychopathy. Cleckley's descriptions primarily included personality and cognitive features such as superficial charm; callous, unemotional interpersonal behavior; selfishness, and egocentricity. Stellwagen (2011) pointed out that Cleckley's clinical population was somewhat affluent, with a low base rate of violent behavior, and thus Cleckley's early conceptualizations of psychopathy were not as focused on violence and aggression.

Robert Hare extended Cleckley's work and helped to distinguish psychopathy from antisocial personality disorder (APD; APA, 2000, 2013). Hare developed the Psychopathy Checklist (PCL; Hare & Frazelle, 1980) and subsequently the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), which is the most frequently used measure of

psychopathy in research and a gold standard in diagnosing psychopathy (Stellwagen, 2011). The PCL and PCL-R have consistently yielded two factors when subjected to factor analyses. Factor 1 psychopathy (primary psychopathy) includes primarily personality traits (e.g., lack of empathy, lack of emotionality, narcissism) and Factor 2 psychopathy (secondary psychopathy) is essentially behavioral in nature (e.g., impulsivity, irresponsibility, problems with the law and criminal behavior). Both factors are associated with aggression, but with different forms of aggression. Factor 1 has been found to be positively associated with proactive aggression (planned, goal-oriented) and Factor 2 has been found to be more associated with reactive aggression (hostile, angry).

Psychopathy consistently has been found to be positively associated with narcissism, and narcissistic personality traits are a core feature and major component of all conceptualizations of psychopathy (see Stellwagen, 2011). Narcissism and psychopathy are both associated with manipulation and exploitation of others; however, this exploitation takes on different forms, as summarized by Stellwagen (2011):

> "…one distinction between narcissistic exploitation and psychopathic exploitation is intentionality; that is, psychopaths fully intend to victimize others, whereas the exploitativeness of narcissists results from their inability to conceptualize others as full-fledged people who require careful, considerate treatment. In a nutshell, this explains why all psychopaths may be considered narcissistic (Stone, 1993) but only a minority of narcissists are psychopathic. That is, psychopathic predation suggests (at best) a blatant indifference to the pain that is inflicted on others and (at worst) joyful cruelty. This interpersonal style is consistent with an omnipotent view of the self in which others are devalued. On the other hand, the

oblivious narcissist is simply thoughtless and insensitive, and such interpersonal carelessness lacks the rapacious intentionality of psychopathic predation." (p. 35)

Stellwagen (2011) summarized the integral feature of the Dark Triad personality constructs, stating, "all three dispositions indicate the tendency to primarily treat others as utilitarian 'Objects' and 'tools' (in the case of the narcissist, one might add 'emotional supplies')" (p. 39). In other words, the Machiavellian sees interpersonal interactions and relationships with a somewhat cold indifference, the psychopath perhaps with a sense of cruel enjoyment, and the narcissist as a means to nourish a fragile ego and protect against deep feelings of inferiority. In theory, when each cannot achieve their desired ends, the Machiavellian is prone to become increasingly manipulative or deceitful; the psychopath more aggressive, violent, or cruel; and the narcissist more dysregulated, emotionally abusive, exploitative, or interpersonally aggressive.

A study by Fossati et al. (2014) aimed to help answer the question of whether pathological narcissism and psychopathy are meaningfully distinct constructs or perhaps different names for the same thing (e.g., different phenotypes of the same latent construct). Narcissism consistently has been described in terms of grandiose and vulnerable features. Psychopathy consistently has been found to exhibit two factors, termed primary and secondary psychopathy. Fossati et al. aimed to clarify the points of convergence and divergence between these construct facets as well as to examine the relations between the traits at their broad levels.

Fossati et al. (2014) recruited a sample of 740 Italians living in or around Milan, Italy. Measures for the study included the Pathological Narcissism Inventory (PNI; Pincus et al., 2009), the Levenson Self-Report Psychopathy Scale (LSRPS; Levenson et

al., 1995), the HEXACO-60 Personality Inventory (Ashton & Lee, 2009), the Moral Disengagement Scale (Bandura et al., 1996), and a self-report measure of "delinquency." As was expected, pathological narcissism and psychopathy exhibited similarities but also important distinctions. Pathological narcissism and psychopathy were significantly associated at the broad level (i.e., composite measures of the traits themselves as a whole, as opposed to relationships between subscales). Both pathological narcissism and psychopathy were associated with low *Honesty-Humility* and low *Agreeableness*. Both pathological narcissism and psychopathy were also associated with *moral disengagement*, which is the tendency to justify actions that transgress societal moral standards. Additionally, Fossati et al. reported that both pathological narcissism and psychopathy were associated with participant reports of having engaged in illegal behaviors as adolescents (i.e., delinquency).

In addition to the similarities between pathological narcissism and psychopathy reported by Fossati et al. (2014), some important differences were also discovered. Although both pathological narcissism and psychopathy were associated with moral disengagement, this relationship was stronger with psychopathy. Further, both Primary Psychopathy (i.e., Factor 1 psychopathy) and Secondary Psychopathy (i.e., Factor 2 psychopathy) were associated with moral disengagement, whereas only narcissistic vulnerability (as opposed to narcissistic grandiosity) was associated with moral disengagement. Additionally, primary psychopathy and secondary psychopathy were both associated with illegal activity during adolescence, whereas only narcissistic grandiosity was associated with illegal activities during adolescence.

Overall, the Fossati et al. results suggested that pathological narcissism and psychopathy were "different personality constructs that share a common core of greed, immodesty, lack of sincerity, antagonism, a propensity to justify moral transgressions, and acts of delinquency in adolescence" (p. 412). The feature that characterized pathological narcissism rather than psychopathy was *affective dysregulation*; the feature that characterized psychopathy rather than pathological narcissism was *behavioral dysregulation*, a diminished ability to control behavior and plan life. However, pure psychopathy seems to include a greater propensity for aggression and violence, given its association with behavioral dysregulation, and a greater degree of moral dysfunction.

Unificationist theories propose that narcissism, Machiavellianism, and psychopathy are identical constructs, being slight variations in the phenotype of an underlying singular dark personality factor. Yet, discrimination theories (i.e., theories that posit meaningful distinctions among narcissism, psychopathy, and Machiavellianism) seem to have garnered the most empirical evidence: "The Dark Triad traits have been shown to differ in biological bases, underlying processes and dynamics, and association patterns with other constructs within nomological networks" (Rauthman, 2012, p. 488).

Rauthman (2012) hypothesized that, if the Dark Triad traits are meaningfully distinct constructs and are fueled by different interpersonal and intrapersonal processes, then they should be perceived differently by others and also produce different social consequences. Rauthman investigated how "dark personalities" (i.e., those scoring high on one or more components of Dark Triad measures) perceive themselves, how they perceive others, how they perceive social interactions, how others perceive them, as well as how others perceive interactions with them. This study was aimed at helping further

determine whether narcissism, psychopathy, and Machiavellianism are distinct constructs. In the study, 186 first-year college students were placed in 93 randomly assigned dyads in which they had to cooperate to solve a puzzle game that required them to agree on rank ordering the importance of some pieces of information. Participants then provided self and other ratings on personality traits, as well as perceptions about the quality of the interpersonal interactions with their assigned partner. Narcissism was measured using a 17-item scale based on the NPI (sum score was used). Machiavellianism was measured using an 18-item scale based on the Mach-IV, and psychopathy was measured using the 30-item Self-Report Psychopathy Scale-III. Rauthman treated Dark Triad traits as predictors and conducted separate multiple regression analyses using self-ratings, ratings of others, and ratings by others as criterion variables.

Overall, the Rauthman (2012) study suggested that the Dark Triad was not well accounted for as being three manifestations of a single latent dark personality factor. However, "Machiavellians generally showed divergent profiles from narcissists and psychopaths" and "narcissists and psychopaths…seemed to converge" (p. 491). Those scoring higher on narcissism saw themselves as high on agentic traits, were viewed neutrally by partners (as opposed to positively or negatively), although partners were able to sense arrogance in them. Those scoring higher on narcissism did not seem to create a hostile or combative atmosphere in these short-term interactions. Highly Machiavellian individuals generally saw themselves in a negative light, and interactions with them were rated negatively by their partners. Rauthman hypothesized that highly Machiavellian individuals perhaps hold "global misanthropic views" (p. 494), believing that all people,

even themselves, are flawed and bad. Those scoring higher on psychopathy, like those scoring higher on narcissism, did not seem to produce a negative interaction climate with their partners; they were perceived by partners as not particularly likeable, yet psychopathy did not appear to be particularly detrimental to communication or the interpersonal atmosphere in a short-term interaction.

The Rauthman (2012) data seemed to suggest some convergence between narcissism and psychopathy. Individuals who scored higher on measures of narcissism and psychopathy, in short-term interactions with others, were perceived as somewhat arrogant, dominant, and unlikable, yet were able to work effectively with their partners and not create a hostile interpersonal environment. However, individuals with higher scores on psychopathy were seen as less likeable than narcissists, who tended to be perceived in a neutral manner by others during these short-term interactions. Those scoring higher on Machiavellianism, on the other hand, tended to hold negative views of others, and were generally perceived negatively by their partners.

Rauthman and Kolar (2012) investigated laypersons' perspectives on the dark triad traits and discovered that narcissism generally was viewed more positively than Machiavellianism and psychopathy, which were viewed quite similarly. Machiavellianism and psychopathy were viewed by laypersons as having little or no benefits to the self (i.e., the Machiavellian or the psychopath) and disadvantages for others and society. Rauthman and Kolar hypothesized that narcissism may be viewed in a more positive light because narcissists tend to be charming, strive for physical attractiveness, and are somewhat higher in conscientiousness and achievement motivation compared to those who score lower on narcissism measures. They also noted that those

scoring higher on narcissism tend to desire attention, status, and admiration, whereas those scoring higher on Machiavellianism and those scoring higher on psychopathy focus more on exploitation and callousness. Rauthman and Kolar suggested that perhaps narcissism is the most unique of the three dark triad constructs and that perhaps psychopathy and Machiavellianism could be considered the "malicious two." It should be noted that all three traits were viewed rather unfavorably; however, narcissism appeared to have some qualities that lay persons viewed favorably.

As has been reviewed here, empirical evidence supports the conceptualization of narcissism and psychopathy as distinct, yet overlapping, constructs. Furthermore, research data also support conceptualizations of each existing in maladaptive capacities as well as both narcissism and psychopathy being multifaceted. Due to these fundamental complexities, many questions remain and further studies are imperative, especially in light of recent debates about rising levels of narcissism in emerging adults (see Paulsen et al., 2015, for a review), as well as the relationships between narcissism and aggression, to which we now turn.

Narcissism and Aggression

The term aggression is used to refer to a wide variety of behaviors. Before discussing the relationships between narcissism and aggression, it is important to first distinguish between trait aggressiveness and aggressive behavior. Buss and Perry (1992) defined *trait aggressiveness* as something that makes people more prone to hostile cognitions, angry affect, and a readiness or willingness to engage in physical or verbal aggression. *Aggressive behavior* has been defined in various ways across the research literature, including: willingness to administer an electric shock to another individual;

pushing, hitting, or striking; administering monetary or point penalties to experiment confederates or other participants; verbal attacks and insults; as well as providing negative evaluations of others (see Bettencourt et al., 2006, for a review). Trait aggressiveness is commonly measured using self-report questionnaires and aggressive behavior is commonly measured by observing a participant's behavior in a research laboratory.

Narcissism consistently has been found to be associated with both trait aggressiveness and aggressive behavior (e.g., Baumeister et al., 2000; Donnellan et al., 2005). In fact, Baumeister et al. suggested that "narcissism has taken center stage as the form of self-regard most closely associated with violence" (p. 27). As has been reviewed herein, narcissism has consistently exhibited a positive relationship with psychopathy, a construct also associated with aggression and violence; thus, somewhat unsurprisingly, narcissism also has been found to be associated with aggression and violence. However, the aggression perpetrated by highly narcissistic individuals appears to have some distinguishing features when compared to the aggression perpetrated by purely psychopathic individuals (i.e., psychopathy relatively free of narcissistic features).

In their review of literature on narcissism and aggression, Ferriday et al. (2011) outlined a theory of narcissism and aggression. Narcissism, like most all personality variables, is thought to be influenced by both situational and dispositional factors. Two lines of research seem to converge: subclinical narcissism has been consistently associated with aggression and people are generally more aggressive when insulted publicly (as opposed to privately). An aggressive response can be seen as a way to defend one's honor, to save face, or to invalidate or negate an insult or a provocation; thus, it

makes sense that people are more prone to aggress in a public versus a private setting because the aggression has a higher instrumental value in a public setting. Research also suggests that those who score higher on trait narcissism have more unstable self-esteem and self-relevant evaluations and thus require continued admiration from others to buttress a weak and unstable ego. However, when a highly narcissistic individual's self-image or self-concept is threatened due to the insult or provocation of another, one way of maintaining a sense of dominance and superiority is through acts of aggression. Indeed, individuals higher on trait narcissism have been found to have heightened levels of hostility and aggression, be more aggressive after threats to their ego or self-concept and be more likely to interpret interpersonal interactions as having represented or contained hostile intent. Thus, higher scores on trait narcissism are thought to increase the likelihood of aggressive behaviors in response to an ego-threat. In summary, the aggression so common to narcissism is thought to be a result of the interaction between a high, unstable sense of self in combination with an ego-threat, and this reaction is hypothesized to be more pronounced when the individual publicly receives an ego-threat (see Ferriday et al., 2011, for a review).

Bettencourt et al. (2006) conducted a meta-analysis of 63 studies to investigate the relationships between personality and aggressive behavior in provoking versus neutral experimental conditions. Research publications concerning the following personality variables were included in the meta-analysis: trait aggressiveness; trait irritability; trait anger; emotional susceptibility (tendency to feel vulnerable, distressed, or inadequate); narcissism; Type A personality; dissipation-rumination (considered to be opposing ends of a spectrum; ruminators tend to harbor feelings of anger and hostility from long periods

of time, whereas dissipators tend to get over feelings of anger or hostility relatively soon after insult or provocation); and impulsivity. The overall aim of the meta-analysis was to see if personality variables and the type of experimental condition (neutral versus provoking) interact to influence aggressive behavior. An experimental condition considered provoking of aggressive behavior could include: electric shock; noxious noise; monetary or point penalties during a competitive task; verbal provocations, such as personal insults; or frustration tasks such as failure to complete a task or the inability to participate in some activity. Neutral experimental conditions could include a confederate silently observing the participant completing some task, a confederate providing a neutral evaluation of a participant, or the participant receiving positive feedback from an experimenter or confederate.

The results of the Bettencourt et al. (2006) meta-analysis are complex and detailed, and will be summarized concisely here, focusing particularly on narcissism and aggression. Some personality variables were associated with aggression under both neutral and provoking conditions, whereas other personality variables were associated with aggression only under provoking conditions. The authors described these two profiles respectively as *aggression-prone* and *aggression-sensitive*. Narcissism high-scorers and low-scorers exhibited similar levels of aggression in neutral conditions. However, higher levels of narcissism were associated with higher levels of aggressive behavior under provocation conditions. In fact, narcissism, trait anger, and Type A personality were all associated with a “hot-blooded” reactive form of aggression. Thus, the Bettencourt et al. meta-analysis provided a solid empirical grounding for a

conceptualization of narcissism as including an increased propensity for reactive aggression following an ego-threat.

Ferriday et al. (2001) examined narcissism and aggression in a 2x2x2 design that included conditions for *feedback* (positive or negative), *presence* (public or private), and *scenario* (writing an essay about abortion or municipal spending). Participants were asked to imagine themselves participating in an experiment in which they were to write an essay and then receive feedback on it from another participant (they chose the name Alex). Participants were told to imagine that they were chosen at random to write an essay on either abortion or on municipal spending and have it reviewed by Alex. Participants then imagined receiving negative or positive feedback either in private or in front of the experimenters. Then, they were asked to imagine evaluating Alex on a reaction time task. They were told that when Alex lost they were to inform him with a blast of annoying noise as a punishment; participants then selected their noise loudness and noise duration responses. Then, participants completed an unrelated task before completing the NPI. High and low narcissism groups were established via a median split on NPI total scores. Analyses were conducted after collapsing across scenarios (abortion versus municipal spending essay topics) as they were found not to have produced significantly different results with respect to the relevant outcome variables. Results suggested higher aggression among those who were high on narcissism, received public feedback, and received negative feedback. For those high on narcissism, the effect of the feedback condition (positive or negative) on aggression was not significant in the private condition. This experiment highlighted the interaction of situational and dispositional factors to produce aggression.

Falkenbach et al. (2013) included a measure of self-esteem in an attempt to disaggregate psychopathy, narcissism, and aggression. In this study, 118 undergraduate students completed the following measures: RSES-MV (modified version of the RSES that is based on repeated measures to assess self-esteem stability; Kernis et al., 1989); NPI; two NPI subscales based on work by Ackerman et al. (2011), NPI-P (pathological narcissism score obtained by summing scores on Entitlement and Exploitativeness subscales) and NPI-H (healthy narcissism score obtained by summing scores on the Authority, Exhibitionism, Superiority, Self-Sufficiency, and Vanity subscales); Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996); and the Aggression Questionnaire (AQ; Buss & Perry, 1992).

Falkenbach et al. (2013) found that healthy narcissism (NPI-H) was related to Factor 1 psychopathy (the personality components) on the Psychopathic Personality Inventory (r = .55). Neither healthy narcissism nor Factor 1 psychopathy were significantly related to aggression. Pathological narcissism (NPI-P) was positively associated with Factor 2 psychopathy (behavioral components) and both were associated with higher aggression. Interestingly, the differential relationships between the NPI-H and the NPI-P went against past assertions that the NPI only measures healthy, adaptive narcissism. Based on the findings of Falkenbach et al. (and Ackerman et al., 2011), the NPI does seem to capture some elements of pathological narcissism. The authors hypothesized that perhaps some more highly psychopathic individuals also exhibit significant levels of trait narcissism and engage in violent, aggressive, or abusive behaviors as a way to maintain an inflated self-image. Those exhibiting high levels of narcissism perhaps only respond with increased violence when they also exhibit

psychopathic traits. These are issues that warrant the attention of researchers and highlight the importance of including multiple measures of both narcissism and psychopathy in future studies of these constructs.

Mouilso and Calhoun (2012) assessed a sample of 235 college men with respect to narcissism, psychopathy, and sexual assault perpetration. They used two measures of narcissism, the NPI and the 17-item NPD subscale from the Structured Clinical Interview for DSM Disorders-II Personality Questionnaire (SCID-N; First et al., 1997), which are considered to measure adaptive, normal narcissism and narcissism as psychopathology, respectively. Psychopathy (measured using the Self-Report Psychopathy Scale-III; Paulhus et al., in press) was positively associated with frequency of sexual assault perpetration, and also successfully distinguished perpetrators from non-perpetrators. Furthermore, scores on both the NPI and the SCID-N questionnaires were higher among perpetrators of sexual assault and successfully distinguished perpetrators from non-perpetrators. These results suggested that narcissism and psychopathy are significant risk factors for perpetration of sexual assault by college men (i.e., a non-clinical, non-incarcerated sample).

Bobadilla et al. (2012) studied proactive and reactive aggression, narcissism, and psychopathy in a sample of 122 university students. The authors measured narcissism using the four-factor scoring of the NPI (Exploitativeness/Entitlement, Leadership/Authority, Superiority/Arrogance, and Self-Absorption/Self-admiration) and the Psychopathic Personality Inventory (PPI) to measure psychopathic traits, which contains subscales corresponding to primary and secondary psychopathy. Participants had their photograph taken and were asked to write a brief personal profile and were told that

the profile would be rated by another participant, although this "other" participant was nonexistent. After completing a brief personal profile, participants were asked to complete other measures for the study, and the experimenter pretended to go and check on the "other" participant.

Bobadilla et al. (2012) had participants complete a competitive reaction time task against another nonexistent participant. Participants always "won" the first trial and were allowed to "punish" the other (nonexistent) participant by administering a blast of noise via a number keypad that was said to range in intensity; 0 = no noise; 1 = sound in decibels equal to clapping hands; 2 = sound in decibels equal to a freight train. The punishment administered after this first reaction time task was a measure of proactive aggression. As a measure of reactive aggression, participants were told that another (nonexistent) participant had given them a favorable rating (8 of 10) on the quality of writing in their personal profile but an unfavorable score (2 or 3 of 10) on the "attractiveness" of their personal photo and profile. Then, participants again played the reaction time task against the nonexistent participant and were subsequently allowed to administer noise and to rate the other participant's personal ad and photo on a scale of 1 (extremely poor) to 10 (excellent).

Bobadilla et al. (2012) reported that psychopathic traits exhibited a positive association with proactive aggression, but only among men; none of the study's measures were related to proactive aggression in women. Narcissistic traits were positively associated with greater reactive physical aggression (noise blast), with the NPI Self-Absorption/Self-Admiration subscale showing the strongest relationship (r = .19), and a particularly strong relationship for women (r = .26). The NPI total score was negatively

associated with indirect reactive aggression (feedback about the "other" participant's profile; r = -.23). The NPI Self-Absorption/Self-Admiration subscale had the strongest negative association with participant feedback (*r* = -.29), and this relationship held for both men (*r* = -.27) and women (*r* = -.31).

