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The conceptualization and assessment of grandiose and vulnerable narcissism: An investigation of common and unique features

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The Conceptualization and Assessment of Grandiose and Vulnerable Narcissism: An Investigation of Common and Unique Features

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Abstract

Researchers agree that there are two narcissism expressions, specifically grandiose and vulnerable narcissism. However, their assessment remains contentious. The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) assesses all aspects of grandiose narcissism for some whereas critics claim it assesses only 'normal narcissism'. The alternative measure, the Pathological Narcissism Inventory (PNI; Pincus et al., 2009), is proposed to measure all aspects of grandiose and vulnerable narcissism, including that which is clinically-significant, despite inconsistent evidence of the nature of its second-order factors and little empirical validation in clinical populations.

The aim of the research reported in this thesis was to adapt the NPI and the PNI to provide more appropriate measures of grandiose and vulnerable narcissism. This was investigated using four separate samples of university undergraduates. A total of 745 students completed a number of measures, including the NPI and PNI, along with self-esteem and Five-Factor personality measures. Additionally, one sample completed a lexical decision task designed to measure self-esteem indirectly (i.e., implicit self-esteem).

As the focus of studies previously investigating how best to assess narcissistic grandiosity and vulnerability has been on content that distinguishes each, there has been little exploration of which narcissism features are common to these expressions beyond the investigation of entitlement and exploitative tendencies. It is argued in this thesis that comprehensive assessment of the narcissism expressions involves the identification and measurement of both common and unique features of narcissism.

The current research examined the items loading on the subscales of the NPI and PNI before using these adapted subscales to construct new measures of the narcissism

expressions. Items measuring common features of narcissism were first identified and distinguished from those assessing unique features of the expressions using factor analyses. The results of these analyses were used to construct new measures. The associations of these measures with proposed correlates of narcissism were compared to those of the PNI grandiosity and vulnerability measures.

Five separate studies were conducted. In Studies 1 and 2, the factor structures of the NPI and PNI were of interest because the results of previous studies have failed to replicate findings. Accordingly, these scales were submitted to exploratory factor analyses. In most cases, the original subscales of these measures reported by Raskin and Terry (1988) and Pincus and colleagues (2009), established using principal components analyses, were found. The NPI and PNI factors, established in Studies 1 and 2, were then used to compare models of grandiose and vulnerable narcissism. One model used PNI subscales alone (i.e., the PNI grandiosity and vulnerability scales), whilst a new model included NPI and PNI subscales to assess both common and unique features of the narcissism expressions. Studies 4 and 5 compared the relationships of both these new measures of grandiose and vulnerable narcissism and the PNI's second-order grandiosity and vulnerability factors with measures of implicit and explicit self-esteem and the Big-Five domains. The new measures yielded associations consistent with previous research of Five-Factor model personality domains that distinguish the expressions and also support a proposed moderation of explicit self-esteem by implicit self-esteem reflecting the mask model and inverted mask proposition of narcissism. On balance, predicted findings were more consistently found for the new measures than for the PNI grandiosity and vulnerability scales.

Taken together, the results of this research program indicate that the newly-developed measures which consider common features at the core of narcissism are more

appropriate measures of grandiosity and vulnerability than the PNI subscales. It is also concluded that both the NPI and the PNI are required to assess both narcissism expressions. Future research could further examine subsets of characteristics that distinguish the expressions within identified common features. For example, previous research (e.g., Besser & Priel, 2010; Raskin, Novacek, & Hogan, 1991b) suggests that the common feature of attention seeking, is expressed as a craving for admiration in narcissistic grandiosity but as a need for approval, in vulnerability. The new measures, using established NPI and PNI subscales, do not currently target such distinctions.

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Declaration

This is to certify that

(i) this thesis comprises only my original work,

(ii) due acknowledgement has been made in the text to all other material used,

(iii) the thesis is less than 100,000 words in length, exclusive of tables, figures, reference lists, footnotes and appendices.

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Richard Clarke Davies

April 24, 2015

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Chapter 1: Introduction

"The absence of flaw in beauty is itself a flaw."

Havelock Ellis (1914, p. 695)

Havelock Ellis (1927) first alluded to the myth of Narcissus in connection with a case of auto-eroticism where relatively straightforward features of grandiose self-regard were observed. Almost a century later, as one of the oldest constructs in psychology, our understanding of narcissism is notably more complex, complicated by apparent paradoxes. For instance, the narcissistic individual can appear "self-aggrandizing" yet "threatened and overly sensitive" (Morf & Rhodewalt, 2001, p. 177). Vulnerability is thought to be experienced alongside grandiosity in narcissism and is likely obscured by it (Bromberg, 1983). Nevertheless, vulnerability is directly observable in clinical case studies of narcissistic individuals (Akhtar, 2000). Thus, an individual high in narcissism can appear either grandiose or vulnerable. The paradox has been partially resolved by researchers and clinicians agreeing that there are two expressions of narcissism, known as grandiose and vulnerable narcissism.

The assessment of these expressions is complicated by measure-specific issues. There is a plethora of narcissism measures: for example, the Morey, Waugh, and Blashfield (1985) Narcissism Scale , the Wink and Gough (1990) Narcissism Scale, the Narcissism-Hypersensitivity scale (Serkownek, 1975); the Ego-Sensitivity Scale (Pepper & Strong, 1958); the Hypersensitivity Narcissism Scale (Hendin & Cheek 1997); the California Q-Set Narcissism Prototype (Block 1961); the Narcissistic Personality Inventory (Raskin & Terry, 1988), the Pathological Narcissism Inventory (Pincus et al., 2009); the Five-Factor Narcissism Inventory (Glover, Miller, Lynam, Crego, & Widiger, 2012) ; and narcissism items on the Personality Diagnostic

Questionnaire (Bagby & Farvolden, 2004) and the Schedule for Non-adaptive and Adaptive Personality (Simms & Clark, 2006). All of these measures emphasize different features presumed to reflect narcissism. Some are expected to reflect grandiose features and others, vulnerable ones. The validation of specific measures of narcissism is often determined by how well it positively correlates with another assumed measure of grandiose or vulnerable narcissism. Yet theorists and researchers have not reached consensus about which features are essential to the assessment of the grandiose or vulnerable expression.

The studies, detailed in thesis, investigated the measurement of grandiose and vulnerable narcissism using two popular measures, specifically, the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) and the Pathological Narcissism Inventory (PNI; Pincus et al., 2009). The NPI was originally devised to measure Narcissistic Personality Disorder as conceptualized in the DSM-III (American Psychiatric Association, 1980). Some have argued (e.g., Boldero, Bell, & Hulbert, 2013; Miller & Campbell, 2011) that it is a measure of grandiose narcissism although others claim that it is a weak measure of this expression in that it only assesses adaptive features of narcissism (e.g., Pincus & Lukowitsky, 2010; Rosenthal & Hooley, 2010). The PNI is proposed to measure both grandiose and vulnerable narcissism and is viewed by some as a replacement for the NPI (e.g., Pincus et al., 2009). Critics of the PNI, however, claim that it assesses mostly vulnerable features (Miller & Campbell, 2011; Miller, Lynam, & Campbell, 2014).

Both measures are proposed to be multi-dimensional. These measures were each found to assess seven principal components by their authors (Pincus et al., 2009; Raskin & Terry, 1988). The NPI subscales are proposed to assess Entitlement, Exploitativeness, Exhibitionism, Vanity, Authority, Superiority and Self-sufficiency

(Raskin & Terry, 1988). However, subsequent analyses show little consensus about the factor structure of the NPI (2-7 factors have been found; e.g., Ackerman et al., 2011; Boldero et al., 2013; Corry, Merritt, Mrug, & Pamp, 2008; Kubarych, Deary, & Austin, 2004). The PNI assesses Entitlement Rage, Grandiose Fantasy, Contingent Self-Esteem, Hiding the Self, Devaluing and Self-Sacrificing Self-Enhancement (Pincus et al., 2009). It also has an Exploitativeness subscale that has identical items to Raskin and Terry's NPI Exploitativeness subscale, when the latter is the rating scale response version (Miller et al., 2014). Nevertheless, the PNI factor structure, particularly its second-order factors (i.e., its grandiosity and vulnerability ones), have not been replicated (e.g., Jakšić, Milas, Ivezić, Wertag, Jokić-Begić, & Pincus, 2014; Tritt, Ryder, Ring, & Pincus, 2010; Wright, Lukowitsky, Pincus, & Conroy, 2010; You, Leung, Lai, & Fu, 2012).

Alongside the issue of how many factors or subscales the NPI and the PNI have, there is little agreement about which of these NPI and PNI features assess the grandiose expression and which assess the vulnerable one. Moreover, there has been no systematic investigation of whether some features are common to both expressions. Thus, the assessment of grandiose and vulnerable narcissism using the NPI and/or the PNI may be less than optimal. Moreover, using one of these measures alone is unlikely to comprehensively assess narcissism.

The results of a recent study suggest that the NPI and the PNI *together* may provide this comprehensive assessment and, therefore, measure both expressions. Maxwell, Donnellan, Hopwood, and Ackerman (2011) found that the NPI and the PNI assess "relatively distinct attributes with the exception of common content focused on entitlement and exploitative tendencies" (p. 581). It is possible that these "distinct attributes" are those specific to the grandiose and vulnerable expressions and that

"common content" are the features common to them (i.e., 'core' features). The task remains to identify which factors of the multi-dimensional NPI and PNI uniquely assess the specific grandiosity and vulnerability dimensions and which ones measure common features. This was a focus of the current research.

The aim of the studies, presented in this thesis, was to develop more appropriate measures of grandiose and vulnerable narcissism using the NPI and the PNI, informed by the view that grandiosity and vulnerability in narcissism are expressions of a common narcissistic core (Cain, Pincus, & Ansell, 2008). As a result, these new measures of grandiosity and vulnerability, adapted from the NPI and PNI subscales, will likely have common narcissistic features in addition to ones that distinguish them.

The research aim is achieved by first identifying the factors that the NPI and the PNI assess using exploratory factor analysis. Subscales assessing these factors are then used to build a second-order factor model of grandiose and vulnerable narcissism. This is informed by theoretical and empirical evidence concerning which NPI and PNI subscales assess grandiose and vulnerable features. This model is subsequently compared to the PNI-assessed model of grandiose and vulnerable narcissism proposed by Wright et al. (2010). In two further studies, the associations of the measures, derived from this new second-order factor model, with factors proposed to be correlates of narcissism, are compared to Wright et al.'s (2010) grandiosity and vulnerability PNI scales.

Study 4 examines the measures' relationships with the Five-Factor model personality domains. Grandiose narcissism is expected to reflect reduced personal distress and an antagonistic, domineering social orientation (Miller, Price, Gentile, Lynam, & Campbell, 2012a; Miller & Campbell, 2011; Wink 1991). Consistent with this proposition, grandiose measures should be positively related to extraversion (i.e.,

social dominance and positive emotionality) and negatively related to neuroticism (i.e., distress and negative emotionality) and agreeableness (i.e., the tendency to be amenable to others). Vulnerable narcissism is associated with personal distress and a cold, distancing personality style where the worth of others is devalued (Dickinson & Pincus, 2003; Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991). Thus, vulnerable measures should be positively related to neuroticism and negatively related to extraversion and agreeableness (Hendin & Cheek, 1997; Houlcroft, Bore, & Munro, 2012).

Grandiose narcissism is also proposed by some researchers (e.g., Miller & Campbell, 2011) to have a positive association with explicit self-esteem (defined as one's self-reported evaluation of self-worth) whereas vulnerable narcissism should be negatively associated (Akhtar & Thomson, 1982; Wink, 1991). The vulnerability that is theoretically obscured in the grandiose expression is proposed to be reflected by low implicit self-esteem (defined as indirectly assessed self-esteem that is less consciously acknowledged), in the presence of higher explicit self-esteem (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003). Conversely, grandiosity that is obscured in the vulnerable expression should be reflected by high implicit self-esteem, in the presence of lower explicit self-esteem (Bosson & Prewitt-Freilino, 2007). Thus, Study 5 examined whether the relationships between the measures of grandiosity and vulnerability and explicit self-esteem are moderated by implicit self-esteem.

The results of these two studies provide initial evidence that the proposed measures of narcissistic grandiosity and vulnerability are more appropriate for the assessment of the expressions than the PNI's grandiosity and vulnerability scales (Wright et al., 2010). In this way, Maxwell et al.'s (2011) finding that the NPI and PNI are both relevant to the assessment of pathological narcissism is extended.

1.1 Justification for the Research

The NPI has attracted increasing criticism in recent times, despite its use in the majority of narcissism research since 1985 (Cain, Pincus, & Ansell, 2008). This includes claims that it assesses adaptive features, linked to self-esteem, that are not features of narcissism (Brown, Budzek & Tamborski, 2009; Rosenthal & Hooley, 2010). Despite criticisms, narcissism, assessed using the NPI, is associated with maladaptive behavior, including sexual risk-taking (Widman & McNulty, 2010); alcohol use (Luhtanen & Crocker, 2005), reduced capacity to forgive (Exline, Baumeister, Bushman, Campbell, & Finkel, 2004), and anti-social behavior (Miller et al., 2010). Indeed, Miller and Campbell (2011) warned that the NPI should not be prematurely discarded as a narcissism measure, given its positive associations with features of psychopathy (e.g., Paulhus, Williams, & Harms, 2001). Despite this, some recent research has used the PNI alone to measure both grandiose and vulnerable narcissism or has relegated the NPI to the assessment of 'normal' narcissism (e.g., Back et al., 2013; Houlcroft et al., 2012; Zeigler-Hill & Besser, 2011). However, there is equivocal empirical support for these practices. In addition, as the PNI's items are designed to assess personal distress in narcissism, it does not assess narcissistic features that are unrelated to distress (e.g., vanity, superiority & authority), despite links to anti-social behavior (Miller & Campbell, 2011). Hence, it is important to further investigate what the two measures actually assess.

1.2 Thesis Outline

In the next chapter, Chapter 2, conceptualizations of grandiose and vulnerable narcissism from the perspectives of clinical and social/personality psychology are discussed. It is argued that current conceptualizations of grandiose and vulnerable

narcissism are conflated with categorical notions of normal versus abnormal personality characteristics, respectively. This is inconsistent with a dimensional approach to personality pathology. Further, this conflation leads to an assumption that vulnerable narcissism features are necessarily pathological whereas grandiose ones reflect non-pathological functioning. In Chapter 3, the use of the NPI and the PNI as measures of multi-dimensional narcissism is discussed. As part of this discussion, the failure to find a consistent first-order factor structure for the NPI (e.g., Ackerman et al., 2011; Boldero et al., 2013; Corry et al., 2008; Kubarych et al., 2004) is attributed to the use of versions that use a forced-choice response format for items and less than optimal factor analytic techniques. Similarly, the PNI's first- and second-order factor structures have not been replicated (e.g., Diguer et al., 2014; Tritt et al., 2010; Wright et al., 2010; You et al., 2012). In Chapter 4, the theoretical literature and empirical evidence for features common to grandiose and vulnerable narcissism are reviewed and a proposal that several subscales of the NPI and PNI might assess these is presented. In Chapter 5, Five-Factor personality measure relationships with grandiose and vulnerable narcissism are reviewed. In Chapter 6, the empirical relationships of grandiose and vulnerable narcissism with explicit self-esteem are discussed and their proposed moderation by implicit self-esteem reviewed. Issues regarding the measurement of implicit self-esteem are also discussed and suggestions for improvement of this are made.

The rationale for the research presented in this thesis is outlined in Chapter 7. In Chapters 8 to 12, the results of five empirical studies are reported. Chapters 8 and 9 (i.e., Studies 1 and 2) report the findings of first-order exploratory factor analyses of the NPI and PNI. Using the factors identified in these analyses, a third study presented in Chapter 10, explores the re-conceptualization of grandiose and vulnerable narcissism using second-order factor analysis. In this study, some NPI and PNI subscales are

specified to load on a grandiose or vulnerable latent factor and others are permitted to load on both, based on the theoretical literature and empirical evidence. The fit of this model is compared to Wright et al.'s (2010) second-order model of PNI-assessed grandiosity and vulnerability. In Chapter 11 (Study 4), the relationships of the measures, derived from the analyses reported in Chapter 10, with Five-Factor personality domains are examined. In Chapter 11 (Study 5), the same grandiose and vulnerable measures' relationships with explicit self-esteem are examined. Of specific interest is whether these are moderated by implicit self-esteem in ways that are consistent with propositions about the nature of the two narcissism expressions. Finally, in Chapter 13, a general discussion presents the conclusions that can be drawn from this research, suggesting wider implications and future research directions.

1.3 Terminology

Earlier research distinguished 'overt' from 'covert' narcissism (e.g., Akhtar & Thomson, 1982; Wink 1991). In this thesis, these earlier expressions are considered to be synonymous with the current definitions of grandiose and vulnerable narcissism. 'Overt' narcissism refers to observable self-enhancement reflected in narcissistic grandiosity whereas 'covert' narcissism refers to observable social distancing and hidden grandiosity that reflects narcissistic vulnerability (Dickinson & Pincus, 2003). Pincus and Lukowitsky (2010) argued that using the 'overt' and 'covert' labels encourages "a criterion problem" (p. 430) across social/personality and clinical sub-disciplines, given that the 'grandiose' and 'vulnerable' labels are more commonly used in clinical research. Hence, most researchers have now embraced the latter terms. Consequently, in this thesis, grandiose and vulnerable narcissism are used to refer to the constructs previously referred to as overt and covert narcissism, respectively.

1.4 Summary

In summary, new conceptualizations of grandiose and vulnerable narcissism are proposed and measures of them developed based on an empirically-derived knowledge about common features of narcissism. Subsequently, whether these measures, formed from NPI and PNI subscales, better assess the narcissism expressions than the PNI's grandiosity and vulnerability scales (Wright et al., 2010) was investigated.

The relative utility of the two different ways of measuring grandiose and vulnerable narcissism was first investigated by examining relationships with the Five-Factor personality domains. Grandiose narcissism should reflect a lack of personal distress and an antagonistic and domineering social style, whereas vulnerable narcissism reflects personal distress and a cold, distancing interpersonal style where others are devalued. Thus, grandiose measures were expected to be negatively related to neuroticism and agreeableness, and positively related to extraversion. Moreover, vulnerable measures should be positively related to neuroticism and negatively related to agreeableness and extraversion.

The relatively utility of the two different ways of measuring grandiose and vulnerable narcissism was further explored by examining their relationships with self-esteem. The positive relationships of grandiose measures and the negative relationships of vulnerable measures with explicit (i.e., self-reported) self-esteem were expected to be moderated by implicit self-esteem (one's indirectly assessed self-worth), such that grandiose narcissism is associated with high explicit self-esteem in the presence of low implicit self-esteem, whereas vulnerable narcissism is associated with low explicit self-esteem in the presence of high implicit self-esteem. These relationships reflect the interplay of grandiosity and vulnerability within the narcissism expressions. Expressed grandiosity masks vulnerability in the grandiose expression (Bromberg 1983), whereas

expressed vulnerability masks grandiosity in the vulnerable one (Bosson & Prewitt-Freilino, 2007).

Chapter 2. The Conceptualization of Grandiose and Vulnerable Narcissism

"The narcissistic personality is fraught with contradictions.
The sine qua non of narcissism is grandiose beliefs about the self,
yet narcissists are exceedingly sensitive to experiences that have the
potential to threaten these beliefs."

Zeigler-Hill and Jordan (2012, p. 101)

2.1 Introduction

Divergent lines of theory and research have contributed to the conceptualization of narcissism. Cain, Pincus, and Ansell (2008) outlined three broad areas of empirical work that have largely operated in isolation. Those engaged in clinical research, for example, have developed profiles of 'the narcissist' from case studies which emphasize a vulnerable self-concept and proneness to depression and anxiety (e.g., Akhtar, 2000; Kernberg, 1985; Kohut, 1966). Formulation of the NPD criteria in the Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-5; American Psychiatric Association, 2000, 2013), however, remains focused on the haughty, exhibitionist characteristics of the narcissist, emphasising core features of entitlement and a lack of empathy. Social psychological research, on the other hand, has focussed on narcissism and its social costs, as well as self-regulatory and self-esteem consequences (e.g., Bosson & Prewitt-Freilino, 2007; Bosson, Swann, & Pennebaker, 2000; Campbell, Brunell, & Finkel, 2006; Campbell et al., 2010b; Gregg & Sedikides, 2010; Horvath & Morf, 2010; Morf, 2000; Rhodewalt & Morf, 1995; Zeigler-Hill, 2006).

Not surprisingly, these different lines of research have produced an extensive, complex, and paradoxical knowledge base. Nevertheless, all three have converged on the need for a distinction between two expressions of narcissism. There is now considerable support across these psychology sub-disciplines for the distinction between

grandiose and vulnerable narcissism (Miller, Gentile, Wilson, & Campbell, 2012b; Pincus & Roche, 2011).

This chapter compares current definitions of these expressions across clinical and social/personality psychology. It also clarifies terms that are sometimes used interchangeably in the literature (e.g., 'normal' & 'adaptive'), and compares categorical and dimensional conceptualizations of narcissism.

2.2 Definitions of Narcissism

2.2.1 Grandiose Narcissism

Grandiose narcissism has been defined in social psychology as being composed of "traits such as grandiosity, aggression, and dominance" (Miller et al., 2012b, p. 284). Taking a clinical perspective, Pincus and Roche (2011) emphasized dysfunctional self-regulation, defining grandiose narcissism as involving "intensely felt needs for validation and admiration giving rise to urgent motives to seek out self-enhancement experiences" (p. 32).

2.2.2 Vulnerable Narcissism

From the perspective of social psychology, vulnerable narcissism is defined as "a defensive and insecure grandiosity that obscures feelings of inadequacy, incompetence, and negative affect" (Miller et al., 2012b, p. 284). Pincus and Roche (2011) described a socially avoidant style of self-regulation in their clinical definition of vulnerable narcissism with "increased sensitivity to ego-threat and subsequent self-, emotion-, and behavioral-dysregulation" (p. 32).

2.2.3 Normal versus Pathological Narcissism

Notions of grandiosity and vulnerability are associated with concepts of normal and pathological narcissism in the literature (e.g., Malkin, Zeigler-Hill, Barry, &

Southard, 2012; Miller, Price, & Campbell, 2012c; Wright et al., 2010). Those taking a clinical perspective view normal narcissism as a set of "strategies used to promote a positive self-image and facilitate agency by otherwise psychologically healthy well-adjusted individuals" (Ackerman et al., 2011, p. 68). Thus, normal narcissism is associated with grandiose behavior, in the absence of evidence of self-vulnerability. This implies that normal narcissism should be adaptive, although Malkin et al. (2012) and Miller and Campbell (2011) argued that maladaptive features, such as increased aggression, are associated with measures of, so-called, 'normal' narcissism.

Despite the controversy surrounding whether narcissistic grandiosity is predominantly adaptive or maladaptive, the study of grandiose narcissism in social/personality psychology has been referred to as the study of normal, adaptive narcissism and, as such, has a narrow empirical focus (Pincus & Lukowitsky, 2010; Zeigler-Hill & Besser, 2012). Using this narrow focus as a rationale, Pincus and Lukowitsky (2010) argued for a distinction between normal and pathological narcissism. Pathological narcissism is "characterized by maladaptive self-regulation processes that cause significant distress and impairment" (Ackerman et al., 2011, p. 68), involving both grandiose and vulnerable expressions.

2.3 Self-Esteem and Narcissism Measures

The NPI is a multi-dimensional measure of narcissism frequently used in social/personality research. Either the number of narcissistic statements (versus non-narcissistic statements; e.g., 'I think I am a special person' versus 'I am no better or worse than most people') endorsed as self-descriptive or the degree to which the narcissistic statements are endorsement as self-descriptive on Likert scales are taken as a measure of narcissism, despite the scale's multi-dimensionality (Raskin & Terry, 1988). These scores are positively associated with explicit (i.e., self-reported) self-

esteem (Miller & Campbell, 2011). Pincus and Lukowitsky (2010) argued, however, that this positive association with self-reported self-esteem, which is an indicator of psychological well-being, is evidence that the NPI does not adequately assess pathological narcissism.

Pincus and colleagues (2009) designed their alternative measure, the PNI, to specifically assess pathological narcissism. The PNI is also a multidimensional measure which measures the level of endorsement of narcissistic statements (e.g., 'I feel important when others rely on me') on Likert scales. Some of its subscales are proposed to assess grandiose narcissism whereas others to assess vulnerable narcissism. Its total scale score, however, is proposed to assess pathological narcissism (Pincus et al., 2009). This total score is negatively associated with explicit self-esteem as are scores on other scales that purportedly measure vulnerable narcissism (e.g., Atlas & Them, 2008), such as the Hypersensitive Narcissism Scale (HSNS, Hendin & Cheek, 1997). Despite critics claiming that the PNI is a measure of vulnerable narcissism (Miller and Campbell, 2011, Miller et al., 2014), others claim that this negative association indicates that the scale assesses pathological rather than vulnerable narcissism (Pincus et al., 2009), since it is argued that some PNI subscales assess grandiose features. However, other empirical findings suggest that pathological narcissism can have positive or negative associations with explicit self-esteem (Horvath & Morf, 2010; Raskin, Novacek, & Hogan, 1991a; Watson, Little, Sawrie, Biderman, 1992; Watson, Sawrie, Greene, Arredondo, 2002).

The status of explicit self-esteem as purely adaptive has been questioned (Ellis, 2005) and this may explain unexpected associations with narcissism. Baumeister, Campbell, Krueger and Vohs' (2003) extensive review of explicit self-esteem research indicated that this factor is not necessarily an indicator of psychological adjustment.

They concluded that "High self-esteem may…amplify both prosocial and antisocial tendencies" (p. 36). Miller and Campbell (2011) argued that self-enhancement, encompassing feelings and cognitions of being extraordinary and/or superior to others, can bolster self-esteem. These strategies are used by those high in grandiose narcissism. The brazen self-bolstering and social-domineering, associated with grandiose narcissism that inflates explicit self-esteem, has been shown to be empirically distinct from that of 'genuine' high explicit self-esteem, where individuals self-present more moderately and respond in socially acceptable ways (Raskin et al., 1991a; Horvath & Morf, 2010). Therefore, assuming that all factors that are positively associated with explicit self-esteem are necessarily indicative of psychological well-being is flawed (Baumeister et al., 2003; Hibbard, 1989).

Clinical reliance on case studies rather than empirical investigation using clinical populations may have over-emphasized personal distress and dysfunction at the expense of consideration for the impact of grandiose narcissism on others (Miller & Campbell, 2011). Psychopathy, for example, is correlated with NPI-assessed grandiose narcissism and is also associated with high explicit self-esteem and low distress (Baumeister, Smart, & Boden, 1996; Hart & Hare, 1998; Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003). Moreover, NPI-assessed grandiose narcissism has associations with aggression (Locke, 2009), particularly in young men prone to delinquent behavior (Barry, Grafeman, Adler, & Pickard, 2007; Barry, Pickard, & Ansel, 2009). As a result, social/personality research examining grandiose narcissism remains relevant to the pathological form (Ronningstam, 2005), despite its relationship with high explicit self-esteem. Further, clinical research has demonstrated that high explicit self-esteem is related to extreme psychopathology, such as that reported during bipolar mania episodes (Johnson et al., 2000).

2.4 The Conflation of Terminology in Narcissism

The constructs of normal and grandiose narcissism are potentially conflated. Both are associated with high explicit self-esteem and low distress (Boldero et al., 2013; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004) and can be adaptive or maladaptive (Malkin et al., 2012; Miller & Campbell, 2011). Further, this conflation has led to the relative disregard of a corresponding continuum from normal to pathological in *vulnerable* narcissism.

Early research using the HSNS to assess vulnerable narcissism (Pincus et al., 2009) demonstrated that it can be assessed as an individual difference factor in the normal population. Moreover, Pincus and Lukowitsky (2010) acknowledged that the PNI also assesses narcissistic vulnerability in this population. Thus, it follows that vulnerable narcissism, like its grandiose counterpart, is an aspect of normal – as well as pathological – narcissism. Furthermore, there is evidence that vulnerable narcissism has adaptive qualities. For example, self-regulatory strategies associated with shyness, a proposed correlate of this narcissism expression (Hendin & Cheek, 1997), can protect explicit self-esteem in the short term (Snyder, Smith, Augelli, & Ingram, 1985).

2.5 The Continuum Hypothesis and Grandiose/Vulnerable Dimensions

The distinction between normal and pathological narcissism reflect a broader debate about categorical versus dimensional models of personality disorder (Adler, 2011). Clinical assessment of personality disorders has traditionally involved a categorical diagnosis using criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 2000, 2013), whereas social/personality psychology views personality traits as dimensional – that is, represented by levels of particular trait characteristics (Miller & Campbell, 2010).

2.6 Categorical Diagnosis in the DSM

The DSM uses a psychiatric diagnostic system, modelled on medical diagnosis, which assumes that pathological personality is fundamentally different to normal personality (Reynolds & Lejuez, 2011). Thus, the current diagnostic criteria for narcissism involves cut-off points that not only distinguish normal from pathological narcissistic behaviors using their severity or frequency, but also, using divergent symptomatology (also known as taxonomies or markers), which separate normal from pathological features of narcissism.

Medico-legal certainty is one reason behind the continuation of a categorical diagnostic system, since this provides clear differentiation between those with the disorder and those who do not have it, which can mitigate legal issues and facilitate government services (Mellsop & Kumar, 2007). Nevertheless, Mellsop and Kumar (2011) argued that the lack of straightforward biological markers for many DSM disorders (e.g., schizophrenia; Mellsop, Hutton, & Delahunt, 1985; Jablensky, Herrman, & Gureje, 2006) highlights the inadequacy of a purely categorical system for mental illness.

2.6.1 The DSM and Narcissism

The DSM conceptualization of Narcissistic Personality Disorder (NPD) has been both a source and consequence of considerable confusion (Dickinson & Pincus, 2003). NPD was originally included in the DSM-III (American Psychiatric Association, 1980) because of its widespread use by psychodynamic clinicians who were influenced by Kernberg (1970) and Kohut (1966) (Reynolds & Lejuez, 2011). At that time no studies had been conducted. Similarly, no field work was commissioned when the NPD criteria were revised for inclusion in the DSM-IIIR and so the criteria were based on clinical observations (American Psychiatric Association, 1987). Despite this, both the DSM-III

and DSM-IIIR included proposed grandiose and vulnerable features as criteria for pathological narcissism.

The DSM-IVR (American Psychiatric Association, 2000) criteria intentionally narrowed the diagnostic focus of NPD (Gunderson, Ronningstam, & Smith, 1995) because some criteria had poor reliability and the disorder had high comorbidity with other personality disorders (PDs), such as histrionic, antisocial and borderline PDs. This consequently led to the inclusion of more grandiose elements, such as boastfulness, pretention, arrogance and haughty behaviors, since these had been studied at that time (Reynolds & Lejuez, 2011).

In preparation for the DSM-5 (American Psychiatric Association, 2013), social and clinical psychology researchers called for the NPD diagnostic criteria to include more vulnerable features of narcissism (Miller & Campbell, 2011; Pincus & Lukowitsky, 2010). Both sub-disciplines acknowledge that grandiose and vulnerable narcissism are distinct, dimensional constructs. However, clinical researchers still maintain that pathological narcissism manifests differently from normal narcissism (e.g., Pincus & Lukowitsky, 2010). Specifically, the tension between sub-disciplines relates to the articulation of the grandiose expression (Cain et al., 2008; Miller & Campbell, 2010; Miller et al., 2012c; Pincus & Lukowitsky, 2010). Cain et al. (2008) suggested that leadership and authority represent adaptive, grandiose features, whereas Miller and Campbell (2010) argued for their pathological relevance, demonstrating clear links between leadership, authority, exploitation, and narcissism. Nevertheless, Pincus and Lukowitsky (2010) argued for a dimensional model of narcissism where vulnerable narcissism is exclusively pathological and grandiose narcissism is divided into normal/adaptive and pathological/maladaptive forms. The rationale for this model is the notion that all narcissism can be understood as "as one's capacity to maintain a

relatively positive self-image" (Pincus & Roche, 2011, p. 31) that is essential to normal self-regulatory function. However, when self-regulation becomes dysfunctional, driving poor interpersonal relations and/or contributing to depression, social anxiety and feelings of worthlessness, narcissism becomes pathological. Vulnerable narcissism is associated with feelings of depression, socially-avoidant behavior and low self-esteem (Dickinson & Pincus, 2003; Rathvon & Holmstrom, 1996; Rose, 2002; Wink, 1991) and therefore reflects pathology. However, Pincus and Lukowitsky argued that grandiose narcissism is only pathological at extreme levels, where it can damage interpersonal relationships (Dickinson & Pincus, 2003; Rhodewalt & Morf, 1995).

By contrast, social/personality psychology has historically embraced the single continuum hypothesis with regard to narcissism (Miller & Campbell, 2010). This model posits that narcissism represents a single dimension. In this model, there is no strict division between normal and pathological narcissism. Only extreme narcissism levels are considered pathological. Consistent with this model, Foster and Campbell (2007) found that grandiose narcissism, as measured by the NPI, is dimensional. Using a sample of 3895 participants, taxometric procedures, designed to identify categorical constructs from extreme skew and kurtosis in the response distributions of narcissism indicators (i.e., exhibitionism, exploitativeness or entitlement), and taxometric indicators (i.e., techniques which evaluate the presence of latent classes from characteristics of a sample distribution) supported the notion of dimensionality as opposed to a strict normal/pathological distinction.

There is also evidence for the single continuum hypothesis in studies where explicit self-esteem, depression, assertiveness, competition, and perfectionism levels co-vary from adaptive to maladaptive with narcissism scores, measured by both MMPI clinical profiles and NPI scores (Watson, Hickman, & Morris, 1996; Watson et al.,

2002; Watson, Varnell, & Morris, 2000; Watson, Morris, & Miller, 1998). However, some evidence supports categorical distinctions between normal and pathological personality traits generally (Haslam, 2003), and for narcissism specifically amongst clinical samples (Fossati et al., 2005). Moreover, Foster and Campbell (2007) admitted that their dimensional findings for the NPI might not generalize to clinical narcissism. Nevertheless, Haslam, Holland, and Kuppens (2012), in a recent quantitative review of taxometric research, concluded that most latent variables of interest to clinical psychology, particularly those involving personality and personality disorder, are dimensional in nature. Furthermore, they estimated that taxa were found to exist in as little as 14% of published studies (after accounting for methodological weaknesses in previously used taxometric techniques) and these were largely confined to schizotypy, autism and substance use disorders.

The notion of grandiose and vulnerable narcissism as *separate* dimensions negates the single continuum model (Besser & Priel, 2010; Rose, 2002; Wink, 1991). Nevertheless, a *dual* continuum is plausible, with grandiose and vulnerable dimensions moving from normal adaptive narcissism, extending through normal maladaptive narcissism to pathological narcissism. Wink (1991) found that these dimensions were distinct. Nevertheless, they were both related to core features of narcissism such as conceit, self-indulgence and the disregard of others and, therefore, show common features.

Wink (1991) suggested that high levels of grandiose and vulnerable narcissism were associated with psychological problems and dysfunction. High vulnerable narcissism would be linked to, for example, anxiety, pessimism, life dissatisfaction and sensitivity to trauma. For the grandiose expression, Wink suggested links with overconfidence, aggressiveness and a compulsive need of admiration. Thus, by

inference, low scores on either construct will be associated with decreased difficulties. Anxiety, pessimism, dissatisfaction, overconfidence, aggression and the need for attention are experienced to some extent by all individuals, and do not necessarily indicate clinically significant distress or dysfunction.

2.7 Evolutionary Support for a Dual Expression Continuum

From the perspective of an evolutionary account of personality, traits that are associated with both grandiose and vulnerable narcissism are potentially adaptive or maladaptive at different times and situations (Nettle, 2006). Grandiose narcissism is linked to adaptive outcomes, such as increased sexual conquests (Bushman, Bonacci, van Dijk, & Baumeister, 2003; Foster, 2006). However, Nettle (2005) found that increased sexual conquests are also associated with higher risks of physical injury or illness and poorer involvement in parenting, which are clearly maladaptive outcomes. Broad ranging sexual experiences are also associated with increased likelihood to engage in criminal and antisocial activity (Ellis, 1987).

Anxiety, which is positively associated with vulnerable narcissism (Wink, 1991), is positively associated with enhanced wariness to threatening stimuli and sharpened attention (Mathews, Mackintosh, & Fulcher, 1997). Negative associations with anxiety, such as those found for grandiose narcissism (Wink, 1991), are also associated with dangerous risk-taking. For example, climbers of the Mount Everest are remarkably low on measures of anxiety (Egan & Stelmack, 2003). Yet, given the relative security of modern living, the deleterious effects of high anxiety are often most salient in research (Nettle, 2006).

These examples demonstrate that personality traits associated with apparently adaptive evolutionary features, such as those associated with increased sexual prowess, can be maladaptive. Likewise, personality traits, such as anxiety proneness, are not

necessarily maladaptive. Thus, all points along the grandiose and vulnerable narcissism continua, by virtue of their various associations with certain personality features, also have advantages *and* disadvantages. Accordingly, vulnerable narcissism should have adaptive features alongside its well-defined maladaptive ones. Similarly, grandiose narcissism, which is typically adaptive, also has maladaptive features.

2.8 Conclusion

Disagreement with regard to the conceptualization of grandiose and vulnerable narcissism reflects a wider controversy about what constitutes normal versus pathological narcissism. Some equate normal narcissism with adaptive outcomes and pathology with maladaptive ones (e.g., Pincus & Lukowitsky, 2010). Others also expect maladaptive outcomes for aspects of normal narcissism (e.g., Malkin et al., 2012). Moreover, grandiose narcissism tends to be seen as adaptive and, therefore, is referred to as normal narcissism, whereas vulnerable narcissism is typically viewed as pathological. A dual continuum of grandiose and vulnerable narcissism extending from normal to pathological, however, is consistent with an evolutionary perspective of personality traits as, potentially, both adaptive and maladaptive (Nettle, 2006). Despite this, it is likely that both expressions are pathological at high levels (Wink, 1991). The next chapter examines the validity and reliability of the NPI and PNI and identifies their limitations as measures of grandiose and vulnerable narcissism.

Chapter 3. The Measurement of Grandiose and Vulnerable Narcissism

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

Gore Vidal (1981)

As discussed in Chapter 2, the NPI is assumed by some to be a measure of normal and grandiose features of narcissism (Atlas & Them, 2008; Cain et al., 2008; Sedikides et al., 2004; Zeigler-Hill & Besser, 2012). Nevertheless, it is also a measure with scores that are associated with measures of psychopathology, as well as high explicit self-esteem and low distress (Ackerman et al., 2011; Fossati et al., 2009; Miller & Campbell, 2011; Ronningstam, 2005; Watson et al., 1996; Watson et al., 1998).

The PNI is proposed to measure both grandiose and vulnerable pathological narcissism rather than 'normal' narcissism (Wright et al., 2010). Critics have argued that it is an adequate measure of vulnerable narcissism but is less than optimal as a measure of grandiose narcissism (Bosson & Weaver, 2011; Miller & Campbell, 2011; Miller et al., 2014). One reason for this is that research has not investigated its ability to assess both expressions, particularly in clinical populations (Miller et al., 2012c; Watson & Bagby, 2011). Moreover, it is claimed that it emphasizes features of vulnerability, such as high personal distress and low self-esteem (Miller & Campbell, 2011).

This chapter reviews the psychometric properties of these scales, including their factor structures, since these have not been replicated for either measure (e.g., Boldero et al., 2013; Corry et al., 2008; Emmons, 1987; Kubarych et., 2004; Miller et al., 2011a; Pincus et al., 2009; Raskin & Terry, 1988; Wright et al., 2010). Moreover, since explicit self-esteem is reliably associated with both grandiose and vulnerable narcissism (e.g., Ackerman et al., 2011; Boldero et al., 2013; Cain et al., 2008; Emmons, 1987;

Horvath & Morf, 2010; Wright et al., 2010), this factor's associations with both NPI and PNI scale scores and with their subscales are also reviewed.

3.1 The Narcissistic Personality Inventory

The NPI was designed to assess the DSM-III's Narcissistic Personality Disorder (NPD) criteria (Raskin & Hall, 1979). Two hundred and twenty-three forced-choice items were written to measure the eight broad NPD domains, specifically, a grandiose sense of self, fantasizing, exhibitionism, under- or over-reaction to criticism, entitlement, exploitativeness, interpersonal relationship vacillation, and a lack of empathy. Each item comprised a narcissistic and a non-narcissistic statement and participants were asked to select which of these was more self-descriptive. Item analysis was performed on data provided by 71 university students and 80 items were retained. Two alternate 40-item forms were constructed from these items. Responses to these were strongly correlated when completed eight weeks apart (Raskin & Hall, 1981). In a series of unpublished studies, the number of items was reduced to 54 using internal consistency estimates.

Emmons (1984) subjected the 54-item NPI to principal components analysis (PCA), retaining 40 items. He (Emmons, 1987) later reduced this to 37-items using principal-axis factor analysis. Raskin and Terry (1988) also used PCA to examine the NPI's structure. However, before performing this analysis the measure was reduced to 47 forced-choice items because seven items had non-monotonic distributions in item analyses. The total number of narcissistic options endorsed on the remaining 40 items had a correlation of .98 with the total number of the original 54-items endorsed. Accordingly, these items were retained. Both Raskin and Terry's 40-item NPI and

Emmons 37-item one are used in research. However, only 31 items are common to these versions (Rosenthal & Hooley, 2010).

Raskin and Hall (1979) stated that the NPI is not a measure of NPD but, rather, assesses individual differences in trait narcissism. However, Raskin and Hall (1981) argued that abnormal narcissism was continuous with normal narcissism. Thus, only extremely high scores on NPI characteristics are assumed to assess pathological narcissistic features.

The majority of research in social/personality psychology since 1985 has used the NPI with samples drawn from undergraduate student populations (Cain et al., 2008). This has resulted in an extensive body of work examining relationships with self-regulatory factors, behavior, cognitions, and emotions that are theoretically related to narcissism (Ronningstam, 2005; Pincus & Lukowitsky, 2010). Moreover, the NPI is most frequently used in research examining the 'dark triad', which emphasizes the contribution of narcissism, sub-clinical psychopathy and Machiavellianism to a composite anti-social personality profile (Paulhus & Williams, 2002). Although not necessarily a *pathological* personality profile, dark triad traits are frequently maladaptive, with negative consequences for interpersonal relationships, anger management and extreme risk-taking (Jonason, Li, & Buss, 2010; Jonason & Tost, 2010).

Despite the widespread use of NPI, it is unclear whether it is a reliable multi-dimensional narcissism measure. Researchers have not been able to replicate the factor structure of the NPI (e.g., Ackerman et al., 2011; Boldero et al., 2013; Corry, Merritt, Mrug, & Pamp, 2008; Kubarych et al., 2004), and, despite being based on factor solutions, some of the subscales show low internal consistency (Boldero et al., 2013; Cain et al., 2008; del Rosario & White, 2005; Kubarych et al., 2004). Other issues

pertain to the NPI's validity, particularly in regard to factors that are positively related to explicit self-esteem, such as those reflecting leadership, authority and self-admiration. Some have argued that these are adaptive constructs that have little relevance to the assessment of grandiose narcissism (Brown et al., 2009; Rosenthal & Hooley, 2010). Thus, there have been numerous calls for the scale's revision (e.g., Ackerman et al., 2011; Brown et al., 2009; Cain et al., 2008; Corry et al., 2008; Glover et al., 2012; Kubarych et al., 2004; Miller & Campbell, 2010; Pincus & Lukowitsky, 2010). The following sections review the results of studies that have examined the factor structure of the NPI and further outline the NPI's positive relationship with explicit self-esteem.

3.1.1 The NPI's Factor Structure

Researchers have been unable to replicate the factor structure of the NPI. Almost all replication studies have used the force-choice response version of the NPI. An alternative version, however, using a 6-point Likert rating scale format, was submitted to factor analysis by Boldero, Bell, and Hulbert (2013) and their seven-factor solution was consistent with the seven-component solution originally found by Raskin and Terry (1988) in their analyses of the forced-choice version. A review of studies investigating the factor structure of the NPI follows and also a rationale of why the forced-choice version of the NPI has produced inconsistent factor solutions and why the rating scale version may be a better measure.

The NPI has been, variously, submitted to PCA, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Emmons (1987) found 37 items loaded on four factors, respectively, when Raskin and Hall's (1981) 54-item NPI version was subjected to principal-axis factoring. These were labelled Leadership/Authority, Self-absorption/Self-admiration, Superiority/Arrogance and

Exploitativeness/Entitlement. Kansi (2003), using a Swedish translation of the NPI, also found that 29 items loaded on four principal components that were similar to those found by Emmons (1987). Emmons' four-factor/component structure has been used extensively in studies investigating aspects of narcissism and is still popular (e.g., Bosson & Prewitt-Freilino, 2007; Cater, Zeigler-Hill, & Vonk, 2011; Holtzman, Vazire, & Mehl, 2010; Miller et al., 2011a; Rhodewalt & Morf, 1995; Rose, 2002; Zeigler-Hill & Besser, 2012).

Raskin and Terry (1988) argued that the Emmons' (1984, 1987) four component/factor solutions were restrictive and that analysing tetrachoric correlations would more clearly reveal the NPI's latent variable structure. They found that 40 items loaded on seven principal components. These components were labelled Exhibitionism, Self-Sufficiency, Vanity, Authority, Exploitativeness, Entitlement and Superiority (Raskin & Terry, 1988). *Exhibitionism* assesses one's need for attention from others. *Self-Sufficiency* assesses the denial of a need for others in narcissism. *Vanity* measures one's obsession with their own body or appearance. *Authority* assesses beliefs about one's leadership potential. *Exploitativeness* measures the tendency to use others to one's own advantage. *Entitlement* measures the expectation of special treatment not requiring reciprocal acts. Finally, *Superiority* assesses one's belief that they are above the status of most others.

However, the four-factor and seven-component structures, outlined above, have not been replicated in other research. Kubarych et al. (2004), using PCA and subsequently CFA, found a three-factor solution for the 40-item NPI. Similarly, Ackerman et al. (2011), using EFA, found that the NPI is underpinned by three factors (with loadings from 37 and 25 items, respectively). Kubarych and colleagues labelled their factors, Power, Exhibitionism and Special Person, whereas Ackerman et al.

labelled them, Leadership/Authority, Grandiose Exhibitionism and Entitlement/Exploitativeness, respectively.

Two-factor exploratory solutions have also been found. Corry et al. (2008) found that 23 items loaded on two factors labelled, Leadership/Authority and Exhibitionism/Entitlement, whereas Barelds and Dijkstra (2010) found that all 40 items of the Dutch version of Raskin and Terry's (1988) scale loaded on Authority/Power and Self-Admiration factors. Kubarych et al. (2004) also found that 37 items loaded on two factors, labelled Power and Exhibitionism. Based on examination of items with high loadings, one factor from each of the three analyses was designated as reflecting power and authority. However, the other factor differed across the studies.

Based on an examination of a scree plot, Barelds and Dijkstra (2010) concluded that the NPI's factors load on a single second-order factor measuring 'general narcissism'. Similarly, Boldero et al. (2013) found that the NPI's seven first-order factors loaded on a single second-order one that they labelled as grandiose narcissism. These findings suggest that the total scale score can be used to assess an overarching trait of narcissism.

There are three reasons that have been discussed in the literature in regard to a lack of agreement about the NPI's factor structure (Ackerman et al., 2011; Boldero et al., 2013; Corry et al., 2008). Firstly, Boldero et al. (2013), Corry et al. (2008), and Ackerman et al. (2011) highlighted the use of Pearson's correlation coefficients as the basis of the analysis and principal components analyses to determine the NPI's structure. Pearson's correlations are unsuitable for items with dichotomous forced-choice response formats (Carroll, 1961) that is 'standard' for the NPI. Tetrachoric correlations, first used by Raskin and Terry (1988), are an appropriate alternative (Muthén & Hofacker, 1988). In addition, Boldero and colleagues argued that Raskin &

Terry's use of PCA is not the appropriate method when a scale's latent structure is of interest. Principal components are summaries of the effects of observed variables (Edwards, 2011; Reise, Waller, & Comrey, 2000) whereas factors extracted using EFA are latent variables that represent commonalities in the correlations amongst a scale's items (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Thus, EFA is optimal in the investigation of latent factor structures.

Secondly, Boldero et al. (2013) noted that the majority of researchers have decided the number of factors to extract using Cattell's (1966) scree plot or Kaiser's (1960) 'eigenvalues greater than one' criterion, both of which are unreliable (Reise et al., 2000). Parallel analysis (Horn, 1965) is considered to be more reliable (Wood, Tartaryn, & Gorusch, 1996; Zwick & Velicer, 1976, 1986).

Third, and finally, Boldero et al. (2013) argued that the use of dichotomous forced-choice items is also an issue. They proposed that neither alternative may accurately reflect how individuals see themselves and that this can lead to the low internal consistency estimates found for some subscales (Brown et al., 2009; del Rosario & White, 2005; Raskin & Terry, 1988). Since the number of response scale points for a particular measure is associated with an increase in reliability (Lissitz & Green, 1975), a Likert-scale format with several response points could be expected to have greater reliability than one using forced-choice items. Consequently, Boldero et al. used a 6-point Likert scale response format for the 40-item NPI. An EFA (N = 545) replicated Raskin and Terry's (1988) seven-factor structure. They also performed a CFA on the 40-item NPI with binary response items (where participants indicated whether or not narcissistic statements were descriptive of them) using tetrachoric correlations, which tested the fit of the seven-factor model. However, the NPI version using items with the Likert scale response format had factors that were more internally

consistent than that using items with the binary response format version. Consistent with Boldero and colleagues' finding that a seven-factor solution is appropriate for the NPI, both Ackerman et al. (2011) and Corry et al. (2008) found that seven-factors had the best fit of all previous models using CFA.

In summary, the NPI's factor structure remains equivocal. Nevertheless, several researchers (Barelds & Dijkstra, 2010; Boldero et al., 2013; Corry et al., 2008) have suggested that the NPI has one second-order factor assessing grandiose narcissism. Moreover, some researchers suggest that the NPI should be revised. The recommendations to encourage greater certainty about its factor structure are: (i) to use a consistent version of the NPI with identical item count and content (Ackerman et al., 2011); (ii) to use a likert-scale response format for NPI items (e.g., Corry et al., 2008; Kubarych et al., 2004); (iii) to use better criteria in factor extraction decisions (Boldero et al., 2013), and; (iv) to conduct further factor analytic studies to confirm and explore previously identified factor structures (Ackerman et al., 2011; Boldero et al., 2013).

3.1.2 NPI Relationships with Self-Reported Self-Esteem

The relationships of scores on the NPI and the majority of its factors with self-reported self-esteem support the proposition that the scale, fundamentally, is a measure of grandiose narcissism (Boldero et al., 2013; Miller & Campbell, 2011). NPI scores correlate moderately positively with a number of self-esteem measures (e.g., Brown & Zeigler-Hill, 2004; Bushman & Baumeister, 1998; Raskin et al., 1991a; Rhodewalt & Morf, 1995; Wallace & Baumeister, 2002), such as Rosenberg's (1965) Self-esteem Scale, the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), Feelings of Inadequacy Scale (Fleming & Courtney, 1984) and the California Self-Evaluation Scale (Phinney & Gough, 1984). Ironically, these results have been used to suggest that the NPI is largely a measure of self-esteem (Rosenthal & Hooley, 2010).

Rosenthal and Hooley (2010) claimed that the NPI is confounded by self-esteem, as well as factors unrelated to pathological narcissism, such as authority and leadership (Ackerman et al., 2011). Consistent with this argument, Rosenthal and Hooley found that NPI items, which they argued were less central to narcissism (on the basis of relationships with the Emmons', 1987, Leadership/Authority factor, expert ratings and item response characteristics) are positively related to self-esteem and unrelated to NPD scores, whereas NPI items reflecting central narcissism features, such as arrogance, entitlement and exploitativeness, are associated with NPD scores but weakly related to self-esteem. They concluded that items assessing less central features were confounded by self-esteem and, therefore, assess psychologically adaptive factors. However, Miller, Maples, and Campbell (2011b) found, using two undergraduate samples (N = 271 & N = 238), that both subsets of NPI items were associated with entitlement (assessed using the Psychological Entitlement Scale; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) and NPD (assessed using the Personality Diagnostic Questionnaire; Hyler, 1994). Thus, both subsets of items are relevant to the assessment of narcissism. Rosenthal, Montoya, Ridings, Rieck, and Hooley (2011), conceding that this is the case, based on the outcomes of a meta-analysis using 54 data sets (N = 38,932), maintained that the NPI does not measure narcissism *exclusively*.

A further issues is that Emmons' (1987) Exploitativeness/Entitlement (E/E) NPI factor, because of its relationship with self-esteem, has been used to measure both vulnerable (e.g., Bosson & Prewitt-Freilino, 2007) and pathological narcissism (e.g., Falkenbach, Howe, & Falki, 2013). Specifically, it has a somewhat equivocal relationship, either being negatively related (Ackerman et al., 2011; Bosson & Prewitt-Freilino, 2007; Brown et al., 2009; Gramzow & Tangney, 1992; Zeigler-Hill & Besser, 2012) or unrelated (Falkenbach et al., 2013; Rhodewalt & Morf, 1995; Watson, Taylor,

& Morris, 1987). As a result, some have suggested that the NPI "may reflect a confusing mix of adaptive and maladaptive content" (Cain et al., 2008, p. 643). Nevertheless, claims that the scale assesses both adaptive and maladaptive content only strengthen the assertion that it measures the full-range of narcissistic grandiosity rather than just that which is 'normal'.

3.1.3 Summary

Evidence from a number of studies suggests that the NPI is a measure of grandiose narcissism which varies on a continuum from normal to pathological. However, as the NPI's factor structure has not been replicated and some subscales are low in internal consistency, which is likely a result of the use of forced-choice items, further investigation of its structure and psychometric properties is important.

3.2 The Pathological Narcissism Inventory

The PNI was developed to assess pathological or clinically-significant narcissism (Pincus et al., 2009). Pincus and colleagues reported that 131 items were generated to assess this type of narcissism by a team of "clinical faculty and graduate students, psychotherapists, and psychology undergraduates" (p. 367). This team generated items consistent with seven target dimensions: contingent self-esteem, exploitativeness, entitlement, grandiose fantasies, devaluing of others and needs for others, narcissistic social avoidance, and self-sacrificing self-enhancement. After these 131 items were reviewed twice by those involved in their construction, 105 were retained and subjected to PCA. Items were retained if their loadings on the components were greater than .33; had correlations with other items, and; they did not result in low internal consistency (assessed using Cronbach's, 1951, coefficient alpha). The resultant scale had 50 items. Pincus and colleagues (2009) subsequently deleted two items,

revised two and added four to "improve fidelity" (p. 368) of the seven components, resulting in the 52-item PNI.

Forty-nine of the PNI's items, however, are identical to those reported for the initial 105-item pool of the Vulnerable Narcissism Scale (VNS; Pimentel, 2007, as cited in Ansell, 2005; see Appendix A). Zeigler-Hill, Clark, and Pickard (2008) investigated the strength of relations between domains of self-worth and vulnerable and grandiose narcissism, assessed using the 50-item VNS and the 37-item NPI, respectively, suggesting that initially the PNI was conceived of as a vulnerable measure. This is consistent with Miller et al.'s (2014) argument that the PNI "may be better conceived of as an alternative measure of narcissistic vulnerability or one that is an admixture of vulnerable and grandiose content" (p. 4).

The final 52 items of the PNI were subjected to PCA and Pincus et al. (2009) labelled the seven identified components according to their original target dimensions. *Contingent Self-Esteem* assesses fluctuating self-esteem resulting from the presence or absence of external sources of self-esteem validation. The *Exploitativeness* component, comprised of the narcissistic statements of the NPI Exploitativeness component (Miller et al., 2014), assesses "a manipulative interpersonal orientation" (Pincus et al., 2009, p. 368). *Self-Sacrificing Self-Enhancement* assesses altruism used to enhance one's own self-image. *Hiding the Self* measures one's unwillingness to show flaws or needs. *Grandiose Fantasy* assesses fantasizing that reflects success, admiration and fame. *Devaluing* measures disinterest in others who do not validate one's need for admiration and the consequent shame experienced. Finally, *Entitlement Rage* assesses anger when entitled expectations are not met.

Paradoxically, Pincus et al. (2009) used the positive correlations between the NPI and some PNI subscales as evidence that the PNI assesses pathological grandiose

narcissism (Pincus et al., 2009), even though they claimed that the NPI measures 'normal' narcissism. Similarly, Pincus and Lukowitsky (2010) continued to argue against continuity of normal and pathological narcissism, describing the PNI as "the only multifaceted measure assessing clinically identified characteristics spanning the full phenotypic range of pathological narcissism" (p. 443). Scores on the PNI correlate moderately with measures of Borderline Personality features and psychopathy in university undergraduate samples (Miller et al., 2010). They also predict college students' stalking behaviors (Ménard & Pincus, 2012). Evidence for the PNI's clinical utility in psychiatric populations, however, is minimal (Watson & Bagby, 2011).

Comparing the NPI and PNI, Maxwell et al. (2011) concluded that *both* scales assess distinct constructs related to pathological narcissism. Correlations between total scores were weak and the NPI and the PNI were positively and negatively related to explicit self-esteem, respectively, consistent with the proposed distinctiveness of the constructs. Nevertheless, both were substantial, independent predictors of NPD (assessed by the Personality Diagnostic Questionnaire-4; Hyler, 1994) in a regression model. These findings are inconsistent with the proposition that the NPI measures normal narcissism and the PNI categorically distinct, pathological narcissism. They *are* consistent with the NPI as a measure of the full range of grandiose narcissism (i.e., normal to pathological) and the PNI as a measure of vulnerable narcissism.

Pincus et al. (2009) proposed that the PNI subscales assess either grandiose or vulnerable narcissism due to its correlations with points on an interpersonal circumplex (Alden, Wiggins, & Pincus, 1990; Pincus et al., 2009). The interpersonal circumplex is a two-dimensional space which represents the location of constructs as a function of their covariance on two dimensions, one representing social dominance (Dominance versus Submission) and the other, communion with others (Warmth versus Coldness).

Pincus et al. argued that a tendency to dominate and to be "overly-nurturant" (p. 376; i.e., high interpersonal warmth) would reflect narcissistic grandiosity, whereas a tendency to be interpersonally cold and submissive would reflect narcissistic vulnerability. Consequently, based on correlations between PNI subscales and the two dimensions of the interpersonal circumplex, they argued that Entitlement Rage, Exploitativeness, Grandiose Fantasy and Self-Sacrificing Self-Enhancement were grandiose components, whilst Contingent Self-esteem, Hiding the Self and Devaluing were vulnerable ones. Despite these correlations, subsequent factor analyses of first- and second-order latent factors (Miller et al., 2011a; Wright et al., 2010) indicated that the grandiose and vulnerable aspects of the PNI subscales are not clearly delineated. The results of these analyses are now reviewed.

3.2.1 The PNI's Factor Structure

The first-order factor structure of the PNI has not been replicated. Several exploratory and confirmatory factor analyses have been conducted. Houlcroft et al. (2012), using EFA on the English version PNI, found one large and several small factors suggesting that the PNI predominantly assesses one dimension of narcissism, in addition to several, inconsequential ones. Eight factors were found in an EFA of the Croatian version, although there were only two substantial item loadings on the eighth factor (Jakšić et al., 2014).

You et al. (2012), used CFA to replicate the results of Pincus et al.'s (2009) principal components but the initial model was a poor fit. Item-parcelling was subsequently used to specify the PNI subscales to achieve acceptable fit, although this practice is controversial (Little, Cunningham, Shahar, & Widaman, 2002) because it can lead to model mis-specification (see Chapter 8, Section 8.1). Furthermore, some parcels specified by You et al. had less than three indicators which can lead to under-identified

factors (Little et al., 2002). Similarly, a CFA of the Croatian PNI version fit only after using item-parcelling (Jakšić et al., 2014). Thus, there is no specific support for the seven components found by Pincus et al. (2009).

A range of second-order factor models have also been fitted to the PNI subscales. Wright et al. (2010) fit three second-order confirmatory models. Two of these involved specifying different first-order factors as loading on two second-order ones, reflecting grandiose and vulnerable narcissism. The third model fit a single second-order factor. However, Wright and colleagues did not fit Pincus et al.'s (2009) original proposed model that assesses grandiosity and vulnerability. In the first, Exploitativeness, Entitlement Rage and Grandiose Fantasy were specified to load on one second-order factor whereas Contingent Self-esteem, Self-Sacrificing Self-Enhancement, Devaluing and Hiding the Self were specified to load on the second. In the second, Entitlement Rage and Self-Sacrificing Self-Enhancement were exchanged and, thus, were specified to load on alternate second-order factors.

The fit of these two models was almost identical. Furthermore, Wright et al. (2010) reported correlations between second-order factors of .95 and .81, suggesting that one second-order factor represents a parsimonious solution (Boldero et al., 2013). Similarly, their third model in which only one second-order factor was specified had equivalent model-fit to their two-factor second-order models. Despite this, Wright et al. concluded that their second, two-factor higher-order model was the best-fitting solution as it had slightly superior fit indices.

Moderately high correlations between PNI second-order factors have also been found in other studies (Cater et al., 2011; Jakšić et al., 2014, Fossati, Feeney, Pincus, Borroni, and Maffei, 2014; You et al., 2012; Zeigler-Hill & Besser, 2011; Zeigler-Hill & Besser, 2012) ranging from .56 to .89. These results, along with those of Wright et

al. (2010), suggest that PNI subscales do not load on two second-order factors. However, elsewhere in the literature, alternative two-factor second-order solutions for the PNI have been identified. Miller et al. (2011a) conducted an EFA using two of the four NPI factors identified by Emmons (1987), namely Leadership/Authority and Exhibitionism/Entitlement, together with the Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997) and the PNI subscales. Consistent with predictions, both NPI factors loaded on the grandiose factor whereas the HSNS loaded on the vulnerable narcissism factor as expected. Only two PNI subscales, Exploitativeness and Grandiose Fantasy, however, loaded on the grandiose factor with the remaining five loading on the vulnerable factor. Furthermore, whereas Exploitativeness loaded strongly on the grandiose factor, its loading on the vulnerable factor was weak (i.e., < .25). In contrast, the Exploitativeness factor of the Croatian version of the PNI did not load (Jakšić et al., 2014). Miller et al. (2011a) also found that the Grandiose Fantasy subscale had equivalent loadings on both second-order factors (i.e., .45 & .41 for the vulnerable and grandiose factors, respectively).

Tritt et al. (2010) conducted three PCAs which they claimed demonstrated seven first-order components for the PNI. These appeared to form two higher-order components, identified by examination of a scree plot, which is not an optimal statistical practice for investigating a scale's structure (Boldero et al., 2013). These two second-order components were also subsequently distinguished by the positive- and negative-affective valence of the PNI's item content, assessed using the Temperament Evaluation of the Memphis, Pisa, Paris, and San Diego Auto-Questionnaire (Akiskal & Akiskal, 2005). The correlation between these second-order components differed remarkably from that found for second-order factors demonstrated by Wright et al. (2010), showing

considerable independence (i.e., $r = .16$). This likely reflects Tritt and colleagues' choice of PCA rather than EFA/CFA (Fabrigar et al., 1999).

You et al. (2012) conducted CFAs of their data, finding a two-factor solution. They evaluated both Pincus et al.'s (2009) and Wright et al.'s (2010) second-order models, in addition to a single second-order factor model. You et al. found that Wright et al.'s preferred two-factor model was the best model fit. However, inconsistent with Wright et al.'s results, they found that the single-factor higher-order model was a substantially poorer fit.

Houlcroft et al. (2012) found that two factors, which they labelled grandiose and vulnerable narcissism, accounted for 36.48% of the variance in the PNI. They obtained these through EFA, extracting two factors because "two dimensions of Narcissism are commonly accepted" (p. 276). They used this to justify this analysis despite initially identifying one large factor and several smaller ones from the scree plot.

A CFA study of the French version of the PNI (Diguer et al., 2014) was unable to replicate one or two second-order factor structures of Wright et al., (2010). They used PCA to reproduce the structures Wright et al. found for the English PNI. Nevertheless, Fossati et al., (2014) found two second-order factors using two samples (one clinical and the other non-clinical) in structural equation modelling (SEM). The clinical sample was an adequate fit, according to Hu and Bentler's (1999) suggestions. The non-clinical sample was a good fit (Hu & Bentler, 1999) after modifications involving the specification of error covariances.

Clearly, taken together the results of these studies suggest that the second-order factor structure of the PNI needs further validation. The differences in the current literature for the second-order factor structure and evidence for a single second-order

solution may be a partial consequence of the use of subscales that were derived from PCA, rather than EFA, at least where the English version of the PNI is concerned.

3.2.2 The PNI and Self-Esteem

Although PNI scores are negatively related to explicit self-esteem (Pincus et al. 2009), the PNI Exploitativeness subscale positively correlates with it (Maxwell et al., 2011; Pincus et al., 2009; You et al., 2012). This is inconsistent with the argument that pathological narcissism aspects should not have positive associations with indicators of psychological well-being (e.g., Pincus & Lukowitsky, 2010; Rosenthal & Hooley, 2010). Paradoxically, the NPI Exploitativeness scale, when assessed using forced-choice response format items, is unrelated to self-esteem (Boldero et al., 2013; Maxwell et al., 2011).

The remaining PNI subscales have negative relationships with self-esteem, except for Self-Sacrificing Self-Enhancement, which is unrelated (Maxwell et al., 2011; Pincus et al., 2009; You et al., 2012). Thus, it appears that the negative association with self-esteem of PNI scores is driven by narcissistic vulnerability (Miller et al., 2014).

3.3 Conclusion

Factor analyses of the NPI and PNI have not replicated the number and nature of the dimensions that underlie these measures. Investigations at the factor level have been hampered by divergent techniques used to examine the scales' structures, particularly for the NPI, with the result that there is little consensus about its structure. Premature consensus about PNI subscales, on the other hand, has seen its subscales divided into grandiose and vulnerable second-order ones, when the evidence for doing so is also equivocal. It is likely that both the NPI and the PNI measure grandiose and vulnerable features of narcissism, although associations with self-esteem suggest that the NPI

factors, for the most part, assess grandiose features whereas the PNI factors, for the most part, assess vulnerable ones.

It has been proposed that measures of grandiose and vulnerable narcissism will contain features common to both expressions of narcissism (Chapter 1, Section 1.2). It is plausible that the NPI and the PNI factors assess common features as well as features unique to each expression. The next chapter (i.e., Chapter 4) reviews clinical and empirical evidence for common features of narcissism. Furthermore, specific NPI and PNI factors that likely assess these common features are reviewed. It is proposed that once common features assessed by the NPI and the PNI are empirically identified, the remaining ones assessed by the NPI and PNI should be unique to either grandiose or vulnerable narcissism.