In summary, research on narcissism and aggression seems to support the following: 1) those who score higher on measures of narcissism are more likely to react aggressively to provocation, insult, or other ego-threats; and 2) those who score higher on measures of narcissism are likely to respond aggressively to provocation or negative feedback when the feedback is delivered publicly (e.g., in front of an experimenter) as opposed to privately. However, many questions remain to be answered and researchers consistently call for increased study of these variables using multiple measurement tools as well as multiple modes of measurement (e.g., self-report and direct behavioral measurements).

Measuring Narcissism: Complexities and Confusion

Perhaps the most pressing concern about the measurement of narcissism is the nearly exclusive use of the NPI. In a review of the social and personality psychology literature since 1985, Cain et al. (2008) discovered that the NPI was the primary or only measure of narcissism used in approximately 77% of the research (see also Miller et al., 2014). This excessive reliance on the NPI as the primary or only measure of narcissism included in most research is a significant limitation to further development in the study of narcissism.

In addition to the overuse of the NPI, there is debate as to what exactly it measures. There seems to have been a past consensus that the NPI measures healthy,

adaptive, normative narcissism and does not directly measure pathological narcissism (Miller & Campbell, 2008; Pincus et al., 2009; Pincus & Lukowitsky, 2010; Watson, 2005). However, Ackerman et al. (2011) asserted that the NPI captures both adaptive and pathological elements of narcissism. Further, scales comprised of NPI items aimed at capturing healthy narcissism (NPI-H) and maladaptive or pathological narcissism (NPI-P), based on the work of Raskin and Terry (1998) and Ackerman et al. (2011), have continued to exhibit differential associations with a range of variables, providing increasing evidence that the NPI captures some elements of maladaptive or pathological narcissism (e.g., Falkenbach et al., 2013).

Indeed, when subjected to factor analyses, the NPI has yielded 2-factor (Corry et al., 2008), 3-factor (Ackerman et al., 2011), 4-factor (Emmons, 1984, 1987) and 7-factor solutions (Raskin & Terry, 1988). However, a recent large-scale cross-cultural study conducted across 11 world regions and 53 nations revealed that the Raskin and Terry 7-factor structure provided the best overall fit in most nations (Schmitt et al., 2017). In sum, researchers continue to debate the factor structure of the NPI, although seem to have achieved a relative consensus that the instrument measures healthy, adaptive narcissism, and also captures some elements of maladaptive and perhaps pathological narcissism. Further, when considered globally, the 7-factor structure (i.e., exploitativeness, entitlement, exhibitionism, authority, self-sufficiency, vanity, and superiority) appears to be the most useful and appropriate.

Although Ackerman et al. (2011) arrived at a three-factor NPI solution (i.e., leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness) and Schmitt et al. (2017) provided robust support for the original Raskin and Terry (1988)

solution, these sets of results converge in a significant way. Ackerman et al. provided evidence that the NPI's Leadership- and Authority-related content was generally associated with adaptive or positive outcomes and not significantly associated with pathological narcissism. The Grandiose Exhibitionism component of the Ackerman et al. three-factor model was associated with some less desirable and maladaptive outcomes, such as Entitlement Rage (a Pathological Narcissism Inventory [PNI] subscale). However, Grandiose Exhibitionism was also positively associated with Social Potency and extraversion. Ackerman et al. discovered that NPI content capturing Entitlement or Exploitativeness had the most consistent and strongest associations with maladaptive ("socially toxic", p. 83) outcomes. For example, the Entitlement and Exploitativeness factor exhibited positive associations with antisocial tendencies, Machiavellianism, devaluing others, and negative associations with agreeableness and relationship quality.

In a study by Schmitt et al. (2017), the NPI Raskin and Terry (1988) factors of Authority, Self-sufficiency, Vanity, and Superiority were consistently positively associated with self-esteem. Additionally, the Raskin and Terry factors of Self-Sufficiency and Authority were also consistently positively associated with subjective well-being. Additionally, Schmitt et al. noted that the NPI Entitlement, Exploitativeness, and Exhibitionism subscales have exhibited links with psychological maladjustment and poor academic outcomes.

Taken together, the results of Ackerman et al. (2011) and Schmitt et al. (2017) suggest that NPI content measuring trait concepts such as authority, self-sufficiency, vanity, and superiority are primarily associated with adaptive, positive outcomes. Available evidence also suggests that NPI content measuring grandiosity and/or

exhibitionism bear associations with both adaptive and maladaptive outcomes. Lastly, previous research has provided consistent support for the NPI's entitlement- and exploitativeness-related content as being particularly maladaptive, if not pathological in nature.

In addition to debates about the NPI, the study of narcissism also suffers from a disconnect between research and clinical theory on pathological narcissism and the diagnostic criteria of NPD. The DSM criteria for NPD (APA, 2000, 2013) are focused almost exclusively on the grandiose features of narcissism, mentioning vulnerability and self-regulatory deficits as features that support the diagnosis. Yet, research has consistently arrived at a conceptualization of pathological narcissism in which the vulnerability aspect of the construct and its accompanying self-regulatory deficits are perhaps the core components of the pathology. Thus, using DSM criteria-based measures for research purposes likely adds to the confusion about the features that distinguish normal narcissism from pathological narcissism. Thus, future research on narcissism ought to include multiple measures of the construct, as well as a measure that taps into both the grandiose and vulnerable features of narcissism as psychopathology.

Given the current measurement debates in the study of narcissism, it is important for future research to include: 1) multiple measures of narcissism, including measures of both adaptive and pathological narcissism; 2) measures of pathological narcissism that include grandiosity and vulnerability subscales; 3a) measures of constructs important to the study of narcissism (e.g., those constructs quite proximal in the existing nomological network, such as self-esteem, aggression, psychopathy, Machiavellianism, anxiety, and depression); 3b) measures of those relevant constructs that include theoretically relevant

subscales; and 4) multiple methods of measurement (e.g., questionnaire, direct behavioral measures, ratings by third parties).

Narcissism and Emerging Adults: Current Debates

The ongoing debate about narcissism and emerging adults highlights the importance of continued study not only of narcissism, but also of its conceptual and empirical correlates. The debate about narcissism cohort effects across recent generations is a complex topic, too lengthy to be reviewed here (for a thorough review see Paulsen et al., 2015). Needless to say, the same measurement limitations and concerns that plague the study of narcissism generally also apply to the study of narcissism in emerging adults, along with the measurement complexities inherent in studying cohort effects. Despite these significant research and measurement limitations, researchers and theorists continue to debate whether levels of narcissism are increasing in young people over time (i.e., a cohort effect). Narcissism is a hot topic at present, and a highly relevant one, given the advent of the internet and social media and the continued transformation of self-presentation norms and customs at a speed and depth unprecedented in human history.

However, it appears that, in the midst of genuine intrigue, excitement, curiosity, and enthusiasm on the part of theorists and researchers of narcissism, some focus has been lost. A strictly logical progression of questions about narcissism cohort effects would proceed as follows: 1) What is narcissism? (i.e., How is it best described?); 2) Given its description, how is narcissism best measured?; 3a) What are the correlates of narcissism and its various facets, including specific, real-world, behavioral correlates?; 4) Are scores on measures of narcissism (or facets thereof) increasing over time? 5) Given narcissism's correlates, should we be concerned about a societal increase in narcissism?

Researchers appear eager to know and make claims about item 5, all the while stuck careening and meandering between items 1 and 4, mired in unknowns due to measurement concerns and different conceptualizations of narcissism across the domains of psychology and psychiatry. With respect to narcissism, modern psychology appears quite far from being able to cut nature at (or perhaps even near) its joints. Thus, studies of narcissism and relevant correlates, such as psychopathy, aggression, self-esteem, and Machiavellianism, are imperative to improve research on narcissism and to answer questions that are quite important to society (e.g., would rising levels of narcissism be a cause for concern, something to celebrate, or neither?).

A Pale Horse or a Harbinger of Health?

Should we as a society worry about a rising swell of narcissism in the coming generations? This is something that at present cannot be answered but to a slight degree. Nearly all research on narcissism has used the NPI, and the NPI is generally considered a measure of an adaptive, normative, personality trait (or at the very least a subclinical version of a psychiatric trait construct) that has been found to correlate with subjective well-being, self-esteem, and other positive phenomena. Yet, curiously, researchers have referred to the possibility of rising NPI scores across recent decades as an “epidemic” (Twenge, 2010), something to be contained, managed, and eliminated, something scary.

Pathological narcissism has consistently been associated with a host of negative outcomes, including aggression, violence, lack of empathy, and perpetration of sexual assault. Further, given its consistent associations with Machiavellianism and psychopathy, these three traits have been termed The Dark Triad. Yet, the lines of association and distinction between normal and pathological narcissism remain somewhat

hidden. Continued investigation of narcissism using both measures of normal and pathological narcissism are needed to further research in this area and answer questions that are important to society at large; these are questions that, if answered, could lead to clinical interventions and potentially reduce aggression, abuse, and violence. Thus, a thorough investigation of narcissism (adaptive and pathological) and its nomological net will not only advance current research on narcissism, but also will cast light into the past, adding further value to decades of NPI data.

Pathological narcissism consistently has been found to be positively related to feelings of sadness, depression, and anxiety (e.g., Konrath & Bonadonna, 2014; Rose, 2002). Yet, due to the grandiosity and sense of omnipotence characteristic of pathological narcissism (see APA, 2000, 2013; Pincus & Lukowitsky, 2010), highly narcissistic individuals, despite possible impairment across multiple domains of life functioning, are highly unlikely to present for psychotherapeutic or psychiatric treatment and identify *narcissism* as one of their primary concerns. Rather, pathologically narcissistic individuals are more likely to present with anxiety or depression symptoms. However, it is important to develop further the body of research on narcissism, both adaptive and pathological, and its mechanisms to develop successful interventions for individuals presenting for treatment who exhibit high levels of narcissism via assessment or clinical interview data. Thus, psychotherapeutic interventions aimed at mitigating narcissism have the potential to effect significant positive changes in the lives of highly narcissistic patients. But, for such interventions to be developed, detailed investigations of narcissism, such as that conducted here, are necessary.

The Current Studies

Literature on narcissism is seemingly fragmented and ripe with controversy and debate. Narcissism consistently has been framed as a dangerous or at least interpersonally toxic personality trait. However, research and theory on narcissism has come to a relative consensus that narcissism exists in both adaptive and pathological capacities. Yet, the overwhelming majority of research on narcissism has been conducted using the NPI, which has long been considered a measure of adaptive narcissism as a personality trait. Indeed, the NPI does not claim to measure psychopathology, and is not considered a measure or assessment of NPD, although therein lie its theoretical and conceptual roots. As reviewed, the NPI has consistently shown positive association with many positive outcome variables, such as self-esteem and general well-being and negative associations with things such as depression and anxiety. However, the NPI has also exhibited associations with aggression, Machiavellianism, and psychopathy. Because of this, rising NPI scores could be a cause for concern, but not necessarily so. To shed more light on this issue, research needs to incorporate measures of both adaptive and pathological narcissism; measures of psychopathy, aggression, Machiavellianism, and self-esteem; and use multiple methods of measurement, moving beyond self-report questionnaires.

The current series of studies are the first examination of narcissism to include multiple measures of narcissism, psychopathy, and aggression, as well as measures of Machiavellianism, emotion regulation, and a measure of self-esteem focused on perceptions of adequacy and equal worth, rather than perceptions of superiority (RSES; Rosenberg, 1965). Further, the current studies move beyond self-report questionnaires by including direct behavioral measures of both proactive and reactive aggression.

In addition to assessing multiple traits and incorporating multiple methods of measurement, these studies employed measurement procedures that consider the multifaceted nature of traits such as aggression (proactive, reactive), narcissism (grandiose, vulnerable, the 7-factor NPI solution, as well as facets of both healthy and pathological narcissism), and psychopathy (Factor 1 and Factor 2, boldness, meanness, and disinhibition). Additionally, the current studies examined two samples of emerging adults, making their results directly relevant to current debates in the narcissism literature.

In summary, these studies addressed a variety of measurement and design concerns that have historically hindered research on narcissism. Furthermore, these studies addressed the most commonly suggested future directions proposed by other researchers. Additionally, results from the current studies will help to resolve disputes in the current debates about rising narcissism in emerging adults (see Paulsen et al., 2015 for a thorough review); i.e., if narcissism is on the rise (which is not clear), should society worry?

The first goal of these studies was to investigate the nomological network of narcissism and the boundaries between normal and pathological personality and behavior using well-researched instruments across two different samples. The second goal of these studies was to employ an experimental manipulation and behavioral measures of aggression. These two main goals will be discussed separately as Study 1 and Study 2. Study 1 is descriptive in nature and examined self-report data collected from two samples. Study 2 concerns the results of an experimental manipulation, behavioral measures of aggression, and an additional self-report measure of aggression not included

in Study 1. Hypotheses for Study 1 will be presented in the Method section immediately after review of the included measures and procedure.

Study 1: Exploring the Nomological Network of Narcissism: Self-Report Measures of Adaptive and Maladaptive Narcissism

Method

Participants

Sample 1. Psychology students (*N* = 227) were recruited from a large Midwestern university and participated in exchange for course extra credit. The sample was primarily female (66%) with a mean age of 20.54 (SD = 3.21). The majority identified as European-American/White (63%), followed by Asian/Pacific Islander (23%), with the remainder identifying as Multiracial (6%), Hispanic/Latina(o) (3%), African-American/Black (2%), Middle Eastern/North African (1%), Other (1%), and Native American (<1%). Fifteen percent were International students. Most students identified their social class while growing up as middle class (46%) or upper-middle or professional middle class (44%), followed by working class (7%), wealthy (3%), and low income or poor (1%). A priori power analyses using "pwr" for R (Champely, 2015) indicated that a sample size of 193 would be sufficient to detect an *r* of .20 (which represents the lower end of expected correlations in this study) with power = .80 and alpha = .05. This sample size also is sufficient to detect a medium effect size in multiple regression (f^2 = .15) with power = .80, alpha = .05, and 11 predictor variables (e.g., grandiose and vulnerable narcissism, primary and secondary psychopathy).

Sample 2. Psychology students (*N* =148) were recruited from a large Midwestern university and participated in exchange for course extra credit. Due to an error in the

survey process, demographic data were available for 61 participants in Sample 2 (41%) who responded to a post hoc request. Available data for Sample 2 suggest that it, like Sample 1, largely included participants who self-identified as female, White, and upper-middle or middle class. Specifically, Sample 2 was primarily female (80%) with a mean age of 21.23 years (SD = 3.82). The majority identified as European-American/White (75.4%), followed by Asian/Pacific Islander (8.2%), with the remainder identifying as African-American/Black (6.6%), Hispanic/Latina(o) (3.3%), Middle Eastern/North African (3.3%), and Multiracial (3.3%). This sample contained a small number of International students (3.3%). Most students identified their social class while growing up as upper-middle or professional middle class (37.7%) or middle class (34.4%), followed by working class (18%), low income or poor (6.6%), and wealthy (3.3%).

Measures

Study 1 was descriptive in nature and examined data collected via self-report questionnaires, described below. These self-report measures included measures of both adaptive and pathological narcissism, multiple measures of aggression, and measures of psychopathy rooted in two different models, the two-factor model and the triarchic model.

Narcissistic Personality Inventory (NPI)

The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979, 1981) is a 40-item questionnaire. On each item of the NPI, participants examine pairs of statements and select the one that better describes them; e.g., "*A. I am no better or worse than most people*" or "*B. I think I am a special person.*" Falkenbach et al. (2013) reported an alpha value of .84 for NPI total scores in an undergraduate sample (N = 118). Brown and

Zeigler-Hill (2004) obtained an alpha value of .87 for NPI total scores from 329 undergraduates. In the present study, the alpha value for Sample 1 NPI total scores was .87 and .83 for Sample 2 NPI total scores.

Results of factor analyses of the NPI have varied, with researchers arriving at 2-factor (Corry et al., 2008), 3-factor (Ackerman et al., 2011), 4-factor, (Emmons, 1984, 1987) and 7-factor solutions (Raskin & Terry, 1988). An early study revealed a 7-factor scoring of the NPI that included subscales measuring Authority, Self-Sufficiency, Superiority, Vanity, Exhibitionism, Exploitativeness, and Entitlement (Raskin & Terry, 1988). Ackerman et al. (2010) conducted a series of four studies and arrived at three factors - Leadership/Authority, Grandiose Exhibitionism, and Entitlement/Exploitativenes - and reported that the Entitlement/Exploitativeness factor was particularly associated with maladaptive outcomes.

Schmitt et al. (2017) provided robust support, based on data collected from over 11 world regions and 53 nations, to suggest that the Raskin and Terry (1988) seven-factor NPI solution is the most useful and appropriate. To further clarify which aspects of the NPI represent healthy, adaptive narcissism and which aspects represent maladaptive or pathological narcissism, the 7-factor scoring will be used and associations between these seven subscales and a mixture of healthy, adaptive constructs/outcomes and maladaptive or pathological constructs/outcomes will be examined.

The internal consistency and test-retest reliability of the NPI 7-factor subscale scores were examined in a sample of 175 college students in the United States (Del Rosario & White, 2005). The NPI was completed twice with approximately 14 weeks between Time 1 and Time 2 (test-retest reliability coefficients ranged from .57 to .81).

They reported the following alpha coefficients at Time 1 and at Time 2 for scores in their sample: (Time 1/Time 2): Authority (.72/.73); Exhibitionism (.62/.68); Superiority (.53,.55); Entitlement (.48/.46); Exploitativeness (.45/.30); Self-Sufficiency (.39/.46); and Vanity (.58/.74). These NPI subscales contain 8, 7, 5, 6, 5, 6, and 3 items, respectively. Low alpha values for scales of such lengths is unsurprising, given the known relationships between measurement reliability and scale length. Lower alpha values are one known limitation of the 7-factor NPI solution/scoring. Alpha values for scores in the current samples (i.e., Sample 1/Sample 2) were as follows: Authority (.80/.74); Exhibitionism (.69/.63); Superiority (.65/.53); Entitlement (.55/.54); Exploitativeness (.57/.63); Self-Sufficiency (.44/.42); and Vanity (.71/.52).

Pathological Narcissism Inventory (PNI)

The Pathological Narcissism Inventory (PNI; Pincus et al., 2009) is a 52-item self-report inventory of pathological narcissism. Each item is rated on a 0 (*not at all like me*) to 5 (*very much like me*) scale (e.g., *I can make anyone believe anything I want them to*). The PNI measures seven dimensions of pathological narcissism, each associated with the two general components of *grandiosity* (Entitlement Rage, Exploitativeness, Grandiose Fantasy, and Self-Sacrificing Self-Enhancement) and vulnerability (Contingent Self-Esteem, Hiding the Self, and Devaluing). Pincus et al. provided support for the seven-factor structure of PNI scores using confirmatory factor analyses and alpha coefficients ranging from .73 to .93 for scores on the seven subscales (.95 for the total score) in a sample of undergraduate students. In the Sample 1, the total score alpha was .95 and subscale alpha values ranged from .78 to .92. In Sample 2, the total score alpha was .95 and subscale alpha values ranged from .75 to .93.

Rosenberg Self-Esteem Scale (RSES)

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), a unidimensional self-report questionnaire. Participants responded to the 10-item RSES using a 1 (*strongly agree*) to 4 (*strongly disagree*) scale (e.g., "On the whole, I am satisfied with myself"). Brown and Zeigler-Hill (2004) reported an alpha coefficient of .89 for RSES data collected from 329 college students. The alpha coefficients in Samples 1 and 2 were both .90.

Reactive-Proactive Aggression Questionnaire (RPQ)

The Reactive-Proactive Aggression Questionnaire (RPQ; Raine et al., 2006) was initially constructed using child and adolescent samples (administered to boys aged 16 years), and is considered by its authors to be a "brief but reliable and valid self-report…used to assess proactive and reactive aggression in child and adolescent samples" (p. 159). Although originally designed for use with children and adolescents, the RPQ has been used with undergraduate samples and scores have exhibited acceptable alpha coefficients (reactive alpha = .79, proactive alpha = .76; Miller et al., 2012). The RPQ contains 23 items that ask participants how often they typically engage in certain behaviors or patterns of thought. Participants answer using the response options 0 = *never*, 1 = *sometimes*, or 2 = *often*. An example of an item is "*Reacted angrily when provoked by others*." The alpha coefficients for scores in Sample 1 were .81 (reactive aggression) and .86 (proactive aggression) and .85 (reactive aggression) and .85 (proactive aggression) for Sample 2.

Buss-Perry Aggression Questionnaire (AQ)

The Buss-Perry Aggression Questionnaire (AQ; Buss & Perry, 1992) is a 29-item measure of four factors/types of aggression: Physical Aggression, Verbal Aggression, Anger, and Hostility. Items (e.g., "*I have threatened people I know*) are answered on a 1 (*extremely uncharacteristic of me)* to 4 (*extremely characteristic of me*) scale. Buss and Perry reported an AQ total score alpha value of .89 for scores from college undergraduates (total *N* = 1,253). In Sample 1 the total score alpha coefficient was .91, with an alpha of .93 in Sample 2.