Chapter 4. Common Features of Grandiose and Vulnerable Narcissism

"…much of the work on narcissism comes from the psychoanalytic/psychodynamic tradition. This is a fabulous tradition for generating theoretical insights into the human condition – including narcissism – but a terrible tradition for scientifically testing these insights"

W. Keith Campbell (2009)

4.1 Introduction

There is no clear theoretical position regarding the nature of any association between grandiose and vulnerable narcissism. This has allowed social and clinical psychological researchers to speculate about an expected association, largely based on the correlations between measures of these constructs.

In the social/personality literature it is proposed that the narcissism expressions are distinct. This view was first suggested by Wink (1991) following his principal components analysis using narcissism scales of the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1951). He found that these scales loaded on two unrelated components, Vulnerability-Sensitivity and Grandiosity-Exhibitionism, which suggested distinct expressions. Wink consequently found that these expressions were similarly related to other measures reflecting conceit, self-indulgence and the disregard of others. Accordingly, he concluded that these distinct expressions share a common narcissistic core that is not assessed by the MMPI scales. With the development of the PNI as an alternate measure of grandiose and vulnerable narcissism (Pincus et al., 2009), clinical researchers have accepted that the expressions are substantially related, since the PNI grandiosity and vulnerability factors are highly correlated (Wright et al., 2010). This strong relationship is taken to represent a broad pathological core (Cain et al., 2008). Others have suggested that this high correlation is

evidence that the PNI assesses vulnerability alone (Boldero et al., 2013; Miller et al., 2014). Despite this, the evidence from Wink (1991) suggests that distinct narcissistic grandiosity and vulnerability dimensions share features.

This chapter considers which features of narcissism are likely common to the expressions (i.e., are core features). Two such features are entitlement and exploitativeness (Brown et al., 2009; Wink, 1991). Additionally, three possible common features are derived from the psychoanalytic literature. These are likely assessed by subscales of the NPI and the PNI. The review focuses on the seven NPI and PNI components from which subscales are formed. For completeness, evidence for features assessed by NPI and PNI subscales that are not common to grandiose and vulnerable narcissism is also reviewed.

4.2 Entitlement and Exploitativeness as Common Features

One point of consensus is that a sense of entitlement is core or common to narcissism (e.g., Ackerman & Donnellan, 2013; Exline et al., 2004; Jones & Figueredo, 2012; Pryor, Miller, & Gaughan, 2008; Tomlinson, 2012). Narcissistic entitlement has been described as "the belief that one deserves a valued resource or positive outcome…[that] is undeserved or largely unrealistic" (Ackerman & Donnellan, 2013, p. 460). A distinction is sometimes made between *non-exploitative entitlement* (e.g., 'I deserve the best things in life'), reflecting a positive self-concept without unrealistic demands, compared with *exploitative entitlement*, where a grandiose, social comparison is involved (e.g., 'I deserve more in life than others…'; Lessard, Greenberger, Chen, & Farruggia, 2011).

Measures of entitlement are strongly related to exploitativeness (e.g., Ackerman et al., 2011; Ackerman, Donnellan, & Robins, 2012; Barry & Wallace, 2010; Wink,

1991). Those with strong entitlement beliefs expect special favors from others (Bogart, Benotsch, & Pavlovic, 2004) as well as displaying non-empathic affective responses involving rage and callousness (Gerrard, 2002). Indeed, exploitative entitlement, assessed using Lessard's (2008) entitlement scale, predicts manipulative and callous responses in adolescents (Lessard et al., 2011). Thus, exploitativeness is also potentially a common feature.

Entitlement and exploitativeness can be assessed using the Entitlement and Exploitativeness components of the Raskin and Terry (1988) seven-component NPI solution. They may also be assessed by Emmons' (1987) E/E factor. Additionally, exploitativeness is assessed by the PNI's Exploitativeness subscale, which is identical to the NPI Exploitativeness subscale when NPI items present the narcissistic statements only and these are assessed using a 6-point Likert scale response format (Glover et al., 2012, Miller et al., 2014). Thus, NPI subscales assess two proposed common features of narcissism and a PNI subscale assesses one of them.

4.3 Common Features from the Psychoanalytic Tradition

Three further common features are suggested by psychoanalytic theorists. The writings of the acknowledged 'fathers' of narcissism from the standpoint of psycho-analysis (Glassman, 1988), Heinz Kohut (1966) and Otto Kernberg (1970), agreed that attention seeking, grandiose fantasizing and narcissistic rage are central features of narcissism. Evidence that they are such central features is now reviewed and which NPI and PNI subscales that likely assess them is discussed.

4.3.1 Attention Seeking

The exhibitionistic craving for attention among those high in narcissism has its roots in psychodynamic theories of narcissism (Akhtar & Thomson, 1982). Both Kohut

(1968) and Kernberg (1970) argued that poor or interrupted parenting stunts the development of a mature self-concept, resulting in an adult who continually seeks attention, either to gain approval or admiration. For Kohut (1968), narcissism involves the craving of approval from admired others that was lacking in a non-empathetic upbringing. In contrast, Kernberg (1970) argued that narcissistic individuals seek admiration to confirm a special, individuated status, since approval would imply unwanted dependence on others.

Consistent with the propositions of both Kohut (1968) and Kernberg (1970), individuals high in both narcissism expressions crave attention. Grandiose narcissism, as measured by the NPI, is associated with the seeking of admiration (Raskin, Novacek, & Hogan, 1991b). On the other hand, vulnerable narcissism, as measured by the appropriate second-order factor of the PNI (Wright et al., 2010), is linked to seeking approval (Besser & Priel, 2010).

The Exhibitionism subscale of the NPI assesses attention seeking (Raskin & Terry, 1988). Moreover, attention seeking could also be measured by the PNI Contingent Self-esteem subscale, as this includes items such as ‘When others don’t notice me, I start to feel worthless’ and ‘I need others to acknowledge me’ (Pincus et al., 2009). It is argued, however, that this subscale reflects attention seeking related specifically to the seeking of approval, linked to vulnerable narcissism (Besser & Priel, 2010). It does not reflect attention seeking in the context of attaining admiration that is linked to grandiose narcissism (Raskin et al., 1991b). Therefore, it is likely that only NPI Exhibitionism assesses attention seeking as a common feature of the expressions.

4.3.2 Grandiose Fantasizing

Both Kohut (1968) and Kernberg (1970) based much of their evidence for the nature of narcissism on the content of clients’ fantasies. Their clinical observations

suggested that grandiose fantasizing was important to clients who expressed either grandiose or vulnerable features during therapy. Empirical evidence supports these observations.

Grandiose themes of heroism, power and revenge are uniquely related to entitlement (Raskin & Novacek, 1991). Entitlement beliefs may be latently held as grandiose fantasies (Cooper & Ronningstam, 1992; Morrison, 1983). Additionally, Cooper (2009) suggested that grandiose fantasizing may reflect themes of omnipotence and messianic suffering. Thus, conceptually, grandiose fantasy is likely a common feature of narcissism.

NPI scale scores are related to narcissistic fantasy styles that include sexual, success-related, power-related, heroic, hostile and self-revelatory daydreaming (Raskin & Novacek, 1991). Similarly, HSNS-assessed vulnerable narcissism is related to fantasizing to cope with anxiety and loneliness (Given-Wilson, McIlwain, & Warburton, 2011). Specifically, Given-Wilson et al. (2011) found HSNS scores were associated with item content reflecting fantasies of being a character in a novel or movie. Thus, grandiose fantasizing appears to be related to scales that are currently used to assess both expressions of narcissism.

Research further suggests that grandiose fantasizing may be used as a strategy to bolster self-esteem, although this also tends to increase intrusive thoughts about low self-worth (Ruggiero, Veronese, Castiglioni, & Sassaroli, 2011). Thus, grandiose fantasizing may be used by those high in either expression to regulate self-worth. However, those high in vulnerable narcissism are likely to be more susceptible to intrusive thoughts that lower self-esteem, whereas those high in grandiose narcissism may be able to use their fantasies to bolster self-esteem. The tendency to engage in grandiose fantasies as a common narcissism feature could be measured using the

Grandiose Fantasy subscale of the PNI. Although Wright et al. (2010) found that this factor loaded on the grandiose narcissism second-order factor, Maxwell et al. (2011) found it had equivalent loadings on both the grandiose and vulnerable ones.

4.3.3 Narcissistic Rage/Aggression

Kernberg (1970) proposed that aggressive impulses in the developing child gradually secure normal individuation from others. One form of poor parenting, characterized as cold and emotionally depriving, was thought to lead to abnormal levels of rage in the child that could be carried into adulthood and expressed as a verbally hostile, abusive interpersonal style. Consequently, others are "dreaded enemies" (Kernberg, 1970, p. 57) who threaten to attack and destroy the narcissistic individual's idealized self. Thus, narcissism was seen as an immature defence to protect one's self-esteem through the continual projection of a grandiose self (Glassman, 1988).

In contrast, Kohut (1968) emphasized that narcissism is the natural state of the infant. When compassionate and timely interactions were not routinely engaged in with parents, the child could experience chronic frustration. Specifically, too many or too few empathetic parental responses to a child's narcissism were viewed as problematic. In these circumstances, the child never outgrows the "archaic grandiose self" and is proposed to pursue immature grandiosity into adulthood, including tantrum-like behavior (Kohut, 1968, p. 87).

For both Kohut (1968) and Kernberg (1970), narcissism is closely associated with rage and aggression in response to frustration with caregivers. Aggression is, as a result, a likely common feature of narcissism because it is an attention seeking strategy (Blackburn & Coid, 1999; Daffern, Howells, & Ogloff, 2007; Shaw et al., 1998; Washburn, McMahon, King, Reinecke, & Silver, 2004). Indeed, aggressive behavior

has been shown to enhance one's status or lead to social approval amongst like-minded peers (Becker & Luthar, 2007; Fast, Halevy, & Galinsky, 2012).

NPI-assessed grandiose narcissism is associated with aggression (Bushman & Baumeister, 1998; Stucke & Sporer, 2002; Twenge & Campbell, 2003; Wink, 1991). However, recent research has shown that vulnerable narcissism, assessed by the HSNS (Hendin & Cheek, 1997) and the PNI vulnerability scale, is also associated with increased anger and hostility towards others (Nakayama & Nakaya, 2006; Krizan & Johar, 2014), although these appear to be unrelated to direct physical aggression (Okada, 2010; Krizan & Johar, 2014). Additionally, both NPI and PNI scores are positively associated with sexual aggression (Zeigler-Hill, Enjaian, & Essa, 2013). Those high in vulnerable narcissism, assessed by the HSNS, and those with Borderline Personality Disorder (BPD) also share a tendency to interpret the actions of others as hostile and provocative and they may, consequently, retaliate (Miller, Gentile, Wilson, Pryor, & Campbell, 2010). Thus, narcissistic rage/aggression is proposed to be another common feature. It is likely assessed by the PNI Entitlement Rage subscale. Previous confirmatory factor analyses have PNI Entitlement Rage loading on a second-order vulnerable factor (Wright et al., 2010; You et al., 2012), although Wright et al. (2010) reported that the model with this factor loading on the grandiose second-order factor had an equivalent fit.

4.3.4 Summary

It has been argued that there is evidence that grandiose and vulnerable narcissism share five common features which are assessed by NPI and PNI subscales. These are: entitlement (assessed by NPI Entitlement), exploitativeness (assessed by NPI/PNI Exploitativeness), attention seeking (assessed by NPI Exhibitionism),

grandiose fantasizing (assessed by PNI Grandiose Fantasy) and narcissistic rage (assessed by PNI Entitlement Rage).

4.4 Unique Features of Grandiose and Vulnerable Narcissism

The remaining subscales of the NPI and PNI are assumed to uniquely assess either grandiose or vulnerable narcissistic features. The correlates of these PNI and NPI factors with self-reported self-esteem and Five-Factor model traits are now reviewed which, together with the results of second-order factor analyses, support this assumption.

4.4.1 Contingent Self-Esteem

Given that narcissism has been described as a self-regulatory deficit where external sources of status/approval are important (Morf & Rhodewalt, 2001), one might expect contingent self-esteem (i.e., self-worth determined by specific circumstances/situations; Zeigler-Hill et al., 2008) to be a feature of both grandiose and vulnerable narcissism. Nevertheless, Zeigler-Hill et al. (2008) found that contingent self-worth in a number of domains, such as physical appearance, competition, academic, family, spirituality and morality, was positively related to vulnerable narcissism but unrelated, or negatively related, to grandiose narcissism. Consistent with this, Maxwell et al. (2011) found no association between PNI-assessed contingent self-esteem and NPI-assessed grandiose narcissism. Furthermore, contingent self-esteem is strongly correlated with neuroticism (r = .67) which is positively associated with vulnerable narcissism (Miller et al., 2011a). Thus, the evidence suggests that the PNI-assessed contingent self-esteem component is a feature of vulnerable narcissism.

4.4.2 Devaluing

Those working in the psychodynamic tradition have claimed that narcissism generally involves the devaluing of self and others (Kernberg, 1975; Morey & Stagner, 2012; Tyson & Tyson, 1984). Accordingly, one might expect that devaluing is common to both grandiose and vulnerable narcissism. However, PNI-assessed devaluing is negatively related to self-esteem and positively related to neuroticism (Maxwell et al., 2011). Devaluing is theoretically linked to notions of shame and social avoidance (Hahn, 2000; Robins, Tracy, & Shaver, 2001) and these are linked to narcissistic vulnerability as they are positively associated with Emmon's (1987) E/E factor and negatively related to his other three factors (Gramzow & Tangney, 1992). It has been proposed that in response to the self-denigration involved in the experience of shame an individual may devalue the other(s) who prompted a shame reaction and subsequently avoid them (Hahn, 2000). Indeed, devaluing is a criterion for BPD diagnosis (American Psychiatric Association, 2000) – a personality disorder conceptually linked to vulnerable narcissism (Glover et al., 2012; Pincus & Lukowitsky, 2010). Consistent with this interpretation, Wright et al. (2010) found that the PNI Devaluing subscale loaded on the vulnerable narcissism in their second-order factor analysis. Therefore, the evidence suggests that devaluing is a feature of vulnerable narcissism.

4.4.3 Hiding the Self

The PNI-assessed Hiding the Self factor is, perhaps, more obviously related to vulnerable narcissism, given the typical description of the vulnerable expression as shy and socially avoidant (Akhtar, 2000; Cain et al., 2008; Wink, 1991). Consistent with this interpretation, Hiding the Self is positively related to neuroticism and negatively related to self-esteem (Miller et al., 2011a, Pincus et al., 2009). It also loads on the vulnerable second-order factor (Wright et al., 2010).

4.4.4 Self-Sacrificing Self-Enhancement

The Self-Sacrificing Self-Enhancement PNI factor is positively related to extraversion (Miller et al., 2011a), which suggests that it is a grandiose feature, since this personality domain has been found positively related to grandiose narcissism (assessed using a combination of NPI and PNI subscales and the HSNS; Miller et al., 2011a). Leadership characteristics are also linked to grandiose narcissism (Miller & Campbell, 2011). Together, these associations are consistent with the results of organisational research that show that self-sacrifice enhances a leader's charisma and is motivated by perceived ethical/moral benefits to the self rather than the notion of doing good for others (de Cremer & van Knippenberg, 2005; Lord & Brown, 2001; Matteson & Irving, 2006). Wright et al. (2010), however, found that Self-Sacrificing, Self-Enhancement could load on either the grandiose or vulnerable second-order factors as these two models had equivalent model-fit. Although they decided that it was a feature of grandiose narcissism, self-sacrificing beliefs are elevated among depressed individuals compared to those who are not depressed (Shah & Waller, 2000). Therefore, PNI-assessed Self-Sacrificing Self-Enhancement is more likely an aspect of vulnerable narcissism.

4.4.5 Authority, Self-sufficiency and Superiority

As mentioned above, grandiose narcissism has considerable links with leadership characteristics (Miller & Campbell, 2011; de Vries & Miller, 1985). Therefore, the NPI components Authority, Superiority and Self-sufficiency are likely grandiose aspects. Consistent with this proposition, all three are positively related to extraversion and negatively related to neuroticism (Bradlee & Emmons, 1992). They are also positively related to self-reported self-esteem and are unrelated to the PNI vulnerable narcissism second-order factor (Maxwell et al., 2011).

4.4.6 Vanity

Finally, vanity, that includes concern for physical appearance and the positive evaluation of achievements, has been found associated with self-reported grandiosity (Netemeyer, Burton, & Lichtenstein, 2013). NPI-assessed vanity is positively related to extraversion (Egan & McCorkindale, 2007). It also has a small positive correlation with self-reported self-esteem but is unrelated to the second-order vulnerable factor of the PNI, further suggesting that it is a grandiose aspect (Bradlee & Emmons, 1992; Maxwell et al., 2011).

4.4.7 Summary

Current theoretical and empirical evidence suggests that NPI-assessed authority, self-sufficiency, superiority and vanity are features unique to grandiose narcissism. In contrast, PNI-assessed contingent self-esteem, devaluing, hiding the self and self-sacrificing self-enhancement appear to be features unique to vulnerable narcissism.

4.5 Conclusion

This chapter has presented evidence that suggests that five features of narcissism are common to the grandiose and vulnerable expressions. These are entitlement, exploitativeness, attention seeking, grandiose fantasizing and narcissistic rage, assessed using subscales from the NPI and the PNI. The remaining subscales appear to assess features that are unique to grandiose or vulnerable narcissism.

In the next chapter, Chapter 5, evidence for the associations of grandiose and vulnerable narcissism with the domains of the Five-Factor model (FFM) of personality is discussed. It is argued that these two narcissism expressions have distinct relationships with two of the three FFM domains that are typically associated with narcissism.

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Chapter 5. Relationships of Grandiose and Vulnerable Narcissism with Personality

> "Nothing so much diminishes not only happiness but efficiency as a personality divided against itself. The time spend in producing harmony between the different parts of one's personality is time usefully employed."
>
> Bertrand Russell (2006, p. 71)

5.1 Introduction

The traits of the Five-Factor model of personality are widely utilized in research examining narcissism (e.g., Boudreau, Boswell, & Judge, 2001; Miller & Campbell, 2010; Widiger, Lynam, Miller, & Oltmanns, 2012; Wiggins & Pincus, 1989). Much of this research has involved FFM domains, which are "multifaceted collections of specific cognitive, affective, and behavioral tendencies" that describe a broad sphere of personality function (Costa & McCrae, 1995, p. 23). These five domains were established using factor analysis (McCrae & Costa, 1987). However, the FFM is hierarchical and a lower level of FFM assessment, known as facets, have also been used to investigate specific personality traits (e.g., being prone to shyness or anger) that make up the broad FFM domains of personality (Costa & McCrae, 1995).

This chapter presents a review of personality domains associated with grandiose and vulnerable narcissism. Research indicates that there are distinct relationships between these expressions and traits at the FFM domain level.

5.2 The Five Domains of Personality

Each of the five personality domains are bi-polar dimensions. Specifically, they assess extraversion versus introversion (hereafter referred to as extraversion),

agreeableness versus antagonism (hereafter referred to as agreeableness), conscientiousness versus undirectedness (hereafter referred to as conscientiousness), neuroticism versus stability (hereafter referred to as neuroticism), and openness versus closedness to experience (hereafter referred to as openness; John & Srivastava, 1999).

5.2.1 Neuroticism

Neuroticism is generally described in terms of worrying, insecurity and self-consciousness (McCrae & Costa, 1987). This dimension has also been variously defined in terms of negative affect propensity (Tellegen, 1985), impulsiveness (Costa & McCrae, 1980) and irrational beliefs (Vestre, 1984). These definitions suggest that the neuroticism pole of the dimension is synonymous with negative cognitions and emotions (McCrae & Costa, 1987). Nevertheless, neuroticism can be beneficial in certain circumstances (Nettle, 2004). For example, vigilance, which is positively associated with neuroticism (Chittka et al., 2011) and is defined in terms of primary sensitivity to negative changes in the environment (Koster, Crombez, Verschuere, & De Houwer, 2004), is thought to increase competitiveness and achievement (Ross, Stewart, Mugge, & Fultz, 2001).

5.2.2 Extraversion

The Extraversion pole of this dimension is associated with sociability, friendliness, talkativeness and tendency to pursue fun and affection (McCrae & Costa, 1987). Tellegen (1985) described extraversion as the propensity for positive affect. Extraversion is associated with excitement, gregariousness and warmth (Lucas, Diener, Grob, Suh, & Shao, 2000). In contrast, introversion is synonymous with a lack of excitement and affiliation. However, extraversion also encompasses characteristics associated with dominance, such as assertiveness (Morrone-Strupinsky & Lane, 2007).

Hence, individuals high on the extraversion trait are not necessarily likeable (McCrae & Costa, 1987).

5.2.3 Agreeableness

Agreeableness is probably best understood in terms of its disagreeable or antagonistic pole (McCrae & Costa, 1987). Individuals higher in disagreeableness tend to be more mistrustful, sceptical, callous and lacking in sympathy. Thus, these individuals have interpersonal issues, such as being less willing to compromise and experience more anger and hurt after conflict with others (Jensen-Campbell & Graziano, 2001). Agreeableness is associated with moralistic themes (McCrae & Costa, 1987), as is conscientiousness. Hence, antagonism may be associated with immorality and psychopathy (Mulder, Newton-Howes, Crawford, & Tyrer, 2011). From an evolutionary perspective, being located at the agreeableness pole may also have interpersonal costs. High levels of agreeableness may result in excessive trust in others' at one's own expense (Nettle, 2006).

5.2.4 Conscientiousness

Individuals high in conscientiousness have a conscience and/or self-control (McCrae & Costa, 1987). The domain is, therefore, described in terms of duty, scruples and morality. However, it also encompasses an achievement focus and, as a result, those high in conscientiousness are those who are hardworking, ambitious and persevering (Digman & Takemoto-Chock, 1981). The inherent purposefulness associated with this construct suggests control and direction. Hence, those individuals higher in undirectedness have a lack of control or direction, which is associated with impulsiveness or laziness (McCrae & Costa, 1987). Being undirected can be beneficial, however, if an apparent lack of direction combined with impulsivity increases the probability that an individual will have novel life experiences or seize opportunities

(Nettle, 2006). Such experiences may be discounted or overlooked by a singularly-focused and restrained individual. A cost of being high in conscientiousness may be obsessive orderliness and perfectionism (Haigler & Widiger, 2001; Samuel & Gore, 2012).

5.2.5 Openness

Openness has been described in terms of originality, imaginativeness, diversity of interests and being daring (McCrae & Costa, 1987). Research has shown that openness is associated with fantasy, aesthetics, ideas and values (Costa & McCrae, 1978), which are constructs related to artistic and scientific creativity (Perrine & Brodersen, 2005). McCrae and Costa proposed a distinction between openness and intelligence. DeYoung, Quilty and Peterson, (2007) also argued for an 'ideas' component associated with Openness which reflects people who are quick thinking and have a fluid short-term memory. Nettle (2006) highlighted costs associated with being high in openness, such as holding unusual or delusional beliefs. Individuals high in closed to experience will tend to hold fixed attitudes and be conventional in their thinking (Flynn, 2005).

5.3 FFM Domain Profiles of the Narcissism Expressions

Grandiose and vulnerable narcissism have typically been found associated with three FFM domains: neuroticism, agreeableness and extraversion in studies using correlation analyses (Paulhus, 2001). The direction of the association with two of these three domains appears to differentiate the narcissism expressions. Investigations of FFM relationships with grandiose and vulnerable narcissism are difficult to determine because outcomes appear to be affected by the specific measures used (for the FFM and narcissism). There are differences in FFM relationships depending on whether

grandiose narcissism is measured using the NPI or the PNI grandiosity scales (see Section 5.3.1 below). Correspondingly, there are also differences for vulnerable narcissism, depending on whether the HSNS or the PNI vulnerability factor is used (see Section 5.3.2). Furthermore, differences can occur through the use of different FFM measures (Block, 1995, 2001; McCrae & Costa, 1987) .

The characteristics of the population from which the sample is derived may also affect outcomes. For example, grandiosity and vulnerability are sometimes found to be associated with conscientiousness and openness (e.g., Clark, Lelchook, & Taylor, 2010; Miller, Gentile, & Campbell, 2012d; Paulhus & Williams, 2002). This could be due to the use of undergraduate samples where openness to experience and conscientiousness are likely characteristics of this predominantly young, tertiary-educated population (Komarraju & Karau, 2005; McKinney, Kelly, & Duran, 2012).

5.3.1 Grandiose Narcissism

In a commentary on narcissism, Paulhus described the grandiose narcissist as "a disagreeable extravert" (2001, p. 229). He suggested this minimalist interpretation on the basis of associations found between grandiose self-descriptive adjectives (e.g., 'bigheaded', 'boastful', 'conceited') and Leary's (1957) system of interpersonal traits. The adjectives were positively associated with the ambitious-dominant dimension and negatively associated with the warm-agreeable one (Wiggins, 1979). Paulhus also noted that Emmons (1984) found positive associations between the NPI and extraversion measures (i.e., the Sixteen Personality Factor Questionnaire, Cattell, Eber, & Tatsuoka, 1970, and; the Eysenck Personality Inventory, Eysenck, 1968) and a negative correlation with other-directedness (assessed using the Interpersonal Checklist, La-Forge & Suczek, 1955), suggestive of a lack of warm affiliation. Similarly, Rhodewalt and Morf (1995) found that the NPI was associated with self-aggrandizing

about positive outcomes (i.e., extraversion) and higher scores on measures of hostility and antagonism (i.e., disagreeableness). Finally, Paulhus argued that Emmons' (1984) factor analysis of the NPI demonstrates that the first two factors extracted (labelled 'leadership' and 'entitlement') "look remarkably like extraversion and [dis]agreeableness" (p. 229).

Consequently, empirical work has confirmed that the domineering social style of individuals high on grandiose narcissism is positively associated with extraversion (e.g., Morrone-Strupinsky & Lane, 2007), whereas interpersonal conflict and a lack of compromise in social situations (expected for both expressions) is negatively associated with agreeableness (e.g., Jensen-Campbell & Graziano, 2001).

Numerous studies have replicated positive associations of extraversion and negative ones of agreeableness with NPI-assessed grandiose narcissism (e.g., Brown et al., 2009; Clark et al., 2010; Egan & McCorkindale, 2007; Holtzman et al., 2010; Miller et al., 2011a; Miller et al., 2012c; Paulhus & Williams, 2002; Ramanaiah, Detwiler, & Byravan, 1994; Samuel & Widiger, 2008; Vazire, Naumann, Rentfrow, & Gosling, 2008; Vernon, Villani, Vickers, & Harris, 2008). In addition, some studies have found a negative association between grandiose narcissism and neuroticism (e.g., Bradlee & Emmons, 1992; Clark et al., 2010; Egan & McCorkindale, 2007; Miller et al., 2012c; Rhodewalt & Morf, 1995; Ruiz, Smith, & Rhodewalt, 2001). Positive associations with openness or conscientiousness are also sometimes found (e.g., Clark et al., 2010; Miller et al., 2012c; Paulhus & Williams, 2002).

Hence, NPI-assessed grandiose narcissism appears to have no relationship to psychological distress, consistent with its positive relationship to extraversion and the absence of a positive relationship with neuroticism. PNI-assessed grandiosity has also been found unrelated to neuroticism (Miller et al., 2012c; Houlcroft et al., 2012),

despite Pincus and Lukowsky's (2010) assertion that both expressions should be associated with distress. PNI-assessed grandiosity also has an equivocal relationship to extraversion, one study finding a positively association with it (Houlcroft et al., 2012): and another finding no relationship (Miller et al., 2012c). The apparent lack of relationship with extraversion suggests that PNI grandiosity does not assess grandiose narcissism in a way that's consistent with Paulhus's (2001) conception. Nevertheless, the dysfunctional nature of grandiose narcissism is evident in the negative relationships with the agreeableness domain which implies interpersonal/social deficits (Widiger, 2005), such as poor conflict resolution and a propensity to anger (Jensen-Campbell & Graziano, 2001). Both NPI- and PNI-assessed grandiosity are negatively related to agreeableness (e.g., Miller et al., 2012; Houlcroft et al., 2012). Indeed, both these measures are associated with anger and aggressive behavior (e.g., Egan & Lewis, 2011; Houlcroft et al., 2012).

5.3.2 Vulnerable Narcissism

There have been relatively few studies of the relationships between vulnerable narcissism and the FFM personality domains (Miller & Maples, 2011). This expression, assessed using either the HSNS or the Wright et al. (2010) vulnerability factor of the PNI, shows consistent negative relationships with agreeableness and extraversion and a positive relationship with neuroticism (Hendin & Cheek, 1997; Houlcroft et al., 2012). Additionally, Miller et al., (2010) also found this pattern when combining the HSNS with Pincus et al.'s (2009) PNI vulnerability second-order factor. As a result of this research, individuals with high levels of vulnerable narcissism might be labelled 'neurotic, disagreeable introverts'. Interestingly, the PNI total scale score also shows this pattern of FFM associations, suggesting that the composite measure might also measure vulnerability.

The expectation that individuals high on vulnerable narcissism are cold and socially-distancing (Dickinson & Pincus, 2003) is consistent with the mistrustfulness, scepticism and callousness reflected in a negative association with agreeableness (McCrae & Costa, 1987) and also introversion – that is, a negative association with extraversion. Vulnerable narcissism is also associated with increased symptoms of depression and anxiety that are positively related to neuroticism (Akhtar, 2000; Wink, 1991).

Additionally, a negative correlation between conscientiousness and vulnerable narcissism, assessed using the PNI vulnerability factor, has been found (Houlcroft et al., 2012). Furthermore, Miller et al. (2010) using a vulnerable narcissism measure calculated from combined PNI vulnerability (Pincus et al., 2009) and HSNS scores, also found this negative relationship. However, Hendin and Cheek (1997) found that HSNS scores are negatively associated with openness but have no relationship with conscientiousness.

5.4 Conclusion

The FFM has been used widely in personality research (Goldberg, 1993). It has been subjected to considerable empirical and theoretical scrutiny (Costa, McCrae, & Dye, 1991; DeYoung et al., 2007; Goldberg, 1993; Jang, Livesley, Angleitner, Riemann, & Vernon, 2002; John & Srivastava, 1999). Three of the five domains are commonly associated with the narcissism expressions. Both grandiose and vulnerable expressions of narcissism are negatively associated with agreeableness. Grandiose narcissism differs from the vulnerable expression as it is positively associated with extraversion and negatively associated with neuroticism, whereas vulnerable narcissism is positively related to neuroticism and is negatively related to extraversion.

In the next chapter, Chapter 6, evidence for the nature of the associations of grandiose and vulnerable narcissism with self-esteem is reviewed. It is argued that interactions between two different forms of self-esteem (i.e., implicit and explicit self-esteem; see Chapter 1), reflect self-esteem dysregulation at the core of narcissism (Cain et al., 2008), that is expressed differently in the grandiose and vulnerable expressions.

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Chapter 6. Relationships of Self-esteem with Dimensions Assessing Narcissism Expressions

> "Is self-esteem a sickness? That's according to the way you define it. In the usual way it is defined by people and by psychologists, I'd say that it is probably the greatest emotional disturbance known to man and woman."
>
> Alfred Ellis (2005, p. 13)

6.1 Introduction

Self-esteem is an important construct in both clinical and social psychology (Campbell, Eisner, & Riggs, 2010a). Branden (1995), taking a clinical perspective, defined self-esteem as 'being worthy of happiness' (p. 168). This reflects psychologically adaptive themes of responsibility, integrity and productivity in one's evaluations of self. In contrast, those taking a social/personality psychology perspective define self-esteem simply as self-positivity (e.g., Greenwald & Farnham, 2000). Campbell et al. (2010a) argued that definitions of self-esteem in these two sub-disciplines differ in ways that have encouraged disagreement about the relationship of self-esteem with grandiose narcissism.

Clinical researchers maintain that grandiose narcissism is maladaptive and should not have a positive relationship with self-esteem, which is psychologically adaptive (Pincus et al., 2009; Rosenthal & Hooley, 2010). Therefore, Pincus et al. and Rosenthal and Hooley argue that the NPI is not an optimal measure of grandiose narcissism because it has a moderate positive relationship to measures of explicit self-esteem. Other researchers argue that grandiose measures of narcissism, like the NPI, should have a positive association with self-esteem (Miller & Campbell, 2008), given that individuals high in grandiose narcissism have a tendency to engage in self-

promotion that likely increases self-esteem. Vulnerable narcissism, on the other hand, because it is more likely to reflect the experience of shame (Gramzow & Tangney, 1992), is linked to personal distress and depression and is expected to be negatively related to self-esteem.

Sedikides et al. (2004) demonstrated that the relationship of psychological well-being and grandiose narcissism (as assessed by the NPI) is fully mediated by explicit self-esteem. They also found across five studies that the NPI was negatively associated with measures of sadness, loneliness, couple well-being and anxiety. They concluded that the NPI assesses 'normal narcissism' and this is psychologically adaptive. Yet the NPI is also associated with maladaptive outcomes, such as anti-social behavior (Miller & Campbell, 2011).

Clearly, grandiose narcissism can be maladaptive, despite having a positive relationship with explicit self-esteem. The question is: what distinguishes those high in grandiose narcissism and explicit self-esteem from those who are low in grandiose narcissism but high in explicit self-esteem? Furthermore, what distinguishes those high in vulnerable narcissism and low in explicit self-esteem from those that are low in both vulnerable narcissism and explicit self-esteem?

6.2 A Self-Regulatory Account of Narcissism

Clinical theorists, such as Kohut (1966) and Kernberg (1975), argued that both grandiosity and vulnerability are central to narcissism. Vulnerability is thought to form early in childhood where empathic or appropriate responses from caregivers are not received in a timely manner. In such cases, a view of the self as inferior is formed. The infant uses grandiose behavior to attract caregivers for reduction of his/her vulnerability. If chronic neglect occurs, the grandiose-behaving child can become a grandiose adult.

This proposition illustrates the basic regulatory mechanism underpinning grandiose narcissism, specifically that an otherwise vulnerable individual expresses grandiosity in the presence of others to enhance self-worth. However, this does not explain vulnerable narcissism. Kohut (1966) and Kernberg (1975), and later Akhtar (2000), proposed that vulnerable narcissism was likely characterized by internally-held *grandiose* views of the self (e.g., as a result of permissive parenting or spoiling of the child), which were expressed as shame and low self-worth (i.e., vulnerability). Thus, vulnerable narcissism is also proposed to involve a susceptibility to self-grandiosity.

Bromberg (1983), in his mask model of narcissism, posited that observable grandiosity *masks* latent self-vulnerability. Bromberg asserted that narcissistic individuals compulsively maintain self-esteem at the expense of emotional and interpersonal development that would otherwise, ironically, effectively promote adaptive and stable self-worth. Like, Kohut (1966) and Kernberg (1975), he argued that emotional and interpersonal growth requires an accepting and facilitating environment for one to authentically experience self-worth. The lack of such an environment may lead individuals to have lower self-esteem. This would, consequently, prompt them to actively disconfirm worthlessness by compulsively promoting a positive self-image. Thus, individuals with grandiose narcissism overcome latent low self-worth by masking it with explicitly endorsed high self-esteem. As an extension of Bromberg's model, Bosson and Prewitt-Freilino (2007) proposed that vulnerable narcissism reflected an 'inverted mask', in which latent grandiosity is masked by expressed vulnerability. Thus, for individuals high on vulnerable narcissism, latent high self-worth is masked by explicitly endorsed low self-esteem.

The interplay of grandiosity and vulnerability is also proposed in social/personality accounts of narcissism, such as Morf and Rhodewalt's (2001)

dynamic self-regulatory process model. In this model, grandiosity and vulnerability involve characteristic behaviors expressed to validate self-worth in the presence of others. Individuals high in narcissism either use self-protective behaviors to cope with threats from others, such as grandiose self-promotion or appeals for sympathy involving disclosures of vulnerability and shame. Thus, individuals may develop grandiose or vulnerable features as a result of their dependence on the validation of others. Cain et al. (2008), influenced by Morf and Rhodewalt's work, further suggested that "self-esteem dysregulation" (p. 643) is a core narcissistic process and that grandiosity and vulnerability are expressions of this core process.

Thus, Kohut (1966) and Kernberg (1975), as well as Bromberg (1983), Morf and Rhodewalt (2001) and Cain and colleagues (2008) proposed that the regulation of self-esteem is a fundamental process in narcissism. Individuals high in grandiose narcissism are proposed to self-report high self-esteem as a consequence of latent low self-esteem. Conversely, the low self-esteem self-reported by individuals high in vulnerable narcissism is proposed to be a consequence of latent high self-esteem which is invalidated by others. In this way, the paradoxical relationship between grandiose narcissism (an assumed maladaptive construct) and self-esteem (a presumed adaptive one) is resolved. In vulnerable narcissism, the paradox of high self-regard in those who report low explicit self-esteem is also explained. The question then becomes, how does one measure an individual's latent self-esteem in order to test these theoretical propositions?

6.3 Self-Esteem Regulation and Implicit Self-Esteem

Self-esteem has been defined as "the individual's positive or negative attitude toward the self" (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995, p. 141) but

there is also a distinction in the literature between two forms, namely explicit and implicit self-esteem. *Explicit* self-esteem is one's consciously acknowledged attitude to one's self through deliberated self-report, which may reflect a biased response (Damarin & Messick, 1965), given that high self-esteem is socially desirable (Baumeister et al., 2003). *Implicit* self-esteem, however, is one's less-consciously acknowledged levels of self-positivity versus self-negativity (Greenwald & Farnham, 2000).

Non-conscious or less consciously acknowledged associations between self and positivity or negativity are considered to be automatic, reflecting the output of a fast memory system that can respond quickly (Smith & DeCoster, 2000). Such automatic associations are represented in cognitive models of memory as an association between nodes in a connectionist network (e.g., Collins & Loftus, 1975) of one's knowledge about oneself (McConnell, 2011).

Connections between nodes in this network represent associations between concepts, structured according to meaning, activated automatically by the process of spreading activation (Collins & Loftus, 1975; McCloskey, 1991). A concept becomes activated in memory through an individual's interaction with the environment and this, in turn, activates associated concepts embedded in the network. The activation of concepts in this way is thought to influence behavior and perception (Kihlstrom, 1987; Westen, 1999). For example, if one is initially successful at cooking, one might expect an association to form between a memory node representing the concept of cooking, another representing a positive evaluation and a third, representing a self-referent concept within a network (e.g., connections between the nodes 'good' 'cook' & 'me'). These connections would be strengthened by one's subsequent culinary successes. Once these concepts are associated in memory, spreading activation retrieves these associations without conscious effort, in response to relevant cues in the individual's

environment, such as further opportunities for cooking. In short, an individual would identify themselves as a 'good cook' and this represents an instance of positive self-worth. In this way, evaluations of one's self-worth form from the strength of associations of self-related concepts with valence concepts (i.e., concepts reflecting positivity or negativity). These associations are automatic and, therefore, hidden from conscious evaluation (Kihlstrom & Klein, 1994). Individuals will have many such associations and the aggregate of these represents one's latent level of self-worth and, therefore, one's level of implicit self-esteem.

For those high in grandiose narcissism, it would be expected that a positive association with explicit self-esteem (indicating expressed self-grandiosity) would occur in the presence of low implicit self-esteem (indicating latent self-vulnerability). For those high in vulnerable narcissism, a negative association with explicit self-esteem (indicated expressed self-vulnerability) would occur in the presence of high implicit self-esteem (indicating latent self-grandiosity).

6.4 Implicit Self-Esteem Tasks

Implicit self-esteem tasks are designed to assess automatic self-evaluations embedded in the connectionist network relating to the self in memory. Unlike measures of explicit self-esteem, where individuals are aware that their self-worth is being assessed because of the deliberate, self-report nature of the content, implicit self-esteem tasks indirectly assess these automatic self-evaluations using tasks that are designed to appear to be measuring something unrelated (e.g., a person's ability to categorize stimuli rapidly or to rate stimuli in terms of personal appeal).

The Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) is commonly used to assess implicit self-esteem. It measures the strength of associations

between the concept of self and positively-valenced concepts as well as not-self and negatively-valenced ones, relative to those for self and negatively-valenced concepts and not-self and positively-valenced ones, using a rapid category-sorting procedure. Individuals are asked to sort self-descriptive words and positive or negative words (i.e., exemplars of self and valenced concepts) into these paired categories as quickly as possible, whilst simultaneously sorting non-self-related words with positive and negative words, by pressing keys on a computer keyboard (Olson & Fazio, 2004; see Figure 1).

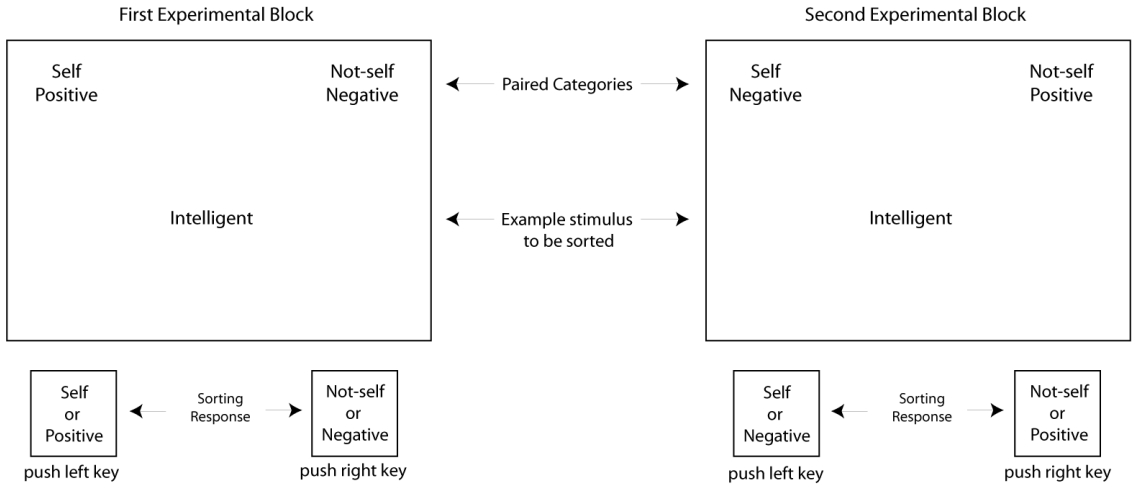

Figure 1. A typical self-esteem IAT measuring the associations of 'self' relative to 'not-self' with positive and negative valence categories.

Stronger associations between the 'self' category and positively-valenced concepts and 'not-self' with negatively-valenced ones relative to those for the 'not-self' category and positive valence and 'self' with negative indicate higher implicit self-esteem. Similarly, stronger associations between 'self' with negatively-valenced

concepts and ‘not-self’ with positive relative to those for ‘not-self’ and negative valence and ‘self’ with positive indicate lower implicit self-esteem.

A variant of the IAT, known as the Go/No-Go Association Task (GNAT; Nosek & Banaji, 2001) has also been used to assess implicit self-esteem (e.g., Gregg & Sedikides, 2010). It was developed to improve some aspects of the IAT, specifically, the requirement for a ‘not-self’ comparison category. The individual performing this task is required to press a designated key on a computer keyboard as fast as possible whenever word stimuli, presented briefly at the centre of a computer screen, matches one of the two target categories displayed (e.g., ‘me’ and ‘positive’), ignoring all non-matching stimuli (i.e., distracters). The trials are very short (typically < 700 ms) and the implicit self-esteem index is the signal detection theory index of sensitivity, *d* prime (Green & Swets, 1966), calculated from the frequency of correct responses to target words (i.e., ‘me’ or ‘positive’ stimuli) relative to incorrect responses to distracters (i.e., ‘not me’ or ‘negative’ stimuli), rather than an index calculated from reaction-times (Nosek & Banaji, 2001). In this way, implicit self-esteem scores are independent of response bias (i.e., whether the individual has a tendency to respond ‘yes’ or ‘no’, regardless of the stimuli presented). The task requires two experimental blocks, the first uses the target categories representing self and positive valence (i.e., ‘me’ & positive’) and the second uses the target categories representing self and negative valence (i.e., ‘me’ & ‘negative’).

Finally, another popular implicit self-esteem measure is the Name Letter Test (NLT; Nuttin, 1985). The NLT assesses self-esteem using the degree to which the letters in an individual’s name are preferred (i.e., are positively evaluated) over other letters, moderated by the extent to which others, who do not have these letters in their names, also evaluate them. The effect is particularly strong for the initials of one’s first

and last names (Jones, Pelham, Mirenberg, & Hetts, 2002). The rationale for using these name-letter evaluations is that individuals' positive self-associations are argued to "spill over into their evaluations of objects associated with the self" (Jones et al., 2002, p. 170). Described in this way, the NLT also assumes spreading activation within a self-associative network in memory (Collins & Loftus, 1975; Smith & DeCoster, 2000). However, the NLT does not ensure the measurement of *automatic* associations because it does not require rapid responding. Despite this, some argue that the NLT still assesses non-conscious processes, as it is thought not to arouse participants' *awareness* that their self-evaluations are being assessed (Gailliot & Schmeichel, 2006).

Implicit self-esteem tasks have been used alongside explicit self-esteem measures (i.e., self-report surveys) in research to investigate self-esteem in grandiose and vulnerable narcissism. Gregg and Sedikides (2010) outlined two broad patterns of implicit and explicit self-esteem, consistent with propositions concerning the nature of self-esteem associated with narcissistic grandiosity and vulnerability. The first pattern involves no relationship between implicit and explicit self-esteem forms, where the implicit form is an "overall index of ego fragility" (p. 144), that is, one's degree of self-vulnerability. In regard to the second pattern, an *interaction* is expected between implicit and explicit self-esteem. This latter pattern is consistent with the mask model, where the level of implicit self-esteem is expected to moderate the level of explicit self-esteem. Research that has explored the nature of the relationships between implicit and explicit self-esteem with grandiose and vulnerable narcissism is now reviewed.

6.4.1 Relationships of Grandiose Narcissism with Implicit and Explicit Self-Esteem

Jordan et al. (2003) found that the relationship of explicit self-esteem with NPI-assessed grandiose narcissism was moderated by IAT-assessed implicit self-esteem.

Specifically, explicit self-esteem was more strongly related to NPI scores to the extent that implicit self-esteem was low. These results support mask model predictions for grandiose narcissism (Bromberg, 1983).

Although Zeigler-Hill (2006) replicated Jordan et al.'s (2003) result, Campbell, Bosson, Goheen, Lakey, & Kernis (2007) were unable to replicate it. They found that an index of self-esteem from an IAT which used stimuli assessing social dominance (e.g., 'assertive') was positively associated with grandiose narcissism (NPI-assessed). Gregg and Sedikides (2010) used an implicit self-esteem GNAT and found both implicit and explicit self-esteem were independently negatively and positively related, respectively, to grandiose narcissism. This finding remains consistent with the proposition that grandiose narcissism is associated with latent self-vulnerability but not with the mask model.

Bosson et al. (2008), following a meta-analysis of both published and unpublished research, noted that implicit self-esteem measures were generally unreliable and this has hampered empirical support for the mask model of grandiose narcissism (Bromberg, 1983). Specifically, the indices of implicit self-esteem assessed using different implicit measures were generally uncorrelated, which suggests that they do not measure the same construct. Moreover, although test-retest reliabilities were adequate (approximately .65), they were not as high as those for explicit self-esteem measures. They argued that the NPI assesses both grandiose and vulnerable features of narcissism, the vulnerable expression reflected in Emmons' (1987) Exploitativeness/Entitlement factor. They suggested that this mixture of features would contaminate expected implicit and explicit self-esteem interactions. Consequently, they concluded that there was equivocal support for the proposition that the interaction between implicit and explicit self-esteem is associated with NPI scores. Thus, to date,

there is little support that a relationship between grandiose narcissism and explicit self-esteem is moderated by implicit self-esteem, such that as implicit self-esteem is lower, there is a stronger positive relationship between grandiose narcissism and explicit self-esteem.

6.4.2 Relationships of Vulnerable Narcissism with Implicit and Explicit Self-Esteem

The relationship of vulnerable narcissism with implicit and explicit self-esteem has only been investigated by Bosson and Prewitt-Freilino (2007). They found that NLT-assessed implicit self-esteem moderated the relationship between explicit self-esteem and vulnerable narcissism. However, they used Emmons' (1987) E/E NPI factor as a measure vulnerable narcissism. They used this because it correlates negatively with self-esteem and positively with shame proneness (Gramzow & Tangney, 1992; Watson et al., 1987). Furthermore, they found that the self-esteem interaction term only approached significance ($p < .10$). Thus, to date, there is scant evidence that a relationship between vulnerable narcissism and explicit self-esteem is moderated by implicit self-esteem, such that as implicit self-esteem is higher, there is a stronger negative relationship between vulnerable narcissism and explicit self-esteem.

6.5 Issues with Implicit Self-Esteem Measurement

In this final section, it is argued that implicit tasks that use reaction times as the basis of the index of implicit self-esteem are susceptible to a valence-related phenomenon that can bias assessment. An improvement to the implicit self-esteem index that is formed from reaction-times is outlined to address this bias in this section. Firstly, however, the self-referent nature of stimuli used in implicit tasks is briefly

discussed in terms of their personal relevance to the participant, as well as in terms of global versus contextual self-esteem.

6.5.1 The Use of Idiosyncratic Stimuli

One strength of the NLT is its use of specific, personally-relevant stimuli (i.e., the letters in one's name). A self-associative network in memory likely comprises unique relationships amongst personally-relevant self-concepts (McConnell, 2011). The NLT paradigm appears to capture unique self-relevance at the global level, that is, the inherent worth of one's own name (Nuttin, 1987). Nuttin (1987) demonstrated that name ownership transcends culture and language. The IAT has typically used generic (i.e., unpersonalized) stimuli associated with the self (i.e., 'me', 'I') but it can be modified to include personalized self-stimuli (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). For example, instead of using generic self-word stimuli, the task can be modified to use individualized names (e.g., 'John' or 'Smith') or other global-self indicators (e.g., birth month or place of birth). Bluemke and Friese (2012) found that a personally-relevant self-esteem IAT had higher correlations with self- and observer-assessments of self-esteem, when compared to a generic self-esteem IAT.

6.5.2 The Assessment of Global versus Contextual Self-Worth

A self-associative connectionist network in memory not only has a broad, overarching self that can be defined as the global self-aspect but also multiple, contextually-activated selves (McConnell, 2011). When the global self-aspect is activated, spreading activation should, theoretically, activate the whole network to some degree. Contextual self-roles, such as 'mother' or 'worker', are more strongly activated in situations where these are salient. The role 'mother', for instance, would be activated strongly when taking children to school. If a woman is employed and also a parent, a 'worker' self-aspect would likely replace the 'mother' aspect when work concerns

become relevant. These contextual self-aspects would also have associated positive and negative attributes, as contextual evaluations of self-worth. Current implicit self-esteem paradigms do not assess the evaluation of these contextual self-aspects when assessing implicit self-esteem. To account for the evaluation of these contextual self-aspects in implicit tasks alongside evaluation of the global self-aspect, however, may be optimal for implicit self-esteem assessment.

6.5.3 The Measurement of Associations of the Self with Positive and Negative

It is argued by some (e.g., Blanton, Jaccard, Gonzales, & Christie, 2006; Fiedler, Messner, & Bluemke, 2006; Siegle, Ingram, & Matt, 2002) that an issue in regard to the equivalence of positive and negative evaluations affects outcomes in all reaction-time tasks. The existence of this valence-related phenomenon places a query over rigid assumptions about positive and negative self-associations that are inherent in the structure of the IAT (Fiedler et al., 2006). It also has specific consequences for the calculation of the IAT-assessed implicit self-esteem index. The calculation is based on an assumption that trial blocks where self and positive concepts are paired and where self and negative concepts are paired should be equally weighted in the assessment (Fiedler et al., 2006). Moreover, the IAT has an extra assumption that self-positivity and other-negativity, as target categories in one experimental block, will be equal and opposite to self-negativity and other-positivity, in a consequent block. Blanton et al., (2006) argued that this makes the IAT restrictive and it assumes that viewing the self positively will cause one to view the other negatively and viewing the self negatively will cause one to view others positively.

IAT effects appear to be driven by positive valence, in addition to semantic relatedness (de Houwer, Hermans, Rothermund, & Wentura, 2002). For example, standard IAT effects for flowers versus insects and black versus white paired with

positive and negative concepts can be reversed or reduced by reversing the valence of stimuli to be sorted into the target categories (Govan & Williams, 2004). This 'positivity bias' pervades most implicit measures and facilitates positive associations over negative ones, yet it is taken as evidence of the self-regulation system tacitly promoting normal 'high' self-esteem (Greenwald & Banaji, 1995). Such a phenomenon, however, limits the measurement of negative associations that are expected in the self-concept for all individuals.

There is also an issue for the measurement of negative stimuli in reaction-time tasks. The results of some studies suggest that 'affective interference' occurs for negative stimuli (Siegle et al., 2002). The consequence is that individuals' responses to these stimuli will be systematically longer than those for positive and valence-neutral ones, despite equivalent associations in memory. Rossell and Nobre (2004), using a lexical decision task (another reaction-time paradigm), found that positively and neutrally-valenced associations are facilitated more than negative ones. This interference is observable as a general temporary 'freeze' of motor responses exhibited by many species when threat is encountered (Algom, Chajut, & Lev, 2004). Others have suggested that the interference is a delay caused by negative information occupying attentional processes for longer because it is important (Fox, Russo, Bowles, & Dutton, 2001). Regardless of the mechanism underlying the effect, Fazio's (2001) review of studies that involve the automatic activation of associated evaluations supports the general assumption that pairs of stimuli congruent in valence, such as positive self-related stimuli paired with positive stimuli or negative self-related stimuli paired with negative ones, elicit faster responding in individuals than incongruently-valenced stimuli pairs, as is expected for automatic self-associations in memory. It is complicated however, by an individual's motivation. Rothermund, Wentura, and Bak

(2001) found that responses to negative associations were systematically slower than those for positive ones when individuals were motivated to avoid losses. This could be a result of avoidance motives which characterize a narcissistic self-regulatory strategy, involving the attenuation of potential losses of self-esteem (Bonanno, 2004). It is plausible that this motive is salient during implicit self-esteem testing and, thus, may inhibit negative self-associations.

Taken together, although shorter responses to negative stimuli in an implicit self-esteem task likely represent stronger negative self-associations, the response latencies for negative self-associations may be longer relative to those for positive self-associations. This response asymmetry would distort the final implicit self-esteem index because it is typically calculated as the difference between average response latencies for positive self-evaluations and those for negative self-evaluations to arrive at a single implicit self-esteem score and this difference score is problematic (Fiedler et al., 2006). Alternatively, positive and negative self-associations should be assessed and analysed separately to provide an optimal assessment of implicit self-esteem that can be used to examine relationships with narcissism. Accordingly, strong positive and weak negative associations would indicate high implicit self-esteem, whereas, weak positive and strong negative associations would indicate low implicit self-esteem.

6.6 An Alternative Implicit Self-Esteem Task

The IAT, GNAT and NLT have been used to assess implicit self-esteem but there are other tasks that may provide a more appropriate measure of it. There is another implicit task that has not been used to measure implicit self-esteem, despite its extensive use to confirm cognitive accounts of automatic self-associations in memory. A lexical decision task was used by Meyer and Schvaneveldt (1971) to demonstrate the

automaticity of semantically-related concepts in memory. Specifically, Meyer and Schvaneveldt found that word pairs that are semantically-related (e.g., 'bread' & 'butter') facilitate participants' lexical decisions whereas unrelated word pairs (e.g., 'bread' & 'doctor') do not. This finding supports the proposition that semantically-related concepts are connected in memory.

Lexical decision tasks, like that of Meyer and Schvaneveldt (1971), have been used to provide evidence of a dynamic and contextual self-associative network in memory and to identify optimal self-stimuli for the measurement of associations between self-related concepts and evaluative ones in memory (Brown & McConnell, 2009; Hugenberg & Bodenhausen, 2004; McConnell, Rydell, & Brown, 2009). Hugenberg and Bodenhausen (2004) presented participants with single letter strings which were non-words, student-related words, or exclusive university fraternity-related words. Participants were asked to indicate, by responding as quickly as possible, whether each letter string was a word or not (i.e., 'yes' this is a word; 'no' this isn't a word). Those who strongly identified with their fraternity and who were primed to think about it responded faster to fraternity-related letter strings than those who were also primed but did not identify as strongly. This was interpreted as demonstrating that strong identification with a self-aspect preferentially activates related concepts in memory through spreading activation. Similarly, McConnell et al. (2009) found using a lexical decision task, that positive and negative attributes are associated with specific personally-relevant self-aspects in memory after these had been primed. Participants had matched these self-aspects with 20 positive (e.g., intelligent) and 20 negative (e.g., lazy) attributes in a separate experimental session several weeks prior to completing the lexical decision task. Their responses to attributes that had been previously paired with the primed self-aspects were faster than those for pairs that had not been matched.

A lexical decision task has some advantages as a reaction-time implicit self-esteem task, compared to the IAT and GNAT. Firstly, it is not a category-sorting task where the self-related nature of the task may be apparent to the participant, potentially contaminating trials with deliberative, rather than automatic responding. The requirement to make a lexical decision is unrelated to self-esteem, since it merely requires the individual to decide whether a letter-string is a word or a non-word.

Lexical decisions tasks can assess the strength of associations between pairs of word stimuli. The Meyer and Schvaneveldt (1971) variant (hereafter referred to as the MS task), requires the participant to decide whether two displayed letter-strings represent a pair of words or non-words or a word and non-word pair. In this way, the task can potentially assess the strength of association between valence concepts and several categories of stimuli in a single experimental block (e.g., various contextual self-aspects and global self-aspects as discussed above). Assessing these using the IAT or GNAT would require multiple experimental blocks.

Like the IAT and GNAT, lexical decision tasks are likely influenced by a positivity bias. Therefore, the creation of a single implicit self-esteem index by subtracting the reaction-times for negative self-associations from those for positive self-associations is not optimal. Shorter responses to negative stimuli in an MS task can be taken to represent stronger negative self-associations and these are likely to be longer relative to those for positive self-associations (Rossell & Nobre, 2004). Thus, implicit positive self-worth and negative self-worth should be evaluated as separate indices of implicit self-esteem.

6.7 Conclusion

There is disagreement about what association explicit self-esteem should have with narcissistic grandiosity and vulnerability expressions. Clinical researchers propose that both expressions should have a negative relationship because narcissism is maladaptive. Social/personality researchers have demonstrated that NPI-assessed grandiose narcissism has links to maladaptive outcomes, despite a positive association with explicit self-esteem. There is consensus between sub-disciplines, however, in regard to the expected negative association for vulnerable narcissism.

The mask model of narcissism (Bromberg, 1983) proposes that individuals high in grandiose narcissism have high explicit self-esteem to obscure low latent self-worth (i.e., low implicit self-esteem). Conversely, individuals high in vulnerable narcissism have low explicit self-esteem to obscure high latent self-worth (i.e., high implicit self-esteem). Therefore, for individuals high in either narcissism expression, implicit levels of self-esteem do not match explicit ones. This suggests that both expressions are potentially maladaptive because of an interplay between latent and expressed forms of vulnerability and grandiosity.

Implicit self-esteem is assessed using tasks designed to measure self-worth indirectly. These tasks are believed to assess automatic appraisals of self-worth that are contained in a self-associative network in memory. Although initial empirical work supported an expected interaction where NPI-assessed grandiose narcissism is positively associated with explicit self-esteem to the extent that implicit self-esteem is lower (i.e., Jordan et al., 2003), only one other study has replicated this interaction (i.e., Zeigler-Hill, 2006). Moreover, in regard to vulnerable narcissism, the expected complementary interaction, where this expression is negatively associated with explicit

self-esteem to the extent that implicit self-esteem is higher, has not been investigated using an established measure.

Reaction-time implicit tasks have a positivity bias that appears to reflect a general facilitation of positive associations for most people, suggesting that the measurement of negative associations may not be equal to the measurement of positive ones. Therefore, calculating an implicit self-esteem index using difference scores may not be optimal.

The MS task has been discussed as an implicit task variant which can assess different categories of self-stimuli and their association with exemplars of positive and negative concepts in a single experimental block. Although, as a reaction-time task, it is susceptible to the positivity bias, it is proposed that faster responses to associations of either valence, represent stronger automatic associations in memory. Nevertheless, they may not be equal and opposite, as is often assumed. By keeping the assessment of positive self-associations discrete from that of negative associations in an MS task using global and domain-based self-stimuli, it is suggested that optimal assessment of implicit self-esteem can be achieved.

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Chapter 7. The Current Research Program

7.1 Introduction

The aim of the research program reported in this thesis was to examine the appropriateness of using combined NPI and PNI subscales for comprehensive assessment of grandiose and vulnerable narcissism. It was further proposed that some of these subscales are relevant to the measurement of the dimensions that assess both expressions. In Chapter 2, it was argued that divergent lines of theory and research from clinical and social/personality psychology sub-disciplines had encouraged disagreement with regard to the conceptualization of grandiose and vulnerable narcissism (Akhtar, 2000; Cain et al, 2008; Bosson & Prewitt-Freilino, 2007; Bosson et al., 2000; Campbell et al., 2006; Campbell et al., 2010b; Gregg & Sedikides, 2010; Horvath & Morf, 2010; Morf, 2000; Rhodewalt & Morf, 1995; Zeigler-Hill, 2006). It was concluded that conflating 'adaptive', 'normal' and 'grandiosity' with grandiose narcissism, and 'maladaptive', 'pathological' and 'vulnerability' with vulnerable narcissism, has contributed to this disagreement. Dickinson and Pincus (2003) introduced the notion of 'pathological narcissism' to distinguish it from normal, grandiose narcissism (i.e., that measured by the NPI). In their concept of pathological narcissism, grandiose and vulnerable expressions are proposed, with the vulnerable expression having no 'normal' form. Pathological narcissism is assessed using the PNI (Pincus et al., 2009). In Chapter 3, it was argued that there was no consensus about the factor structures of the NPI and PNI, as multi-dimensional narcissism scales. Specifically, there is disagreement about the NPI's and the PNI's first-order factors and the PNI's grandiose and vulnerable second-order factors. Further, it was argued that the use of different versions of the NPI (i.e., different item counts and response formats)

and the use of a range of analytic techniques in research of both measures have contributed to the lack of consensus.

Chapter 4 presented a discussion that focused on which NPI and PNI subscales might assess common features of narcissism. The social/personality perspective proposes distinct grandiose and vulnerable dimensions (e.g., Wink, 1991), whereas the clinical perspective expects related dimensions (Cain et al., 2008). Both perspectives consider that a sense of entitlement is reflected in the grandiose and vulnerable expressions (e.g., Pincus & Lukowitsky, 2010; Glover et al., 2012). However, theory and research (e.g., Kernberg, 1970; Kohut 1966, Besser & Priel, 2010; Maxwell et al., 2011; Bushman & Baumeister, 1998; Okada, 2010) suggests that exploitativeness, attention seeking, grandiose fantasizing and narcissistic rage are also features reflected in both expressions and thus, are *common* features of narcissism.

In Chapter 5, FFM domain relationships with grandiose and vulnerable narcissism were reviewed. Both expressions have been found negatively associated with agreeableness, reflecting a lack of affiliation and conformity in interactions with others for individuals high in grandiose and vulnerable narcissism. Additionally, grandiose narcissism has a consistent positive association with extraversion (reflecting a domineering social style) and a negative relationship with neuroticism (reflecting a lack of personal distress). Vulnerable narcissism has a consistent positive association with neuroticism (reflecting personal distress) and a negative one with extraversion (reflecting interpersonal coldness and social distancing).

Finally, in Chapter 6, two forms of self-esteem were described. Explicit self-esteem is that assessed by self-report scales, reflecting one's consciously acknowledged self-worth. Implicit self-esteem is that assessed indirectly, reflecting one's less-consciously acknowledged sense of self-worth. In the mask model (Bromberg, 1983), it

is proposed that a self-worth vulnerability may be latent or expressed in narcissism. Specifically, individuals who are high in grandiose narcissism are expected to have a positive association with explicit self-esteem that is moderated by low implicit self-esteem, reflecting latent vulnerability masked by expressed grandiosity. Those high in vulnerable narcissism are expected to have a negative association with explicit self-esteem, moderated by high implicit self-esteem (Vater, Schröder-Abé, Schütz, Lammers, & Roepke, 2010), reflecting latent grandiosity masked by expressed vulnerability. However, the results of studies that have investigated these propositions are equivocal. It was argued the assessment of implicit-self-esteem likely impacts the detection of self-esteem discrepancies and suggestions for improvement were put forward. Specifically, these involve a new way of assessing implicit self-esteem and the use of a lexical decision task that has not been previously used to measure implicit self-esteem.

The current research program investigated how best to assess grandiose and vulnerable narcissism using two prominent measures – the NPI and the PNI. This was achieved by examining the fit of first-order and second-order factor models for these multi-dimensional measures. Consequently, new measures assessing features that are common, as well as ones that are unique to the expressions, were developed. The relationships of the new measures of grandiose and vulnerable narcissism with the FFM domains were examined and compared to those for PNI-assessed grandiosity and vulnerability scales. Of interest was whether all of these measures evidenced the specific relationships with these domains where grandiose narcissism is positively associated with extraversion (reflecting social dominance) and negatively associated with neuroticism (reflecting a lack of distress), and vulnerable narcissism, is positively associated with neuroticism (reflecting distress) and negatively associated with

extraversion (reflecting social distancing). Additionally, both expressions should be negatively associated with agreeableness (reflecting interpersonal dysfunction). Finally, associations of these measures with both explicit and implicit self-esteem were examined, specifically to examine how well these new measures reflect the proposed self-worth vulnerabilities that are either latent or expressed in grandiose and vulnerable narcissism respectively, compared to PNI-assessed grandiosity and vulnerability. Grandiose narcissism was expected to have a positive association with explicit self-esteem that is moderated by low implicit self-esteem, whereas vulnerable narcissism was expected to have a negative association with explicit self-esteem that is moderated by high implicit self-esteem.

7.2 An Overview of Samples, Studies and Research Questions

7.2.1 Samples

The data used in this research was provided by four separate samples of undergraduate students enrolled at the University of Melbourne, collected over a period of approximately 18 months, from October, 2011 to April, 2013. They participated as part of a number of larger studies. Sample 1 (N = 172) completed the NPI, explicit self-esteem and FFM measures. Sample 2 (N = 95) completed the PNI alone, together with the same explicit self-esteem and FFM measures. Sample 3 (N = 308) completed the NPI, PNI, explicit self-esteem and FFM measures. Sample 4 (N = 170) completed measures of implicit and explicit self-esteem as well as the NPI and the PNI. The exploratory factor analyses of the NPI and the PNI, conducted in Studies 1 and 2, respectively, required substantial sample sizes. As a result, Study 1 participants (N = 650) were those in Samples 1, 3 and 4. Study 2 participants (N = 573) were those of Samples, 1, 2 and 4. The nature of the second-order factor models of grandiose and

vulnerable narcissism investigated in Study 3 used Sample 3 participants. Study 4, which examined relationships of grandiosity and vulnerability measures to FFM domains, also used the participants of Sample 3. Finally, Study 5 used Sample 4 participants who completed reaction-time tasks used to measure implicit self-esteem, together with the NPI, PNI and the measure of explicit self-esteem. The demographic characteristics of the participants used in each study are described in the chapters that report the results of each study.