Machiavellianism (Mach-IV)

The Mach-IV (Christie & Geis, 1970) is a measure of the degree to which respondents agree with statements consistent with sentiments and ideas expressed in Machiavelli's work *The Prince*, which are thought to typify a cold, manipulative, deceitful, ambitious, and unscrupulous personality. Christie and Geis provided evidence that individuals with higher scores on the Mach-IV were more likely to be manipulative and cold both in laboratory and real-world settings. The Mach-IV contains 20 items that are scored on a 5-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Examples of items include "*It is wise to flatter important people*" and "*Anyone who completely trusts anyone else is asking for trouble*." Scores on the Mach-IV have been found to be significantly associated with both narcissism (r = .25) and psychopathy (r = .31), consistent with the notion that it overlaps with narcissism and psychopathy but is a theoretically and empirically distinct construct (Paulhus & Williams, 2002). Scores on The Mach-IV achieve acceptable internal consistency in undergraduate samples. For example, Tracy et al. (2009) reported an alpha coefficient of .73 in an undergraduate sample. The alpha value for Sample 1 was .72 and the alpha value for Sample 2 was .77.

Levenson Self-Report Psychopathy (LSRP)

The Levenson Self-Report Psychopathy scales (LSRP; Levenson et al., 1995) were designed to measure two components of psychopathy, which initially emerged from the conceptualizations put forth by Karpman (1948). Primary psychopathy is conceptualized as interpersonal-affective traits of psychopathy such as absence of remorse, superficial charm, tendency to be manipulative, selfish, and routinely untruthful. Secondary psychopathy is conceptualized as the behavioral-lifestyle characteristics of psychopathy such as criminality, conduct problems, extreme impulsivity, and antisocial behavior. The LSRP contains 26 items, 16 items measuring primary psychopathy and 10 items measuring secondary psychopathy. Respondents rate their agreement with 26 statements using a 4-point scale ranging from *disagree strongly* to *agree strongly*. Example items include "*Looking out for myself is my top priority*" and "*I find myself in the same kinds of trouble, time after time*." Mack et al. (2011) reported alpha coefficients of .81 (primary psychopathy) and .68 (secondary psychopathy) in a sample of 209 United States college students and, similarly, Wilson and McCarthy (2011) reported alpha coefficients of .81 (primary psychopathy) and .66 (secondary psychopathy) in a sample of 903 college students in New Zealand. Alpha values for Sample 1 were .85 (primary psychopathy) and .76 (secondary psychopathy). Alpha values for Sample 2 were .89 (primary psychopathy) and.74 (secondary psychopathy).

Triarchic Psychopathy Measure (TriPM)

The Triarchic Psychopathy Measure (TriPM; Patrick, 2010) is intended to measure three distinct phenotypic constructs derived from research findings and historical theorizing about the trait composition of psychopathy; namely, *disinhibition*, *boldness*,

and *meanness* (see Patrick & Drislane, 2015). Disinhibition refers to a deficit in an individual's ability to regulate emotional responses and inhibit behavior. Individuals who score high on this psychopathy factor can be expected to exhibit impulsiveness, irresponsibility, anger, hostility, and oppositionality. Boldness can be considered an adaptive expression of psychopathy and is associated with interpersonal dominance, a degree of fearlessness, low anxiety, and quick recovery from stressors. Meanness refers to an individual's lack of empathy, exploitativeness, desire and ability to be manipulative, selfishness, rebelliousness, and disdain for others.

The TriPM contains a 19-item Boldness scale, a 20-item Disinhibition scale, and a 19-item Meanness scale. Respondents rate the degree to which the items apply to them using a True/False format. Example items include "I can get over things that would traumatize others" and "I don't mind if someone I dislike gets hurt." The TriPM has been found to exhibit acceptable alpha values (subscales ranging from .80 to .87) when used with an undergraduate sample as well as acceptable 3-month test-retest reliability (subscales ranging from $r = .64$ to $r = .77$; Blagov et al., 2015). Blagov et al. also reported that the TriPM did not suffer from significant range restriction or excessive skew in a primarily female undergraduate sample. Donnellan and Burt (2015) used the TriPM with an undergraduate sample ($N = 633\text{-}637$) and reported acceptable alpha coefficients of .82 to .89. Alpha values for subscale scores ranged from .74 to .78 across the two samples.

Difficulties in Emotion Regulation Scale (DERS)

The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36-item self-report questionnaire on which respondents indicate how much each of the

statements apply to them on a scale ranging from 1 = *Almost never* to 5 = *Almost always*. The DERS aims to capture "not just the modulation of emotional arousal, but also the awareness, understanding, and acceptance of emotions, and the ability to act in desired ways regardless of emotional state" (Gratz & Roemer, 2004, p.41). Gratz and Roemer reported an internal consistency estimate of .93 for the DERS total score in data collected from a sample of 479 college undergraduates. The DERS total score alpha coefficient was .94 for Sample 1 and .95 for Sample 2.

Flourishing Scale (FS)

The Flourishing Scale (FS; Diener et al., 2010) is a brief, 8-item scale measuring subjective psychological well-being. The scale includes items assessing self-respect, optimism, the degree to which the respondent feels that she/he has a supportive social network, contributes to the happiness of others, and leads a meaningful, purposeful life. Each item of the FS is rated on scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (7*)*. Diener et al. reported reliability data from a sample of 689 undergraduate college students; specifically, alpha = .87 and 1-month test-retest reliability = .71. Further, the FS exhibited acceptable convergent validity with other measures of psychological well-being, such as the Satisfaction with Life Scale (r = .62). The alpha coefficients were .91 for both Samples 1 and 2.

Big Five Personality Traits (BFI)

The Big Five Inventory (BFI) was developed by John and Srivastava (1999) and is a 44-item self-report inventory designed to assess the Big Five personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. The BFI asks participants to rate how much each item applied to them on a 5-point scale ranging

from *Disagree Strongly* to *Agree Strongly*. Donellan et al. (2006) reported reliability data for a sample of 300 undergraduate college students: Openness alpha = .79, Conscientiousness alpha = .83, Extraversion alpha = .86, Agreeableness alpha = .79, and Neuroticism alpha = .84. Rammstedt and John (2007) reported a mean 6-week test-retest reliability estimate for the BFI of .83 (N = 726). Alpha coefficients for Sample 1 ranged from .82 (openness) to .86 (extraversion) and alpha coefficients for Sample 2 ranged from .80 (openness) to .86 (extraversion).

Procedure

All data were collected online, including consent. The study was approved by the university Institutional Review Board. The order of the measures contained within the online survey was randomized for each participant and items were randomized across subscales on measures that used the same response options across subscales.

Hypotheses

As reviewed, the current series of studies use the seven-factor NPI scoring (Raskin & Terry, 1988; Schmitt et al., 2017). Additionally, although they did not use the seven-factor NPI scoring, the work of Ackerman et al. (2011) and Falkenbach et al. (2013) provided rich soil for hypothesizing; although slightly psychometrically different from the work of Raskin and Terry and Schmitt et al., they remain highly conceptually relevant. A large body of research literature exists concerning the NPI total score and its correlates. Accordingly, some hypotheses in the current studies were about the NPI total score. However, a number of logical and sound hypotheses could be made regarding specific NPI subscales, based on works just reviewed herein. Thus, the hypotheses below concern both the NPI total score and also its subscales, where appropriate. With respect

to the PNI, hypotheses primarily focused on the PNI total score, with some discussion, where relevant, of its seven subscales.

Normal and Pathological Narcissism

HN1: Adaptive and pathological narcissism are considered distinct taxa with overlapping phenotypic expression. Thus, it is expected that the NPI (adaptive narcissism) and PNI (pathological narcissism) total scores will exhibit a significant yet small relationship, consistent with past research (Pincus et al., 2009, $r = .13$). Additionally, multiple authors have provided evidence that the NPI captures elements of pathological narcissism (e.g., Ackerman et al., 2011; Falkenbach et al., 2013; Schmitt et al., 2017). In fact, even the authors of the NPI hypothesized that individuals diagnosed with NPD may score high on the measure (Raskin & Hall, 1979, 1981).

HN2: Of the NPI's subscales, the Entitlement and Exploitativeness subscales will exhibit the strongest relationships with the PNI total and subscale scores (Ackerman et al., 2011; Pincus et al., 2009).

Narcissism and Self-Esteem

HSE1: NPI total score will be positively related to self-esteem, consistent with prior research (Sedikides et al., 2004).

HSE2: Among NPI subscales, the Entitlement and Exploitativeness subscales will exhibit the weakest relationship with self-esteem, as Entitlement- and Exploitativeness-related NPI content has been found to be associated with pathological narcissism, which is associated negatively with self-esteem (Pincus et al., 2009). Further, the NPI Entitlement and Exploitativeness subscales did not exhibit consistent associations with self-esteem in a large cross-cultural study (Schmitt et al., 2017).

HSE3: The PNI total score will be negatively associated with self-esteem (Pincus et al., 2009).

HSE4: The NPI and PNI will exhibit differential associations with self-esteem (i.e., positive and negative association, respectively) and these correlations will significantly differ from each other.

Narcissism and Emotion Regulation

HNER1: Adaptive narcissism (NPI total score) will be negatively associated with emotion regulation difficulties (DERS score) and pathological narcissism (PNI score) is expected to exhibit a positive association with emotion regulation difficulties (HNER2). Affective dysregulation is considered to be one of the hallmark features that distinguishes pathological from adaptive narcissism (Pincus & Lukowitsky, 2010).

HNER3: Of the NPI subscales, Entitlement, Exploitativeness, and Exhibitionism were predicted to exhibit significant positive associations with emotion regulation difficulties. These scales can be considered to be socially maladaptive forms of narcissism and have a history of being associated with poor psychological adjustment and social dysfunction (see Schmitt et al, 2017 for a review). Further, the Entitlement/Exploitativeness NPI factor produced by Ackerman et al. (2011) was found to be significantly negatively associated with self-control.

N**arcissism and Psychopathy**

Narcissism and psychopathy have been found to be related yet distinct constructs (Paulhus & Williams, 2002). However, past research and theory suggest a wide range in the phenotypic expression of each construct, as well as each construct being multifaceted (Fossati et al., 2014; Pincus & Lukowitsky, 2010). Factor 1 psychopathy (primary

psychopathy) has been found to be associated with narcissism and Factor 2 psychopathy has been found to be associated with aggressiveness, reactivity, and impulsivity (Hare, 2003; Patrick, 2006). When considering the *triarchic model of psychopathy* (boldness, meanness, and disinhibition) and the two-factor model of psychopathy, Factor 1 psychopathy is thought to capture *meanness* and some aspects of *boldness*, with Factor 2 capturing primarily *disinhibition* and to a small extent *meanness*.

HP1: The NPI total score will exhibit positive association with Factor 1 psychopathy on the LSRP (Miller et al., 2010). Factor 1 psychopathy is conceptualized as a grouping of personality traits such as lack of empathy, callousness, and narcissism.

HP2: The Entitlement, Exploitativeness, and Exhibitionism subscales of the NPI were predicted to exhibit significant positive associations with Factor 1 psychopathy. These NPI subscales have been found to be associated with psychological maladjustment and social dysfunction. Further, the Entitlement/Exploitativeness factor produced by Ackermen et al. (2011) was described as the "socially toxic" component of narcissism and exhibited significant positive associations with impulsive antisocial behavior and Machiavellianism.

HP3: The PNI will exhibit positive association with Factor 1 psychopathy. Further, the PNI will exhibit a significantly stronger association with Factor 1 psychopathy than will the NPI. Thought to capture pathological narcissism, the PNI should measure a more grandiose and more callous version of narcissism than the NPI (Pincus et al., 2009), and should thus correlate more strongly with Factor 1 psychopathy than the NPI.

HP4: The PNI will exhibit positive association with Factor 2 psychopathy, whereas the NPI will not. Factor 2 psychopathy is characterized by difficulties with behavior regulation and affective dysregulation and reactivity are considered core features of pathological narcissism. Thus, the reactivity, impulsivity, and volatility associated with Factor 2 psychopathy are hypothesized to associate significantly with pathological narcissism.

HP5: Because the NPI Entitlement, Exploitativeness, and Exhibitionism subscales have been consistently described as the maladaptive components of the NPI and have exhibited significant positive associations with impulsive and antisocial behavior, pathological narcissism (i.e., the PNI), and counterproductive school behaviors (see Schmitt et al, 2017 for a review), these NPI subscales were predicted to exhibit significant positive associations with Factor 2 psychopathy, which is also characterized by impulse control problems and behavior regulation difficulties.

HP6: The NPI will exhibit significant positive linear associations with psychopathic meanness and boldness, but fail to exhibit any significant relationship with psychopathic disinhibition.

HP7: Given that the NPI subscales Entitlement, Exploitativeness, and Exhibitionism have been found to be associated with impulsive and antisocial behavior, it was predicted that these NPI subscales would exhibit significant positive associations with psychopathic disinhibition.

HP8: The PNI will exhibit significant positive linear relationships with psychopathic meanness and disinhibition, but fail to exhibit any significant relationship with psychopathic boldness.

Narcissism and Aggression

As reviewed herein, past theory and research has asserted that one key distinction between adaptive and pathological narcissism is pathological narcissism's association with impulsive, reactive aggression. However, both adaptive and pathological narcissism have been found consistently associated with aggression more generally (i.e., general trait-level aggression). Thus, the hypotheses included in the current studies are focused on general aggression and reactive aggression.

Both NPI (HNA1) and PNI (HNA2) total scores will be positively associated with reactive aggression as measured by the RPQ (Raine et al., 2006). Further, PNI scores should be more strongly related to reactive aggression than NPI scores (Pincus et al., 2009; HNA3).

HNA4: The NPI Entitlement, Exploitativeness, and Exhibitionism subscales have been previously described as maladaptive forms of narcissism, and have been found to be associated with impulsive and antisocial behaviors (see Schmitt et al., 2017 for a review). Thus, it was predicted that these NPI subscales would exhibit significant positive associations with reactive aggression.

HNA5: Both NPI and PNI scores will be associated with higher levels of aggression generally (i.e., aggression total scores) (Bettencourt et al., 2006).

HNA6: The NPI Entitlement, Exploitativeness, and Exhibitionism subscales were predicted to be positively associated with general aggression (Ackerman et al., 2011; Schmitt et al., 2017).

Narcissism and Psychological Well-Being

The NPI total score has consistently exhibited significant positive linear relationships with aspects of psychological well-being such as self-esteem (Campbell et al., 2002; Raskin & Terry, 1988) and subjective well-being (Rose, 2002). The NPI has consistently exhibited significant negative linear relationships with symptoms of anxiety (Watson & Binderman, 1993) and depression (Watson & Binderman, 1993; Wink, 1992). The PNI has exhibited significant positive linear associations with psychological difficulties such as symptoms of depression (Kealy et al., 2012), shame, aggression, borderline personality organization, vindictiveness (Pincus et al., 2009), and a higher likelihood of using physical and verbal aggression (Miller et al, 2010). Thus, it is hypothesized here that the NPI total score will exhibit a significant positive linear relationship with Flourishing (HF1); further, the PNI total score will exhibit a significant negative relationship with Flourishing (HF2).

Based on the work of Raskin and Terry (1988), Ackerman et al. (2011), Falkenbach et al. (2013), and Schmitt et al. (2017), the NPI Authority, Self-Sufficiency, Vanity, and Superiority are predicted to exhibit positive associations with Flourishing, whereas the Entitlement and Exploitativeness subscales are predicted to be negatively associated with Flourishing (HF3).

Narcissism and the Big Five

Previous research suggests that adaptive narcissism (e.g., the NPI) manifests as a sort of disagreeable extraversion (see Campbell et al., 2002; Furnham & Crump, 2014; Paulhus, 2001). The NPI can be thought of as capturing a sense of grandiosity, but not the truly pathological vulnerability captured by the PNI. Miller et al. (2010) reported findings on the *grandiosity* and *vulnerability* aspects of narcissism, which are the two highest-

order factors thought captured by the PNI. They found the following: grandiosity and vulnerability were both significantly negatively related to agreeableness; vulnerability was significantly positively related to neuroticism; grandiosity was not significantly related to neuroticism; grandiosity was significantly positively related to extraversion; vulnerability was not significantly related to extraversion.

HNBF1: The NPI total score will exhibit a significant positive linear association with extraversion and a significant negative linear association with agreeableness (Campbell et al., 2002).

HNBF2: Extraversion was predicted to be positively associated with the NPI subscales Authority, Exhibitionism, Exploitativeness, and Superiority. Additionally, Agreeableness was predicted to exhibit negative associations with the NPI subscales Entitlement, Exploitativeness, and Exhibitionism. These hypotheses are consistent with findings reported by Schmitt et al. (2017) as well as previous conceptualizations of NPI scores as capturing a sort of disagreeable extraversion.

HNBF3: The NPI and PNI total scores will exhibit different relationships with neuroticism, with the NPI exhibiting a significant negative relationship with neuroticism and the PNI exhibiting a significant positive relationship with neuroticism. These two relationships will be significantly different from each other.

HNBF4: Pathological narcissism (PNI total score) will exhibit a significant negative linear relationship with agreeableness.

Narcissism and Machiavellianism

Adaptive and pathological narcissism have both exhibited significant positive relationships with Machiavellianism (Ackerman et al., 2011; Furnham et al., 2013; Paulhus & Williams, 2002). Thus, the following hypothesis is warranted here.

HNM1: Both adaptive (NPI) and pathological (PNI) narcissism will exhibit significant positive linear associations with Machiavellianism.

HNM2: Based on the findings of Ackerman et al. (2011) and Schmitt et al. (2017), the NPI subscales Exploitativeness, Entitlement, and Exhibitionism were predicted to exhibit significant positive associations with Machiavellianism.

Results

Exploratory Data Analysis

Tables 1a and 1b provide the means, standard deviations, skewness, and kurtosis statistics for Samples 1 and 2 when computing scale scores as means of respective items. Scale scores computed if at least 80 percent of a given scale's item-level data were present.

Many of the variables exhibiting statistically significant skew (see Tables 1a and 1b) appeared roughly normal upon visual inspection, with some noteworthy exceptions. In both samples, RPQ proactive aggression and TriPM meanness exhibited quite significant positive skew (skewness statistics $1.50 \leq 2.52$). Because the primary analyses of the current report are applications of correlation, the main threat to the validity of the results is whether or not *Y* (the criterion) is normally distributed, conditional on *X* (the predictor); "This is not quite the same thing as saying that *Y* must be normal." (Lumley et al., 2002 p.154).

Missing Data

For both Sample 1 and Sample 2, data for participants who provided few or no responses were deleted (e.g., participants who entered the online survey, but provided no responses or did not attempt or complete the first presented questionnaire), as were data from participants who failed to complete two or more of the included study questionnaires. Data were also deleted for participants who exhibited significant evidence of careless responding (e.g., significant strings of the same response option across multiple questionnaires; see Figures 1a and 1b). The proportion of participants with significantly missing data was .11 in Sample 1 and the proportion of participants exhibiting careless responding was .01. Sample 2 required participation at two time points and had approximately 27% attrition between Time 1 and Time 2 (see Figure 1b). The proportion of participants with significantly missing data in Sample 2 was .06 and the proportion of participants exhibiting random responding was .00.

Both Sample 1 and Sample 2 had minimal amounts of missing item-level data. Sample 1 included data from 227 participants and a total of 362 questionnaire items, which is 82,174 pieces of item-level data. Sample 1 had a total of 302 total missing responses, which is a missing data proportion of .004. Most individual items had 0, 1, or 2 missing responses across the 227 participants. Sample 2 included data from 148 participants and a total of 373 questionnaire items, which is 55,204 pieces of item-level data. Sample 2 had a total of 188 missing responses, which is a missing data proportion of .003. As with Sample 1, most items in Sample 2 had 0, 1, or 2 missing responses across the 148 participants.

Normal and Pathological Narcissism

Consistent with Hypothesis HN1, NPI and PNI total scores exhibited a significant positive linear relationship ($r = .18$, $p < .001$) in Sample 1 and a marginally significant positive linear relationship ($r = .14$, $p = .085$) in Sample 2. The association in Sample 2 was quite similar to that of Sample 1 and in the predicted direction, its significance differing likely due to the smaller sample size.

Of the NPI subscales, the Entitlement and Exploitativeness subscales were predicted to exhibit the strongest relationships with the PNI and generally across PNI subscales (HN2). This hypothesis was partially supported. In both samples, the NPI subscales that correlated most strongly with the PNI total score were Exploitativeness, Entitlement, and Exhibitionism (see Tables 2a and 2b). In both samples, the NPI Authority, Superiority, Vanity, and Self-Sufficiency subscales did not exhibit significant associations with the PNI total score. Interestingly and unexpectedly, the NPI Exhibitionism subscale exhibited a significant positive relationship with PNI total score in both samples, and had the most significant correlations across PNI subscales, showing a significant positive linear association with five of the seven PNI subscales in Sample 1 and three of the seven PNI subscales in Sample 2.

Narcissism and Self-Esteem

As predicted (HSE1), NPI total scores exhibited significant positive associations with self-esteem in both Sample 1 and Sample 2 (see Tables 2a and 2b). Among NPI subscales, the Entitlement and Exploitativeness subscales were predicted to exhibit the weakest relationships with self-esteem (HSE2). This hypothesis was partially supported because the Exhibitionism subscale also exhibited weak associations with self-esteem. Thus, although the Entitlement and Exploitativeness subscales exhibited weak and non-

significant relationships with self-esteem, they were not the weakest of the relationships, as had been predicted. The NPI Entitlement, Exploitativeness, and Exhibitionism subscales did not exhibit any significant relationships with self-esteem in either sample. The strongest significant positive relationships among NPI subscales and self-esteem in both samples were Self-Sufficiency and Authority, followed by Vanity and Superiority.

As hypothesized (HSE3), the PNI total score exhibited a significant negative linear association with self-esteem in both samples (see Tables 3a and 3b). Also as hypothesized (HSE4), the NPI and PNI exhibited differential associations with self-esteem and these correlations themselves were significantly different from each other in both samples (Sample 1, t (224) = -8.98, $p < .001$; Sample 2, t (144) = -7.93, $p < .001$).

Narcissism and Emotion Regulation

Adaptive narcissism (NPI score) was expected to be negatively associated with emotion regulation difficulties (DERS score; HNER1). This hypothesis was not supported in Sample 1 ($r = -.06$, $p = .41$), but was supported in Sample 2 ($r = -.22$, $p < .01$). As predicted (HNER2), PNI total scores had a significant positive linear relationship with emotion regulation difficulties in both samples (see Tables 3a and 3b). Additionally, the correlations between NPI total scores and DERS scores and PNI total scores and DERS scores were themselves significantly different in both samples (Sample 1, t (224) = -6.55, $p < .001$; Sample 2, t (144) = -5.53, $p < .001$). Thus, the current results provide some support for a negative association between adaptive narcissism and emotion regulation difficulties and clear evidence of a positive association between pathological narcissism and emotion regulation difficulties.

The NPI subscales Entitlement, Exploitativeness, and Exhibitionism were predicted to exhibit significant positive associations with emotion regulation difficulties (HNER3). This hypothesis was not supported (see Tables 2a and 2b).

Narcissism and Psychopathy

As predicted (HP1), the NPI exhibited a significant positive association with *primary psychopathy* on the LSRP in both samples (see Tables 2a and 2b). The Entitlement, Exploitativeness, and Exhibitionism subscales of the NPI were predicted to exhibit significant positive associations with Factor 1 psychopathy (HP2). This hypothesis was supported, as all three of these NPI subscales exhibited significant positive linear relationships with Factor 1 psychopathy across both samples (see Tables 2a and 2b).

Likewise, as predicted (HP3), the PNI exhibited a significant positive linear association with primary psychopathy in both samples. It was also hypothesized that the PNI would exhibit a significantly stronger association with primary psychopathy than would the NPI; this hypothesis was not supported in either sample (Sample 1, t (224) = 1.35, p = .18; Sample 2, t (144) = -.28, p = .78).

As predicted (HP4), normative narcissism (NPI) was not significantly associated with Factor 2 psychopathy in either sample (see Tables 2a and 2b), whereas pathological narcissism (PNI) was significantly associated with Factor 2 psychopathy in both samples (see Tables 3a and 3b). The NPI Entitlement, Exploitativeness, and Exhibitionism subscales were predicted to exhibit significant positive associations with Factor 2 psychopathy (HP5). This hypothesis was partially supported. In Sample 1, the NPI Exhibitionism and Entitlement subscales were significantly positively associated with

Factor 2 psychopathy, whereas the NPI Entitlement and Exploitativeness subscales exhibited significant positive relationships with Factor 2 psychopathy in Sample 2. Thus, of the hypotheses about subscales, only the NPI Entitlement subscale was consistently associated with Factor 2 psychopathy across samples.

Additionally, the NPI exhibited a significant positive relationship with TriPM Boldness in both samples, whereas the PNI did not exhibit a significant relationship with TriPM Boldness. TriPM Meanness was significantly positively associated with the NPI and PNI in both samples. Lastly, TriPM Disinhibition was not significantly associated with NPI in either sample, but was significantly positively related to the PNI in both samples (see Tables 3a and 3b). Thus, hypotheses HP6 and HP8 were supported. This suggests that behavioral disinhibition and poor impulse control are features specific to pathological narcissism, whereas psychopathic Boldness is specific to adaptive narcissism.

The NPI subscales Entitlement, Exploitativeness, and Exhibitionism were predicted to exhibit significant positive associations with psychopathic disinhibition (HP7). This hypothesis was partially supported. Only the NPI Exhibitionism subscale exhibited a significant positive association with psychopathic disinhibition across both samples (see Tables 2a and 2b).

Narcissism and Aggression

NPI total scores were predicted to exhibit a positive association with reactive aggression as measured by the RPAQ (HNA1; Raine et al., 2006). This hypothesis was not supported. The NPI total score did not exhibit a significant positive linear relationship

with reactive aggression in Sample 1 or Sample 2 (see Tables 2a and 2b). Thus, the current results do not suggest a significant link between the NPI and reactive aggression.

As predicted (HNA2), PNI scores exhibited a significant positive association with reactive aggression (RPAQ *reactive* score) as well as aggression more generally (AQ) in both samples. In Sample 1, both NPI total score and PNI total score exhibited significant positive associations with proactive aggression as measured by the RPAQ. However, in Sample 2, only the PNI total score continued to exhibit a significant association with RPAQ proactive aggression. Thus, the current data show an inconsistent link between adaptive narcissism and proactive aggression and a consistent link between pathological narcissism and proactive aggression.

Scores on the PNI were predicted to be associated with reactive aggression to a greater degree than scores on the NPI (HNA3). This hypothesis was supported in both Sample 1 and Sample 2. In both samples, the PNI exhibited moderate and significant correlations with reactive aggression whereas the NPI did not (Sample 1, $t(224) = -2.84$, $p < .05$; Sample 2, $t(144) = -3.23$, $p < .01$).

The NPI Entitlement, Exploitativeness, and Exhibitionism subscales were predicted to exhibit significant positive associations with reactive aggression (HNA4). This hypothesis was not supported (see Tables 2a and 2b). None of these NPI subscales exhibited a consistent significant relationship with reactive aggression across samples. However, all of these NPI subscales exhibited consistent significant relationships with proactive aggression across both samples.

The NPI was predicted to exhibit a significant positive association with aggression generally (i.e., AQ and RPQ total scores) (HNA5). This hypothesis was

partially supported. In Sample 1 the NPI exhibited significant positive linear relationships with both the RPAQ and the AQ. However, these results were not replicated in Sample 2, in which the NPI did not exhibit a significant relationship with either the RPAQ or AQ. Due to the magnitudes of the relationships, this inconsistency was not likely due to sample size effects. Likewise, the PNI was predicted to exhibit a significant positive association with aggression generally (i.e., aggression total scores) (HNA5). This hypothesis was supported in both samples. In fact, as can be seen in Tables 3a and 3b, the PNI exhibited significant positive relationships with the RPAQ, AQ, and all associated subscales in both samples.

The NPI Entitlement, Exploitativeness, and Exhibitionism subscales were predicted to exhibit positive associations with general aggression (HNA6). This hypothesis was partially supported. In Sample 1, all three of these NPI subscales were significantly positively associated with general aggression (AQ score). However, in Sample 2, the Entitlement and Exploitativeness subscales were significantly associated with general aggression, and the relationship between Exhibitionism and general aggression approached significance.

Narcissism and Psychological Well-Being

As hypothesized (HF1), the NPI exhibited a significant positive relationship with flourishing in Sample 1 and Sample 2 (see Tables 2a and 2b). Also, as hypothesized, the PNI exhibited a significant negative relationship with flourishing in both samples (HF2).

The NPI Authority, Self-Sufficiency, Vanity, and Superiority were predicted to exhibit positive associations with Flourishing, whereas the Entitlement and Exploitativeness subscales are predicted to be negatively associated with Flourishing

(HF3). This hypothesis was partially supported. As predicted, across both samples, the NPI Authority, Self-Sufficiency, Vanity, and Superiority subscales were consistently positively associated with Flourishing. The NPI subscales Exhibitionism, Entitlement, and Exploitativeness did not exhibit any significant associations with Flourishing in either sample.

Narcissism and the Big Five

As predicted (HNBF1), NPI total scores exhibited a significant positive linear association with extraversion in Sample 1 and Sample 2 (see Tables 2a and 2b). However, NPI scores exhibited significant negative linear associations with agreeableness in Sample 1 and a negative although nonsignificant linear association with agreeableness in Sample 2. Thus, hypothesis HNBF1 was partially supported.

Extraversion was predicted to be positively associated with the NPI subscales Authority, Exhibitionism, Exploitativeness, and Superiority. Additionally, Agreeableness was predicted to exhibit negative associations with the NPI subscales Entitlement, Exploitativeness, and Exhibitionism (HNBF2). This hypothesis was partially supported. Extraversion was significantly associated with the NPI Authority, Exhibitionism, Exploitativeness, and Superiority subscales in Sample 1; the associations with Authority, Exhibitionism, and Exploitative replicated in Sample 2, but the association with Superiority did not, although said association approached significance. NPI Entitlement, Exploitativeness, and Exhibitionism was significantly negatively associated with agreeableness in Sample 1, with Entitlement and Exploitativeness also exhibiting a significant negative relationship with agreeableness in Sample 2.

As predicted, the NPI and PNI exhibited different relationships with neuroticism (Sample 1, t = (224) -7.19, $p < .001$; Sample 2, t (144) = -6.34, $p < .001$), with the NPI exhibiting a significant negative relationship with neuroticism and the PNI exhibiting a significant positive relationship with neuroticism (HNBF3). This hypothesis was supported in both samples. Additionally, also as predicted, pathological narcissism (PNI total score) exhibited a significant negative linear relationship with agreeableness in both samples (HNBF4).

Narcissism and Machiavellianism

As predicted (HNM1), adaptive (NPI) and pathological (PNI) narcissism exhibited significant positive linear associations with Machiavellianism in both samples (see Tables 2a, 2b, 3a, and 3b).

As predicted, (HNM2), the NPI subscales that Machiavellianism displayed consistent significant association with across both samples were Entitlement, Exploitativeness, and Exhibitionism. These are the NPI subscales that were most consistently associated with pathological narcissism in the current samples. Unsurprisingly, Machiavellianism exhibited a significant positive relationship with all PNI subscales across both samples except for the Self-Sacrificing Self-Enhancement (use of seemingly or purportedly altruistic acts to bolster an inflated self-image) subscale. The NPI Exploitativeness, Entitlement, and Exhibitionism subscales were in fact the only NPI subscales to exhibit consistent and significant relationships with Machiavellianism across both samples.

Discussion

As was expected, the NPI and PNI were consistently, modestly associated across both samples in the current study. When considering the NPI and PNI total scores, this is consistent with past reports (e.g., Maxwell et al., 2011; Pincus et al., 2009). This supports the hypothesis that the NPI captures elements of both adaptive and pathological narcissism, which perhaps helps explain some of the inconsistent or unexpected findings in past research using the NPI. However, in addition to continued examination of their total score correlates, the NPI and PNI must also be examined and considered at a subscale level.

The NPI subscales predicted to be most consistently related with pathological narcissism were the Entitlement, Exploitativeness, and Exhibitionism subscales. However, the NPI Entitlement and Exploitativeness components have a longer history of being viewed as maladaptive or pathological than the NPI Exhibitionism component. In these samples, the NPI Exhibitionism subscale indeed exhibited a consistent positive relationship with pathological narcissism as well as other elements of psychopathology. These results are consistent with the Ackerman et al. (2010) assertion that exhibitionism-related NPI content assesses something potentially maladaptive. However, these results are inconsistent with the Falkenbach et al. (2013) approach of including the NPI Exhibitionism scale into a composite formed from the seven-factor NPI solution (Raskin & Terry, 1988), which they labeled Healthy Narcissism (NPI-H). Thus, the results of the Ackerman et al. (2010) and Schmitt et al. (2017) initiatives and the current studies support the hypothesis that exhibitionism-related NPI item content does indeed assess a maladaptive or pathological component of the narcissism construct.

The NPI Entitlement subscale and the PNI Entitlement Rage subscale would appear to capture different aspects of entitlement. The NPI Entitlement subscale was consistently positively associated with the following variables across both samples: primary and secondary psychopathy (LSRP), TriPM Meanness. RPAQ proactive aggression, general aggression (AQ), and Machiavellianism. The NPI Entitlement subscale exhibited a quite different correlational profile than the PNI Entitlement Rage subscale. The PNI Entitlement Rage subscale differed in that it was consistently positively associated with TriPM Disinhibition, RPAQ reactive aggression, emotion regulation difficulties (DERS), and neuroticism. Further, the PNI Entitlement Rage subscale exhibited consistent negative relationships with flourishing, self-esteem, conscientiousness, and agreeableness. These results provide evidence that the PNI Entitlement Rage subscale is indeed capturing a more pathological element of entitlement, However, although the NPI Entitlement subscale and the PNI Entitlement Rage subscale both capture different elements of narcissistic entitlement, both scales appear to measure pathological narcissistic entitlement. These findings are consistent with those of Ackerman et al. (2010), Falkenbach et al. (2013), and Schmitt et al. (2017), which results also suggested that *narcissistic entitlement* is one of the pathological elements captured by the NPI.

The NPI Exploitativeness subscale and the PNI Exploitative subscale appeared to capture similar elements of narcissistic exploitativeness. The NPI Exploitativeness and PNI Exploitative subscales were both consistently positively associated with primary psychopathy, psychopathic boldness, psychopathic meanness, proactive aggression, general aggression, Machiavellianism, and extraversion. These subscales were both

consistently negatively associated with agreeableness. Neither of these subscales were significantly associated with emotion regulation difficulties, reactive aggression, or self-esteem in either sample. Thus, these results provide evidence that the NPI Exploitativeness subscale and the PNI Exploitative subscale capture much the same phenomena. These subscales seem to capture a somewhat cold, aggressive, disagreeable, extraverted life strategy not characterized by emotional dysfunction, reactive aggression, or low self-esteem. However, as Miller et al. (2017) warned, pathology should not be equated with subjective distress or specific types of emotional dysfunction or dysregulation. In the absence of problems with low self-esteem or emotional dysfunction, a narcissistically exploitative individual can nonetheless cause great harm and disruption to their own lives and to the lives of those around them. Thus, the NPI Exploitative subscale appears to indeed capture a maladaptive/pathological element of narcissism, which is consistent with past findings (Ackerman et al., 2010; Falkenbach et al., 2013).

A somewhat surprising and interesting finding was the consistent relationship between the NPI Exhibitionism subscale and pathological narcissism and associated constructs. This subscale was significantly positively associated with the PNI subscales Exploitativeness, Grandiose Fantasy, and Entitlement Rage across both samples. NPI Exhibitionism was also positively associated in both samples with primary psychopathy, psychopathic boldness, psychopathic meanness, psychopathic disinhibition, proactive aggression, Machiavellianism, and extraversion. These results provide support for the assertion that Exhibitionism may be one of the pathological narcissism elements captured by the NPI, which is consistent with findings by Ackerman et al. (2010) and Schmitt et al. (2017).

The NPI subscales associated most consistently with the PNI and PNI subscales (i.e., Entitlement, Exploitativeness, and Exhibitionism) also exhibited consistent relationships with other constructs associated with pathological narcissism. Thus, the assertion here is not that the NPI captures elements of pathological narcissism simply because it exhibits consistent relationships with a measure of pathological narcissism (i.e., the PNI), but also because some NPI subscales exhibit consistent relationships with other constructs relevant to psychopathology and to the portion of the nomological network most relevant to pathological narcissism.

These results are largely consistent with previous efforts to distinguish between adaptive and maladaptive elements of the NPI. Falkenbach et al. (2013), informed by past NPI research, used a two-factor NPI scoring approach, designating the Authority, Exhibitionism, Superiority, Self-Sufficiency, and Vanity subscales as "healthy narcissism" and the Entitlement and Exploitativeness subscales as "pathological narcissism." However, other research has suggested that Exhibitionism is a maladaptive element of narcissism captured by the NPI (Ackerman et al., 2010; Schmitt et al., 2017). The current results support the hypothesis that Entitlement, Exploitativeness, and Exhibitionism are the three maladaptive narcissism components captured by the NPI. As will be delineated below, this makes sense empirically and conceptually, when considering the NPI as comprised of *self-focused* versus *other-focused* (i.e., contingent self-worth) subscales, a concept unique to and originating from the current studies.

As predicted, the NPI was consistently and positively associated with self-esteem. The NPI subscales Authority, Self-Sufficiency, Superiority, and Vanity were significantly positively associated with self-esteem across both samples. The NPI subscales

Entitlement, Exploitativeness, and Exhibitionism were not significantly associated with self-esteem in either sample. These results are entirely consistent with the findings of Maxwell et al. (2011), who also reported significant positive relationships between NPI Authority, Superiority, Self-Sufficiency, and Vanity subscales and self-esteem and no significant relationships between NPI Exhibitionism, Entitlement, and Exploitativeness subscales and self-esteem.

The current results also provided support for the novel assertion made herein, that the NPI's adaptive and maladaptive components are most accurately and concisely described as being respectively *self-focused* and *other-focused* in nature. One particularly noteworthy current finding is that no NPI subscale exhibited a significant negative relationship with self-esteem in either sample, yet only the Authority, Self-Sufficiency, Superiority, and Vanity subscales exhibited significant positive associations across both samples. These results suggest that it is the self-focused elements of the NPI that are associated with healthy self-esteem. Indeed, a sense of Authority, Self-Sufficiency, Superiority, and Vanity would seem to largely represent an individual's evaluation, interpretation, and predictions about their ability to successfully engage with the world, exert agency and influence in the world, while maintaining a positive sense of vanity. Conversely, those factors found unrelated to self-esteem - Entitlement, Exploitativeness, and Exhibitionism - are more focused on what is deserved from or owed by others, how others can be used as tools toward one's own ends, and the necessary *show* or *mask* that must be put on to meet one's needs through the interpretations and opinions of others. Vanity, when first considered, could seem to be other-focused, essentially like Exhibitionism. However, a noteworthy distinction here is in Vanity being a sort of focus

on the self *for its own sake*, whereas Exhibitionism is a presentation of the self with the aim of having one's emotional, interpersonal, or other psychological needs met. For example, one can take care of one's self with a sense of vanity, due to a simple belief that the self is worthy of such care. This is different from an exhibitionistic display of the self in service of influencing or manipulating others. Considered in this light, it makes sense that vanity is one of the NPI elements associated positively with self-esteem.

The NPI exhibited some consistent negative associations with emotion regulation difficulties across the two current sample. Individuals scoring higher on the NPI Authority and Self-Sufficiency subscales reported less difficulty with emotion regulation in both samples. The NPI appears primarily negatively associated with emotion regulation difficulties, the exceptions perhaps being the Entitlement and Exhibitionism subscales, which have previously been found, empirically and conceptually, to be maladaptive components of narcissism captured by the NPI (e.g., Ackerman et al., 2011; Schmitt et al., 2017). The NPI Exhibitionism and Entitlement subscales were significantly positively associated with emotion regulation difficulties in Sample 1, although these results did not replicate in Sample 2. However, it is noteworthy that the Exhibitionism and Entitlement subscales were the only two NPI subscales to exhibit positive associations with emotion regulation difficulties at any point across the two samples.

The NPI total score was related to all aspects of psychopathy other than secondary psychopathy and psychopathic disinhibition across both sample. These results were consistent with current hypotheses as well as previous research and conceptualization of adaptive narcissism (e.g, Pincus et al., 2009; Sellbom, 2011; Stellwagen, 2011). The

LSRP primary psychopathy scale is thought to capture psychopathic traits in the interpersonal and affective domains, whereas the LSRP secondary psychopathy scale is thought to detect the presence of impulsivity, behavioral dysregulation, and antisocial lifestyle features. Stated simply, primary psychopathy can be thought of as the affective and interpersonal elements of the psychopathic personality and secondary psychopathy can be thought of as the behavioral and lifestyle elements of the psychopathic personality. As discussed previously, the NPI was not found to be associated with deficits in self-esteem or emotion regulation difficulties in the current samples. Thus, it was not surprising that the NPI total score did not exhibit any significant relationships with secondary psychopathy. Psychopathic disinhibition is characterized by deficits in affect regulation, difficulties controlling behavior, impulsivity, and irresponsibility (Patrick, 2010). Thus, it is also unsurprising that the NPI total score did not exhibit any significant relationships with psychopathic disinhibition.

The NPI subscales Authority, Exhibitionism, Entitlement, and Exploitativeness were significantly associated with primary psychopathy in both samples. The NPI Authority subscale's relationships with primary psychopathy, although statistically significant, were somewhat weaker than those of the Exhibitionism, Entitlement, and Exploitativeness subscales. Thus, in the current samples, it was primarily the maladaptive elements of the NPI that exhibited consistent and robust relationships with primary psychopathy. The only NPI subscale to exhibit replicated significant positive association with secondary psychopathy was the Entitlement subscale. In sum, in the current data, the relationship between the NPI and both primary and secondary psychopathy seems to be accounted for by the maladaptive components of the NPI, which is consistent with past

reports of these subscales exhibiting associations with antisocial behaviors, counterproductive school behaviors, and impulsivity (see Schmitt et al., 2017, for a review).