7.2.2 Study 1

Study 1 was designed to identify first-order factors of the NPI, given that previous research does not agree on the number of factors that this measure assesses (see Chapter 3, Section 3.1.1). As this disagreement can be partially attributed to the use of different analytic techniques, in addition to the use of the forced-choice NPI items that results in lower subscale reliability (Lissitz & Green, 1975), this study used a 6-point Likert-scale and required responses to the NPI narcissistic statements only (e.g., Egan & Lewis, 2011; Egan & McCorkindale, 2007; Jordan et al., 2003). Specifically, the number of factors for the rating form version of the NPI was determined using parallel analysis and the fit of an exploratory factor model was examined. Consequently, the factors found were compared to the principal components originally identified by Raskin and Terry (1988) and those of Boldero et al. (2013), who found factors consistent with Raskin and Terry's components using EFA.

7.2.3 Study 2

Study 2 identified the first-order factors of the PNI, using the same methodology as Study 1. Like the NPI, the PNI's seven subscales were originally derived using PCA (see Chapter 3, Section 3.2.1). A recent confirmatory analysis of the Chinese version of the PNI found that this version assesses seven factors (You et al., 2012). However, the

initial CFA analysis was a poor model-fit. Consequently, You et al. used item-parcelling to produce a solution that fit. Item-parcelling, however, can increase systematic error and distort study outcomes (Little et al., 2002). Those examining the factor structure of the Croatian version PNI also had to use item-parcelling to confirm first-order factors (Jakšić, et al. 2014) after an initial EFA found eight factors. When these first-order factors were used in a subsequent CFA of second-order factors (i.e., grandiosity and vulnerability factors), the first-order Exploitativeness factor showed an inconsequential loading on the second-order grandiosity factor (.06). Those examining the structure of the French version PNI were unable to replicate Wright et al.'s (2010) first- and second-order factors using CFA but consequently did so using PCA (Diguer et al., 2014). Finally, a CFA of the Italian version PNI found that these first- and second-order factors were a poor fit but were an adequate fit for data from a non-clinical sample and a good fit for data from a clinical sample, after specifying error covariance for several subscales (Fossati et al., 2014). Thus, current research was used to examine how many first-factors the English PNI has via EFA and compared these to the principal components identified by Pincus et al. (2009).

7.2.4 Study 3

The question examined in Study 3 was whether the PNI grandiosity and vulnerability second-order factor model (Wright et al., 2010) optimally conceptualize these narcissism expressions or whether, consistent with Miller et al.'s (2014) finding, the PNI primarily measures narcissistic vulnerability. Further, as Maxwell et al. (2011) demonstrated that the NPI and the PNI together comprehensively assess narcissism (and therefore, both grandiosity and vulnerability), this study was designed to compare the PNI grandiosity and vulnerability factors to those formed from NPI and PNI subscales. Several NPI and PNI subscales were proposed to assess common features of narcissism

(see Chapter 4, Sections 4.2 & 4.3) and therefore, to reflect both grandiosity and vulnerability factors in this alternate model. Consequently, second-order factor models were constructed reflecting Wright et al.'s (2010) model and the alternate model and the fit of these models was compared.

7.2.5 Study 4

A review of the relationships of grandiose and vulnerable narcissism with FFM domains indicates that relationships with two domains, extraversion and neuroticism, distinguishes the narcissism expressions (see Chapter 5, Section 5.3). Grandiose narcissism is positively related to extraversion and negatively related to neuroticism. Vulnerable narcissism is positively related to neuroticism and negatively related to extraversion. These associations are consistent with theory suggesting that individuals high in grandiose narcissism are socially dominant and not personally distressed (Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991), whereas those high in vulnerable narcissism experience high levels of personal distress and distance themselves socially (Dickinson & Pincus, 2003; Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991). Additionally, both expressions are negatively related to agreeableness because individuals high in both share an antagonistic interpersonal style that diminishes affiliation with others (Wink, 1991). Therefore, the question examined in Study 4 was whether NPI/PNI-assessed grandiose and vulnerable measures, developed in Study 3, would show these expected relationships with FFM domains. For completeness, the relationship of Wright et al.'s (2010) PNI-assessed grandiosity and vulnerability factors with the FFM domains were also examined.

7.2.6 Study 5

Self-regulatory processes in narcissism are proposed to be reflected by differential interactions between implicit and explicit self-esteem for the narcissism

expressions (Bosson & Prewitt-Freilino, 2007; Jordan et al., 2003; Morf & Rhodewalt, 2001). These proposed interactions are theoretically consistent with the mask model of narcissism (Bromberg, 1983) and the corresponding inverted mask proposition (Bosson & Prewitt-Freilino, 2007). Although the empirical evidence reviewed in Chapter 6 (see Sections 6.4.1 & 6.4.2) provides scant evidence for these interactions, it has been argued that this may reflect issues with the measurement of implicit self-esteem (see Section 6.5).

Thus, the question examined in Study 5 was whether the measures of grandiose and vulnerable narcissism that measure common and unique features (i.e., those developed in Study 3) have expected relationships with explicit self-esteem and whether these are moderated by implicit self-esteem (Bosson & Prewitt-Freilino, 2007; Jordan et al., 2003). For completeness, the relationships of PNI grandiosity and vulnerability factors (Wright et al., 2010) with implicit and explicit self-esteem were also examined. The mask model (Bromberg, 1983) predicts that expressed grandiosity masks a latent self-worth vulnerability in grandiose narcissism. This model, thus, predicts that there will be a positive relationship between explicit self-esteem and grandiose narcissism that is moderated by low implicit self-esteem. The inverted mask proposition (Bosson & Prewitt-Freilino, 2007) proposes that expressed vulnerability will be masked by a latent grandiose sense of self-worth in vulnerable narcissism. Thus, this proposition predicts that there will be a negative relationship between vulnerable narcissism and explicit self-esteem, that is moderated by high implicit self-esteem.

Chapter 8. An Exploratory Factor Analysis of the Narcissistic Personality Inventory

(Study 1)

8.1 Introduction

The NPI is a multi-dimensional narcissism scale, although there is little agreement about how many factors it assesses (e.g., Ackerman et al., 2011; Corry et al., 2008; Emmons, 1987; Kubarych et al., 2004; Raskin & Terry, 1988; see Chapter 3, Section 3.1.1 for a detailed review). Some researchers use the 40-item NPI composite score as a general measure of narcissism (e.g., Deluga, 1997; Ruiz et al., 2001). Others typically use the scores of four subscales of the 37-item version (e.g., Bosson & Prewitt-Freilino, 2007; Cater et al., 2011; Holtzman et al., 2010; Miller et al., 2011a; Rhodewalt & Morf, 1995; Rose, 2002; Zeigler-Hill & Besser, 2012), that reflect the results of Emmons' (1987) factor analyses. Other analyses of the NPI have identified two and three factor/component solutions (Ackerman et al., 2011; Corry et al., 2008; Kubarych et al., 2004).

Boldero et al. (2013) found evidence that the original seven components identified by Raskin and Terry (1988) underlie responses to the NPI. Raskin and Terry's seven-component model has several advantages over models with fewer discrete factors. For example, it separates Entitlement from Exploitativeness. This is important because, as was argued in Chapter 4 (see Section 4.2), entitlement and exploitativeness are different narcissistic features that are closely linked (e.g., Ackerman et al., 2011; Ackerman et al., 2012; Barry & Wallace, 2010; Wink, 1991). Entitlement is a cognition (assessed via one's set of beliefs) whereas exploitativeness is a behavioral tendency to act in an opportunist manner. Further, it is possible to have an inflated sense of

entitlement without being exploitative (Lessard et al., 2011). Thus, separate assessment of entitlement and exploitativeness is optimal for research purposes rather than a single factor that combines them. The seven-factor solution also separates exhibitionism and vanity factors (Raskin & Terry, 1988). Both factors are related to self-enhancement (Farwell & Wohlwend-Lloyd, 1998), yet NPI-assessed exhibitionism is associated with defensive self-enhancement whereas NPI-assessed vanity is not (Raskin et al., 1991b). Thus, the seven-factor model allows for finer distinction of narcissism factors.

Boldero et al. (2013) argued that the use of the forced-choice items, as well as the factor extraction method and analysis type, account for the lack of consensus and poor internal consistencies typically found for NPI subscales. An alpha value of .70 or above is considered to indicate an acceptable level of internal consistency for research purposes (Streiner, 2003). Researchers (del Rosario & White, 2005; Foster & Campbell, 2007; Maxwell et al., 2011) have previously found the following range of values for coefficient alpha for Raskin and Terry's (1988) forced-choice NPI subscales: Authority (α =.72-.75); Exhibitionism (α =.57-.68); Exploitativeness (α =.45-.55); Self-Sufficiency (α =.35-.39); Superiority (α =.53-.57); Entitlement (α =.46-.48), and; Vanity (α =.58-.66). Therefore, it would appear from these studies that the Authority subscale is the only one with acceptable internal consistency. Since the number of rating options available for items on a scale is associated with an increase in reliability (Lissitz & Green, 1975), a Likert-scale format should give more reliable subscales than the forced-choice versions. Thus, a Likert-response version of the NPI was used in the current study. Boldero et al. used a six-point response scale for the 40-item NPI and these Likert-response ratings assessed the extent to which individuals agreed or disagreed that the narcissistic statements were self-descriptive. They found that the subscales formed

were more reliable than those when individuals indicated whether or not the NPI's narcissistic statements were self-descriptive (see Section 3.1.1).

Boldero and colleagues (2013) analyzed data, gathered using a six-point Likert-scale version of the 40-item NPI using exploratory factor analysis (EFA) in Mplus 7 (Muthén & Muthén, 1998-2013). EFA was used instead of CFA, for a number of reasons. Firstly, EFA and CFA are different analytic procedures. Factors will be retained in an EFA if they account for significant variance in the data and produce adequate fit statistics. In contrast, significant variance remains after all factors identified in EFA are accounted for in a confirmatory model (i.e., one extracted using CFA), resulting in a poorer fit (Floyd & Widaman, 1995). Secondly, the fit of a model in a CFA is unlikely to be acceptable when there are many items or where items have cross-loadings on several factors (e.g., Church & Burke, 1994). This can be rectified using item-parcelling (Floyd & Widaman, 1995).

Item-parcelling involves the averaging of item scores across two or more items, aggregating error in order to enhance the accuracy of parameter estimates (Hall, Snell, & Foust, 1999). When a researcher cannot be certain that each item assesses a single underlying construct, item parcelling may bias item-loading estimates, thereby distorting measurement models (Bandalos & Finney, 2001). Moreover, systematic error across items can inadvertently and inaccurately define a latent construct (Little et al., 2002). As a result, item-parcelling can hide model mis-specifications that would otherwise emerge when individual items are analysed. As a result, item-parcelling requires assumptions to be made about the underlying constructs. These assumptions are potentially violated as there is considerable disagreement about the NPI's first-order structure.

Floyd and Widaman (1995) recommended that EFA and CFA be used together to determine the factor structure. Specifically, two data sets are used with the factors identified using EFA with data from the first set being confirmed with CFA of the second set. A drawback of this technique, however, is that very large samples are required. With smaller samples (i.e., < 1200+ participants), EFA represents the optimal factor-analytic technique (Floyd & Widaman, 1995). Since the number of participants available to the present study was 650 participants, EFA was considered to be the best choice for analysis of the NPI.

8.1.1 This Study

This study was designed to examine the factor structure underlying of the 6-point Likert scale version of the 40-item NPI that presents narcissistic statements only, using EFA. The number of factors to extract in the current study was determined using parallel analysis (Horn, 1965) rather than a scree-plot (Cattell, 1966), which is less reliable (Reise et al., 2000; Streiner, 2012). Parallel analysis compares randomly-generated eigenvalues to those in the actual data to identify the number of factors to extract (Ruscio & Roche, 2012). Furthermore, an oblique geomin rotation (Yates, 1987) was used as this identifies complex factors by providing an interpretable solution through the minimisation of cross-loadings (Sass & Schmitt, 2010).

8.2 Method

8.2.1 Participants

Participants were 650 first-year students (512 female, 138 male) from the University of Melbourne, who participated in partial fulfilment of a Research Experience Program requirement of the psychology subject in which they were enrolled. They ranged in age from 17 to 54 years (*M* = 19.5 years, *SD* = 3.5 years). Of these, 65.2% were born in Australia, 23.7% in Asia, 5.4% in another Western country and 5.7% in other countries. All participants were fluent English speakers who had lived in Australia from one to 41 years (*M* = 2.2 years, *SD* = 4.8 years).

8.2.2 Materials

8.2.2.1 The Narcissistic Personality Inventory (NPI). The 40-item version of the NPI was used (see Appendix B). Participants were asked to indicate the extent to which each narcissistic NPI statement was self-descriptive on a 6-point Likert scale, from ‘not at all like me’ (1) to ‘very much like me’ (6).

8.2.3 Procedure

Participants completed the NPI as part of several larger studies. These studies included other measures of narcissism, along with measures of self-esteem and FFM personality measures. The NPI was completed after the self-esteem measures and before the FFM measure. Participants provided demographic data, including age, gender, years lived in Australia and place of birth, following completion of the measures of interest.

8.3 Results

8.3.1 Item Characteristics.

Examination of the distributions for NPI items revealed that three items, items 3, 18 and 26, were skewed (see Appendix C). These items reflect socially-desirable themes, such as 'I would do almost anything on a dare' and 'I want to amount to something in the eyes of the world', or undesirable ones such as 'I like to be complimented'. Eight items, items 5, 13, 19, 22, 25, 26, 29 and 37 also showed kurtosis (see Appendix C). The item 'I like to be complimented', for example, exhibited a peaked distribution at the fifth point of the Likert scale, whereas items, such as 'If I ruled the world it would be a better place' and 'I wish somebody would someday write my biography', produced flat distributions. These departures from normality were addressed in the EFA by using the robust maximum likelihood (MLR) estimator as this compensates for non-normal item distributions (Curran et al., 1996).

8.3.2 Exploratory Factor Analysis of the NPI.

The EFA of the NPI was conducted in Mplus 7 (Muthén & Muthén, 1998-2013). Correlational analysis revealed that all items correlated with more than one other item, suggesting that factor analysis was appropriate (see Appendix D).

The Kaiser-Meyer-Olkin measure of sampling adequacy was .91, well above the recommended value of .60. Bartlett's test of sphericity was also significant, $\chi^2 (780) = 10558.85$, $p < .001$. Examination of anti-image correlations revealed acceptable values well above .5 on the diagonals (i.e., all > .7). Additionally, as communalities were greater than .3, there was additional evidence of shared variance amongst items. As a result, factor analysis of all 40 items was appropriate.

A parallel analysis (Horn, 1965), using 100 datasets and a confidence level of 95%, determined that seven factors should be extracted. The seven-factor solution was an adequate fit to the data, CFI = .938, NNFI = .908, RMSEA =.039, SRMR = .027. The Satorra-Bentler Scaled Chi-Square was significant, χ^2 (780) = 9273.77, $p < .001$. However, this test is known to be too conservative for many SEM applications, encouraging Type 2 errors (Fornell & Larcker, 1981). Table 1 shows the loadings of items for the seven-factor solution.

Table 1

Item loadings for the seven-factor exploratory analysis solution of the 40-item NPI.

		Factor						
Item No.	NPI Statement	1	2	3	4	5	6	7
35	I can make anybody believe anything I want them to*	.74						
13	I find it easy to manipulate people*	.71						
6	I can usually talk my way out of anything*	.63						
1	I have a natural talent for influencing people^	.54		.37				
16	I can read people like a book*	.53						
23	Everybody likes to hear my stories*	.28	.24					
34	I am going to be a great person*		.82					
40	I am an extraordinary person*		.75					
9	I think I am a special person*		.71					
8	I will be a success*		.67	.21				
31	I can live my life in any way I want to*		.53					
4	I know that I am good because everybody keeps telling me so*		.42					
39	I am more capable than other people	.24	.26				.23	
10	I see myself as a good leader*			.87				
33	I would prefer to be a leader*			.81				
36	I am a born leader*			.74				
32	People always seem to recognize my authority*	.33		.49				
11	I am assertive*			.45				
30	I really like to be the centre of attention*				.86			
7	I like to be the centre of attention*				.84			
20	I will usually show off if I get the chance*				.39		.25	
3	I would do almost anything on a dare				.21			
19	I like to look at my body*					1.02	.23	
29	I like to look at myself in the mirror*					.65		
15	I like to show off my body*					.60		
25	I will never be satisfied until I get all that I deserve*						.74	.21
14	I insist upon getting the respect that is due to me*						.51	
24	I expect a great deal from other people*						.49	
18	I want to amount to something in the eyes of the world*				-.27		.43	-.30
37	I wish somebody would someday write my biography						.39	
38	I get upset when people don't notice how I look when I go out in public^				.33		.37	
12	I like to have authority over other people^			.31			.33	
27	I have a strong will to power*			.25			.30	
5	If I ruled the world it would be a better place^						.27	
26	I like to be complimented*						.26	-.27
2	Modesty does become me						.25	
28	I like to start new fads and fashions						.22	
17	I like to take responsibility for making decisions*			.37				.40
21	I always know what I'm doing*		.27					.37
22	I rarely depend on anyone else to get things done*							.37

** denotes loading on a factor consistent with Boldero et al. (2013). ^ denotes item loading on a factor corresponding to a cross-loading found in Boldero et al. (2013).*

Examination of factor loadings in Table 1 indicates that the pattern of items loading on factors in this study were like those reported by Boldero and colleagues (2013). Factor 6 had 12 items, nine of which loaded on Boldero et al.'s Entitlement factor. Some of these items reflect a grandiose sense of self, such as 'If I ruled the world it would be a better place' and 'I wish somebody someday would write my biography'. Of the items loading on the Exploitativeness factor (Factor 1), five were those which Raskin and Terry's (1988) reported loaded on their Exploitativeness component and Boldero et al.'s Exploitativeness factor. The exception was that in the current study an additional item, Item 1 (i.e., 'I have a natural talent for influencing people'), loaded on this factor.

The items loading on Factor 5 (i.e., Items 15, 19, and 29) were those that loaded on Boldero et al.'s (2013) and Raskin and Terry's (1988) Vanity factors. A majority of items loading on Factors 2, 3, and 4 were those which loaded on the Superiority, Authority, and Exhibitionism factors, respectively, in these previous studies. Seven items loaded on the Superiority factor as opposed two six for Boldero et al and five for Raskin and Terry. Five items loaded on the Authority factor compared to the seven Boldero et al. found loaded on this factor and eight found by Raskin and Terry. Four items rather than eight (Boldero et al., 2013) or seven (Raskin & Terry, 1988) loaded on the Exhibitionism factor. Three items rather than five (Boldero et al., 2013) and six (Raskin & Terry, 1988) loaded on the Self-Sufficiency factor. Exhibitionism (i.e., Factor 4), was relabelled as Attention seeking because the items loading on it related to being the centre of attention or acting on a dare (i.e., items 7, 30, & 3) and only one item (i.e., Item 20) reflects exhibitionism (i.e., 'I will usually show-off if given the

chance'). All scores on the subscales (calculated from the mean across items loading on the factors) were normally distributed (see Appendix E).

8.3.3 The Reliability of NPI Subscales

The values of Guttman's lambda indicated six of the seven subscales were reliable. These were: Exploitativeness (λ = .79); Superiority (λ =.82); Authority (λ =.84); Attention Seeking (λ =.76); Vanity (λ =.79); and Entitlement (λ =.79). However, Self-sufficiency was not (λ =.43).

8.3.4 Inter-Correlations of NPI Subscales

Scores on the Self-Sufficiency subscale were relatively weakly correlated with those on the remaining six subscales (see Table 2). This indicates that it did not load on the same second-order factor as the other subscales (Muthén, 2004), which were moderately, positively correlated. It had a weak positive association with Exploitativeness and a weak *negative* one with Attention Seeking and Vanity. It had no association with Superiority, Authority or Entitlement.

Table 2

Inter-correlations amongst extracted NPI factors.

	1	2	3	4	5	6	7
1. Exploitativeness	-						
2. Superiority	.29*	-					
3. Authority	.40*	.39*	-				
4. Attention Seeking	.33*	.17*	.19*	-			
5. Vanity	.21*	.45*	.19*	.41*	-		
6. Entitlement	.43*	.31*	.27*	.51*	.32*	-	
7. Self-sufficiency	.09*	.08	.09	-.21*	-.13*	-.05	-

N = 650; * indicates significance at $p < .05$

8.4 Discussion

This study was designed to examine the factor structure of the NPI when the narcissistic statements of the forced-choice version are used and these are responded to using a Likert scale. A parallel analysis indicated that seven factors should be extracted and the seven-factor exploratory solution fit the data. Further, the analysis yielded six subscales that were reliable.

The pattern of item loadings on six factors was broadly consistent with that reported by Boldero et al. (2013). Boldero et al. found that nine items loaded on their Entitlement factor. These nine items along with three additional ones loaded on the factor labelled Entitlement in this study. Attention Seeking was assessed by four items with three of these items being those loading on Boldero et al.'s eight-item Exhibitionism factor. Further, the Authority subscale comprised five items which were among the seven that Boldero et al found loaded on their Authority factor. Superiority had seven items loading on it and six of these loaded on Boldero et al.'s equivalent factor. The five of six items loading on the Exploitativeness factor in this study were those loading on Boldero et al.'s equivalent factor. Finally, the three items loading on the Vanity factor were those loading on Boldero et al.'s Vanity factor and on Raskin and Terry's (1988) Vanity component.

The Self-sufficiency subscale was not reliable. This result is consistent with those of studies that have found that this subscale is not as reliable as the other subscales (e.g., del Rosario & White, 2005; Foster & Campbell, 2007; Maxwell et al., 2011; McHoskey, 1995).

Self-Sufficiency was also unrelated or negatively related to other NPI subscales, suggesting that it may not be relevant to the assessment of narcissism. It is a feature of Maslow's (1969) self-actualized individual and involves self-determination and

psychological well-being achieved by rare individuals (Ryan, Huta, & Deci, 2006). However, the illusion of one's self-sufficiency is thought to be a self-enhancement strategy underpinned by the denial of self-vulnerability (Almond, 2004; Modell, 1975; Ronningstam, 2013) and, thus, a narcissistic feature. It could be that this factor is not operationalized well. Thus, its inclusion in subsequent analyses was considered to be potentially problematic.

8.5 Conclusion

The results of this study indicate that the Likert-scale version of the NPI reliably assesses six key aspects of narcissism. These were labelled Authority, Vanity, Superiority, Exploitativeness, Attention Seeking and Entitlement, since they are broadly consistent with Boldero et al.'s (2013) seven-factor solution and with Raskin and Terry's (1988) seven principal components. Study 2 (reported in the next chapter) was designed to examine whether, consistent with the results of Pincus et al.'s (2009) PCA, seven latent factors underlie the PNI.

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Chapter 9. An Exploratory Factor Analysis of the Pathological Narcissism Inventory

(Study 2)

9.1 Introduction

The 52-item PNI is a relatively recent multi-dimensional measure of pathological narcissism (Pincus et al., 2009). It was originally conceived of as a measure of vulnerable narcissism (Pimental et al., 2004, as cited in Ansell, 2005; Pimentel, 2007; Zeigler-Hill et al., 2008). Using PCA, Pincus et al. (2009) extracted seven components from the PNI: Contingent Self-esteem; Hiding the Self; Devaluing; Grandiose Fantasy; Entitlement Rage; Exploitativeness, and; Self-Sacrificing Self-Enhancement. They argued that the scale measures aspects of clinically-significant, grandiose and vulnerable narcissism.

The PNI's seven subscales are reliable (Maxwell et al., 2011; Pincus et al., 2009; Wright et al., 2010), which may be partially attributable to the use of a Likert scale response format for its items (Culpepper, 2013). Previous research (Maxwell et al., 2011; Miller et al., 2011a; Pincus et al., 2009) has found values for coefficient alphas within the following ranges: Contingent Self-esteem (α =.92-.94); Entitlement Rage (α =.84-.89); Exploitativeness (α =.76-.83); Self-Sacrificing Self-Enhancement (α =.74-.78); Hiding the Self (α =.73-.79); Grandiose Fantasy (α =.84-.91), and; Devaluing (α =.82-.86).

Subsequent second-order factor analyses suggest that the PNI assesses either one or two second-order latent factors (Wright et al., 2010). Wright and colleagues (2010) tested three second-order models, specifically, two 2-factor models and one single-factor one (Chapter 3, Section 3.2.1). There was little difference in the fit of these

models suggesting that the PNI subscales most parsimoniously reflect a single overarching factor, presumed to be 'pathological narcissism' (Pincus et al., 2009). Nevertheless, it is plausible that the PNI primarily measures vulnerable narcissism (which also has a negative relationship with self-esteem), given its original conception as a vulnerable narcissism measure (Miller et al., 2014) – that is, the Vulnerable Narcissism Scale (Pimentel et al., 2004).

Some researchers argue that, despite the conceptual differences between PCA and EFA, they will give equivalent results (e.g., Schonemann, 1990; Steiger, 1990; Velicer & Jackson, 1990). Latent variables are unobservable constructs which underpin patterns of *common* variance in the data (Reise et al., 2000). PCA, however, does not discriminate between difference sources of variance, such as common, unique and error sources, but instead accounts for *all* of the variance among items in the formation of components (Costello & Osborne, 2005). Thus, each PCA component is a weighted summary of the total measure and assumes that the construct under measurement is completely accounted for by the measure's items (Edwards, 2011). Consequently, Edwards (2011) argued that the PCA is inconsistent with the realistic expectation that no item (or group of items) will constitute perfect assessment of a latent construct and a degree of measurement error is anticipated. Because Pincus and colleagues (2009) conducted PCA, the scale's latent factors were not identified (Krishnakumar & Nagar, 2007), and therefore, are not known for the English version PNI.

If the PNI is a multi-dimensional measure that assesses seven narcissism features, the scale should have seven first-order latent factors. Although, the English version PNI has not been analysed using EFA, the Croatian version has. Jakšić et al. (2014) found, using parallel analysis and Velicer's (1976) MAP test, that eight factors should be extracted. When they did this they found that one of these factors was "a

narrow subcomponent of Self-Sacrificing Self-Enhancement" (p. 5), whereas the others were equivalent to Pincus et al.'s (2009) seven components.

Recently, non-English versions of the PNI have been submitted to CFA to replicate first-order factors. Diguer et al., (2014), Fossati et al., (2014), Jakšić et al.,(2014) and You et al. (2012) found the initial fit for a seven-factor model was poor. Jakšić et al. and You et al. (2012) found that the fit was improved when item-parcelling was used. In both studies, some parcels contained only two items, when three are recommended to avoid under-identified factors (Little et al., 2002). Diguer et al. could not replicate the seven-factor solution using CFA, although they did using PCA. Fossati et al. achieved adequate and good fits in non-clinical and clinical samples, respectively, but only after specifying error covariances between some factors.

Houlcroft et al. (2012) also explored the structure of the PNI. However, they report 'components' and so it is likely that they used PCA rather than EFA. Moreover, as Houlcroft et al. were specifically interested in the nature of the second-order factors of grandiose and vulnerable narcissism, they did not indicate how many first-order factors were extracted nor did they report the items loading on them. Thus, it remains to be investigated whether the English PNI has seven latent factors that correspond to the PCA-derived components.

9.1.1 This Study

This study was designed to examine the factor structure underlying the 52-item PNI using EFA. The number of factors to extract in the current study was determined using parallel analysis, as it was for Study 1. Also as for Study 1, an oblique geomin rotation was used to identify factors.

9.2 Method

9.2.1 Participants

Participants were 573 first-year students (461 female, 112 male) from the University of Melbourne, who took part to satisfy a Research Experience Program requirement for the psychology subject in which they were enrolled. They ranged in age from 17 to 56 years (*M* = 19.6 years, *SD* = 3.9 years). Of these, 64.9% were born in Australia, 24.1% in Asia, 5.6% in another Western country and 5.4% in other countries. All participants were fluent English speakers who had lived in Australia from one to 41 years (*M* = 2.2 years, *SD* = 5 years).

9.2.2 Materials

9.2.2.1 The Pathological Narcissism Inventory (PNI). The PNI, like the NPI, is a multi-dimensional measure. Pincus et al. (2009) found that the scale to has seven components (see Appendix F), specifically: (1) Entitlement Rage, (2) Exploitativeness, (3) Grandiose Fantasy, (4) Self-Sacrificing Self-Enhancement, (5) Contingent Self-esteem, (6) Hiding the Self, and (7) Devaluing. Of the PNI's 52-items, seven are the narcissistic statements of the forced-choice 40-item NPI (Raskin & Terry, 1988). Five of these comprise the PNI's Exploitativeness subscale and are those which comprise Raskin and Terry's (1988) Exploitativeness subscale (i.e., Items 4, 10, 15, 23 & 35; Glover et al., 2012) when the NPI presents the narcissistic statements only and responses are required on a Likert scale. The remaining two items which are the narcissistic statements of items on Raskin and Terry's Entitlement subscale are items on the PNI Grandiose Fantasy subscale (i.e., Item 49) and the Entitlement Rage subscale (i.e., Item 38).

9.2.3 Procedure

Participants completed the PNI as part of several larger studies. The PNI was presented after an explicit self-esteem measure and before an FFM of personality measure. Participants provided demographic data following completion of these scales.

9.3 Results

9.3.1 Item Characteristics.

Examination of the distribution of responses to the PNI items revealed that two items, Items 6 and 49 (i.e., 'I can make myself feel good by caring for others' & 'I want to amount to something in the eyes of the world', respectively), were skewed (see Appendix G). Eighteen items (i.e., items 3, 5, 7, 9, 11, 15, 20, 23, 30, 32, 36, 38, 40, 42, 46, 50-52; see Appendix G) showed kurtosis. Such items showed flat distributions that indicated low endorsement of items. Thus, the MLR estimator was used in analyses to compensate for these non-normal item distributions (Curran et al., 1996).

9.3.2 Exploratory Factor Analysis of the PNI.

The EFA of the PNI's 52 items was conducted using Mplus 7 (Muthén & Muthén, 1998-2013). Correlational analysis revealed that all items were correlated with more than one other item, indicating suitability for factor analysis (see Appendix H).

The Kaiser-Meyer-Olkin measure of sampling adequacy was excellent at .94. Bartlett's test of sphericity was also significant, $\chi^2(1326) = 13984.67$, $p < .001$. Examination of anti-image correlation revealed acceptable values above .5 on the diagonals (i.e., all > .8). Additionally, as communalities were greater than .3, there was additional evidence of shared variance amongst items. Therefore, factor analysis was suitable with all PNI items.

A parallel test, using 100 datasets and a confidence level of 95%, determined that an eight-factor solution was appropriate. Consequently, an EFA with an oblique geomin rotation extracted eight factors. This model fit the data (CFI = .931, NNFI = .902, RMSEA =.038 [90% confidence interval: .035 - .041], SRMR = .026). The Satorra-Bentler Scaled Chi-Square was significant, $\chi^2(938) = 1713.61$, $p < .001$. Table 3 shows the item loadings for the eight-factor solution.

Table 3

Item loadings for the eight-factor exploratory analysis solution of the 52-item PNI.