Across both samples, all NPI subscales, other than NPI Entitlement in Sample 1, were significantly associated with psychopathic boldness, which is characterized by dominance, tolerance for unfamiliarity and danger, capacity to remain calm under pressure, and high social efficacy (Patrick, 2010). Psychopathic meanness is characterized by callous aggressiveness, deficits in empathy, disdain for and lack of close attachments with others, and empowerment through cruelty (Patrick, 2010). The NPI Vanity, Exhibitionism, Entitlement, and Exploitativeness subscales were consistently significantly associated with psychopathic Meanness. Exhibitionism was the only NPI subscale consistently positively associated with psychopathic disinhibition, although Entitlement was significantly associated with psychopathic disinhibition in Sample 2 and approached significance in Sample 1. Thus, as with psychopathic meanness, the maladaptive components of the NPI were positively associated with psychopathic disinhibition. Thus, current results suggest that the NPI (adaptive and maladaptive components) and its subscales are consistently associated with psychopathic boldness. However, it appears to be primarily the maladaptive components of the NPI (Entitlement, Exploitativeness, and Exhibitionism) that contribute to its association with psychopathic personality features such as lack of empathy, impulsivity, poor emotional control, poor affect regulation, and irresponsibility.

The NPI total score was not consistently associated with any of the forms of aggression measured in either Sample 1 or Sample 2. However, the NPI Entitlement,

Exhibitionism, and Exploitativeness subscales exhibited significant positive relationships with proactive aggression in both samples and the Entitlement and Exploitativeness subscales were significantly associated with general aggression in both samples. These results provide further evidence that the NPI Entitlement, Exploitativeness, and Exhibitionism subscales indeed capture maladaptive elements of narcissism, consistent with previous findings (Ackerman et al., 2011; Schmitt et al., 2017). Thus, the link between the NPI and aggression would seem to be a link to general aggression and proactive aggression, rather than the volatile, reactive, dysregulated aggression so consistently associated with pathological narcissism.

Consistent with previous research reviewed herein (e.g., Rose, 2002), adaptive narcissism was generally associated with greater psychological well-being. The exceptions were the NPI subscales Exhibitionism, Entitlement, and Exploitativeness, which were not significantly associated with psychological well-being in either sample. As reviewed, the Entitlement and Exploitativeness subscales have been previously associated with negative outcomes, and the current data suggest that the NPI Exhibitionism subscales also captures a maladaptive element of narcissism. These results suggest that higher scores on the adaptive elements of the NPI (Authority, Self-Sufficiency, Superiority, and Vanity) may benefit one's psychological well-being, whereas higher scores on the maladaptive elements of the NPI (Entitlement, Exploitativeness, and Exhibitionism) are associated with a null or negative effect on well-being. On the other hand, higher scores on the PNI or its subscales are associated with lower psychological well-being, particularly for the Contingent Self-Esteem, Devaluing,

and Entitlement Rage subscales, which exhibited significant negative relationships with psychological well-being across both samples.

The current results support the conceptualization of adaptive narcissism as a sort of disagreeable extraversion (Paulhus, 2001).The NPI Entitlement and Exploitativeness subscales were significantly negatively associated with agreeableness across both samples. The NPI total score was consistently positively associated with extraversion across both samples, as were all NPI subscales with the exception of the Entitlement subscale. Further, the NPI and its subscales were consistently negatively associated with neuroticism. The disagreeable nature of adaptive narcissism seems primarily driven by the NPI's maladaptive subscales of Entitlement and Exploitativeness. On the other hand, we see a relatively maladaptive big five personality profile associated with PNI scores, including lower conscientiousness and agreeableness, and greater neuroticism. Thus, in contrast to the NPI, the PNI can be thought of within the big five framework as disagreeable neuroticism with low conscientiousness. Thus, here again, narcissism cohort effects would only be cause for significant concern if they were driven by the maladaptive elements of the NPI or if there was evidence for a cohort increase in pathological narcissism.

The current results support the claim that the association between the NPI and Machiavellianism is primarily driven by the NPI's maladaptive elements (Entitlement, Exploitativeness, and Exhibitionism). These maladaptive NPI elements were consistently associated with Machiavellianism in both samples of the current study. Pathological narcissism and all of its elements other than Self-Sacrificing Self-Enhancement were consistently associated with Machiavellianism. Thus, Machiavellianism is primarily

associated with the maladaptive and pathological aspects of narcissism. The current results are consistent with the findings of Ackerman et al. (2011), who reported significant positive associations between Machiavellianism and narcissistic Grandiose Exhibitionism and narcissistic Entitlement/Exploitativeness, which factors were deemed maladaptive due to their various associations with negative outcomes. These findings increase in importance, given that Machiavellianism was consistently associated with primary and secondary psychopathy, psychopathic disinhibition, psychopathic meanness, and all forms of aggression measured in the current study, findings similar to and consistent with past research (see Muris et al., 2017 and Vize et al., 2016 for thorough reviews).

Limitations

Perhaps the most obvious and primary limitation of the current study was that all data were gathered using self-report questionnaires. Narcissism and other personality researchers consistently call for more experimental investigations of these topics, and more studies using objective, behavioral measurements of the constructs in question (Bettencourt et al., 2006; Falkenbach et al., 2013; Ferriday et al., 2011; Lobbestael et al., 2014; Rauthman & Kolar, 2012). This limitation was addressed in Study 2, presented below, which included experimental manipulation and behavioral measures of relevant constructs.

Second, there is a long history of literature documenting higher levels of direct, physical types of aggression in males than in females across ages and cultures (see Archer, 2004; Coie & Dodge, 1998). However, the significant majority of many undergraduate samples are female, likely resulting in lower endorsement of item content

measuring a more direct, physical style of aggressive behaviors. One limitation of Study 1 was the lack of measur of relational aggression, which research suggests is a form of aggression more commonly exhibited by females than direct, physical aggression (Crick et al., 2006). A measure of relational aggression was included in Study 2.

Another limitation of Study 1 was that data were collected from a university undergraduate sample, limiting the generalizability of findings to other age groups or cohorts. As Arnett (2013) has noted, the majority of emerging adults in the United States are not students at traditional four-year universities. Thus, not only are there concerns about the ability to generalize the current results to other age groups, there is also intra-cohort generalizability concerns due to the fact that this was a university sample, which introduces potential confounds such as education level, socioeconomic status, access to transportation, interests and abilities, social and financial support, among many others. However, given that the study seeks to inform debates about emerging adults that have roots in data also collected from undergraduate samples, an undergraduate sample was relevant and appropriate, despite its inherent limitations in addressing some other questions.

Study 2: Behavioral Correlates of Adaptive and Maladaptive Narcissism: Experimental Manipulation and Behavioral Measures of Aggression

Introduction

This study expanded upon Study 1 and addressed some of its limitations. Study 2 made use of manipulated participant feedback (positive versus negative) to investigate differences in the levels and forms of aggression (proactive versus reactive, direct versus relational) and their associations with different forms of narcissism (adaptive,

maladaptive, and pathological) and related constructs such as Machiavellianism, psychopathy, and self-esteem. This study included experimental manipulation and direct behavioral measures of aggression. This is an important extension of Study 1, because *trait aggressiveness* is fundamentally different from *aggressive behavior* (see Buss & Perry, 1992). Study 2 also used a measure of relational aggression, as opposed to more traditional measures of aggression, which include more physical, stereotypically masculine forms of aggression. Thus, by including an experimental manipulation, behavioral measures of aggression, as well as a measure of relational aggression, Study 2 is a logical extension of Study 1, and addresses some of its limitations.

Methods

Participants

Demographic information for participants was presented with the demographic information for participants from Study 1 (i.e., Sample 2). As in Study 1, Study 2 participants were university undergraduates enrolled in participating psychology courses and received course extra credit for participation.

Measures

Study 2 included both self-report questionnaire measures as well as behavioral measures of key constructs. Study 2 also included an experimental manipulation involving an ego threat and deception via manipulated participant feedback.

Self-Report Measures

Study 2 made use of data from the self-report measures previously described in Study 1: Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979, 1981); Pathological Narcissism Inventory (PNI; Pincus et al., 2009); Rosenberg Self-Esteem

Scale (RSES; Rosenberg, 1965); Reactive-Proactive Aggression Questionnaire (RPQ; Raine et al., 2006); Buss-Perry Aggression Questionnaire (AQ; Buss & Perry, 1992); Mach-IV (Christie & Geis, 1970); Levenson Self-Report Psychopathy (Levenson et al., 1995); Triarchic Psychopathy Measure (TriPM; Patrick, 2010); Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004); Flourishing Scale (FS; Diener et al., 2010); and the Big Five Inventory (BFI; John & Srivastava, 1999). In addition, Study 2 included a self-report measure of relational aggression (proactive and reactive), behavioral measures of aggression (proactive and reactive), and the International Cognitive Ability Resource Sample Test (ICAR Sample Test; Condon & Revelle, 2014), which are described below.

The Self-Report of Aggression and Social Behavior Measure (SRASBM; Morales & Crick, 1998; Linder, Crick, & Collins, 2002) is a 56-item self-report questionnaire designed to measure qualities of adult social interaction and close relationships. Respondents indicated how true each of the statements was for them at present and during the past year on a scale ranging from 1 = *Not at all true* to 7 = *Very true*. The SRASBM contains six subscales: relational aggression, physical aggression, relational victimization, physical victimization, exclusivity, and prosocial behavior. The relational aggression subscale (16 items) is itself divided into three components, proactive relational aggression (5 items), reactive relational aggression (6 items), and cross-gender aggression (5 items). The proactive and reactive relational aggression items were used in the current study. An example of an item measuring proactive relational aggression is “I have threatened to share private information about my friends with other people in order to get them to comply with my wishes”, and an example of an item measuring reactive

relational aggression is “When I am not invited to do something with a group of people, I will exclude these people from future activities.” The cross-gender aggression items refer to behavior in the context of a romantic relationship; due to their specificity in that regard, they were not used in the current study. Murray-Close et al. (2010) reported internal consistency estimates for total relational aggression scores (.83), as well as proactive (.69) and reactive (.72) relational aggression scores, based on data collected from a sample of 1387 adults aged 25 to 45 years. Ostrov and Houston (2008) reported one-month test-retest reliabilities for proactive relational aggression (.84) and reactive relational aggression (.75), based on data collected from 679 college undergraduates. Alpha coefficients for the current sample were as follows: proactive relational aggression = .86 and reactive relational aggression = .84.

Brief IQ Measure (ICAR)

The International Cognitive Ability Resource Sample Test (ICAR Sample Test) is a 16-item questionnaire intended to measure general intelligence and cognitive ability. Condon and Revelle (2012) reported an internal consistency estimate of .76 for the 16-item ICAR Sample Test total score from a sample of 137 university students. Research has shown evidence of convergent validity for the ICAR Sample Test scores and combined Scholastic Aptitude Test (SAT) scores (.59) and ACT scores (.52) in a large sample of adults between the ages of 18 and 22 years (N = 34,229, of which 26,911 were from the United States; Condon & Revelle, 2014). The alpha coefficient for the ICAR Sample Test in this sample *(N* = 148) was .70. The ICAR sample test was presented as a “puzzle game” and its data were not associated with primary study hypotheses.

Direct Behavioral Measures

Bettencourt et al. (2006) reviewed some commonly used laboratory measures of aggressive behavior, which include negative evaluations and monetary or point penalties, both of which were used in the current study. Additionally, there is further precedent justifying use of the current paradigm, as it is similar to that successfully used by Bobadilla et al. (2012).

Participants were given three opportunities to exhibit proactive aggression, and three opportunities to exhibit reactive aggression. As will be detailed below, participants were asked to type a brief personal profile, which described concisely things such as their personality and some of their interests, goals, and abilities. Participants were told that two other participants would rate their profile, and that they themselves would rate the profiles of two other participants. Thus, the cover story was that each person rates two other profiles and has their own profile rated by two other people. When presented with a profile, participants were asked to rate the profile on *Likability* and *Writing Quality*, each on a 1-10 Likert-type scale. Participants were also offered the opportunity to deduct points from said person's profile, to be explained in more detail below. The ratings of Likability and Writing Quality, and the ability to deduct points, occurred under two conditions: after being presented with positive/neutral feedback about one's own profile and after being presented with negative/critical feedback about one's own profile. Thus, there were three opportunities to exhibit proactive aggression (ratings and deduction of points in the positive/neutral feedback trial) and three opportunities to exhibit reactive aggression (ratings and deduction of points in the negative/critical feedback trial).

Procedure

Participants created brief personal profiles, describing themselves and some of their personal qualities, goals, and achievements. Participants also completed a brief "puzzle game", which was in fact a short IQ measure (the ICAR Sample Test). Participants were told that, over approximately a two-week period, their created personal profiles would be rated by two other participants and their scores on the so called *puzzle game* would be compared to the scores of these two other participants. However, these other participants were in reality nonexistent and the feedback and ratings that participants received were experimentally manipulated. After receiving these manipulated ratings of their own personal profiles, participants were given the opportunity to respond aggressively by giving unfavorable ratings to the participants (nonexistent) by which they thought their own profile had been evaluated and rated and also by deducting points from these other participants' scores on the puzzle game, which was presented as being directly linked to the possibility of receiving a monetary reward. A similar paradigm was used by Bobadilla et al. (2012). The current method differed in several ways from the Bobadilla et al. methodology, most notably in that the current participants were responding to the experimental manipulation in an online format, from their own computers in a non-laboratory setting, whereas participants in the Bobadilla et al. study were responding within a laboratory context, with research personnel present and with the belief that another participant was also physically proximal, in another room. These methods and procedures are described in detail below and can be visualized in Figures 1a and 1b.

Creation of Fake Profiles

As described above, each participant was asked to write a brief personal profile and to subsequently rate the profiles of two other participants, who were in fact nonexistent. To maintain the cover story of the experiment, these fake profiles needed to have an acceptable level of believability. Further, as will be further discussed below, the two profiles presented to each participant needed to be roughly equivalent in their degrees of Likability and Writing Quality, so as to not bias the results by introducing differential extraneous effects on the desired outcome variables. To these ends, the fake profiles were created through a series of iterations of both creation and evaluation by undergraduate students who were neither study participants nor directly associated with the study in any way. The undergraduate students who aided in the creation of the fake profiles were undergraduate research assistants and students in an upper division undergraduate psychology course.

First, the team of undergraduate students created brief personal profiles with the goal of achieving maximum believability (i.e., other undergraduates would believe that these were actual profiles created by other study participants). Fortunately, all of the initially created 15 potential profiles received high average believability ratings (M = 7.44 [of a possible 10]; range = 6.04-9.07) when rated by a group of undergraduate students. These ratings were perhaps the most important because they had directly to do with maintaining the study cover story and are thus the most important with respect to the validity of the study results. A mix of both “man” and “woman” profiles were created by inserting gender cues into the profile, for example, “...I also regularly jog with my sorority sisters”, “...I’m the middle child and only son out of five kids”, and “I also volunteer in the Big Brothers and Big Sisters program as a big sister.” Fifteen profiles

were included for rating and review and potential inclusion in the final study materials, with the goal of ultimately selecting two “man” profiles and two “woman” profiles. Rationale for selecting this quantity and quality of profiles is discussed below.

Next, these 15 potential profiles were rated by a group of 38 undergraduate students on a 1-10 scale for overall *Likability* of the profile and *Writing Quality* of the profile (instructions to these undergraduate raters and an example can be found in the Appendix). Several important considerations were necessary when analyzing data gathered from these undergraduate raters. The goal was to select profiles with high Likability ratings, to ensure confidence that, should a participant rate said profile quite low, they are doing so *aggressively*, since the profile tended to be rated quite highly. However, another goal was to not select fake profiles that tended to be rated too highly. If a profile appeared too likable or too virtuous, unintended biases and effects would likely be introduced into the data. Thus, profiles were selected that were consistently rated highly on Likability, but not too highly (i.e., averaging a score of 9/10 or above). The two “man” profiles selected were rated the closest on Likability (M = 7.84, SD = 1.50 and M = 8.03, SD = 1.72, respectively) and this was the same for the two “woman” profiles selected (M = 7.45, SD = 1.46 and M = 7.29, SD = 1.75, respectively). Further, these two pairs of profiles were also the second most closely related with respect to Writing Quality. For the current study, overall Likability was valued above Writing Quality, making these two pairs the most ideal of the 15 included in the pilot project. These four fake profiles included in the current study can be viewed in the Appendix.

Efforts to Avoid Confounding Effects

To avoid confounding gender effects, participants were randomized into one of two experimental conditions. The first condition included receiving neutral/positive feedback from a nonexistent *Man* and rating the profile of said *Man*, followed by receiving negative feedback from a second nonexistent *Man* and rating the profile of said *Man*. The second condition followed this pattern, but included two *Woman* profiles. Participants were randomized into one of these two experimental conditions, which resulted in approximately half of the study's self-identified male participants receiving feedback from nonexistent Man participants and rating the associated profiles and half of the study's self-identified male participants receiving feedback from nonexistent Woman participants and rating the associated profiles. This pattern was the same for female participants, with approximately half of them rating and being rated by nonexistent Man participants and half rating and being rated by nonexistent Woman participants. Self-identified male participants may, on average, react differentially to feedback, dependent on the gender self-identification of the person delivering it, and likewise for self-identified female participants. Thus, it was important that the sex/gender of the feedback source be kept constant *within* each participant's data. Second, it is important to get a mix of participant-feedback combinations. This created four combinations in the data: male participant, male rating/feedback; male participant, female rating/feedback; female participant, female rating/feedback; and female participant, male rating/feedback.

Participants created their brief personal profile before playing the *puzzle game* (see Figures 1a and 1b). The puzzle game was in fact a brief measure of IQ, the ICAR sample test (Condon & Revelle, 2014). Being a measure of IQ, the ICAR sample test contains items that are intellectually and cognitively challenging. Conceivably, some

participants could become frustrated while completing this measure and perhaps have a negative emotional valence when performing subsequent tasks. If a participant did not feel good, positive, proud, or some other type of positive emotion while creating their personal profile, they might not exhibit as much of a reaction to negative feedback about their profile by way of cognitive dissonance, perhaps having the emotional/cognitive escape of "I didn't try very hard on that anyway." Having participants create the brief personal profile before completing the puzzle game was an attempt to ensure that participants were in a generally positive mindset when creating their profile and felt good about their profile information, so as to take increased offense to negative or critical evaluation (i.e., ego threat).

Lastly, a distractor task was included between the two rating/feedback tasks (see Figures 1a and 1b). The cover story of the experiment mentioned that the project concerned "aesthetic preferences." After the first of the two rating/feedback tasks, participants were asked to rate the aesthetic beauty of a series of images. These images were in the public domain and included paintings by artists such as Vincent van Gogh, Paul Cezanne, and Michelangelo Merisi de Caravaggio. The first rating/feedback task included neutral/positive feedback to each participant, and the second rating/feedback task included negative feedback about each participant's personal profile (i.e., ego threat). The distractor task was aimed at creating some cognitive distance between these two tasks in an attempt to limit any cognitive or emotional spillover of the neutral/positive feedback into the negative feedback task. It was estimated that most participants completed this distractor task, which included rating a series of 10 paintings on a 1-10 scale ranging from *Not At All Beautiful* (1) to *Very Beautiful* (10), in

approximately one to two minutes. This is seemingly conservative estimate, which rests on the assumption that participants looked at each picture and selected a rating option (i.e., 1-10, Not At All Beautiful to Very Beautiful) within approximately ten seconds.

Hypotheses

The hypotheses related to narcissism and aggression from Study 1 were repeated for Study 2. However, Study 2 considered the following aggression variables: proactive relational aggression; reactive relational aggression; proactive behavioral aggression (deduction of points and lower ratings after receiving positive/neutral feedback); and reactive behavioral aggression (deduction of points and lower ratings after receiving positive/neutral feedback). Reactive aggression was also examined as a function of the difference between ratings and deductions by subtracting scores on task one from scores on task two, so that positive scores represent an increase in aggression between positive/neutral feedback and negative/critical feedback conditions.

Results

As previously described (visualized in Figures 1a and 1b), participants first received neutral/positive feedback about their personal profile, rated the profile of a nonexistent other participant on Likability and Writing Quality and were presented with the option to deduct points from this nonexistent participant. Next, participants completed a brief distractor task, also previously described. Then, participants received negative/critical feedback about their profile, rated the profile of a nonexistent other participant on Likability and Writing Quality and were presented with an option to deduct points from this nonexistent participant. When discussing results below, the rating of Likability for the first rated profile (neutral/positive feedback) will be referred to as

Likability-Neutral/Positive, and the rating of the second profile (negative/critical feedback) will be referred to as Likability-Negative/Critical. The difference between Likability ratings was calculated by subtracting Likability-Neutral/Positive from Likability-Negative/Critical, so that lower values represent decreased Likability ratings from the first profile to the second, and positive values represent increased Likability ratings from the first profile to the second. This value is referred to below as Likability Difference. These same conventions are used below when discussing ratings of Writing Quality. Discussion of Overall Difference below refers to the difference between the overall rating of the first profile (Likability + Writing Quality) and the second profile (Likability + Writing Quality), with the overall score of the first profile having been subtracted from the overall score of the second profile, such that lower values represent decreased ratings from the first profile to the second, and positive values represent increased ratings from the first profile to the second.

Additionally, each participant was given the opportunity to deduct points from each of the nonexistent participants by whom they thought that their own profile had been rated. The deduction of points for the first rated profile (neutral/positive feedback) will be referred to as Deduct-Neutral/Positive, and the deduction of points for the second profile (negative/critical feedback) will be referred to as Deduct-Negative/Critical. The difference between Deduct-Neutral/Positive and Deduct-Negative/Critical was calculated by subtracting Deduct-Neutral/Positive from Deduct-Negative/Critical, so that lower values represent decreased point deductions from the first profile to the second, and positive values represent increased point deductions from the first profile to the second. This value is referred to below as Deduct Difference.

Narcissism and Aggression

NPI total score was predicted to be positively associated with reactive aggression and aggression more generally. Indeed, NPI total scores exhibited a significant positive relationship with both proactive and reactive relational aggression, and to similar degrees. Three NPI subscales were consistently related to proactive and reactive relational aggression: Authority, Exhibitionism, and Entitlement (see Table 2b).

Results with respect to NPI total scores, profile ratings, and deduction of points were somewhat unexpected. Contrary to the hypotheses, NPI total scores did not exhibit any significant associations with ratings of Likability or Writing Quality (see Table 4). Those scoring higher on narcissism were expected to give significantly lower ratings of both Likability and Writing Quality after receiving Negative/Critical feedback about their own personal profile, which was not observed here. However, as expected, NPI total score did exhibit a significant positive association with Deduct-Negative/Critical, suggesting a modest yet significant narcissism-related effect in response to negative/critical feedback (see Table 5). In general, participants deducted significantly more points (M = 4.19, SD = 3.57) from the nonexistent peer who provided negative/critical feedback than they did from the nonexistent peer who provided neutral/positive feedback (M = 2.63, SD = 2.69; t (147) = 7.29, $p < .001$, $d = .50$). NPI total score and PNI total score were significantly associated with deduction of points after negative/critical feedback, but not significantly related to deduction of points after neutral/positive feedback.

These variables can be contrasted with variables such as primary psychopathy, reactive aggression, proactive relational aggression, and reactive relational aggression

(see Table 5), which were significantly or similarly related to deduction of points after both positive/neutral and negative/critical feedback. The associations between these variables and deduction of points (i.e., aggression) thus appears to be independent of the type of feedback received. Making sense of participants having deducted significantly more points after receiving negative/critical feedback necessitates examination of variables that exhibited differential associations with point deduction across feedback conditions. In the case of these data, such variables were the NPI, PNI, and some associated subscales. This means that the increase in point deduction in the negative/critical feedback condition is perhaps in small part due to a narcissistic response to an ego threat. Indeed, post hoc multiple regression analyses revealed that adding in other relevant variables (in addition to narcissism) did not increase the predictive power of linear regression models aimed at predicting point deduction in response to negative/critical feedback (NPI, PNI, primary psychopathy, reactive aggression, $F(4,139) = 2.67$, $r^2 = .07$, $p = .04$; NPI, PNI, $F(2,144) = 3.51$, $r^2 = .05$, $p = .03$). Further, only narcissism-related variables exhibited significant associations with difference scores between point deduction in the neutral/positive condition and the point deduction in the negative/critical condition: NPI Authority ($r = .23$, $p < .01$); PNI Exploitativeness ($r = .18$, $p < .05$); and PNI Hiding the Self ($r = .18$, $p < .05$), with NPI Exploitativeness and PNI Entitlement Rage approaching significance. Thus, it appears possible that the experimental manipulation elicited a narcissistic response (reactive aggression in the form of point deduction) to an imposed ego threat (negative/critical feedback). However, the current results, given their relative weakness, do not provide convincing evidence of such an effect.

The hypotheses that PNI scores would exhibit significant positive associations with reactive aggression as well as aggression more generally were supported in Study 1 and were partially supported in Study 2. PNI total score was significantly associated with both proactive and reactive relational aggression, although the PNI total score was more strongly associated with reactive relational aggression than proactive relational aggression, t (144) = -2.39, $p < .05$; see Table 3b).

Results were mixed with respect to the PNI and behavioral measures of aggression. Contrary to expectations, PNI total scores did not exhibit any significant associations with ratings of Likability or Writing Quality (see Table 4). However, as reviewed, PNI total scores were significantly associated with deduction of points after receiving negative/critical feedback, suggesting a weak/modest yet statistically significant narcissism-related effect in response to negative/critical feedback. These results suggest that this increased aggressive behavior could be in some small part due to a narcissistic response to an imposed ego threat, as the variables driving this differential relationship (increased deduction after negative/critical feedback) were both narcissism variables (i.e., NPI and PNI).

Discussion

With respect to self-report questionnaire data, Study 2 provided further support for a significant and consistent link between both adaptive and pathological narcissism and aggression, including relational aggression. Indeed, increased likelihood of aggression appears to be a consistent feature of adaptive trait narcissism as measured by the NPI. Pathological narcissism, on the other hand, appears to be associated even more strongly than adaptive trait narcissism with general and relational aggression, as well as

with more dysregulated and reactive types of aggressive behavior. Additionally, Study 2 provided additional support for the NPI Exhibitionism and Entitlement subscales as capturing maladaptive components of narcissism (see Table 2b), as these subscales were significantly associated with both proactive and reactive relational aggression.

The experimental portion of Study 2 was an extension and adaptation of previous paradigms (see Bobadilla et al., 2012). Although the study made use of well-established laboratory procedures and measures (e.g., manipulated feedback, aggression via deduction of points and critical/low ratings), and was a unique endeavor in that data were collected from participants in an entirely online format and included multiple measures of narcissism, aggression, and psychopathy. Further, unlike the Bobadilla et al. paradigm, the current study did not select only participants above a certain NPI cut score for the experimental manipulation. Rather, the current study applied the experimental manipulation to all participants. Thus, Study 2 was a logical extension of past research on narcissism, but was also exploratory in some respects.

Although the current findings were not particularly robust, Study 2 provided some evidence of NPI-associated aggressive behavior in the study's experimental conditions. NPI total score did exhibit a significant positive association with deduction of points in response to negative/critical feedback suggesting a modest yet significant narcissism-related effect in response to an ego threat. This effect - increased deduction of points in response to negative/critical personal feedback - was also observed with respect to PNI total scores. And, as reviewed above, post hoc analyses provided some evidence, although weak, that this effect was perhaps narcissism-driven on some level.

These results are important for multiple reasons. First, the current results suggest that those scoring higher on narcissism (adaptive and/or pathological) are more likely to engage in aggressive responses to ego threats, even in a private setting (i.e., not in the presence of peers, the public, or researchers). Ferriday et al. (2011) used a minimal provocation design in which participants were told to imagine a scenario in which they completed a task and received feedback from another participant. Participants were asked to imagine having written an essay and receiving feedback about it, which the experimenters manipulated to be either positive or negative, and received that feedback either in private or in front of the experimenters. Ferriday et al. noted that narcissism significantly predicted aggression when negative feedback was delivered publicly, but not otherwise. These results suggest that those scoring higher on narcissism are not significantly more likely to engage in aggressive behaviors to ego-threats that are delivered in private. Second, in the current study, primary psychopathy, reactive general aggression, proactive relational aggression, and reactive relational aggression were all associated with deducting more points in response to negative/critical feedback from an anonymous source in a private setting. These results have implications not only for research on narcissism, but also future research on personality and aggressive online behavior such as cyber-bullying.

Limitations

The current study collected data from university undergraduates and is thus limited with respect to age, sex, gender, race, and socioeconomic generalizability. As Arnett (2013) reminds us, only about one fourth of emerging adults in the United States attend a four-year college or university. Further, the sample was largely white and

female, and contained students enrolled in a psychology course. Limitations of this nature were also discussed in the Limitations section of Study 1.

Another important limitation of the current study is the lack of a metric for *actual believability*. The experimental procedure was pilot tested and the profiles of the non-existent participants received high *believability* ratings by undergraduates during pilot testing. However, an estimate of the degree to which study participants truly believed that they were receiving feedback from another real person was not obtained (i.e., no follow-up manipulation checks were administered). Further, participants completed the survey at their leisure and on an internet-connected device of their choosing and in a location of their choosing. Thus, some participants might have influenced the responses of others or some other individuals might have influenced the responses of some participants (e.g., roommates, friends).

The online nature of this study likely inhibited or limited potential narcissism-related aggressive responses. Past literature suggests that narcissism is related to aggressive responses to ego-threat, especially when the ego-threat is delivered in public and in person. In the current study, negative/critical feedback was delivered in an online format, which likely significantly reduced any potential effects. However, in this study an effect was observed (i.e., deduction of points), although modest, even when participants received the ego-threat anonymously and in an online format.

Another factor that may have limited the effects of ego-threat was that participants did not include a picture of themselves along with their personal profile. Rather, participants simply wrote about themselves (hobbies, interests, etc.). The observed effects likely would have been significantly larger had participants uploaded

personal photographs to go along with their written personal profiles. As mentioned above, narcissistic aggressive responses to ego threats are more likely to occur when an ego threat is delivered in public and in person, as opposed to anonymously and/or in private. Adding a personal photograph would theoretically have made the negative/critical feedback feel more personal and perhaps public, due to significantly reduced anonymity.

General Discussion

The current studies have provided additional support for the assertion that the NPI measures a combination of adaptive and maladaptive factors. The maladaptive components identified herein are consistent with the findings of Ackerman et al. (2011), which identified Entitlement and Exploitativeness as particularly maladaptive NPI components, with the Ackerman et al. factor Grandiose Exhibitionism being considered somewhat maladaptive. However, the current results suggest that the Exhibitionism component of the NPI is also quite maladaptive, as it exhibited consistent significant relationships with negative outcomes and pathology-related constructs. Thus, the current results suggest a broad two-factor composition of the NPI as containing adaptive and maladaptive elements. This is similar to the findings of Ackerman et al., although instead of a Grandiose Exhibitionism factor, current results suggest that the exhibitionism component of the NPI can be grouped together with the Entitlement and Exploitative components to form an overarching *maladaptive narcissism* factor, more similar to the findings of Schmitt et al. (2017).

Narcissism researchers have debated whether a narcissism cohort effect has occurred across recent decades, and, if so, if this constitutes a sort of epidemic, or

perhaps a positive, healthy phenomenon, or maybe much ado about nothing (see Paulsen et al., 2015 for a review). The current investigation supports the hypothesis that, even if NPI scores were increasing moderately over time, creating a cohort effect, this would not necessarily be a bad thing, and could in fact be an adaptive phenomenon, (i.e., increased adaptive trait narcissism but not increased pathological narcissism) given sociological and technological changes in the world in recent decades, namely the rise of social media and the creation of new societal norms for self-presentation and promotion in such a context. Current results as well as those of Ackerman et al. (2011) suggest that the NPI does capture elements of adaptive trait narcissism. As such, if NPI total scores across recent decades have increased as a function of increased scores on some combination of the Authority, Self-Sufficiency, Superiority, and Vanity subscales, then this could reasonably be presumed to be an overall adaptive and healthy effect, as these subscales are generally associated with quite positive outcomes. If, on the other hand, such increases were driven by some combination of scores on the Entitlement, Exploitativeness, or Exhibitionism subscales, this would be cause for great societal concern, as such NPI components have consistently been found to be associated with maladaptive and pathology-related outcomes. However, debate continues about the degree, if any, of an NPI cohort effect in recent decades (Paulsen et al., 2015; Wetzel et al., 2017; see Figures 3a and 3b for a visual summary of NPI total score relationships).

In sum, the current results suggest that the maladaptive components of the NPI are the Entitlement, Exploitativeness, and Exhibitionism subscales. Additionally, these results, taken as a whole, suggest that the NPI does capture some maladaptive narcissistic elements, and that these elements are distinct from the more purely pathological and toxic

elements captured by the PNI. With respect to concerns about potential cohort effects in narcissism in recent decades, it would seem that the primary cause for broad scientific and societal concern would be any significant increase in NPI Entitlement, Exploitativeness, or Exhibitionism, for which there is no conclusive evidence. However, one general concern can be leveled regarding cohort effects and the NPI. As a purely mathematical fact, as scores on the NPI increase, approaching the highest possible score, the likelihood increases that item content on the Entitlement, Exploitativeness, or Exhibitionism subscale will be endorsed. Thus, if significant cohort effects in narcissism as measured by the NPI have occurred, discussion of the implications would warrant discussion at the subscale level to make claims about potential harmful or beneficial societal or individual outcomes.

The current studies also added significantly to the body of research concerning narcissism and psychopathy. Fossati et al. (2014) raised an important question: Are pathological narcissism and psychopathy different constructs or different names for the same thing? They concluded that pathological narcissism and psychopathy exhibit phenotypic overlap, but are meaningfully distinct constructs. Current results support this assertion, as well as the assertion that adaptive narcissism exhibits significant phenotypic overlap with psychopathy, yet remains a meaningfully distinct construct. Narcissism as measured by the NPI was significantly associated with primary psychopathy (Factor 1 psychopathy) but not secondary psychopathy (Factor 2 psychopathy). This adaptive narcissism appears to be related to the affective-interpersonal aspect of psychopathy, but not significantly associated with the antisocial deviancy factor of psychopathy, which includes high impulsivity, high reactive aggression, as well as associations with

sensation-seeking and alcohol and drug problems. When considering the triarchic model of psychopathy (Patrick, 2010), adaptive narcissism was found consistently associated with boldness and meanness, but not psychopathic disinhibition. Thus, adaptive narcissism, like psychopathic boldness, can perhaps be considered an adaptive phenotypic expression of the *fearless disposition* genotype. This warrants continued research and theory.

Pathological narcissism, on the other hand, does tend to be associated with secondary psychopathy and is thus associated with impulsivity, affective and behavioral dysregulation, as well as increased reactive aggression. Pathological narcissism did not exhibit the consistent relationship with psychopathic boldness (an adaptive construct) found with adaptive narcissism. Thus, pathological narcissism, as predicted, is not related to higher extraversion, interpersonal boldness and dominance, and high behavioral and affective regulation commonly associated with adaptive narcissism. In sum, adaptive narcissism, pathological narcissism, and psychopathy all appear to be highly interrelated, although meaningfully distinct, constructs.

In the current studies, the relationship observed between the NPI and Machiavellianism appears primarily driven by the maladaptive components of the NPI - Entitlement, Exploitativeness, and Exhibitionism. This reaffirms the previously leveled argument that narcissism cohort effects driven by some combination of Entitlement, Exploitativeness, and Exhibitionism would be cause for concern. This also serves as support for conceptualizing and philosophizing provided in the discussion section of Study 1 herein regarding the *other-focused* nature of the NPI's maladaptive elements and the *self-focused* nature of its adaptive elements.

Study 2 provided some evidence of narcissism-related (adaptive and pathological) aggressive behavior in response to an ego-threat that is both anonymous in nature and delivered in a private setting. These findings suggest that the reactive-aggressive element of both adaptive and pathological narcissism could perhaps regularly manifest itself in various private and/or anonymous contexts, such as through a computer or mobile device.

Additionally, the results of these studies have implications for the fields of counseling and clinical psychology. Maladaptive narcissism is rarely presented as a chief complaint when an individual seeks inpatient or outpatient treatment. However, narcissism has long been recognized as a potentially pathological and toxic personality feature (see APA, 2000; APA, 2013). Even adaptive trait narcissism seems to include some maladaptive elements, or is at least fertile soil for their development. This is important knowledge for psychologists and psychiatrists. The current results suggest that narcissism-related Entitlement, Exploitativeness, and Exhibitionism could be relevant targets for clinical intervention, when a patient is observed to exhibit these narcissistic features and is experiencing psychological and interpersonal difficulties. One could, in theory, facilitate individuals' overall well-being by assisting them in emphasizing the more adaptive aspects of their narcissism (e.g., Vanity, Authority, Self-Sufficiency, Superiority) and gaining insight into and reducing maladaptive behaviors and thought patterns, such as exploitativeness, entitlement, and exhibitionism. Research and theory would suggest, however, that such interventions would be more effective with subclinical narcissism than with individuals with longstanding narcissistic personality psychopathology (APA, 2013). In sum, because narcissism in its various forms is associated with a multitude of maladaptive outcomes, yet is rarely identified as a source

of discontent or difficulty in clinical populations, it is a subject deserving of significant inquiry and focus by both counseling and clinical psychology.

Future Directions

Future research should focus on further examining the development and composition of *adaptive* narcissism. One interesting question has to do with the degree of symbiosis between the adaptive and maladaptive components of the NPI. For example, perhaps development of Self-Sufficiency, Authority, Superiority, or Vanity, although seemingly healthy and adaptive in and of themselves, also provide a ready diathesis from which Entitlement, Exploitativeness, or Exhibitionism may rise, given the right stress. Stated simply, perhaps adaptive narcissistic factors are themselves risk factors for maladaptive narcissistic factors, given certain environmental conditions. Longitudinal studies and latent profile analyses could reveal the extent to which such adaptive and maladaptive components can develop independently or affect one another.

As narcissism theorists and researchers continue to refine theory and measurement of the constructs, continued investigation into possible cohort effects across recent decades is warranted. In this same spirit, researchers are advised to maintain narcissism-related data at the item-level for use in future initiatives, avoiding reliance on cross-temporal techniques (e.g., correlation coefficients computed using groups of summary statistics such as means, instead of item-level data), which are problematic (see Paulsen et al., 2015).

Narcissism researchers should continue to investigate the relationships between narcissism, psychopathy, and aggressive behavior and violence. Due to narcissism's

consistent relationships with aggression and psychopathy, continued research will likely be of significant benefit to society.

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Table 1a. Descriptive statistics for Sample 1 Scales as Means[1]

	N	Mean	SD	Skew	Kurtosis
NPI total	227	0.38	0.19	0.49*	-0.2
Authority	227	0.52	0.31	0.01	-1.2
Self-Sufficiency	227	0.42	0.25	0.34*	-0.61
Superiority	226	0.4	0.3	0.38*	-0.89
Exhibitionism	227	0.26	0.26	0.94*	0.08
Exploitativeness	227	0.33	0.27	0.6*	-0.64
Vanity	226	0.43	0.39	0.28	-1.38
Entitlement	227	0.27	0.25	0.61*	-0.69
LSRP total	226	1.92	0.39	0.15	-0.61
LSRP Primary	225	1.9	0.44	0.21	-0.59
LSRP Secondary	227	1.97	0.46	0.12	-0.57
MACH-IV total	224	2.23	0.32	-0.03	-0.24
PNI total	227	3.39	0.67	-0.31	-0.36
CSE	227	3.24	0.98	0.03	-0.53
EXP	225	3.31	0.96	0.15	-0.62
SSSE	226	3.92	0.84	-0.3	-0.01
HS	225	3.67	0.91	-0.01	-0.18
GF	226	3.94	1.0	-0.24	-0.16
DEV	226	2.88	0.93	0.07	-0.32
ER	227	3.02	0.89	0.12	-0.3
RSES	227	3.02	0.55	-0.29	-0.22
RPQ Proactive	227	1.14	0.22	2.4*	5.86*
RPQ Reactive	227	1.52	0.33	0.38*	-0.52
TriPM Boldness	226	0.56	0.2	-0.2	-0.31
TriPM Meanness	225	0.14	0.14	1.81*	4.07*
TriPM Disinhibition	226	0.2	0.16	0.87*	-0.27
AQ	226	2.26	0.55	0.4*	-0.42
DERS	227	2.35	0.61	0.29	-0.48
FS	227	5.65	0.9	-1.1	1.75*
Openness	227	3.41	0.64	-0.17	-0.22
Conscientiousness	227	3.71	0.64	-0.06	-0.39
Extraversion	227	3.19	0.78	0.13	-0.39
Agreeableness	227	3.85	0.65	-0.48	0.12
Neuroticism	227	2.93	0.78	0.04	-0.32
ICAR total	225	0.55	0.21	-0.05	-0.48
VR	226	0.82	0.26	-1.44	1.27*
LN	225	0.58	0.32	-0.27	-1.07
MR	225	0.54	0.32	-0.22	-1.03
R3D	225	0.25	0.31	1.16*	0.24

Asterisk (*) indicates significant skew or kurtosis

NPI = Narcissistic Personality Inventory; LSRP = Levenson Self-Report Psychoapthy; PNI = Pathological Narcissism Inventory; RSES = Rosenberg Self-Esteem Scale; RPQ = Reactive Proactive Aggression Questionnaire; TriPM = Triarchic Psychopathy Measure; AQ = Aggression Questionnaire; DERS = Difficulties with Emotion Regulation Scale; FS = Flourishing Scale; ICAR = International Cognitive Ability Resource Sample Test

[1] Scale scores computed as the mean score across items

Table 1b. Descriptive statistics for Sample 2 Scales as Means[2]

	N	Mean	SD	Skew	Kurtosis
NPI total	148	.36	.17	.47*	-.47
Authority	148	.52	.28	.08	-.87*
Self-Sufficiency	148	.42	.24	.16	-.65
Superiority	147	.36	.28	.47*	-.59
Exhibitionism	148	.25	.24	.85*	-.21
Exploitativeness	148	.31	.29	.72*	-.42
Vanity	148	.37	.34	.47*	-.93*
Entitlement	148	.27	.24	.95*	.41
LSRP total	147	1.92	.43	.26	-.22
LSRP Primary	147	1.88	.50	.46*	.01
LSRP Secondary	147	1.98	.44	-.11	-.45
MACH-IV total	141	2.30	.37	.51*	.43
PNI total	147	3.38	.68	-.13	-.18
CSE	147	3.23	.99	-.16	-.66
EXP	146	3.31	.96	-.02	-.68
SSSE	148	3.82	.85	-.66*	.70
HS	147	3.80	.97	.07	-.44
GF	147	3.95	.99	-.50*	.11
DEV	147	2.81	.96	.02	-.64
ER	148	2.95	.93	.21	-.31
RSES	148	2.93	.57	-.23	-.05
RPQ Proactive	146	1.13	.23	2.52*	6.52*
RPQ Reactive	146	1.53	.36	.82*	.56
TRIPM Boldness	148	.57	.20	-.39	-.30
TRIPM Meanness	148	.14	.15	1.50*	2.04*
TRIPM Disinhibition	148	.23	.17	.70*	-.37
AQ	148	2.25	.62	.63*	-.05
DERS	148	2.44	.66	.45*	-.38
FS	148	5.58	.86	-1.09*	1.58*
Openness	148	3.50	.61	-.16	-.02
Conscientiousness	147	3.60	.63	.24	-.54
Extraversion	148	3.22	.77	-.14	-.01
Agreeableness	148	3.85	.62	-.38	-.20
Neuroticism	148	2.96	.79	-.03	-.18
ICAR total	148	.51	.19	-.11	-.06
VR	148	.76	.28	-1.23*	.95*
LN	148	.55	.30	-.30	-.83*
MR	148	.52	.30	.25	-1.00*
R3D	148	.22	.27	1.20*	.74
SRASB proactive	148	2.01	1.07	1.14*	.39
SRASB reactive	148	2.45	1.09	.77*	-.09
SRASB prosocial	148	5.58	.79	-.42*	-.14

Asterisk (*) indicates significant skew or kurtosis

NPI = Narcissistic Personality Inventory; LSRP = Levenson Self-Report Psychoapthy; PNI = Pathological Narcissism Inventory; RSES = Rosenberg Self-Esteem Scale; RPQ = Reactive Proactive Aggression Questionnaire; TriPM = Triarchic Psychopathy Measure; AQ = Aggression Questionnaire; DERS = Difficulties with Emotion Regulation Scale; FS = Flourishing Scale; ICAR = International Cognitive Ability Resource Sample Test

[2] Scale scores computed as the mean score across items

Table 2a. Sample 1 Narcissistic Personality Inventory (NPI) relationships with primary study variables.