		Factor							
Item No.	PNI Statement	1	2	3	4	5	6	7	8
10	I can make anybody believe anything I want them to*	.82							
15	I find it easy to manipulate people*	.77							
4	I can usually talk my way out of anything*	.67							
23	I can read people like a book*	.58				.26			
35	Everybody likes to hear my stories*	.39							
36	It's hard for me to feel good about myself unless I know other people like me*		.80						
30	It's hard to feel good about myself unless I know other people admire me*		.74						
16	When others don't notice me, I start to feel worthless*		.69						
8	When people don't notice me, I start to feel bad about myself*		.69						
32	I am preoccupied with thoughts and concerns that most people are not interested in me*		.64						
5	It's hard to feel good about myself when I'm alone*		.62			.26			
40	I am disappointed when people don't notice me*		.58						
48	I need others to acknowledge me*		.58						
19	I sometimes need important others in my life to reassure me of my self-worth*		.51						
47	When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself*		.47	.26					47
2	My self-esteem fluctuates a lot*		.44			.32			
33	I like to have friends who rely on me because it makes me feel important		.38				.36		
41	I often find myself envying others' accomplishments*		.35		.27				

Item No.	PNI Statement	Factor							
		1	2	3	4	5	6	7	8
21	When others don't meet my expectations, I often feel ashamed about what I wanted			.75					
3	I sometimes feel ashamed about my expectations of others when they disappoint me			.61					
24	When others disappoint me, I often get angry at myself			.57					
45	I often fantasize about being recognized for my accomplishments*				.79				
31	I often fantasize about being rewarded for my efforts*				.70				
14	I often fantasize about having a huge impact on the world around me*				.65				
42	I often fantasize about performing heroic deeds*				.61				
1	I often fantasize about being admired and respected*				.60				
26	I often fantasize about accomplishing things that are probably beyond my means*				.55				
49	I want to amount to something in the eyes of the world*				.48	.24			
7	I hate asking for help*					.57			
9	I often hide my needs for fear that others will see me as needy and dependent*		.31			.51			
46	I can't stand relying on other people because it makes me feel weak*					.49			
28	It's hard to show others the weaknesses I feel inside*		.26			.47			
44	It's important to show people I can do it on my own, even if I have some doubts inside*				.25	.36			
50	When others get a glimpse of my needs, I feel anxious and ashamed*		.30			.36			
13	I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire*					.32			
25	Sacrificing for others makes me the better person*						.61		

Item No.	PNI Statement	Factor							
		1	2	3	4	5	6	7	8
6	I can make myself feel good by caring for others*						.60		
39	I try to show what a good person I am through my sacrifices*						.57		
43	I help others in order to prove I'm a good person*		.21				.47		
22	I feel important when others rely on me*		.33				.44		
29	I get angry when criticized*							.66	
11	I get mad when people don't notice all that I do for them*							.57	
37	It irritates me when people don't notice how good a person I am*							.56	
52	I can get pretty angry when others disagree with me*			.21				.54	
12	I get annoyed by people who are not interested in what I say or do*							.49	
18	I typically get very angry when I'm unable to get what I want from others*			.25				.45	
20	When I do things for other people, I expect them to do things for me*							.44	
38	I will never be satisfied until I get all that I deserve*	.25			.21			.28	
17	Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them								.69
34	Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them								.68
27	Sometimes I avoid people because I'm afraid they won't do what I want them to			.34					.51
51	Sometimes it's easier to be alone than to face not getting everything I want from other people					.21			.44

** denotes item loading on factor consistent with Pincus et al. (2009).*

Inspection of Table 3 reveals that Factors 1, 2, 4, 5, 6 and 7 have similar patterns of item loadings to those of six of Pincus et al.'s (2009) subscales. Factor 1 was identical to the Exploitativeness component. Twelve of the 13 items loading on Factor 2 were those that loaded on the Contingent Self-Esteem component. The additional item was item 33 – 'I like to have friends who rely on me because it makes me feel important'; an item loading on Pincus et al.'s Self-Sacrificing Self-Enhancement component. Seven items loaded on Factor 4 and these were identical to the seven that load on the Grandiose Fantasy component. Factor 5 had seven items that are identical to those loading on the Hiding the Self component. Factor 6 had five of the items that loaded on the six-item Self-Sacrificing Self-Enhancement component. As noted above, Item 33 loaded on Factor 2. Finally, Factor 7 had identical item loadings to the Entitlement Rage component.

Accordingly, these factors were labelled Exploitativeness, Contingent Self-Esteem; Grandiose Fantasy; Hiding the Self; Self-Sacrificing Self-Enhancement, and; Entitlement Rage. An exception was the PNI Devaluing component subscale which separated into two distinct factors (i.e., Factors 3 [Items 3, 21, & 24] & 8 [Items 17, 27, 34, & 51]). These differentiated along themes of experienced shame and the avoidance of others. Consequently, these factors were named Shame and Social Avoidance, respectively. Scores were calculated from the mean across items loading on each factor and the resulting subscale scores were normally distributed for all eight subscales (see Appendix I).

9.3.3 The Reliability of PNI Subscales

The values of Guttman's lambda indicated that the eight subscales were reliable: Contingent Self-esteem (λ = .92); Hiding the Self (λ =.75); Grandiose Fantasy (λ =.86);

Exploitativeness (λ =.77); Self-Sacrificing Self-Enhancement (λ =.72), Entitlement Rage (λ =.84); Shame (λ =.69), and; Social Avoidance (λ =.76).

9.3.4 Inter-Correlations of PNI subscales

Table 4 shows the correlations among factors. Most factors showed moderate to weak positive correlations. However, Exploitativeness was unrelated to Contingent Self-esteem, Shame or Hiding the Self. Additionally, Hiding the Self was unrelated to Entitlement Rage.

Table 4

Inter-correlations amongst extracted PNI factors.

	1	2	3	4	5	6	7	8
1. Exploitativeness	-							
2. Contingent Self-Esteem	.05	-						
3. Shame	.08	.45*	-					
4. Grandiose Fantasy	.21*	.44*	.24*	-				
5. Hiding the Self	.03	.20*	.26*	.08*	-			
6. Self-Sacrificing Self- Enhancement	.13*	.24*	.12*	.33*	.10*	-		
7. Entitlement Rage	.29*	.47*	.37*	.37*	.05	.17*	-	
8. Social Avoidance	.12*	.38*	.38*	.23*	.13*	.10*	.45*	-

N = 573; * indicates significance at $p < .05$

9.4 Discussion

This study examined the first-order factor structure of the PNI. Although Pincus et al. (2009) found that this scale has seven components, in the present study parallel analysis indicated that it has eight, rather than seven, latent factors. This is consistent with the results of Jakšić et al. (2014) who found eight factors underlying the Croatian version of the scale. A subsequent EFA revealed that the original Devaluing component loaded on two factors, labelled Shame and Social Avoidance. This is inconsistent with the results of Jakšić et al. as they reported that the eighth factor was a subcomponent of Self-Sacrificing Self-Enhancement.

Thus, the structure of six of the seven PNI subscales were replicated by the EFA of the data in this study. The pattern of item loadings on these factors is similar but not identical to the pattern of loading on Pincus et al.'s (2009) components. One item (i.e., Item 33) loaded on the Contingent Self-esteem factor rather than on Self-Sacrificing Self-Enhancement one. Despite this, the latter subscale was reliable. Indeed, the reliability of the eight subscales is equivalent to that found in previous studies (Maxwell et al., 2011; Miller et al., 2011a; Pincus et al., 2009).

The fact that the Devaluing component was underpinned by two factors (i.e., Shame & Social Avoidance) suggests that these are separate experiences associated with vulnerable narcissism (Gramzow & Tangney, 1992; Robins et al., 2001; Wink, 1991). Consequently, separate Shame and Social Avoidance subscales may improve understanding of the contributions of these factors to the narcissism expressions.

9.5 Conclusion.

Using EFA, this study found that eight first-order factors underlie the PNI's 52 items. Six of these factors were largely consistent with Pincus et al.'s (2009)

components. They are: Exploitativeness, Contingent Self-Esteem; Grandiose Fantasy; Hiding the Self; Self-Sacrificing Self-Enhancement, and; Entitlement Rage. The seventh component, Devaluing, divided into two discrete factors of Shame and Social Avoidance and this may improve the precision of the PNI in future research. Thus, an eight-factor solution found in this study was optimal.

In Study 3 (reported in Chapter 10), the eight PNI factors (including Exploitativeness) found in this study, and the five reliable NPI factors (*excluding* Exploitativeness) identified in Study 1, were used to examine two competing models of grandiose and vulnerable narcissism. This investigation of the second-order structure underlying the PNI and NPI first-order factors is consistent with Maxwell et al.'s (2011) recommendation that the PNI and the NPI should be used together to assess grandiose and vulnerable narcissism.

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Chapter 10. Models of Grandiose and Vulnerable Narcissism (Study 3)

10.1 Introduction

In Chapters 2 and 3, issues with the measurement of grandiose and vulnerable narcissism were discussed and it was argued that measures of these expressions were compromised by disagreement about their conceptualization. Moreover, it was argued that this disagreement was, in part, due to the conflation of grandiose narcissism with the concepts of normal and adaptive and vulnerable narcissism with pathological and maladaptive traits (see Section 2.4). In Chapter 4, it was further argued that it would be useful to consider features that are common to both grandiose and vulnerable narcissism as well as those that differentiate them.

The social/personality perspective proposes that the narcissism expressions are distinct (Wink, 1991). Nevertheless, Wink (1991) showed that grandiosity and vulnerability share features in common that assess entitlement and exploitative tendencies. Research has shown that a sense of entitlement is shared by individuals who are high on either grandiose or vulnerable narcissism (Ackerman & Donnellan, 2013; Exline et al., 2004; Jones & Figueredo, 2012; Pryor et al., 2008; Tomlinson, 2012). Several other common features (see Chapter 4), articulated in psychoanalytic theory (Kernberg 1970; Kohut 1968) and substantiated empirically (Ackerman & Donnellan, 2013; Besser & Priel, 2010; Bushman & Baumeister, 1998; Given-Wilson et al., 2011; Lessard et al., 2011; Miller, Price & Campbell, 2012c; Okada, 2010; Raskin et al., 1991b; Raskin & Novacek, 1991), are exploitativeness, attention seeking, grandiose fantasizing and narcissistic rage.

Pincus et al. (2009) proposed that the PNI measures both grandiose and vulnerable narcissism. Wright et al. (2010) found that PNI grandiosity and vulnerability factors were highly correlated (r = .81). Wright and colleagues proposed that this strong correlation was due to shared narcissistic pathology assessed by the measure. However, Boldero et al. (2013) suggested that this may be because the PNI measures one dimension of narcissism, not two. Indeed, an alternative single second-order factor model fit, as well as the preferred two-factor one (Wright et al., 2010). Miller et al. (2014) further suggested that the PNI emphasizes vulnerability and, therefore, its assessment of grandiose narcissism is narrow. On the other hand, whilst the NPI is a measure of grandiose narcissism (e.g., Boldero et al., 2013; Miller & Campbell, 2011), it has been criticized for not measuring pathological aspects of grandiose narcissism (e.g., Cain et al., 2008; Pincus & Lukowitsky, 2010). Maxwell et al. (2011) proposed, however, that the NPI and the PNI together assess narcissism.

The NPI and PNI have subscales that assess unique features of either vulnerable or grandiose narcissism (Pincus et al., 2009; Raskin & Terry, 1988). Moreover, some of these subscales appear to assess the common features discussed above. Entitlement should be assessed by the NPI's Entitlement subscale; exploitativeness by the NPI's or the PNI's Exploitativeness subscale; grandiose fantasizing by the PNI's Grandiose Fantasy subscale; narcissistic rage by the PNI's Entitlement Rage subscale, and; attention seeking by the NPI's Exhibitionism subscale. Thus, NPI and PNI subscales may assess these common features, and the remaining subscales are expected to assess features that distinguish grandiose and vulnerable narcissism.

The PNI grandiosity and vulnerability scales were validated by Wright et al. (2010) for the English version PNI using confirmatory analyses. However, second-order factor analyses replicating Wright et al.'s preferred two-factor model in versions

of the PNI other than English, have not fit without using item-parcelling or the re-specification of correlation between error terms (i.e., error covariance). Jakšić et al. (2014) and You et al. (2012) used item-parcelling to achieve a good fit for Wright et al.'s preferred two-factor second-order model for the Croatian and Chinese PNI versions. By contrast, Fossati et al. (2014) respecified error covariance to improve fit.

10.1.1 The Re-specification of Error Covariance in Second-Order Confirmatory Models

It has been argued that item-parcelling is considered problematic in CFA (Little et al., 2002; see Sections 3.2.1 & 8.1), however, the correlation of error terms may be necessary in some models (Smolkowski, 2007). It is important that modifications specifying error covariance amongst indicators in CFA have sound theoretical justification (Bowen, 2014).

A situation where correlated errors are expected is when two factors overlap to form a second-order factor that is not considered part of the model of interest (Gerbing & Anderson, 1984). This situation is particular relevant in the measurement of narcissism. Some narcissism features may be combined as indicators of other variables, such as Machiavellianism, psychopathy, masochism, and pride (Cooper, 2009; McHoskey, 1995; Paulhus & Williams, 2002; Tracy, Cheng, Robins, & Trzesniewski, 2009). For instance, exploitativeness in those who see themselves as leaders is an aspect of Machiavellianism (Wilson, Near, & Miller, 1996) as well as of narcissism. Machiavellianism is associated with the propensity to hide personal liabilities in order to exploit others for gain (Nelson & Gilbertson, 1991). For instance, individuals high on Machiavellianism may hide their own cowardice in order to manipulate followers into acting courageously. Thus, features measured by subscales of the NPI and the PNI, such as Authority (i.e., beliefs about one's leadership potential), Hiding the Self (i.e.,

one's unwillingness to show flaws or needs) and Exploitativeness likely assess Machiavellianism in addition to narcissism. Indeed, associations have been found for NPI Authority and Exploitativeness with Machiavellianism in empirical research (McHoskey, 1995).

Likewise, there are links between psychopathy and NPI-assessed narcissism (Paulhus & Williams, 2002). Psychopathy is distinguishable by an emphasis on violent exploitation of others (Patrick, Fowles, & Krueger, 2009). Thus, the Exploitativeness subscale that is common to both the NPI and the PNI together with PNI's Entitlement Rage (i.e.., anger in response to unmet expectations) likely indicate psychopathy as well as narcissism.

Masochism is also believed to be a correlate of narcissism (Cooper, 2009). It is proposed in theory that masochism arises from fantasies of self-sacrifice (Kernberg, 1988). Therefore, it is plausible that PNI Self-Sacrificing Self-Enhancement combined with PNI Grandiose Fantasy may assess masochism in addition to narcissism.

Finally, narcissism has associations with the experience of pride (e.g., Exline, Baumeister, Bushman, Campbell, & Finkel, 2004; McGregor, Nail, Marigold, & Kang, 2005). Recent theory suggests that there are two types of pride, namely 'authentic' and 'hubris' (Tracy et al., 2009). Authentic pride reflects prestige and achievement, whereas hubris pride is associated with arrogance and conceit. Prestige is related to vanity (Netemeyer et al., 2013), since one can be preoccupied with appearance (i.e., one's clothing and adornments) as an indication of high social status. In this respect, NPI-assessed Vanity (i.e., one's obsession with appearance) and NPI-assessed Superiority (i.e., a belief that one is above the status of others) may be indicators of both authentic and hubris pride, although only the latter form is associated with narcissism (Tracy et al., 2009). Moreover, Jaeger (2004) proposed that attention seeking in vanity is a social

skill for self-confidence and wellbeing. However, vanity and attention seeking are also characteristics of those who are narcissistic and reflect social dysfunction (Vazireet al., 2008). Thus, NPI-assessed Exhibitionism (i.e., Attention Seeking), combined with NPI-assessed Vanity, may assess social competence as well as social dysfunction, the latter alone, reflecting narcissism.

Although Machiavellianism, psychopathy, masochism, and pride are correlates of narcissism (Cooper, 2009; Exline et al., 2004; McHoskey, 1995; Paulhus & Williams, 2002), they are ostensibly unwanted factors when investigating a model of subscales that assess narcissistic grandiosity and vulnerability. Allowing residual errors to correlate in this situation is justifiable on theoretical grounds (Gerbing & Anderson, 1984), since these correlations can account for the influence of second-order factors that are not the focus of investigation. Thus, theoretically sound and sparing re-specification of error correlation can improve the fit of the CFA model, without compromising it (Bowen 2014; Gerbing & Anderson, 1984; Smolkowski, 2007).

10.1.2 This Study

This study used CFA to examine the fit of two second-order factor models of narcissism. A confirmatory approach was used since it is most appropriate where one wishes to test an aspect of theory (Costello & Osbourne, 2005) – in this case, that several NPI and PNI subscales assess features common to grandiose and vulnerable narcissism. This study was designed to compare the fit of the Wright et al.'s (2010) grandiosity and vulnerability factors to a model of grandiose and vulnerable narcissism that uses both NPI and PNI scales (Maxwell et al., 2011). In this latter model, it was specified that several subscales assess common features, consistent with psychoanalytic theory (Kernberg, 1970; Kohut, 1966) and supporting empirical evidence (see Section 4.3), whereas others assesses grandiose or vulnerable features. Thus, common features

were specified to load on both second-order factors (i.e., grandiosity and vulnerability), whereas unique features were specified to load on either one second-order factor or the other but not both.

10.1.2.1 Model 1. The first model evaluated was that which specified Wright et al.'s (2010) grandiosity and vulnerability factors. Wright et al. (2010) tested two other second-order factor models and a single second-order factor. These models showed equivalent fit. Wright et al. decided that Exploitativeness, Self-Sacrificing Self-Enhancement, and Grandiose Fantasy subscales loaded on the grandiosity factor and Contingent Self-esteem, Hiding the Self, Entitlement Rage and Devaluing loaded on the vulnerability factor, based on a slightly lower Akaike information criterion (AIC) estimate, in the absence of statistically significant differences amongst these models. The PNI model provides an adequate fit to versions of the PNI in languages other than English (Fossati et al., 2014; Jakšić et al., 2014; You et al., 2012). As a result, the fit of this model was evaluated using CFA in the current study, given that it represents the currently accepted model of PNI grandiosity and vulnerability factors.

10.1.2.2 Model 2. The second model (Model 2) is based on Maxwell et al.'s (2011) finding that the NPI and the PNI both assess important but distinct attributes of narcissism. Given evidence that NPI factors appear to primarily assess grandiosity (Miller & Campbell, 2011) whilst PNI factors primarily assess vulnerability (Miller et al., 2014), NPI subscales were specified to load on a grandiosity second-order factor whereas PNI subscales were specified to load on a vulnerability one. However, it was further expected, consistent with Kernberg (1970) and Kohut (1966), that Entitlement, Exploitativeness, Entitlement Rage, Grandiose Fantasy and Exhibitionism (hereafter, referred to as Attention Seeking) assess common features of grandiose and vulnerable

narcissism. As a result, these subscales were specified to load on both second-order grandiosity and vulnerability factors.

Specifying cross-loading indicators increases the factorial complexity of Model 2 (Hoyle, 1995). Complex models can improve model fit but are sometimes difficult to interpret (Lester & Bishop, 2000). Nevertheless, the theoretical and empirical grounds for specifying this model was established in Chapter 4 (see Sections 4.2 & 4.3). Moreover, Preacher (2006) stated that complex models may better fit across different samples than simple or 'pure' models (i.e., models where indicators uniquely load on second-order factors). Thus, a simple model is less likely to describe relationships amongst the variables of interest across different samples and populations, whereas a complex model with a priori theoretical justification for cross-loading indicators may be a better solution (Hoyle, 1995).

10.2 Method

10.2.1 Participants

The participants were 308 first-year students (263 female, 45 male) from the University of Melbourne who participated in partial fulfilment of a Research Experience Program requirement of the psychology subject in which they were enrolled. They ranged in age from 17 to 45 years (*M* = 19.2 years, *SD* = 3.2 years). Of these, 70.1% were born in Australia, 19.8% in Asia, 4.2% in another Western country and 5.8% in other countries. All participants were fluent English speakers who had lived in Australia from one to 20 years (*M* = 2.7 years, *SD* = 4.3 years).

10.2.2 Measures

The NPI and the PNI were used. All subscales were formed by calculating the mean across items.

10.2.2.1 The Narcissistic Personality Inventory (NPI). In this study, 31 of the 40 6-point Likert-scale NPI items were used (see Chapter 8, Section 8.2.2.1, for a description of this measure). The Self-sufficiency factor was removed, since it had low reliability and was unrelated to the other NPI factors in Study 1. The NPI six-item Exploitativeness subscale, identified in Study 1, was also removed, since this subscale is in the PNI, where it is identical to Raskin and Terry's (1988) original five-item component and Boldero et al.'s (2013) factor. Thus, the NPI assessed five factors. The resulting NPI subscales were reliable: Superiority (λ = .79); Authority (λ = .81); Attention Seeking (λ = .76); Vanity (λ = .72), and; Entitlement (λ = .75).

10.2.2.2 The Pathological Narcissism Inventory (PNI). The 52-item PNI was used in this study to assess the eight factors identified in Study 2 (see Chapter 9, Section 9.2.2.1, for a description of this measure). The resulting subscales were reliable: Exploitativeness (λ = .73), Contingent Self-Esteem (λ = .88); Shame (λ = .68);

Grandiose Fantasy (λ = .82); Hiding the Self (λ = .76); Self-Sacrificing Self-Enhancement (λ = .71); Entitlement Rage (λ = .83) and; Social Avoidance (λ = .76).

10.2.3 Procedure

As part of a larger study, participants completed the NPI and the PNI items that were presented in a randomized order before completing a short demographic survey.

10.3 Results

10.3.1 Descriptive Statistics

Descriptive statistics for all variables are shown in Table 5. Some subscales demonstrated departures from normality, namely Exploitativeness, Attention Seeking and Self-Sacrificing Self-Enhancement. Thus, the MLR estimator was used in analyses since it is less influenced by these departures (Curran et al., 1996). Zero-order correlations amongst subscales are shown in Appendix J.

Table 5

Descriptive statistics for the NPI/PNI narcissism features in Study 3.

Narcissism features	*M*	*SD*	Skewness (*SE* = .14)	Kurtosis (*SE* = .28)
Exploitativeness (EXP)	3.27	0.92	0.74	-0.16
Superiority (SUP)	3.82	0.80	-0.33	-0.02
Authority (AUTH)	3.48	0.98	0.01	-0.26
Attention Seeking (AS)	2.71	1.24	0.63	-0.15
Vanity (VAN)	2.95	1.19	0.19	-0.52
Entitlement (ENT)	3.32	0.67	0.40	0.42
Shame (SH)	3.15	1.15	0.26	-0.39
Social Avoidance (SA)	2.85	1.09	0.20	-0.50
Contingent Self-esteem (CSE)	3.71	0.94	-0.19	-0.21
Hiding the Self (HS)	3.97	0.89	-0.10	-0.24
Grandiose Fantasy (GF)	4.25	0.92	-0.40	-0.04
Self-Sacrificing Self-Enhancement (SSSE)	4.07	0.85	-0.54	0.62
Entitlement Rage (ER)	3.24	0.94	0.36	-0.01

N = 308

10.3.2 Second-Order Confirmatory Factor Analyses of the Two Proposed Models

Both models were evaluated using Mplus Version 7.1 (Muthén & Muthén, 1998-2013). These models were constructed by specifying that subscales of the PNI alone (i.e., Model 1) or the PNI and the NPI (i.e., Model 2) load on either grandiose or vulnerable second-order factors. Model 1 subscales were specified to load according to Wright et al.'s (2010) preferred two-factor solution (see Section 3.2.1). In Model 2, NPI subscales were specified to load on the grandiose factor and PNI subscales, on the vulnerable factor. Additionally, for Model 2, some NPI and PNI subscales were specified to cross-load on both second-order factors, as common features of narcissism. Each model was considered a good fit if the CFI and TLI were close to or higher than .95, its SRMR was lower than .08 and RMSEA, lower than .06 (Hu & Bentler, 1999).

10.3.2.1 Model 1 (Wright et al., 2010). In this model, PNI-assessed Grandiose Fantasy, Exploitativeness, and Self-Sacrificing Self-Enhancement subscales were specified to load on the grandiose second-order factor. PNI-assessed Shame, Social Avoidance, Contingent Self-Esteem, Hiding the Self and Entitlement Rage were specified to load on the vulnerable factor.

The model did not fit the data, CFI = .933, TLI = .901, RMSEA =.081 (90% confidence interval: .057 - .105), SRMR = .044. The Satorra-Bentler Scaled Chi-Square was also significant, χ^2 (19) = 57.06, $p < .001$. Exploitativeness did not load on the grandiose factor ($p = .068$).

Inspection of the modification indices suggested that model fit could be improved by allowing some subscales to have error terms that are correlated. Such modifications were permitted where the combined features assessed by the subscales have theoretical support for the formation of a discrete psychological variable other than narcissism.

The first modification respecified the error covariance between Entitlement Rage and Exploitativeness to reflect aggressive exploitation that has been linked to psychopathy, as distinct from that associated with narcissism (Patrick et al., 2009). The fit of the model subsequently improved, CFI = .953, TLI = .927, RMSEA =.069 (90% confidence interval: .044 - .095), SRMR = .038. The Satorra-Bentler Scaled Chi-Square was significant, χ^2 (18) = 44.39, $p < .001$. In the second modification, the error covariance was respecified between Hiding the Self (i.e., the extent to which an individual is unwillingness to show their flaws and needs, Pincus et al., 2009) and Exploitativeness. This was respecified to reflect the proposition that those high in Machiavellianism hide personal liabilities to exploit others (Nelson & Gilbertson, 1991). The final model was a good fit, CFI = .972, TLI = .954, RMSEA =.055 (90% confidence interval: .025 - .083), SRMR = .035 and Satorra-Bentler Scaled Chi-Square, χ^2 (17) = 32.90, $p = .012$. Grandiosity and vulnerability factors were positively correlated ($r = .78$). Inconsistent with predictions, Exploitativeness did not load on the grandiose second-order factor ($p = .144$) for this model (see Appendix K).

10.3.2.2 Model 2. In this model, NPI-assessed Authority, Vanity, and Superiority subscales were specified to load on the grandiose second-order factor. PNI-assessed Shame, Social Avoidance, Contingent Self-Esteem, Hiding the Self, and Self-Sacrificing Self-Enhancement were specified to load on the vulnerable factor. NPI-assessed Entitlement and Attention Seeking and PNI-assessed Exploitativeness, Entitlement Rage, and Grandiose Fantasy were specified to crossload on both second-order factors.

The initial analysis of Model 2 indicated that it was a poor fit, CFI = .905, TFI = .874, RMSEA =.081 (90% confidence interval: .067 - .095), SRMR = .060, and the Satorra-Bentler Scaled Chi-Square was significant, χ^2 (59) = 177.71, $p < .001$.

Consistent with Model 1, features assessed by NPI and PNI subscales that, when combined, theoretically form an additional second-order factor were respecified to permit correlation between some error terms according to Mplus modification indices. Five modifications were made (see Table 6).

The first modification specified the correlation of errors for Hiding the Self with Exploitativeness which was also specified in the analysis of Model 1. The second modification specified error covariance between Vanity and Attention Seeking, as attention seeking involving one's vanity can be viewed as a social skill (Jaeger, 2004) in addition to that which reflects social dysfunction in narcissism (Vazire et al., 2008). The third modification respecified error covariance between Vanity (i.e., an obsession with one's own appearance) and Superiority (i.e., a belief that one is of higher status than most others). These subscales, when combined, are proposed to reflect one's social prestige (Netemeyer et al., 2013) and, therefore, indicate authentic pride (Tracy et al., 2009) in addition to the hubris pride associated with narcissism. The fourth modification allowed error covariance between Self-Sacrificing Self-Enhancement and Grandiose Fantasy (i.e., the experience of self-sacrificing fantasies) as an indicator of masochism (Kernberg, 1988) in addition to narcissism. Finally, Authority (i.e., assessing one's beliefs about leadership potential) was respecified to allow error covariance with Exploitativeness, since exploitation can be an effective strategy in leadership reflecting Machiavellianism (McHoskey, 1995), as well as narcissism.

Table 6

Modifications to NPI and PNI combined model with associated values of fit indices.

	First Modification	Second Modification	Third Modification	Fourth Modification	Final Model
Error covariance between subscales as modifications to the model					
Hiding the Self ↔ Exploitativeness	.26	.26	.26	.26	.23
Vanity ↔ Attention Seeking		.24	.27	.27	.26
Vanity ↔ Superiority			.26	.26	.25
Self-Sacrificing Self-Enhancement ↔ Grandiose Fantasy				.21	.22
Authority ↔ Exploitativeness					.17
Fit Indices					
χ^2	161.07	147.49	129.70	118.76	112.99
Df	58	57	56	55	54
RMSEA	.076	.072	.065	.061	.060
CFI	.917	.927	.941	.949	.953
TFI	.889	.901	.918	.927	.932
SRMR	.059	.056	.053	.051	.049

Figure 2 shows the final model for Model 2 which was a good fit (see Table 6). The grandiose and vulnerable latent variables were negatively related to each other.

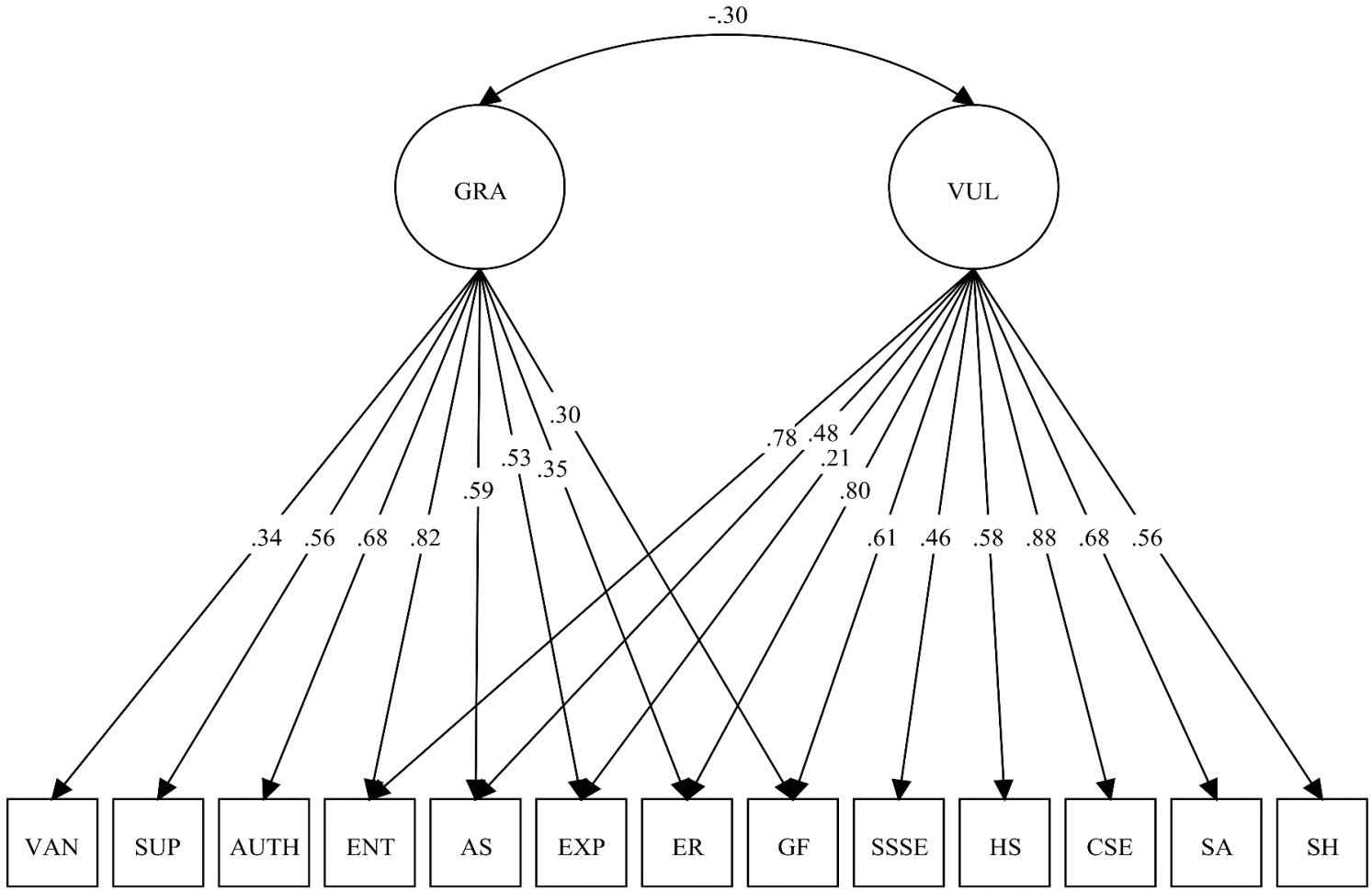

Figure 2. Final model of grandiose and vulnerable narcissism using NPI and PNI subscales.

NB: All paths are significant at $p = .05$. VUL = Vulnerable latent factor; GRA = Grandiose latent factor; ESE = Explicit Self-Esteem; AS = Attention Seeking; ENT = Entitlement; EXP = Exploitativenness; SH = Shame; SA = Social Avoidance; CSE = Contingent Self-Esteem; HS = Hiding the Self; SSSE = Self-Sacrificing Self-Enhancement; ER = Entitlement Rage; GF = Grandiose Fantasy; AUTH = Authority; SUP = Superiority; VAN = Vanity.

10.4 Discussion

This study investigated two models of grandiose and vulnerable narcissism, assessed using the NPI and PNI subscales or the PNI subscales alone. The first model evaluated was that of Wright et al. (2010) which includes only PNI subscales. The second model evaluated grandiosity and vulnerability factors using both PNI and NPI subscales, as suggested by Maxwell et al. (2011). Several subscales were proposed to assess features common to both grandiosity and vulnerability in the second model (Kernberg, 1970; Kohut, 1966).

The results indicate that the second model, in which five subscales assess common features (i.e., Entitlement, Exploitativeness, Grandiose Fantasy, Entitlement Rage & Attention Seeking [i.e., NPI Exhibitionism]) is optimal, since all subscales loaded and cross-loaded on the second-order factors as predicted. Consistent with Wink (1991), the model shows that distinct grandiosity and vulnerability dimensions, evidenced in the current study by a negative correlation between second-order factors in Model 1, nevertheless, have features in common such as those assessing entitlement and exploitative tendencies that are core to narcissism. However, this study also shows that grandiose fantasizing, narcissistic rage and attention seeking are common features. The study is also consistent with Maxwell et al.'s (2011) claim that both the NPI and the PNI assess differing attributes relevant to the full-range of narcissism (i.e., from normal to pathological).

Consistent with psychodynamic theory (Kernberg, 1970; Kohut, 1966), this study lends support for proposed common features of narcissism, assessed by NPI and PNI subscales. In this model, the Entitlement subscale assesses one of these common features, which is consistent with the status of entitlement as the core feature of

narcissism (Ackerman & Donnellan, 2013; Lessard et al., 2011; Miller, Price & Campbell, 2012c). Lessard and colleagues (2011) found that entitlement in narcissism is exploitative and, thus, the Exploitativeness subscale assesses another likely common feature of narcissism. The model is consistent with this finding. Likewise, attention seeking has been found to be a feature of both grandiose and vulnerable narcissism in separate research (Besser & Priel, 2010; Raskin et al., 1991b). Consistent with these results, it was found to be a common feature in this research, assessed by the subscale NPI-assessed Attention Seeking. Narcissistic rage, linked to aggression in both expressions (e.g., Bushman & Baumeister, 1998; Okada, 2010), assessed by the PNI's Entitlement Rage subscale, has also been shown to be a common feature. Finally, Kernberg (1970) and Kohut (1966) proposed that grandiose fantasizing is also a fundamental narcissistic feature. Consequently, it was found to be a common feature in Model 2, assessed by PNI-assessed Grandiose Fantasy, consistent with separate research findings which show that grandiose fantasizing is related to each expression (Given-Wilson et al., 2011; Raskin & Novacek, 1991).