	Narcissistic Personality Inventory (NPI)							
	Total	AUTH	SELF	SUP	VAN	EXH	ENT	EXP
PNI Total	.18**	.09	-.04	.07	-.06	.30***	.23***	.23***
CSE	.03	-.07	-.19**	.00	-.13*	.27***	.15*	.07
EXP	.50***	.43***	.19**	.26***	.07	.37***	.29***	.69***
SSSE	.09	.08	.06	.05	.01	.11	-.06	.13
HS	-.06	.05	-.09	-.19**	-.13	-.05	.01	.04
GF	.24***	.17*	.07	.18**	.06	.19**	.26***	.18**
DEV	-.03	-.15*	-.13*	-.05	-.10	.17**	.12	.04
ER	.30***	.13	.06	.19**	.03	.40***	.37***	.22***
LSRP Primary	.43***	.20**	.21**	.20**	.18**	.38***	.45***	.44***
LSRP Secondary	.06	-.12	-.13	.02	-.01	.25***	.20**	.11
TriPM Boldness	.54***	.62***	.41***	.29***	.24***	.21**	.15	.45***
TriPM Meanness	.46***	.20**	.19**	.31***	.20**	.40***	.43***	.40***
TriPM Disinhibition	.09	-.08	-.12	.04	.08	.35***	.12	.05
RPQ Proactive	.28***	.08	.08	.12	.19**	.29***	.32***	.27***
RPQ Reactive	.11	.04	-.08	.06	.06	.14	.21**	.10
AQ	.27***	.13	.01	.16*	.09	.28***	.36***	.22**
MACH-IV	.26***	.08	.02	.15*	.02	.29***	.40***	.28***
DERS	-.06	-.16*	-.21**	-.09	-.06	.19**	.14*	-.04
FS	.23**	.35***	.31***	.20**	.17**	.00	-.13	.09
RSES	.30***	.37***	.42***	.24***	.25***	-.00	.01	.07
Openness	.15*	.15*	.09	.22***	.13	.05	-.01	.07
Conscientiousness	.11	.28***	.33***	.02	.11	-.23***	-.07	.01
Extraversion	.52***	.54***	.32***	.31***	.24***	.41***	.14*	.36***
Agreeableness	-.26***	-.09	-.08	-.14*	-.04	.23***	-.45***	-.21**
Neuroticism	-.21***	-.21**	-.34***	-.10	-.17**	-.01	.01	-.18**

NPI = Narcissistic Personality Inventory; AUTH = Authority; SELF = Self-Sufficiency; SUP = Superiority; VAN = Vanity; EXH = Exhibitionism; ENT = Entitlement; EXP = Exploitativeness; PNI = Pathological Narcissism Inventory; PNI subscale abbreviations: CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.; LSRP = Levenson Self Report Psychopathy measure; TriPM = Triarchic Psychopathy Measure; RPQ = Reactive-Proactive Aggression Questionnaire; AQ = Aggression Questionnaire; MACH-IV = Machiavellianism Scale-IV; DERS = Difficulties with Emotion Regulation Scale.

All values are Pearson *r*-values. *$p < .05$, **$p < .01$, ***$p < .001$

Table 2b. Sample 2 Narcissistic Personality Inventory (NPI) relationships with primary study variables.

	Narcissistic Personality Inventory (NPI)							
	Total	AUTH	SELF	SUP	VAN	EXH	ENT	EXP
PNI Total	.14	.09	-.14	.06	.00	.19*	.20*	.18*
CSE	-.06	-.07	-.34***	.04	-.11	.14	.07	.00
EXP	.52***	.40***	.16	.17*	.22**	.35***	.23**	.69***
SSSE	.05	.02	.01	.04	.04	.10	-.06	.06
HS	-.10	-.04	-.08	-.28***	-.15	-.07	.10	.03
GF	.28***	.10	.03	.28***	.07	.28***	.28***	.18*
DEV	-.03	-.02	-.13	-.08	-.00	-.00	.11	-.01
ER	.26***	.21**	-.06	.14	.12	.18*	.32***	.20*
LSRP Primary	.33***	.23**	.01	.12	.03	.27**	.38***	.37***
LSRP Secondary	.04	-.04	-.23**	-.09	-.05	.16	.22**	.19*
TriPM Boldness	.62***	.58***	.51***	.32***	.28***	.25**	.18*	.49***
TriPM Meanness	.30***	.17*	.08	.12	-.01	.17*	.43***	.29***
TriPM Disinhibition	.14	-.03	-.19*	.09	.02	.28***	.31***	.16
RPQ Proactive	.10	.01	-.13	-.02	-.05	.18*	.21**	.19*
RPQ Reactive	-.04	-.02	-.22**	-.08	-.08	.04	.11	.08
AQ	.12	.10	-.10	-.03	-.09	.15	.24**	.18*
SRASB Proactive	.26***	.20*	.04	.10	.10	.23**	.29***	.12
SRASB Reactive	.23***	.16*	-.06	.13	.09	.21*	.36***	.09
MACH-IV	.27**	.08	.03	.09	-.02	.21*	.45***	.33***
DERS	-.22	-.19*	-.33***	-.25**	-.20*	-.02	.08	-.05
FS	.28**	.25**	.38***	.25**	.28***	.10	-.15	.12
RSES	.35***	.27***	.45***	.32***	.33***	.02	.06	.15
Openness	.20*	.17*	.07	.16	.19*	.08	.11	.11
Conscientiousness	.16	.24**	.31***	.15	.12	-.15	-.04	.02
Extraversion	.43***	.42***	.24**	.17*	.21*	.37***	.04	.34***
Agreeableness	-.12	-.14	.07	.10	.19*	-.06	-.38***	-.20*
Neuroticism	-.28***	-.20*	-.37***	-.21*	-.23**	-.11	-.04	-.09

NPI = Narcissistic Personality Inventory; AUTH = Authority; SELF = Self-Sufficiency; SUP = Superiority; VAN = Vanity; EXH = Exhibitionism; ENT = Entitlement; EXP = Exploitativeness; PNI = Pathological Narcissism Inventory; PNI subscale abbreviations: CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.; LSRP = Levenson Self Report Psychopathy measure; TriPM = Triarchic Psychopathy Measure; RPQ = Reactive-Proactive Aggression Questionnaire; AQ = Aggression Questionnaire; SRASB = Self-Report of Aggression and Social Behavior; MACH-IV = Machiavellianism Scale-IV; DERS = Difficulties with Emotion Regulation Scale.

All values are Pearson *r*-values. *$p < .05$, **$p < .01$, ***$p < .001$

Table 3a. Sample 1. Pathological Narcissism Inventory (PNI) relationships with primary study variables.

	Pathological Narcissism Inventory (PNI)							
	Total	CSE	EXP	SSSE	HS	GF	DEV	ER
NPI Total	.18**	.03	.50***	.09	-.06	.24***	-.03	.30***
AUTH	.09	-.07	.43***	.08	.05	.17*	-.15*	.13
SELF	-.04	-.19**	.19**	.06	-.09	.07	-.13*	.06
SUP	.07	.00	.26***	.05	-.19**	.18**	-.05	.19**
VAN	-.06	-.13*	.07	.01	-.13	.06	-.10	.03
EXH	.30***	.27***	.37***	.11	-.05	.19**	.17**	.40***
ENT	.23***	.15*	.29***	-.06	.01	.26***	.12	.37***
EXP	.23***	.07	.69***	.13	.04	.18**	.04	.22***
LSRP Primary	.32***	.22***	.42***	.08	.01	.08	.33***	.48***
LSRP Secondary	.44***	.51***	.11	.10	.15*	.08	.53***	.48***
TriPM Boldness	-.11	-.26***	.52***	.07	-.08	.13*	-.30***	-.06
TriPM Meanness	.22***	.15*	.36***	.04	-.05	.16*	.15*	.39***
TriPM Disinhibition	.40***	.40***	.11	.11	.10	.11	.33***	.38***
RPQ Proactive	.21***	.17*	.17*	.02	.03	.09	.20**	.31***
RPQ Reactive	.35***	.30***	.06	.12	.21**	.30***	.26***	.38***
AQ	.48***	.46***	.22***	.15*	.16*	.26***	.41***	.57***
MACH-IV	.38***	.34***	.26***	.09	.23***	.16*	.29***	.45***
DERS	.47***	.56***	-.00	.15*	.33***	.14*	.48***	.39***
FS	-.17***	-.36***	.19**	.14*	-.10	.04	-.30***	-.19**
RSES	-.38***	-.57***	.06	-.09	-.23***	-.08	-.40***	-.27***
Openness	-.07	-.20**	.18**	-.03	-.04	.14*	-.16*	-.09
Conscientiousness	-.25***	-.38***	.03	.01	.01	-.05	-.37***	-.25***
Extraversion	-.03	-.14*	.33***	.12	-.17**	.12	-.21**	-.01
Agreeableness	-.21***	-.23***	-.17**	.17*	-.07	-.03	-.20**	-.39***
Neuroticism	.36***	.51***	-.16*	.04	.20**	.12	.41***	.32***

NPI = Narcissistic Personality Inventory; AUTH = Authority; SELF = Self-Sufficiency; SUP = Superiority; VAN = Vanity; EXH = Exhibitionism; ENT = Entitlement; EXP = Exploitativeness; PNI = Pathological Narcissism Inventory; PNI subscale abbreviations: CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.; LSRP = Levenson Self Report Psychopathy measure; TriPM = Triarchic Psychopathy Measure; RPQ = Reactive-Proactive Aggression Questionnaire; AQ = Aggression Questionnaire; MACH-IV = Machiavellianism Scale-IV; DERS = Difficulties with Emotion Regulation Scale.

All values are Pearson *r*-values. *$p < .05$, **$p < .01$, ***$p < .001$

Table 3b. Sample 2. Pathological Narcissism Inventory (PNI) relationships with primary study variables.

	Pathological Narcissism Inventory (PNI)							
	Total	CSE	EXP	SSSE	HS	GF	DEV	ER
NPI Total	.14	-.06	.52***	.05	-.10	.28***	-.03	.26**
AUTH	.09	-.07	.40***	.02	-.04	.10	-.02	.21**
SELF	-.14	-.34***	.16	.01	-.08	.03	-.13	-.06
SUP	.06	.04	.17*	.04	-.28***	.28***	-.08	.14
VAN	.00	-.11	.22**	.04	-.15	.07	-.00	.12
EXH	.19*	.14	.35***	.10	-.07	.28***	-.00	.18*
ENT	.20*	.07	.23**	-.06	.10	.28***	.11	.32***
EXP	.18*	.00	.69***	.06	.03	.18*	-.01	.20*
LSRP Primary	.36***	.24**	.45***	.02	.08	.15	.31***	.53***
LSRP Secondary	.45***	.38***	.32***	.07	.26**	.12	.48***	.51***
TriPM Boldness	-.11	-.35***	.43***	.01	-.17*	.04	-.20*	.05
TriPM Meanness	.22***	.12	.35***	-.13	.14	.08	.17*	.35***
TriPM Disinhibition	.40***	.38***	.27**	.02	.25**	.18*	.40***	.37***
RPQ Proactive	.32***	.25**	.25**	.04	.20*	.20*	.29***	.31***
RPQ Reactive	.29***	.26**	.10	-.03	.30***	.10	.28***	.30***
AQ	.46***	.33***	.34***	.14	.32***	.17*	.39***	.57***
SRASB Proactive	.38***	.26**	.33***	.09	.04	.13	.44***	.55***
SRASB Reactive	.51***	.39***	.35***	.20*	.22**	.22**	.46***	.61***
MACH-IV	.34***	.24**	.41***	-.06	.26**	.22*	.19*	.40***
DERS	.54***	.61***	.15	.11	.52***	.11	.59***	.31***
FS	-.25***	-.35***	-.01	.10	-.22**	.06	-.36***	-.26**
RSES	-.40***	-.56***	.03	-.07	-.40***	-.02	-.42***	-.22**
Openness	-.04	-.05	.06	-.11	-.08	.11	-.03	-.08
Conscientiousness	-.23***	-.30***	-.07	-.08	-.03	-.05	-.26**	-.23**
Extraversion	-.10	-.21*	.29***	.07	-.22**	.03	-.17*	-.04
Agreeableness	-.37***	-.29***	-.31***	.02	-.28***	-.04	-.35***	-.50***
Neuroticism	.34***	.45***	.03	.05	.36***	-.03	.39***	.20*

NPI = Narcissistic Personality Inventory; AUTH = Authority; SELF = Self-Sufficiency; SUP = Superiority; VAN = Vanity; EXH = Exhibitionism; ENT = Entitlement; EXP = Exploitativeness; PNI = Pathological Narcissism Inventory; PNI subscale abbreviations: CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.; LSRP = Levenson Self Report Psychopathy measure; TriPM = Triarchic Psychopathy Measure; RPQ = Reactive-Proactive Aggression Questionnaire; AQ = Aggression Questionnaire; SRASB = Self-Report of Aggression and Social Behavior; MACH-IV = Machiavellianism Scale-IV; DERS = Difficulties with Emotion Regulation Scale.

All values are Pearson *r*-values. *$p < .05$, **$p < .01$, ***$p < .001$

Table 4. Relationships between Likability and Writing Quality and primary study variables.

	Likability Neu/Pos	Likability Neg/Crit	Quality Neu/Pos	Quality Neg/Crit	Likability Difference	Quality Difference	Overall Difference
NPI Total	.00	-.08	-.03	-.05	-.08	-.02	-.06
Authority	.05	-.15	-.09	-.06	-.17*	.00	-.09
Self-sufficiency	-.05	.06	-.00	-.03	.08	-.03	.03
Superiority	-.05	-.08	.11	-.04	-.06	-.11	-.09
Exhibitionism	.08	.00	-.06	-.03	-.03	.01	-.01
Exploitative	.04	-.13	-.05	-.09	-.15	-.05	-.11
Vanity	-.05	.09	.07	.05	.11	.00	.06
Entitlement	-.06	-.04	-.05	.04	-.01	.06	.03
PNI Total	-.01	-.12	.03	-.06	-.11	-.08	-.10
CSE	.06	-.13	.01	-.10	-.16	-.10	-.14
EXP	-.02	-.13	-.03	-.07	-.12	-.05	-.09
SSSE	-.08	.06	.00	.04	.10	.04	.07
HS	-.02	-.10	.06	-.04	-.08	-.08	-.09
GF	.03	-.07	.04	.08	-.08	.05	-.02
DEV	-.05	-.05	.03	-.11	-.02	-.12	-.08
ER	-.07	-.13	.06	-.06	-.09	-.09	-.10
LSRP Primary	-.02	-.06	.06	-.02	-.05	-.06	-.06
LSRP Secondary	-.02	-.05	.03	-.03	-.03	-.05	-.04
TriPM Boldness	-.02	-.00	-.06	-.00	.01	.04	.03
TriPM Meanness	-.21*	-.12	-.05	-.09	-.01	-.05	-.03
TriPM Disinhibition	-.22**	-.12	-.15	-.17*	-.01	-.06	-.04
RPQ Proactive	-.23**	-.11	-.12	-.08	.01	.01	.01
RPQ Reactive	-.09	-.25**	-.04	-.21*	-.20*	-.17*	-.21*
AQ	-.08	-.23**	.06	-.11	-.18*	-.14	-.18*
MACH-IV	-.07	-.13	.06	-.08	-.09	-.11	-.11
DERS	-.04	-.12	-.01	-.13	-.10	-.11	-.12
FS	.10	.07	-.01	.04	.02	.04	.03
SRASB proactive	-.07	-.08	-.01	-.07	-.04	-.06	-.06
SRASB reactive	-.18*	-.06	.00	-.02	.03	-.02	.01
SRASB prosocial	.10	.09	-.02	.05	.04	.06	.06
Openness	.14	.04	.02	.08	-.03	.06	.02
Conscientiousness	-.01	.01	.11	.00	.02	-.07	-.03
Extraversion	-.01	.04	-.07	.06	.05	.10	.08
Agreeableness	.16	.17*	.03	.18*	.09	.14	.13
Neuroticism	.04	-.16*	-.00	-.19*	-.18*	-.17*	-.20*

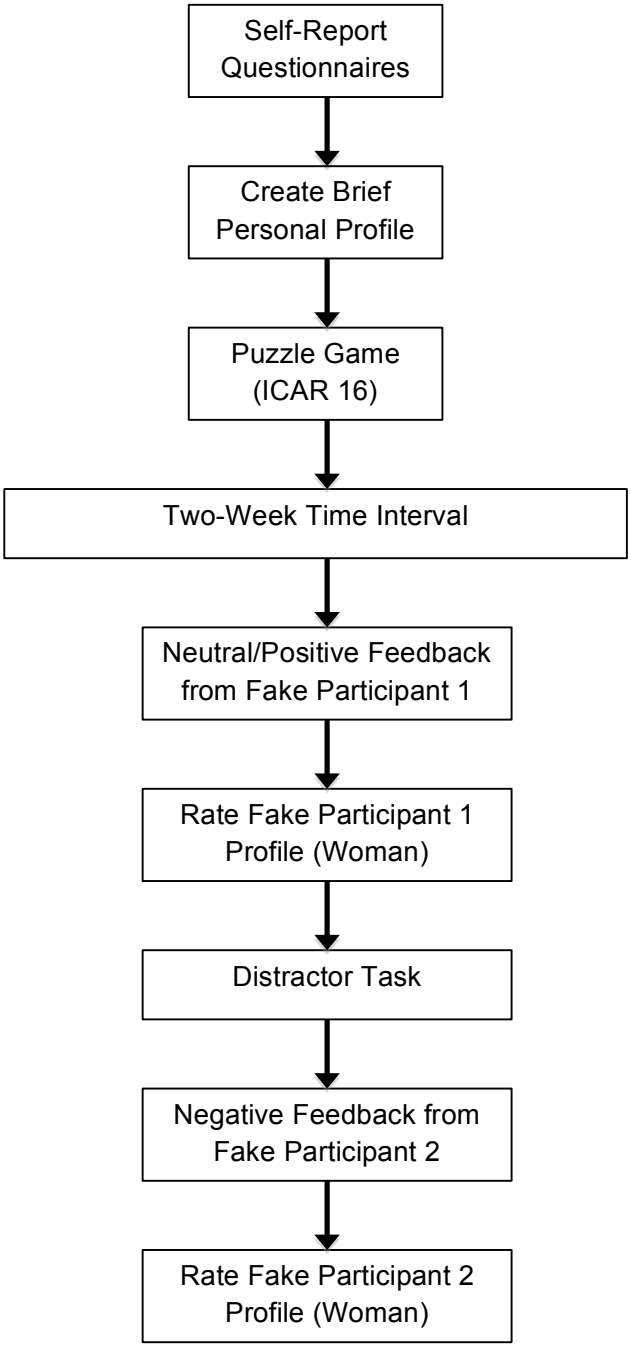
NPI = Narcissistic Personality Inventory; PNI = Pathological Narcissism Inventory; PNI subscale abbreviations: CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.; LSRP = Levenson Self Report Psychopathy measure; TriPM = Triarchic Psychopathy Measure; RPQ = Reactive-Proactive Aggression Questionnaire; AQ = Aggression Questionnaire; MACH-IV = Machiavellianism Scale-IV; DERS = Difficulties with Emotion Regulation Scale; FS = Flourishing Scale.
*$p < .05$, **$p < .01$, ***$p < .001$

Table 5. Relationships between Point Deduction and primary study variables.