In Model 2 NPI-assessed superiority, authority and vanity are uniquely grandiose features of narcissism, supporting the results of previous research (e.g., Brown et al., 2009; Rosenthal & Hooley, 2010). Whilst these factors may be adaptive features of narcissism, they are also related to maladaptive outcomes (e.g., Exline et al., 2004; Luhtanen & Crocker, 2005; Miller et al., 2010; Widman & McNulty, 2010). In addition, the results suggest that PNI-assessed contingent self-esteem, hiding the self, shame and social avoidance are uniquely vulnerable features, consistent with Pincus et al. (2009).

Model 1, which replicated Wright et al.'s (2010) grandiosity and vulnerability factors using only PNI subscales, was not convincing as a comprehensive model of

narcissism in this study. Although this model fit after two modifications, Exploitativeness did not load on the grandiose factor as expected.

Fosatti et al., (2014), Wright et al. (2010) and Jakšić et al. (2014) all found that the correlation between the grandiosity and vulnerability factors was very strong (ranging from .81 - .86). Similarly, these factors were strongly correlated in the present study. It is argued that such a high correlation implies that the two factors may be better interpreted as a single factor assessing vulnerability (Boldero et al., 2013; Miller et al., 2014). Alternatively, Wright et al. claimed that this high correlation indicates that both factors are measuring *pathological* narcissism. However, the results of this study suggest that the PNI assesses vulnerable features of narcissism alongside features that are common to the narcissism expressions. This finding supports Miller et al.'s (2014) claim that the PNI is a vulnerable measure with some subscales assessing an "admixture of vulnerable and grandiose content" (p. 4).

10.5 Conclusion

Wright et al.'s (2010) PNI grandiosity and vulnerability model's fit was compared to a model in which both NPI and PNI subscales assessed grandiose and vulnerable narcissism, using second-order confirmatory analyses. This new model appears to optimally measure the expressions. Furthermore, it provides further evidence that several subscales assess grandiose and vulnerable expressions, as originally proposed by psycho-analytic theorists (Kernberg, 1970; Kohut, 1966).

The measures formed using both NPI and PNI subscales that assess features common to both expressions in addition to those that uniquely assess grandiosity or vulnerability (i.e., Model 2 in Study 3) are, hereafter, referred to as the NPI/PNI-assessed grandiosity and vulnerability measures. In the next study (Study 4), the

associations of these new grandiose and vulnerable narcissism measures (i.e., those derived from Model 2) are examined for their expected associations with FFM personality domains that distinguish the narcissism expressions. These new measures are compared to PNI-assessed grandiosity and vulnerability scales.

Chapter 11. Five-Factor Model Domains and Narcissism Expressions (Study 4)

11.1 Introduction

In the previous Study (Study 3; Chapter 10), a new model of narcissism was proposed and tested which includes both common and unique features in the assessment of grandiose and vulnerable narcissism, formed from NPI and PNI content (i.e., Model 2, Section 10.1.2.2). In Chapter 4 (see Section 4.2 & 4.3), it was proposed that several NPI and PNI subscales measure common features, while others assess unique indicators of the expressions. The NPI/PNI model was compared to another representing proposed PNI grandiosity and vulnerability scales (where all subscales are expected to be unique to either expression; Wright et al., 2010). Although both models showed a good fit in Study 3, the evidence from Study 3 was consistent with previous studies suggesting that some PNI/NPI subscales assess features that are common to both narcissism expressions. Moreover, the Exploitativeness subscale failed to load on the grandiosity factor in the PNI model, as is proposed (Wright et al., 2010).

The aim of the present study and the following one (i.e., Studies 4 & 5) was to determine whether the new NPI/PNI-assessed measures, designed to assess both common and unique features of grandiose and vulnerable narcissism, are more appropriate than those assessed by the PNI (Wright et al. 2010). This was determined by examining the associations of both NPI/PNI- and PNI-assessed grandiosity and vulnerability with factors that have been found to correlate with narcissism in previous research. In the current study, the relationships of these measures with domains of the Five-Factor model of personality that distinguish narcissism expressions were examined.

In Chapter 5 the nature of the relationships of grandiose and vulnerable narcissism with the FFM domains was discussed. Specifically, research has found that grandiose narcissism is negatively associated with agreeableness and positively associated with extraversion (e.g., Brown et al., 2009; Egan & McCorkindale, 2007; Holtzman et al., 2010; Paulhus & Williams, 2002; Samuel & Widiger, 2008; Vazire et al., 2008; Vernon et al., 2008). As a result, those high in grandiose narcissism have been described as disagreeable extroverts (Paulhus, 2001). By contrast, those high in vulnerable narcissism are disagreeable neurotics (Campbell et al., 2010b), as measures of this expression are negatively associated with agreeableness and positively associated with neuroticism (Miller et al., 2011a). In addition, grandiose narcissism has been found to be negatively associated with the neuroticism in some studies (e.g., Bradlee & Emmons, 1992; Clark et al., 2010; Egan & McCorkindale, 2007; Miller et al., 2012c; Rhodewalt & Morf, 1995; Ruiz et al., 2001). Correspondingly, vulnerable narcissism has been found to be negatively associated with extraversion in studies when this is assessed using the PNI vulnerability scale or the HSNS (Hendin & Cheek, 1997; Houlcroft et al., 2012).

Relationships with conscientiousness and openness have also been occasionally found for measures of grandiosity and vulnerability (e.g., Clark et al., 2010; Hendin & Cheek, 1997; Houlcroft et al., 2012; Miller et al., 2012c; Paulhus & Williams, 2002). Given inconsistent findings in previous research with regard to these relationships, it is clear that these FFM domains are not necessarily associated with narcissism.

11.1.1 This Study

The present study examined relationships of the FFM domains with NPI/PNI-assessed grandiosity and vulnerability for further evidence that these new measures, assessing both unique and common features of narcissism, are more appropriate

measures than PNI-assessed grandiosity and vulnerability scales (Wright et al., 2010). This was done by examining which measures had the strongest relationships with the FFM domains of extraversion, neuroticism and agreeableness.

11.1.1.1 Relationships of Grandiosity and Vulnerability with FFM Domains.

Typically, correlational analysis has been used in previous research to examine relationships between narcissism measures and FFM personality domains (e.g., Hendin & Cheek, 1997; Houlcroft et al., 2012; Egan & McCorkindale, 2007; Holtzman et al., 2010; Miller et al., 2012d; Paulhus & Williams, 2002; Samuel & Widiger, 2008; Vazire et al., 2008; Vernon et al., 2008). In the current research, however, a series of regression analyses were conducted, in which narcissistic grandiosity and vulnerability were predictors of appropriate FFM domains (i.e., Extraversion, Neuroticism, & Agreeableness). This allowed a comparison of the strength of the relationships between PNI- and NPI/PNI-assessed narcissism and these personality domains. The predictive utility of each operationalization of grandiose and vulnerable narcissism (i.e., PNI- or NPI/PNI-assessed measures) was examined in separate regression analyses. Unstandardardized beta values (i.e., estimates of linear regression slopes) were then tested for differences to compare the strength of predictive outcomes for each measure.

It was expected that both measures of narcissistic grandiosity would be positively related to extraversion (Hypothesis 1) and negatively related to neuroticism (Hypothesis 2) and agreeableness (Hypothesis 3). This is consistent with the view that those high in grandiosity are socially domineering and less distressed but are as disagreeable as vulnerable individuals (Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991). In contrast, measures of narcissistic vulnerability should be negatively related to extraversion (Hypothesis 4) positively related to neuroticism (Hypothesis 5), and negatively related to agreeableness (Hypothesis 6). This is consistent with the view

of vulnerable individuals as more introverted, more distressed but as disagreeable as their grandiose counterparts (Dickinson & Pincus, 2003; Miller & Campbell, 2011; Wink 1991). The relationships of openness and conscientiousness with grandiosity and vulnerability were not examined, since the focus of the current research was to evaluate new narcissism measures by their associations with *established* FFM domains identified from a review of previous research (see Chapter 5). To date, research has shown inconsistent findings for the relationship of these domains to narcissism expressions.

Additionally, it was expected that appropriate measures of grandiosity and vulnerability would be stronger predictors of these FFM domain relationships. In this way, the strength of relationships between the measures of grandiosity and vulnerability with the three FFM domains was used to determine which measures were more appropriate.

11.2 Method

11.2.1 Participants

The participants were 308 first-year students (263 female, 45 male) from the University of Melbourne, who were the sample used in Study 3 (see Chapter 10). Accordingly, their characteristics are described in Section 10.2.1.

11.2.2 Materials

11.2.2.1 The Five-Factor Model (FFM). The FFM domains were measured using the Big Five Aspects Scale (BFAS; DeYoung et al., 2007; see Appendix O). This scale requires participants to indicate the extent to which they agree or disagree that phrases, such as 'waste my time' and 'carry out my plans', describe them. Responses were made on 5-point Likert scale, from 'strongly disagree' (1) to 'strongly agree' (5). One hundred items assess the five FFM domains, with 47 being reverse-scored. Each domain is assessed by calculating the mean across the relevant 20 items. The subscales had adequate reliability: Neuroticism (λ = .93); Extraversion (λ = .90); Agreeableness (λ = .87); Conscientiousness (λ = .88), and; Openness (λ = .88).

11.2.2.1 Grandiose and Vulnerable Narcissism. Narcissistic expressions were assessed using 6-point, Likert-response versions of the NPI and the PNI that are described in Chapter 10. As the reliabilities of the NPI and PNI subscales were reported in Study 3 (see Chapter 10, Sections 10.2.2.1 & 10.2.2.2), they are not reported here.

NPI/PNI-assessed grandiose narcissism was assessed by taking the mean across the subscale scores found to be unique to this expression and common to both expressions (i.e., Authority, Superiority, Vanity, Attention Seeking, Exploitativeness, Entitlement, Grandiose Fantasy & Entitlement Rage) in Study 3. NPI/PNI-assessed vulnerable narcissism was, similarly, measured by taking the mean across the Contingent Self-Esteem, Social Avoidance, Hiding the Self, Self-Sacrificing Self-

Enhancement, Shame, Attention Seeking, Exploitativeness, Entitlement, Grandiose Fantasy and Entitlement Rage subscales. Additionally, PNI-assessed grandiosity was calculated by taking the mean of the Grandiose Fantasy, Exploitativeness and Self-Sacrificing Self-Enhancement subscale scores, whereas PNI-assessed vulnerability was calculated by taking the mean of the Contingent Self-Esteem, Hiding the Self, Social Avoidance, Shame and Entitlement Rage subscale scores.

11.2.3 Procedure

Participants completed the NPI, the PNI and the BFAS as part of a larger study (see Section 10.2.3). The narcissism items were completed first, followed by BFAS items.

11.3 Results

11.3.1 Descriptive Statistics

Table 7 shows descriptive statistics for all variables of interest. Agreeableness showed a substantial departure from normality. NPI/PNI-assessed grandiosity and vulnerability also showed some kurtosis and/or skew. Mean scores for FFM domains show that participants generally endorsed 'neither agree nor disagree' responses for Neuroticism, Conscientiousness and Extraversion items and generally endorsed 'slightly agree' for Agreeableness and Openness items. Mean narcissism measure scores show that participants generally endorsed the 'slightly disagree' response for NPI/PNI-assessed grandiosity and vulnerability and PNI-assessed vulnerability content, whereas participants generally endorsed 'slightly agree' in response to PNI-assessed grandiosity items. Consequently, regression analyses were performed in Mplus 7 (Muthén & Muthén, 1998-2013) using the MLR estimator to account for these departures.

Table 7

Descriptive statistics for the FFM domains and narcissism measures.

	M	*SD*	Skewness (*SE* = .14)	Kurtosis (*SE* = .28)
FFM Domains				
Neuroticism	3.13	0.66	0.12	-0.26
Agreeableness	3.94	0.45	-0.75	1.43
Conscientiousness	3.27	0.52	-0.19	0.28
Extraversion	3.36	0.54	0.01	-0.42
Openness	3.61	0.54	0.12	-0.33
NPI/PNI-assessed grandiosity	3.36	0.57	0.42	0.38
NPI/PNI-assessed vulnerability	3.44	0.60	0.06	0.67
PNI-assessed grandiosity	3.85	0.61	-0.08	0.13
PNI-assessed vulnerability	3.39	0.76	-0.12	0.15

N = 308

11.3.2 Associations of FFM Domains with Grandiose and Vulnerable Narcissism

First, zero-order relationships between the FFM domains and the two measures of grandiose and vulnerable narcissism were explored (see Table 8). NPI/PNI- and PNI-assessed grandiosity were negatively related to Agreeableness and positively related to Extraversion. In addition, NPI/PNI-assessed grandiosity was not associated with Neuroticism, whereas PNI-assessed grandiosity was positively related. Both grandiose narcissism measures also had weak positive relationships with Openness.

Table 8

Inter-correlations between narcissism measures and FFM domains.

	1	2	3	4	5	6	7	8	9
1. NPI/PNI-assessed grandiosity	-	.67**	.67**	.37**	.09	.41**	-.41**	.05	.12*
2. NPI/PNI-assessed vulnerability		-	.76*	.91*	.53**	-.06	-.32**	-.17**	-.09
3. PNI-assessed grandiosity			-	.49**	.22**	.18**	-.12*	-.05	.14*
4. PNI-assessed vulnerability				-	.63**	-.29**	-.25**	-.22**	-.21**
5. Neuroticism					-	-.33**	-.16**	-.23**	-.16**
6. Extraversion						-	.13*	.26**	.32**
7. Agreeableness							-	.08	.24**
8. Conscientiousness								-	.10*
9. Openness to Experience									-

N = 308; * denotes coefficients that are significant at $p < .05$, one-tailed. ** denotes coefficients that are significant at $p < .01$, one-tailed

NPI/PNI- and PNI-assessed vulnerability were positively associated with Neuroticism and negatively associated with Agreeableness. NPI/PNI-assessed vulnerability was unrelated to Extraversion whereas PNI-assessed vulnerability had a negative association with Extraversion. NPI/PNI-assessed vulnerability was negatively correlated with Conscientiousness and PNI-assessed vulnerability was negatively related to Conscientiousness and Openness. NPI/PNI- and PNI-assessed measures of grandiosity and vulnerability had moderate to high inter-correlations.

11.3.3 Grandiosity and Vulnerability Measures as Predictors of Relationships with Proposed FFM Domains

Six regression analyses, examining the prediction of Extraversion, Neuroticism and Agreeableness from NPI/PNI- and PNI-assessed measures of grandiosity and vulnerability were performed in Mplus 7.1 (Muthén & Muthén, 1998-2013). Together, the measures of grandiosity and vulnerability accounted for variance in the three FFM domains (see Table 9).

Consistent with predictions, both NPI/PNI- and PNI-assessed grandiosity were positively related to Extraversion (Hypothesis 1) and negatively related to Neuroticism (Hypothesis 2). Partially consistent with predictions, Agreeableness was negatively related to NPI/PNI-assessed grandiosity (Hypothesis 3) whereas PNI-assessed grandiosity was unrelated to this domain.

Also consistent with predictions, both NPI/PNI- and PNI-assessed vulnerability were negatively related to Extraversion (Hypothesis 4) and positively related to Neuroticism (Hypothesis 5). Partially consistent with predictions, PNI-assessed vulnerability was negatively related to Agreeableness (Hypothesis 6) whereas NPI/PNI-assessed vulnerability was unrelated to this domain.

Table 9

Results of regression analyses involving the prediction of Extraversion, Neuroticism & Agreeableness from PNI- and NPI/PNI-assessed grandiosity & vulnerability measures.

	Extraversion	Neuroticism	Agreeableness
PNI-assessed			
Grandiosity	.42***	-.12**	.01
Vulnerability	-.50***	.69***	-.26***
r-square	.22***	.41***	.06*
NPI/PNI-assessed			
Grandiosity	.81***	-.48***	-.35***
Vulnerability	-.60***	.85***	-.09
r-square	.37***	.40***	.17***

NB: * denotes $p < .05$; ** denotes $p < .01$; *** denotes $p \leq .001$

11.3.4 Determining Stronger Predictors of Expected FFM Domain Relationships

To determine which measures were better predictors of three FFM domains, the difference between unstandardized beta weights (i.e., linear regression slopes) was tested. NPI/PNI-assessed grandiosity was a stronger predictor of Extraversion than PNI-assessed grandiosity, t (612) = 5.16, $p < .001$, and of Neuroticism, t (612) = 5.10, $p < .001$. Furthermore, NPI/PNI-assessed vulnerability was a stronger predictor Extraversion and of Neuroticism than PNI-assessed vulnerability, t (612) = 2.92, $p = .004$ and t (612) = 4.40, $p < .001$, respectively. However, PNI-assessed vulnerability and NPI/PNI-assessed grandiosity did not differ as predictors of Agreeableness, t (612) = 1.62, $p = .110$.

11.4 Discussion

This study was designed to examine the associations of NPI/PNI- and PNI-assessed grandiosity and vulnerability measures with FFM personality domains that have been found to be differentially associated with the narcissism expressions (e.g., Bradlee & Emmons, 1992; Clark et al., 2010; Egan & McCorkindale, 2007; Hendin & Cheek, 1997; Houlcroft et al., 2012; Miller et al., 2011a, 2012c; Rhodewalt & Morf, 1995; Ruiz et al., 2001). Most hypotheses were supported. Both grandiosity measures were positively associated with extraversion and negatively associated with neuroticism, whereas both vulnerability measures were negatively associated with extraversion and positively associated with neuroticism. However, only NPI/PNI-assessed grandiosity and PNI-assessed vulnerability were negatively related to agreeableness, although it was predicted that all measures would be related to this domain.

The relationships of NPI/PNI-assessed grandiosity with extraversion and agreeableness are consistent with those found in the majority of previous research (Brown et al., 2009; Clark et al., 2010; Egan & McCorkindale, 2007b; Holtzman et al., 2010; Miller et al., 2010, 2011a; Paulhus & Williams, 2002; Samuel & Widiger, 2008; Vazire et al., 2008; Vernon et al., 2008). Furthermore, the results show that both grandiosity measures were negatively related to neuroticism, consistent with those studies that have found a negative association between grandiosity and neuroticism (Bradlee & Emmons, 1992; Clark et al., 2010; Egan & McCorkindale, 2007; Miller et al., 2012c; Rhodewalt & Morf, 1995; Ruiz et al., 2001).

Although PNI-assessed grandiosity was unrelated to agreeableness in the regression analysis, the zero-order correlation was significant. Moreover, PNI-assessed grandiosity was *negatively related to neuroticism*, inconsistent with results of Houlcroft

et al. (2012) and Miller et al. (2012c) who found no relationship. The current study's findings suggest that distress is attenuated in the grandiose expression, compared to the vulnerable one. This is not necessarily inconsistent with Pincus and Lukowitsky's (2010) assertion that both expressions should be associated with psychological distress. However, it appears that features of grandiosity are related to a reduction in this distress.

In regard to narcissistic vulnerability, both measures were negatively related to extraversion and positively related to neuroticism. Nevertheless, whereas the PNI-assessed vulnerability was uniquely and negatively related to agreeableness, NPI/PNI-assessed vulnerability was not, although it was negatively correlated with agreeableness. Findings for both measures in this study are consistent with previous correlational research examining relationships of PNI- or HSNS-assessed vulnerability, where a negative relationship with agreeableness and extraversion and a positive one with neuroticism have been found (Hendin & Cheek, 1997; Houlcroft et al., 2012).

11.4.1 Implications

The findings suggest that both grandiosity measures are positively related to measures of social dominance and negatively related to measures of psychological distress. It has been argued that the grandiose expression of narcissism, despite its association with reduced distress, is related to maladaptive outcomes indicative of pathology (e.g., Exline et al., 2004; Luhtanen & Crocker, 2005; Miller et al., 2010; Miller & Campbell, 2011; Paulhus et al., 2001; Widman & McNulty, 2010). The findings also suggest that both vulnerability measures are associated with social distancing and inclinations of substantial levels of distress (Dickinson & Pincus, 2003).

Whilst the NPI/PNI-assessed measures were stronger predictors of extraversion and neuroticism than the PNI-assessed ones, the findings for relations with agreeableness are interesting. This domain should be related to both narcissistic

expressions as anti-social behavior is at the core of narcissistic personality pathology (Miller & Campbell, 2011). It would appear that NPI/PNI-assessed grandiosity is a more appropriate narcissism measure than PNI-assessed grandiosity because it is a predictor of disagreeableness. This is broadly consistent with Miller and Campbell's (2011) assertion that the NPI assesses *pathological* grandiosity. However, vulnerability assessed using the PNI appears to be a more appropriate measure than that assessed using the NPI and the PNI. This latter finding is consistent with Miller et al.'s (2014) suggestion that the PNI primarily measures vulnerability. However, the PNI- and NPI/PNI-assessed measures would benefit from further investigation to explore these issues.

11.4.2 Limitations

One limitation of the current study was that the associations of conscientiousness and openness were not considered. These relationships have been found in previous research (e.g., Clark et al., 2010; Miller et al., 2012c; Paulhus & Williams, 2002). However, in the current study these relationships were small and likely reflect characteristics of the sample used. This sample of predominantly young, tertiary-educated participants were likely to have broad cultural and aesthetic interests that reflect openness (McKinney et al., 2012), as well as salient beliefs about study motivation that are reflected in relationships with conscientiousness (Komarraju & Karau, 2005). Thus, it was considered that relationships between openness, conscientiousness and the narcissism expressions may reflect narcissism in undergraduate students but do not reflect relationships that are relevant to narcissism generally. Consequently, further exploration of these associations was not considered necessary for the evaluation of narcissism measures, compared to those for established associations with FFM personality domains.

A second limitation is that the factor loadings of the scales on the second-order factors were not used as weights when calculating grandiosity and vulnerability measures. Since loadings could likely change in future replications of these second-order factor models (Gorsuch, 1983), it was thought premature to weight subscales in this instance. Moreover, unweighted subscales have been shown to be almost as accurate as weighted ones (Floyd & Widaman, 1995). Hence, the mean across subscales that loaded on each latent variable (i.e., grandiosity and vulnerability) was considered to be adequate for the operationalisation of these constructs.

11.5 Conclusion

This study examined the relationships of the two different measures of grandiose and vulnerable narcissism, specifically those constructed from the NPI and PNI subscales, and those assessed using PNI subscales alone, with the FFM personality domains of extraversion, neuroticism and agreeableness. These domains have differential relationships with the expressions of narcissism and the grandiosity measures predicted higher extraversion and lower neuroticism, whereas the vulnerability measures predicted lower extraversion and higher neuroticism. Moreover, the NPI/PNI-assessed measures had stronger relationships with these domains than PNI-assessed grandiosity and vulnerability. In regard to agreeableness, all measures showed negative zero-order relationships with it, however, only PNI/NPI-assessed grandiosity and PNI-assessed vulnerability uniquely predicted a negative relationship with agreeableness, after accounting for relationships with the corresponding measure of vulnerability/grandiosity. This latter finding suggests that NPI content assesses pathological grandiosity, whereas PNI content assesses pathological vulnerability.

The final study (Study 5) further examined the relationships for these two ways of assessing grandiose and vulnerable expressions with implicit and explicit self-esteem. In this way, these assessments of narcissism expressions could be further evaluated for their appropriateness to the measurement of narcissism.

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Chapter 12. Implicit and Explicit Self-Esteem: Relationships with Narcissism (Study 5)

12.1 Introduction

Chapter 6 (see Section 6.4.1 & 6.4.2) outlined two different ways in which implicit and explicit self-esteem can be discrepant. These are patterns that are proposed by the mask model (Bromberg, 1985) and the inverted mask proposition (Bosson & Prewitt-Freilino, 2007) to reflect the two different narcissism expressions (Vater et al., 2010). According to these propositions, low self-worth is either latent or expressed in narcissistic self-regulation. Thus, the grandiose expression is proposed to be associated with high explicit self-esteem in the presence of low implicit self-esteem (i.e., low latent self-worth), whereas the vulnerable expression is proposed to be associated with low explicit self-esteem in the presence of high implicit self-esteem (i.e., high latent self-worth).

Support for these propositions is equivocal (see Chapter 6, Sections 6.4.1 & 6.4.2). However, it was argued that issues with the measurement of implicit self-esteem have made it difficult to determine the nature of the relationships of the two narcissistic expressions with implicit and explicit self-esteem. For example, in Chapter 6 (see Section 6.5.3) evidence that implicit tasks are susceptible to valence effects which distort the assessment of positive and negative self-associations was discussed (de Houwer et al., 2002; Govan & Williams, 2004; Rossell & Nobre, 2004). The 'positivity bias' implies a default response to positive concepts for most individuals that may not necessarily reflect positive *self-referent* evaluations (Greenwald & Farnham, 2000). Similarly, there is evidence that most individuals respond slower to stimuli reflecting negative concepts than those reflecting positive ones (Rossell & Nobre, 2004). Thus,

the typical implicit self-esteem metric that is assumed to reflect the difference between the association between self and negative concepts and the association between self and positive concepts may be inaccurate (Fiedler et al., 2006). Positive and negative indices of self-esteem should remain discrete. Consequently, high implicit self-esteem is indicated by strong associations between self and positive concepts (hereafter referred to as high positive implicit self-esteem) and weak associations between self and negative concepts (hereafter referred to as low negative implicit self-esteem). Similarly, low implicit self-esteem is indicated by high negative implicit self-esteem and low positive implicit self-esteem.

There is evidence that idiosyncratic stimuli generated by the individual (e.g., first name) are superior to generic self-stimuli (e.g., 'I', 'me', 'myself') for the measurement of implicit self-esteem (Bluemke & Friese, 2012), however, a question remains about whether global or contextual self-aspects are optimal. Global self-aspects are those that reflect one's broad sense of self (e.g., 'I', 'me' 'John') whereas contextual ones are those reflecting one's self in various situations (e.g., 'mother', 'worker', 'cook'). The IAT and the NLT typically use global self-aspects (Buhrmester, Blanton, & Swann, 2011). Despite this, contextual sources of self-esteem influence the narcissistic self-image (Fetterman & Robinson, 2010; Park, Crocker, & Mickelson, 2004; Zeigler-Hill et al., 2008). Thus, using an implicit task that can measure both idiosyncratic global and contextual self-aspects within a single experimental block could be advantageous.

Lexical decision tasks, such as Meyer and Schvaneveldt's (1971) task (hereafter referred to as the MS task), have been used to assess self-associative networks in memory (McConnell et al., 2009; McConnell, 2011) and, as such, can be used to assess implicit self-esteem. Since the MS task is not a categorization task but requires the

identification of whether letter-strings represent legitimate words or nonsense words, it can measure the strength of association between global or contextual self-related words with words reflecting positive and negative valence within a single test (i.e., positive and negative implicit self-esteem).

12.1.1 This Study

The present study was designed to examine the associations of grandiose and vulnerable narcissism with implicit and explicit self-esteem and their interaction. The study investigated whether low self-worth is either latent, or expressed, in narcissistic self-regulation. Specifically, of interest was whether the positive relationship between grandiosity and explicit self-esteem is moderated by implicit self-esteem, such that the relationship is stronger when implicit self-esteem is low (i.e., there is latent vulnerability). Similarly, of interest was whether the negative relationship between vulnerability and explicit self-esteem is moderated by implicit self-esteem, such that the relationship is stronger when implicit self-esteem is high (i.e., there is latent grandiosity). The relationships of the NPI/PNI-assessed measures with implicit and explicit self-esteem were compared to those for Wright et al.'s (2010) PNI-assessed grandiosity and vulnerability measures.

The study was also designed to circumvent methodological issues relating to the influence of valence on implicit self-esteem measurement (Fiedler et al., 2006; Govan & Williams, 2004; Rossell & Nobre, 2004). This was achieved by separately assessing positive and negative implicit self-esteem using the strength of valence associations with global and contextual self-aspects. Furthermore, *idiosyncratic* global (e.g., one's first name) and contextual self-related (e.g., the role 'student') self-descriptors were used to increase the self-relevance of implicit task stimuli for each respondent (Buhrmester et al., 2011; Hofmann et al., 2005; McConnell, 2011). In previous

research, idiosyncratic self-aspects have been found superior to generic ones for the assessment of implicit self-esteem (Bluemke & Friese, 2012).

12.1.1.1 Hypotheses. It was expected that measures of grandiose and vulnerable narcissism would be related to explicit self-esteem and that these relationships would be moderated by implicit self-esteem (Jordan et al., 2003; Schröder-Abé, Rudolph, & Schütz, 2007). Specifically, it was hypothesized that NPI/PNI-assessed and PNI-assessed grandiosity would be positively related to explicit self-esteem and that this relationship would be moderated by both positive and negative implicit self-esteem, such that it would be stronger when positive implicit self-esteem was low and when negative implicit self-esteem was high (i.e., low implicit self-esteem; Hypothesis 1). Similarly, NPI/PNI-assessed and PNI-assessed vulnerability was expected to be negatively related to explicit self-esteem and that this relationship would be moderated by positive and negative implicit self-esteem such that it would be stronger when positive implicit self-esteem was high and when negative implicit self-esteem was low (i.e., high implicit self-esteem; Hypothesis 2). In addition, the question of whether global or contextual self-aspects are more appropriate stimuli in measures of implicit self-esteem was explored.

12.2 Method

12.2.1 Participants

Participants were 170 first-year students from the University of Melbourne, who took part to satisfy a Research Experience Program requirement of the psychology subject in which they were enrolled. Of these, six individuals were excluded because their average responses showed latencies of less than 500 ms or more than three seconds. Response latencies of less than 500 ms were likely to reflect responses made in error. Similarly, latencies longer than three seconds were likely made after some deliberation and, therefore, were considered to be explicit responses (Greenwald, Nosek, & Banaji, 2001).

The remaining 164 participants (114 females, 50 males) were aged between 17 and 54 years (M = 20.5 years, SD = 4.5 years). Of these, 58.5% were born in Australia, 27.4% in Asia, 7.9% in another Western country and 6.1% in other countries. All participants were fluent English speakers who had lived in Australia from one to 41 years (M = 2.7 years, SD = 5.6 years).

12.2.2 Materials

12.2.2.1 Explicit Self-Esteem. Explicit self-esteem was assessed using Rosenberg's (1965) Self-Esteem Scale (RSES; 1965). This 10-item self-report measure has five negative and five positive statements, such as "On the whole, I am satisfied with myself" and "I wish I could have more respect for myself". Participants indicated the extent to which they agreed or disagreed that these were self-descriptive on 6-point Likert scales, from 'strongly disagree' (1) to 'strongly agree' (6) (see Appendix L). Negative items were reverse-scored and the mean across items was calculated. Higher scores indicated higher explicit self-esteem. The reliability of the RSES in this study was good (λ = .89).

12.2.2.2 Grandiose and Vulnerable Narcissism. Grandiose and vulnerable narcissism were assessed as in Study 4 (see Chapter 11, Section 11.2.2.2). All subscales were internally consistent: Entitlement (ENT; λ = .88); Exploitativeness (EXP; λ = .86); Attention Seeking (AS; λ = .80); Entitlement Rage (ER; λ = .87); Authority (AUTH; λ = .88); Superiority (SUP; λ = .89); Vanity (VAN; λ = .88); Contingent Self-esteem (CSE; λ = .91); Social Avoidance (SA; λ = .80); Hiding the Self (HS; λ = .75); Self-Sacrificing Self-Enhancement (SSSE; λ = .76); Shame (SH; λ = .71), and; Grandiose Fantasy (GF; λ = .87).

12.2.2.3 Implicit Self-Esteem. Implicit self-esteem was assessed using a version of the MS task (Study 2; Meyer & Schvaneveldt, 1971). This comprised the presentation of words and non-words in pairs as black type on a white background. A fixation cross was presented in the middle of the screen for 500 ms before the target pair appeared, the pair remaining until the participant responded. Participants were instructed to respond as quickly as possible.

Stimulus pairs included: (a) associated word pairs (e.g., 'doctor' & 'nurse'); (b) non-associated word pairs (e.g., 'doctor' & 'butter'); (c) word/non-word pairs (e.g., 'doctor' & 'budden'); (d) participant-generated global and contextual self-descriptors paired with valence word (e.g., 'John' & 'cheer'); (e) positive, negative and neutral valence word pairs (e.g., 'cheer' & 'lovely'), and (f) non-word pairs (e.g., 'budden' & 'thork'). These were presented with equal frequencies in random order, above and below the fixation cross.

If a presented pair comprised two words or non-words, then the correct response was 'same', indicated by the participant pressing the 'e' key on a computer keyboard. If a pair comprised a word and a non-word, the correct response was 'different', indicated by pressing the 'i' key. After a response, a new pair appeared following a 500 ms inter-

stimulus interval. When an incorrect response was made, error feedback was presented in the form of the word 'error' displayed in red for 300 ms at centre screen, prior to the presentation of a new pair.

Associated word pairs and non-words were taken from Meyer and Schvaneveldt (1971). Non-words resembled real words to prevent responses merely in terms of presence/absence of jumbled letters. Homonyms were also omitted (e.g.,'berd') and non-words approximately matched related words for word-length (range = 4-9 letters), since these factors influence response times (Ross, Yarczower, & Williams, 1956). Participant-generated global self-descriptors (e.g., first name) and positive and negative self-role descriptors (e.g., 'student', 'critic') were presented with positive and negative words from the Balanced Affective Word List (Siegle, 1994), that were matched for word length and frequency (see Appendix M; Nelson & Xu, 1995; Ross et al., 1956).