	Deduct Neu/Pos	Deduct Neg/Crit	Deduct Difference
NPI Total	.10	.17*	.12
Authority	.06	.21**	.23**
Self-sufficiency	-.09	-.08	-.02
Superiority	.14	.13	.03
Exhibitionism	.15	.11	-.00
Exploitative	.09	.18*	.15
Vanity	.02	-.05	-.09
Entitlement	.06	.12	.09
PNI Total	.08	.16*	.14
CSE	.07	.13	.11
EXP	.14	.24**	.18*
SSSE	.06	.05	.00
HS	-.04	.10	.18*
GF	.07	.07	.03
DEV	.02	.04	.04
ER	.08	.18*	.16
LSRP Primary	.23**	.17*	.01
LSRP Secondary	.09	.08	.02
TriPM Boldness	-.01	.04	.06
TriPM Meanness	.15	.16	.06
TriPM Disinhibition	.10	.12	.06
RPQ Proactive	.22**	.14	-.04
RPQ Reactive	.16	.16*	.06
AQ	.17*	.15	.03
MACH-IV	.06	.14	.13
DERS	.02	.04	.04
FS	-.09	-.04	.04
SRASB proactive	.15	.16*	.07
SRASB reactive	.15	.16*	.07
SRASB prosocial	-.12	-.11	-.03
Openness	-.06	-.03	.02
Conscientiousness	.04	-.01	-.05
Extraversion	-.10	.01	.11
Agreeableness	-.12	-.14	-.07
Neuroticism	.07	.08	.03

NPI = Narcissistic Personality Inventory; PNI = Pathological Narcissism Inventory; PNI subscale abbreviations: CSE = Contingent Self-Esteem; EXP = Exploitative; SSSE = Self-Sacrificing Self-Enhancement; HS = Hiding the Self; GF = Grandiose Fantasy; DEV = Devaluing; ER = Entitlement Rage.; LSRP = Levenson Self Report Psychopathy measure; TriPM = Triarchic Psychopathy Measure; RPQ = Reactive-Proactive Aggression Questionnaire; AQ = Aggression Questionnaire; MACH-IV = Machiavellianism Scale-IV; DERS = Difficulties with Emotion Regulation Scale; FS = Flourishing Scale.
*$p < .05$, **$p < .01$, ***$p < .001$

Figure 1a. Study 2. Condition 1.[3]



[3] Participants rated each Fake Participant Profile on Likability and Writing Quality, and had the option to deduct points from the Fake Participant's score on the Puzzle Game

Figure 1b. Study 2. Condition 2.

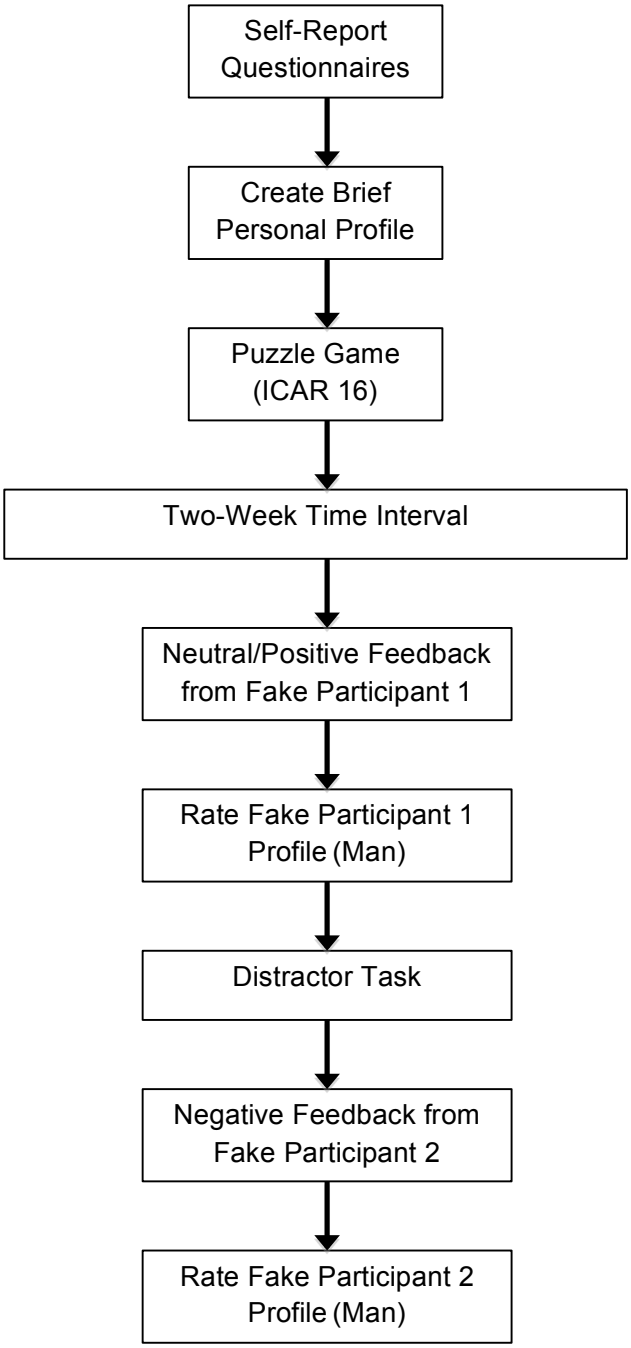


Figure 2a. Sample 1 as inclusion criteria were applied.

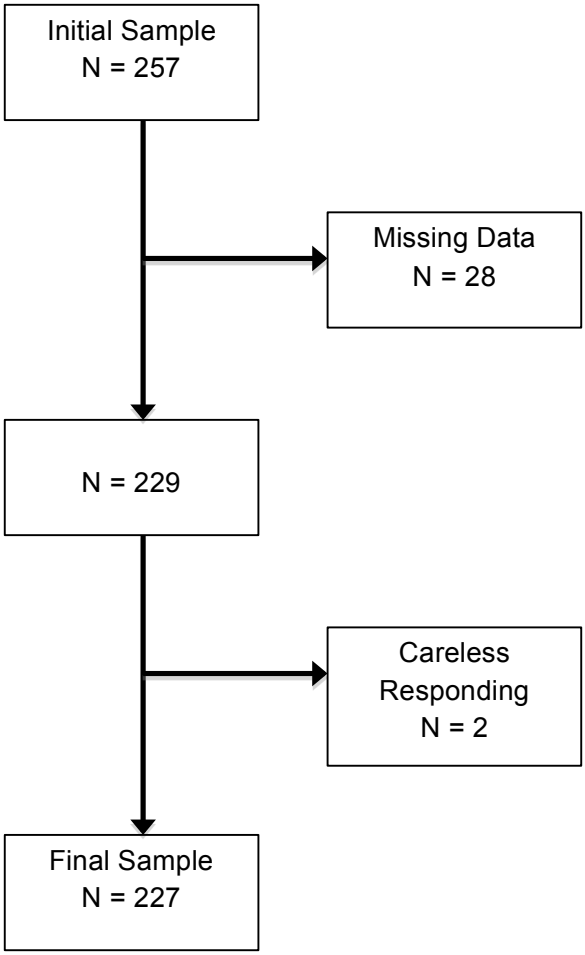


Figure 2b. Sample 2 as inclusion criteria were applied.

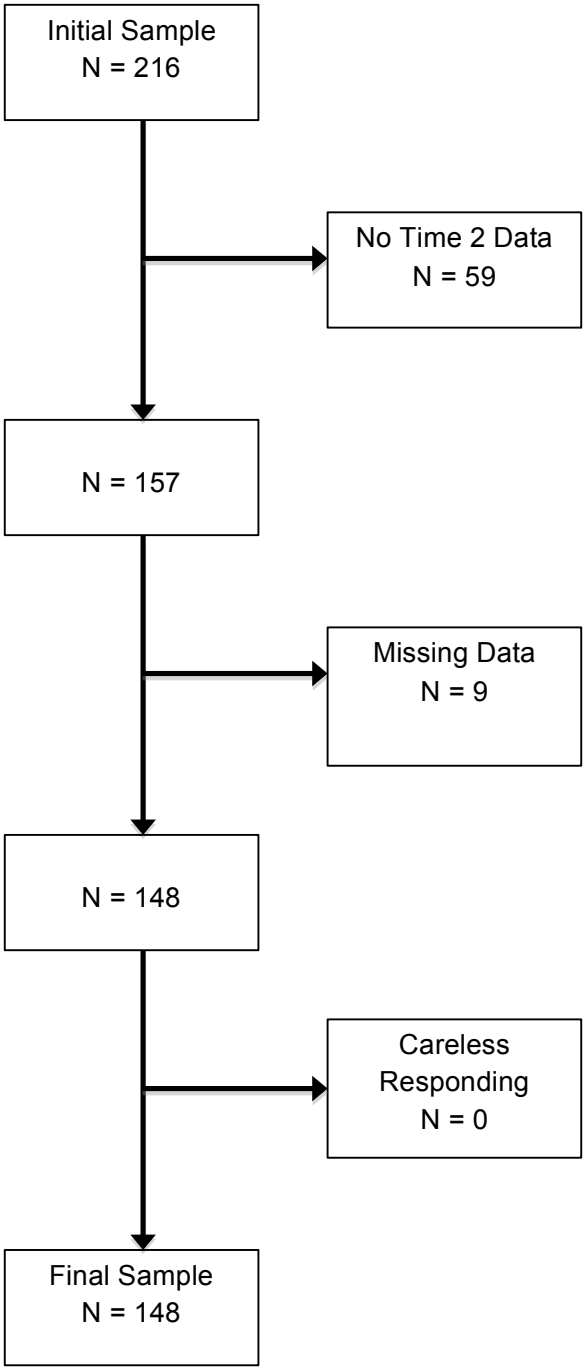
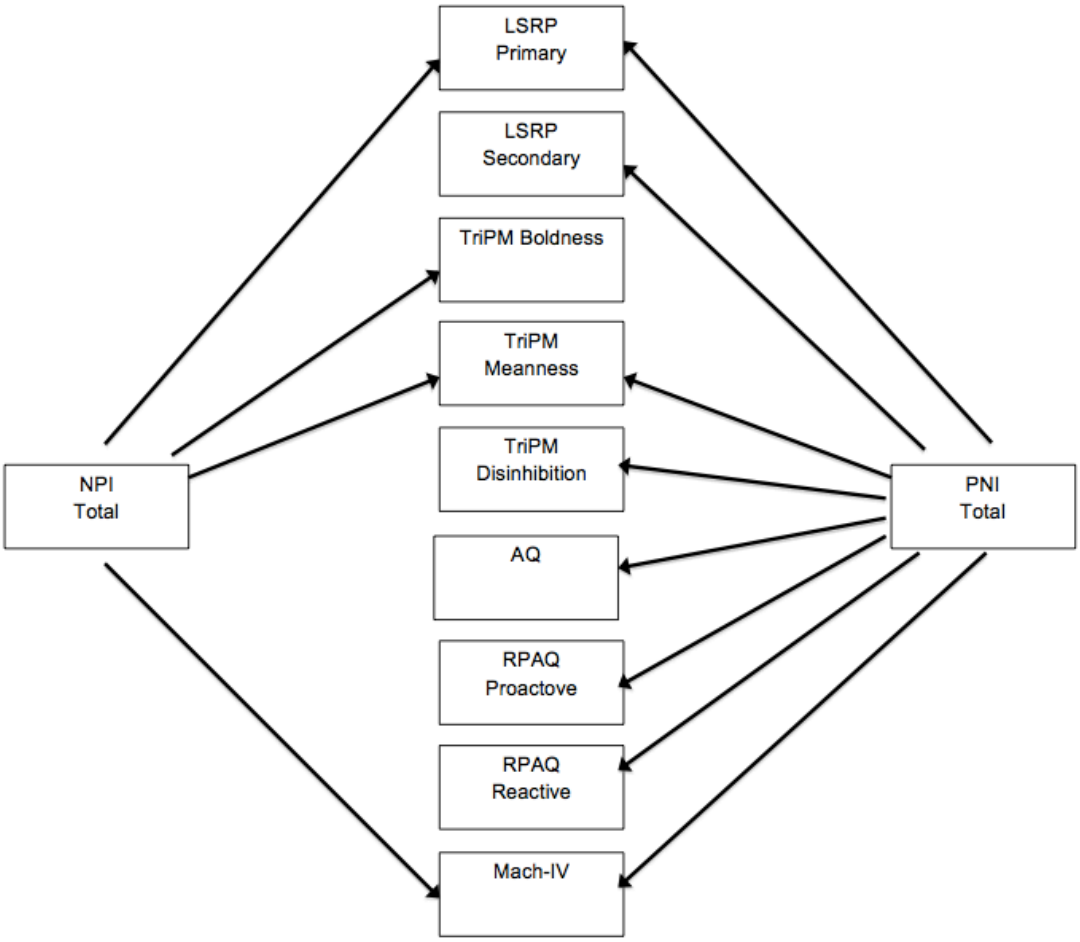
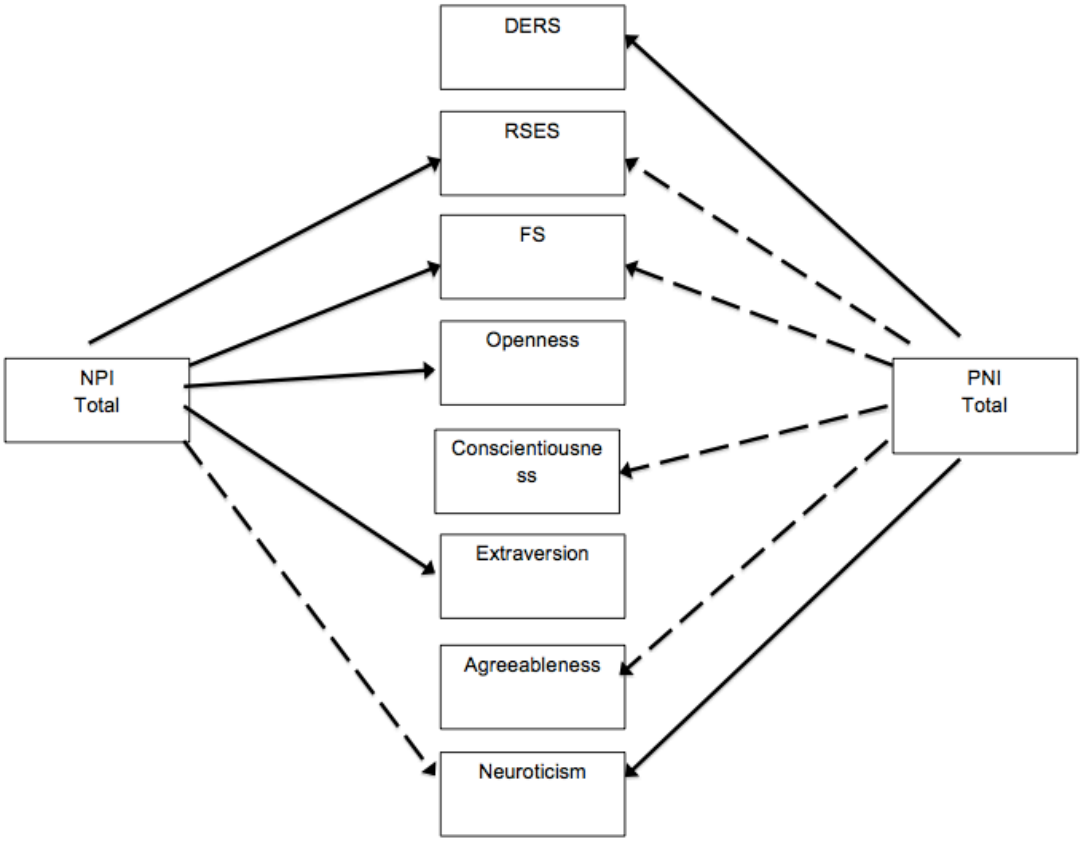


Figure 3a. NPI and PNI replicated positive relationships with main study variables[4]



[4] No significant negative relationships were observed between the NPI or PNI and these variables in either Sample 1 or Sample 2

Figure 3b. NPI and PNI replicated relationships with main study variables[5]



[5] Solid lines represent replicated significant positive relationships; Dashed lines represent replicated significant negative relaitonships

APPENDIX.

Instructions to Pilot Project Raters:

Personal Profile Survey

As a part of an ongoing research project, we are collecting brief personal profiles written by college students. We are interested in how profiles will be rated with respect to WRITING QUALITY and LIKABILITY.

Please rate the following profiles on their WRITING QUALITY and LIKABILITY on a scale of 1-10

1 = extremely low writing quality/likability and
10 = extremely high writing quality/liability

Example of Profile Rating:

Profile 2

Hey! I'm a biology major, though I ultimately want to become a dentist. I like being around people whether it's in a party or just hanging out with some friends. I also like to volunteer. I am most involved in the Big Brother program as a big brother and I have to say it's great. It's nice to provide that kind of stability and support for someone. I'm also an animal person and tend to prefer dogs (no offense to cats). I love my dog and he's probably one of the main highlights of my visits home. I don't have a lot of hobbies since school keeps me pretty busy, but I do like to cook. It's not always easy given my budget and time constraints, but I enjoy doing it when I can. I also like trying new foods. I grew up in a pretty small town so I enjoy trying new things. But, like I said, school takes up most of my time. I'm really focusing on readying myself for dental school. I guess you could say I also value hard work.

Writing Quality

	1	2	3	4	5	6	7	8	9	10	
Extremely Poor Writing Quality	○	○	○	○	○	○	○	○	○	○	Excellent Writing Quality

Likability

	1	2	3	4	5	6	7	8	9	10	
Extremely Low Likability	○	○	○	○	○	○	○	○	○	○	Extremely High Likability

Man Profile 1

Hey! I'm a biology major, though I ultimately want to become a dentist. I like being around people whether it's in a party or just hanging out with some friends. I also like to volunteer. I am most involved in the Big Brother program as a big brother and I have to say it's great. It's nice to provide that kind of stability and support for someone. I'm also an animal person and tend to prefer dogs (no offense to cats). I love my dog and he's probably one of the main highlights of my visits home.

I don't have a lot of hobbies since school keeps me pretty busy, but I do like to cook. It's not always easy given my budget and time constraints, but I enjoy doing it when I can. I also like trying new foods. I grew up in a pretty small town so I enjoy trying new things. But, like I said, school takes up most of my time. I'm really focusing on readying myself for dental school. I guess you could say I also value hard work.

Man Profile 2

Hey! I'm a music major with a particular interest in classical music. A lot of people can't imagine what I'll do with a music degree, but I have my aspirations. After giving up my childhood dream of becoming a goat, I decide to set my sights on a lucrative career in music therapy. I'm very happy with my career choice. It allows me to follow my musical passions while I help others. I actually really value altruism. My current good deed is growing my hair out for Locks for Love. It's been quite a few months and I'm starting to look like a male Rapunzel. More about me, I grew up in a small town and I mean SMALL (like 95% of the population belonged to one of two families). I think that's why I'm so in love with all the noise and activity in the city. Minneapolis is just full to the brim of things to do. Often times, me and my friends just walk around to find stuff to do and we're rarely disappointed. Tho, my favorite activity has to be marathoning. I'm a 5k champ.

Woman Profile 1

I'm a psychology major with an interest in personality psychology. Ultimately, I want to become an academic researcher. In fact, I'm already working on that with my own undergraduate research project. In my free time, I like to take pictures. I've always liked photography and luckily campus has more than enough scenes worth photographing. I also volunteer in the Big Brothers and Big Sisters program as a big sister. My little sister is actually pretty hilarious so I can easily spend hours with her. Another fact about me, was in my high school's archery team. That isn't really useful for my college career, but now I'm really good at darts. So it added to my social life. I'd describe myself as an extrovert. I'd also say I'm pretty conscientious and open minded. I'd like to think I'm agreeable. Some things that I value in others and myself are humor since it brightens almost any situation and mindfulness.

Woman Profile 2

I'm a sophomore and a communications major. I grew up in a small town in northern Minnesota; it was a pretty dull experience and I was more than happy to trade it in for the bustle of Minneapolis. There's just a larger variety of people here and there's always something to do. Often times, me and my sorority sisters just wonder around to find something interesting and are usually successful. It was actually during one of these wonderings that we found our favorite volunteer spot at the House of Charity. I work there regularly now and could honestly see myself going into similar nonprofit work in the future. During the rest of my free time, I like to cook with the few ingredients I can afford and I occasionally have time to read something other than a textbook. However, traveling is by far my favorite activity; especially with others since it's always nice to share and obsess over new experience with those closest to you.