Participants were provided with 30 practice trials before proceeding to 240 critical trials. Of interest was the latency of responses on the trials that included self-descriptors, specifically 'global-self with positive words', 'global-self with negative words', 'positive self-roles with positive words', and 'negative self-roles with negative words'. 'Negative self-roles with positive words' and 'positive self-roles with negative words' were not included because the incongruency of valence in these combinations was likely to interfere with responses (Fazio, 2001). Moreover, these are difficult to interpret in terms of whether they indicate positive or negative self-associations.

Shorter reaction times (RTs) were assumed to reflect stronger associations in memory whereas longer RTs were assumed to reflect weaker associations. Therefore, strong positive and weak negative self-associations indicated high implicit self-esteem, whereas weak positive and strong negative self-associations indicated low implicit self-esteem. The Spearman-Brown split-half reliability coefficients for the four self-

associative conditions were generally in the range of adequate to good: contextual positive self-descriptors with positive words (r_{sb} = .72); contextual negative self-descriptors with negative words (r_{sb} = .61); global self with positive words (r_{sb} = .73), and; global self with negative words (r_{sb} = .40).

12.2.3 Procedure

The experimental task and self-report measures were presented on IBM-compatible PCs using Inquisit Version 3 (Millisecond, 2009). Participants first entered the global self-attributes (i.e., first name, family name, birth month, suburb of residence & city of birth) into Inquisit. They then generated five positive and five negative self-roles (e.g., mother, student) or activities (e.g., running, cooking) that best described them and entered these (see Appendix M).

Participants then either completed the self-report measures or the experimental tasks. The order of completion was counter-balanced across participants so that half completed the self-report measures first. A multivariate analysis of variance (MANOVA) found no order effects for the variable of interest, $F(9, 154) = .63$, $p = .768$.

The order of completion of the self-report measures was the same for all participants. They first completed the RSES, followed by the combined NPI and PNI. A response for every survey item was required. After completing the experimental task and the self-report measures, participants provided demographic information, including age and gender (see Appendix N).

12.3 Results

12.3.1 Data Screening.

MS task variables showed a positive skew (see Table 10), typical of reaction time tasks where participants must respond quickly (Ratcliff & Smith, 2004). There was also considerable kurtosis for RTs to global self-descriptors with positive and negative word pairs. Thus, the MLR estimator was used in Mplus to account for these departures from normality. For global self-descriptors, associations with positive words produced faster responses on average than those with negative words, t (163) = -4.91, $p < .001$. Similarly, positive contextual self-descriptors associations with positive words were faster than those for negative contextual self-descriptors with negative words, t (163) = -5.84, $p < .001$. Table 10 also shows that the self-report variables (i.e., the narcissism and explicit self-esteem measures) demonstrated normal distributions.

Table 10

Descriptive statistics for the RT variables, explicit self-esteem and narcissism measures.

	M	*SD*	Skewness (*SE* = .19)	Kurtosis (*SE* = .38)
Mean RTs (in milliseconds) for:				
Global self-descriptors with positive words	825.22	196.52	3.26	23.27
Global self-descriptors with negative words	876.46	216.18	2.24	9.90
Contextual positive self-descriptors with positive words	827.46	178.82	1.03	1.65
Contextual negative self-descriptors with negative words	914.28	228.77	1.31	1.97
Mean scores for:				
Explicit Self-esteem	4.41	0.86	-0.48	0.40
NPI/PNI-assessed grandiosity	3.23	0.80	0.22	-0.51
NPI/PNI-assessed vulnerability	3.14	0.70	0.05	-0.38
PNI-assessed grandiosity	3.35	0.85	0.34	-0.37
PNI-assessed vulnerability	3.09	0.80	0.05	-0.46

N = 164

12.3.2 Zero-Order Associations of Self-Esteem with Grandiosity and Vulnerability

The zero-order associations of self-esteem with the two measures of grandiosity and of vulnerability were examined using Spearman's rho (see Table 11). Rho was used because the MS-task variables demonstrated departures from normality. The implicit self-esteem variables (i.e., RTs for self-descriptors paired with positive or negative words) were not related to explicit self-esteem nor were they related to the narcissism measures. Both grandiosity measures were positively related to explicit self-esteem and both vulnerability measures were negatively related. All narcissism measures were positively correlated with each other. The two grandiosity measures were very highly correlated as were the two vulnerability ones.

Table 11

Spearman's rho correlations amongst the RT variables, explicit self-esteem and narcissism measures.

	1	2	3	4	5	6	7	8	9
1. Global self-descriptors with positive words	-	.71**	.68**	.67**	-.01	-.06	-.02	-.02	-.04
2. Global self-descriptors with negative words		-	.71**	.73**	-.02	.08	-.01	.03	.01
3. Contextual positive self-descriptors with positive words			-	.65**	.01	.06	-.06	-.02	-.05
4. Contextual negative self-descriptors with negative words				-	.05	.02	-.02	-.01	-.03
5. Explicit self-esteem					-	.32**	-.40**	.29**	-.16*
6. PNI-assessed grandiosity						-	.33**	.88**	.62**
7. PNI-assessed vulnerability							-	.45**	.89**
8. NPI/PNI-assessed grandiosity								-	.76**
9. NPI/PNI-assessed vulnerability									-

** denotes $p < 0.01$; * denotes $p < 0.05$.

12.3.2.1 The prediction of grandiosity and vulnerability from explicit and implicit self-esteem.

NPI/PNI-assessed grandiosity and vulnerability and PNI-assessed grandiosity and vulnerability were regressed on the self-esteem factors (i.e., global positive and negative implicit self-esteem; contextual positive and negative self-esteem; explicit self-esteem, and; their interactions) in separate regression analyses conducted using MLR estimation in Mplus Version 7.1 (Muthén & Muthén, 1998-2013). This estimator was used, not only to account for departures from normality, but also for its utility in examining product terms (i.e., interactions) in regression analyses (Jaccard & Wan, 1995).

12.3.2.1.1 The prediction of PNI- and NPI/PNI-assessed grandiosity scores from self-esteem factors.

Together, the self-esteem factors did not account for variance in PNI-assessed grandiosity (see Table 12). However, they accounted for variance in NPI/PNI-assessed grandiosity. Of the factors in the analyses, the main effect of explicit self-esteem and the interactions between globally-assessed positive implicit self-esteem and explicit self-esteem, and between globally-assessed negative implicit self-esteem and explicit self-esteem, were predictors. Explicit self-esteem was positively associated with NPI/PNI-assessed grandiosity, as was the interaction of globally-assessed positive implicit self-esteem with explicit self-esteem. In contrast, the interaction of globally-assessed negative implicit self-esteem with explicit self-esteem was negatively associated. Subsequent simple slope analyses of 2-way interactions (at ±1 SD) showed that consistent with predictions (i.e., Hypothesis 1), NPI/PNI-assessed grandiosity was associated with high explicit self-esteem, in the presence of low global positive (i.e., longer RTs) and high global negative (i.e., shorter RTs) implicit self-esteem (see Figure 3).

Table 12

Regression analyses predicting grandiosity and vulnerability measure scores from implicit/explicit self-esteem scores and their interaction.

	PNI-assessed grandiosity		PNI-assessed vulnerability		NPI/PNI-assessed grandiosity		NPI/PNI-assessed vulnerability	
	β	*SE*	β	*SE*	β	*SE*	β	*SE*
Explicit Self-esteem (ESE)	.06	.07	-.41***	.05	.28***	.07	-.18**	.06
Global positive ISE	-.25	.14	<.01	.11	-.16	.12	-.12	.12
Global negative ISE	.11	.12	-.02	.13	.08	.12	.04	.12
Global positive ISE x ESE	.26*	.11	.10	.08	.21*	.11	.19*	.09
Global negative ISE x ESE	-.27**	.09	-.26**	.09	-.29**	.09	-.29**	.09
Contextual positive ISE	-.04	.14	-.11	.13	.02	.11	-.09	.14
Contextual negative ISE	.05	.13	.06	.09	-.05	.09	.04	.10
Contextual positive ISE x ESE	.08	.08	.24*	.10	.13	.08	.18	.10
Contextual negative ISE x ESE	.12	.11	-.03	.09	-.06	.08	-.08	.09
r-square	.08	.05	.19*	.05	.14**	.05	.08*	.04

*** denotes $p < .001$; ** denotes $p < .01$; * denotes $p < .05$.

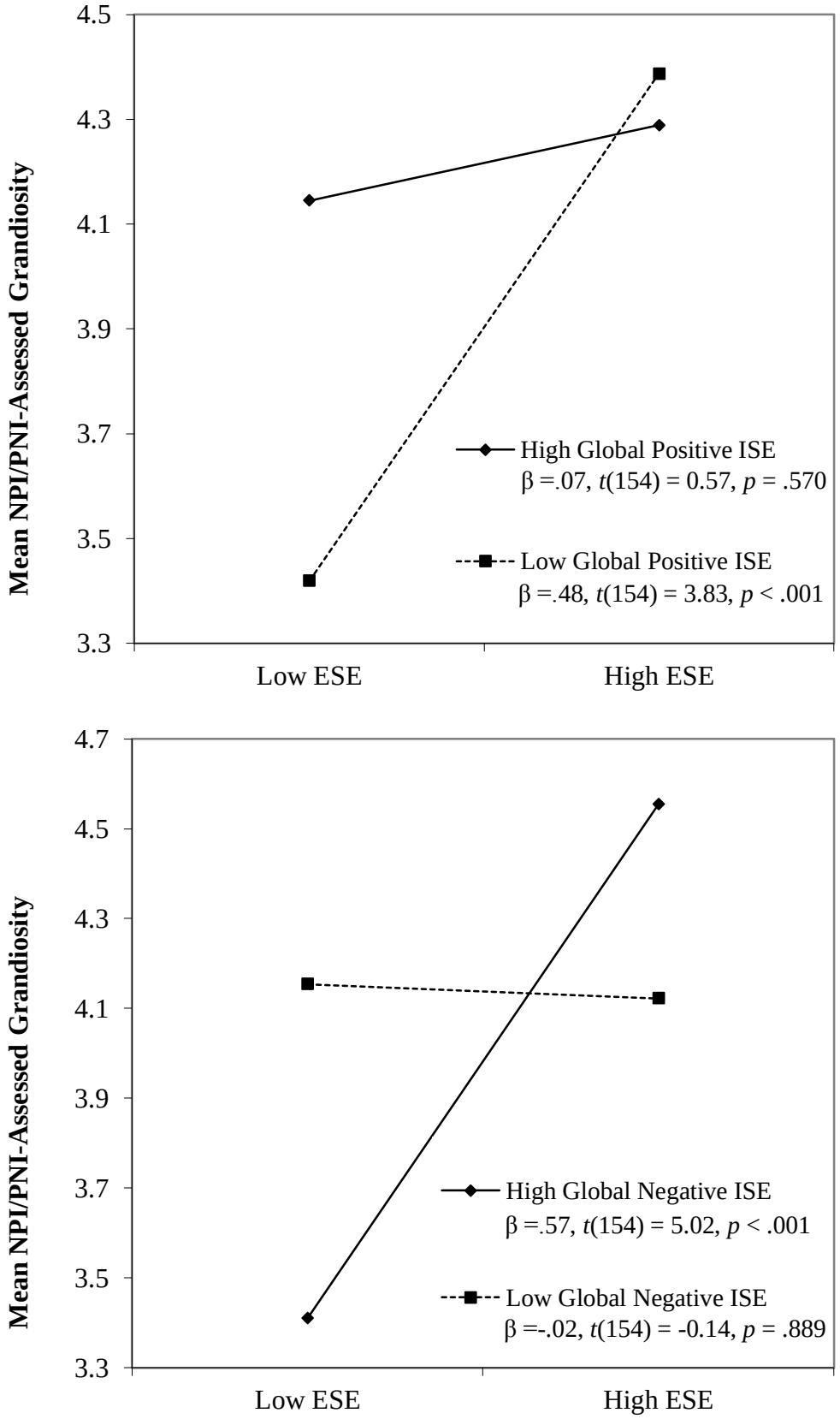

Figure 3. Global positive and negative implicit self-esteem (ISE) and explicit self-esteem (ESE) interactions associated with NPI/PNI-assessed grandiosity.

12.3.2.1.2 The prediction of PNI- and NPI/PNI-assessed vulnerability from self-esteem factors.

Self-esteem factors accounted for variance in PNI-assessed vulnerability. Of the factors in the analyses, the main effect of explicit self-esteem and the interaction of globally-assessed negative implicit self-esteem and explicit self-esteem were predictors. However, vulnerability assessed in this way was not associated with the interaction of globally-assessed positive implicit self-esteem and explicit self-esteem, although it was associated with the interaction between contextually-assessed positive implicit self-esteem and explicit self-esteem. Explicit self-esteem was negatively associated with PNI-assessed vulnerability as was the interaction of globally-assessed negative implicit self-esteem with explicit self-esteem. The interaction of contextually-assessed positive implicit self-esteem was positively related to PNI-assessed vulnerability. Simple slope analyses showed that PNI-assessed vulnerability was associated with low explicit self-esteem, in the presence of high contextual positive (i.e., shorter RTs) and low global negative (i.e., longer RTs) implicit self-esteem, consistent with predictions for Hypothesis 2 (see Figure 4).

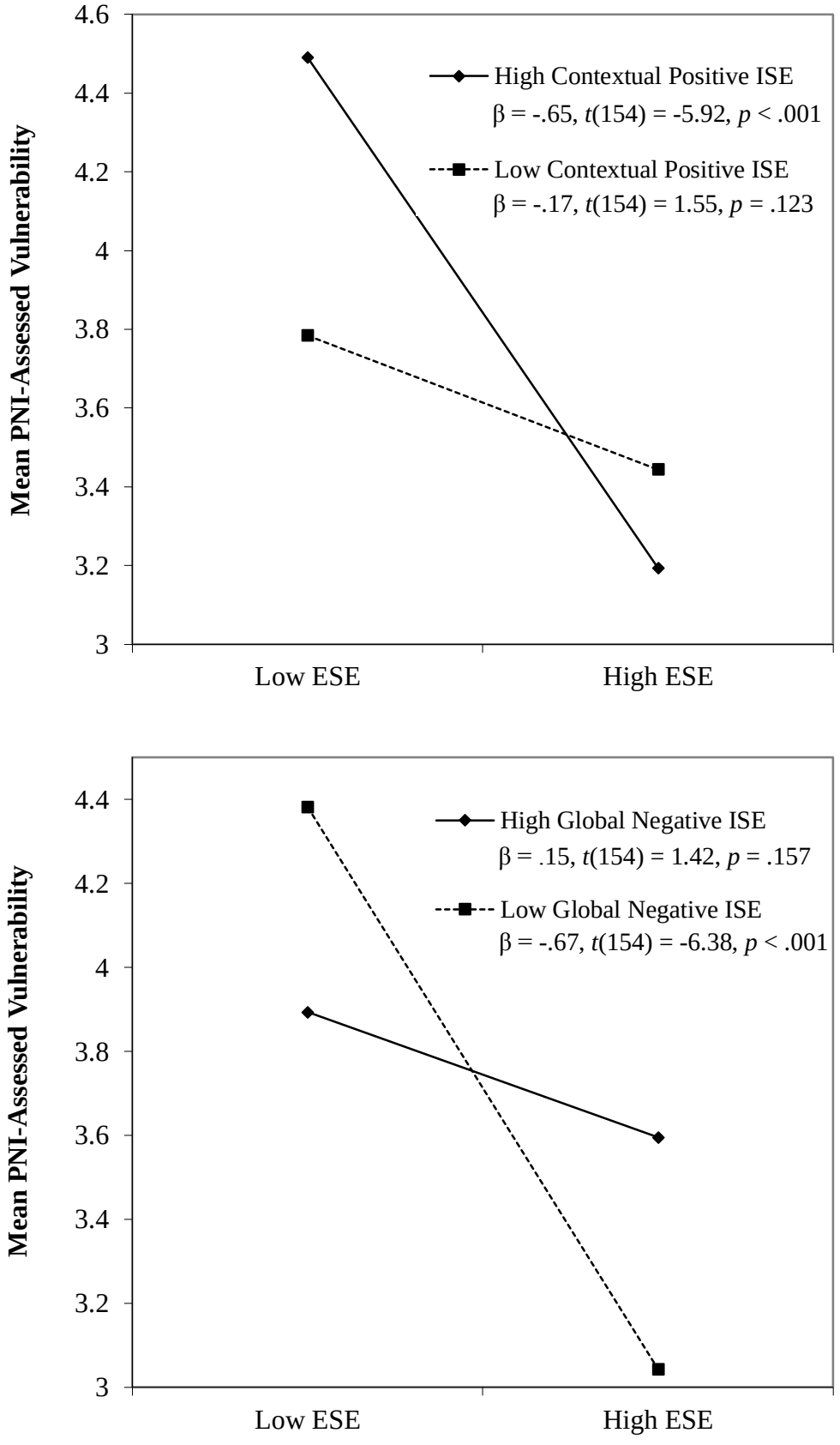

Figure 4. Contextual positive and global negative implicit self-esteem (ISE) and explicit self-esteem (ESE) interactions associated with PNI-assessed vulnerability.

Self-esteem factors also accounted for the variance in NPI/PNI-assessed vulnerability. Of the factors in the analysis, explicit self-esteem and the interactions between globally-assessed positive implicit self-esteem and explicit self-esteem, and between globally-assessed negative implicit self-esteem and explicit self-esteem were predictors. Explicit self-esteem was negatively related as was the interaction of globally-assessed negative implicit self-esteem and explicit self-esteem. In contrast, the interaction of globally-assessed positive implicit self-esteem and explicit self-esteem was positively related. Simple slope analyses showed that NPI/PNI-assessed vulnerability was, consistent with predictions (i.e., Hypothesis 2), associated with low explicit self-esteem in the presence of high global positive and low global negative implicit self-esteem (see Figure 5).

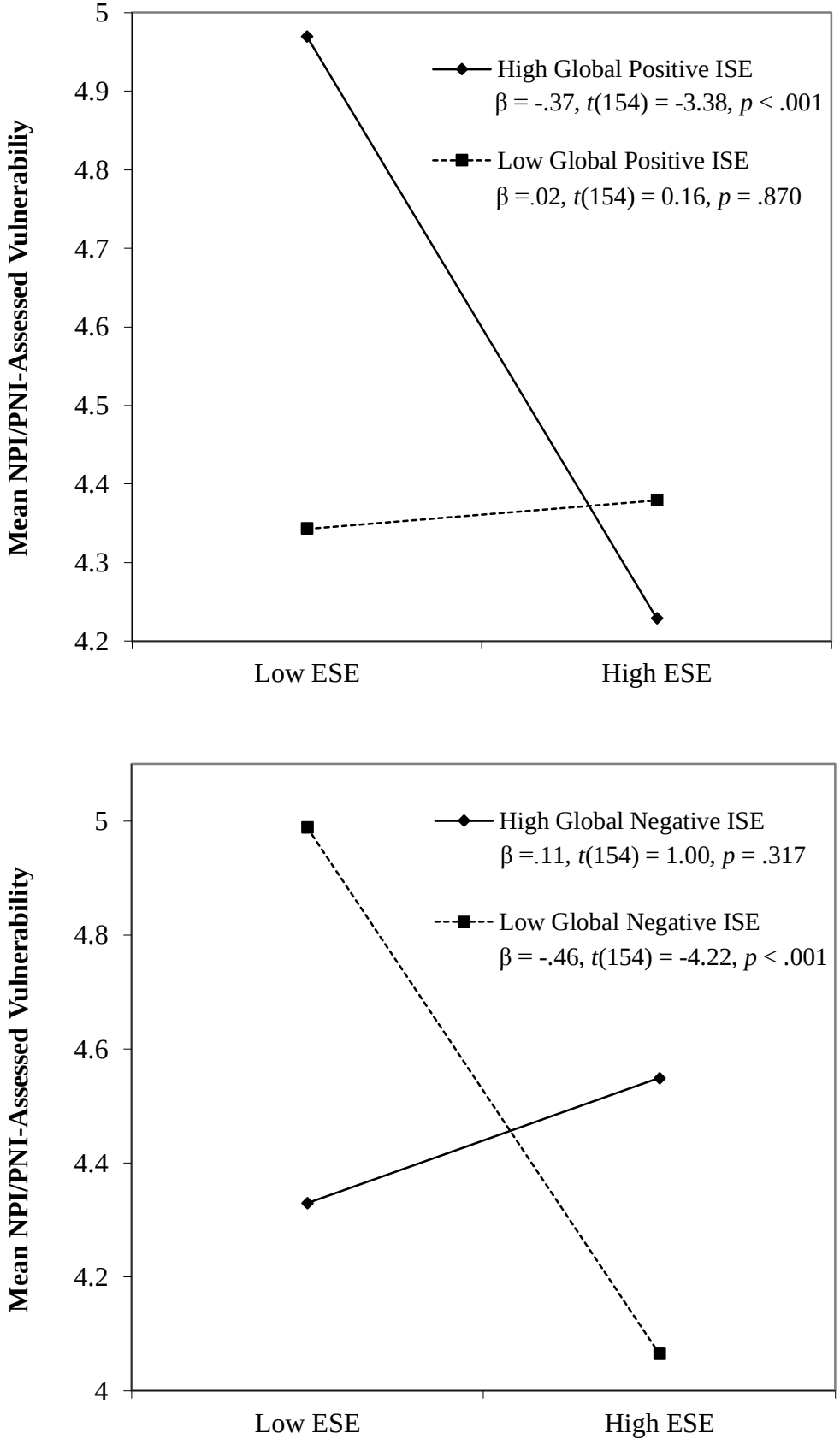

Figure 5. Global positive and negative implicit self-esteem (ISE) and explicit self-esteem (ESE) interactions associated with NPI/PNI-assessed vulnerability.

12.4 Discussion

The aim of this study was to investigate whether two specific interactions between implicit and explicit self-esteem, proposed in the mask model of Bromberg (1983) and the inverted mask proposition of Bosson and Prewitt-Freilino (2007), are associated with grandiose and vulnerable narcissism. It was expected that narcissistic grandiosity would be positively related to explicit self-esteem and that this relationship would be moderated by both positive and negative implicit self-esteem, such that it would be stronger when positive implicit self-esteem was low and when negative implicit self-esteem was high (i.e., low implicit self-esteem). Similarly, narcissistic vulnerability was expected to be negatively related to explicit self-esteem and that this relationship would be moderated by positive and negative implicit self-esteem such that it would be stronger when positive implicit self-esteem was high and when negative implicit self-esteem was low (i.e., high implicit self-esteem).

The failure to replicate associations of interactions between implicit and explicit self-esteem with narcissism expressions (e.g., Bosson et al., 2008; Campbell et al., 2007; Gregg and Sedikides, 2010) in previous research (e.g., Bosson & Prewitt-Freilino, 2007; Jordan et al., 2003; Zeigler-Hill, 2006) was argued to be partly a result of issues with the assessment of implicit self-esteem. Specifically, it was argued that indices of positive and negative self-worth should not be combined to create a single implicit self-esteem index. Furthermore, since there has been conjecture about whether contextual or global self-stimuli best assess implicit self-esteem, both were used in this study. Finally, measures of grandiose and vulnerable narcissism derived from both the NPI and PNI subscales to assess common and unique features of the narcissism expressions (see Chapter 10, Section 10.1.2.2) were used along with PNI-assessed grandiosity and vulnerability scales (Wright et al., 2010).

Both hypotheses were supported for the NPI/PNI-assessed grandiosity and vulnerability measures. The positive relationship of NPI/PNI-assessed grandiosity with explicit self-esteem was moderated by both globally-assessed positive and negative implicit self-esteem, such that it was stronger when these measures reflect low implicit self-esteem (i.e., low positive and high negative implicit self-esteem). This is consistent with the results of Jordan et al. (2003) and Zeigler-Hill (2006) who found that IAT-assessed implicit self-esteem moderated the relationship of explicit self-esteem with NPI-assessed grandiose narcissism. Thus, the current results are consistent with Bromberg's (1983) mask model. In this model, low latent self-worth represents a vulnerability in those high on grandiose narcissism that is counteracted by the bolstering of one's expressed self-worth. By contrast, inconsistent with predictions, variance in PNI-assessed grandiosity was not accounted for by any self-esteem factor.

The negative relationship of NPI/PNI-assessed vulnerability with explicit self-esteem was moderated by both globally-assessed positive and negative implicit self-esteem, such that it was stronger when these measures reflected high implicit self-esteem (i.e., high positive and low negative implicit self-esteem). This is consistent with the results of Bosson and Prewitt-Freilino (2007) who found a marginally significant interaction with a measure of narcissistic vulnerability (i.e., the NPI E/E factor) which represents an 'inverted mask'. In the inverted mask proposition, high latent self-worth is expressed shamefully as low explicit self-esteem by those high in vulnerability.

PNI-assessed vulnerability (Wright et al., 2010) was less consistently predicted by implicit and explicit self-esteem factors. The negative relationship with explicit self-esteem was moderated by *contextually*-assessed positive implicit self-esteem and globally-assessed negative implicit self-esteem such that it was stronger when these

measures reflected high implicit self-esteem. Although this outcome is consistent with the inverted mask proposition, the finding that implicit positive self-worth appeared to be contextually evaluated for PNI-assessed vulnerability was unexpected. It is possible that these results suggest that the moderation of the relationship with explicit self-esteem by implicit self-esteem depends on one's evaluation of positive self-worth across various contexts. This is partially consistent with a perceived importance of contingent self-worth in vulnerable narcissism (Pincus et al., 2009), albeit for positive self-evaluations but not for negative ones. It is also consistent with evidence that individuals high in vulnerability are more likely to experience fluctuations in their self-esteem across situations (Fetterman & Robinson, 2010; Park et al., 2004; Zeigler-Hill et al., 2008). Nevertheless, further research is necessary to confirm this finding and investigate why this occurs for positive implicit self-esteem only.

Implicit self-esteem was optimally assessed using discrete indices of positive and negative self-esteem. This decision was prompted by Fiedler et al.'s (2006) concern that the typical implicit self-esteem index, which subtracts negative from positive scores, erroneously assumes equivalent responding to positive and negative self-associations (see Chapter 6, Section 6.5.3).

The results of this study suggest that the MS task variant is useful as a method to assess implicit self-esteem. This use of the task is consistent with its traditional use as a method to explore self-associative networks in memory (e.g., Brown & McConnell, 2009; Hugenberg & Bodenhausen, 2004; McConnell et al., 2009). Rossell and Nobre (2004) showed that stronger positive self-associations are typically faster than those of stronger negative ones. Consistent with this, in this study self-words with paired with positive words produced more rapid responses than when self-words were paired with negative ones. Consistent with Bluemke and Friese's (2012) findings, globally-assessed

idiosyncratic self-aspects appeared to be appropriate stimuli for the assessment of positive and negative implicit self-esteem.

12.4.1.1 Limitations. One limitation of this study relates to the assessment of implicit self-esteem. As in previous studies using the IAT or NLT to assess implicit self-esteem (e.g., Bosson et al., 2000; Greenwald & Farnham, 2000; Gregg & Sedikides, 2010; Koole, Dijksterhuis, & van Knippenberg, 2001; Krizan & Suls, 2008), no relationship between explicit and implicit self-esteem was found. Such a relationship, even if it were weak, would provide evidence that the implicit and explicit measures assess the same construct (Boldero, Rawlings, & Haslam, 2007). Nevertheless, it remains plausible that the two forms of measurement diverge with regard to a consciousness distinction that divides automatic from deliberative processes in a dual-process memory system (Smith & DeCoster, 2000). In this sense, implicit and explicit self-esteem can be independent of each other and, therefore, show no relationship.

A further limitation is that the measure of implicit negative self-esteem using global self-descriptors had inadequate split-half reliability. Accordingly, the results for this measure should be interpreted with caution, since the global self with negative condition showed poor reliability. Nevertheless, the reliability coefficients for the other implicit self-esteem measures were generally better than those found for established implicit paradigms (i.e., approximately .65 for IAT & NLT test-retest reliabilities; Bosson et al., 2008).

12.5 Conclusion

The results of this study demonstrate that measures derived from a model of narcissism which considers both common and unique features of grandiose and vulnerable narcissism yields measures that have theoretically- and empirically-

consistent relationships with implicit and explicit self-esteem. These results support the mask model and inverted mask proposition (Bosson & Prewitt-Freilino, 2007; Bromberg, 1983). The findings also suggest that this way of assessing grandiosity and vulnerability may be more appropriate than Wright et al.'s (2010) measures of grandiosity and vulnerability that use only PNI subscales. PNI-assessed grandiosity appears not to be predicted by implicit or explicit self-esteem factors.

The study suggests that the MS task has utility as an alternative measure of implicit self-esteem. Lexical decisions tasks, similar to the MS task, have previously found evidence of a self-knowledge network in memory (McConnell et al., 2009; McConnell, 2011).

In regard to appropriate self-stimuli for the assessment of implicit self-esteem, the results suggest that idiosyncratic, globally-assessed positive and negative self-associations are optimal for the detection of an implicit moderation of explicit self-esteem that reflects the mask model and inverted mask propositions in narcissism (Bosson & Prewitt-Freilino, 2007; Bromberg, 1983). However, for PNI-assessed vulnerability, contextually-assessed positive implicit self-esteem moderated the relationship with explicit self-esteem as did globally-assessed negative implicit self-esteem. This unexpected result may reflect the impact of contingent self-worth on vulnerability. However, further investigation is warranted, given that this contextual effect occurred for positive self-associations alone.

The next chapter, Chapter 13, presents an overview of the research findings across the five studies reported in this thesis. In addition, the implications and limitations of the current research program are discussed before recommendations for future research are presented.

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Chapter 13. General Discussion

The five-study sequence, the results of which are reported in this thesis, was designed to evaluate two measures of grandiose and vulnerable narcissism, specifically those using either the PNI subscales or those using the NPI and PNI subscales. First required was an exploration of the features of narcissism assessed by NPI and PNI items (i.e., their underlying factors), since previous research has demonstrated an inconsistent factor structure for the NPI (e.g., Ackerman et al., 2011; Boldero et al., 2013; Corry et al., 2008; Kubarych et al., 2004), whereas the factors underlying the seven subscales of the English version PNI have not been confirmed. These features were used to construct and compare two models of grandiose and vulnerable narcissism. One model essentially replicated Wright et al.'s (2010) grandiosity and vulnerability second-order factors assessed by the PNI. The alternate model was based on the results of Maxwell et al. (2011) who found that the NPI and PNI assess distinct narcissism features. It was also based on the proposition that some features are expected to be common to grandiosity and vulnerability (Kernberg, 1970; Kohut, 1968). Thus, this model represents a conceptualization of narcissism that is consistent with empirical literature showing evidence of shared features (e.g., Ackerman & Donnellan, 2013; Besser & Priel, 2010; Bushman & Baumeister, 1998; Exline et al., 2004; Given-Wilson et al., 2011; Jones & Figueredo, 2012; Krizan & Johar, 2014; Nakayama & Nakaya, 2006; Okada, 2010; Pryor et al., 2008; Raskin & Novacek, 1991; Raskin et al., 1991b; Stucke & Sporer, 2002, Tomlinson, 2012; Wink, 1991). In two further studies, initial validation for these new measures was provided by examining their relationships with the FFM personality domains as well as with implicit and explicit self-esteem. These relationships were considered alongside those of PNI-assessed grandiosity and vulnerability.

The current chapter, first presents a brief review of the findings of each study (Section 13.1). In Section 13.2, these findings are then compared to the results of previous research in regard to: (i) first-order factor structures of the NPI and PNI; (ii) second-order factor models using these measures; (iii) common narcissism features assessed by NPI/PNI subscales; (iv) relationships of NPI/PNI- and PNI-assessed expressions to extraversion, neuroticism and agreeableness; (v) relationships of these narcissism measures to implicit and explicit self-esteem, and; (vi) results that are relevant to the assessment of implicit self-esteem. The implications of the combined findings and recommendations for future research are then discussed in three further sections. In Section 13.3.1, implications for the conceptualization of grandiosity and vulnerability are discussed. In Section 13.3.2, future research directions for the study of common features identified in this research are suggested. In Section 13.3.3, implications for the use and interpretation of the NPI and the PNI are outlined. Finally, limitations of the current studies are presented and a conclusion is drawn.

13.1 A Review of the Findings

13.1.1 Study 1

Study 1 examined the structure of the NPI (Raskin & Terry, 1988). Parallel analysis indicated that seven first-order factors should be extracted from an EFA. Consequently, seven factors were extracted and this model was found to be a good fit. The pattern of items loading on these factors broadly matched those loading on Raskin and Terry (1988)'s seven principal components and those loading on Boldero et al.'s (2013) seven factors. These factors assess entitlement, exploitativeness, exhibitionism, authority, superiority, vanity and self-sufficiency. Furthermore, six of the subscales measuring these features were internally consistent. The exception was the Self-

Sufficiency subscale. In addition, scores on this subscale were unrelated to those derived from the other NPI factors. This was problematic because it was assumed that these factors would load on a second-order factor. For this to occur, the first-order factors need to be strongly and positively related (Muthén, 2004). Accordingly, taken together, these results suggested that this subscale should not be used to assess a narcissism feature.

13.1.2 Study 2

Study 2 examined the latent structure of the PNI. A parallel analysis indicated that eight factors should be extracted. An eight-factor model was found to be a good fit. The pattern of items loading on six of these indicated that they were equivalent to six of the components extracted by Pincus et al. (2009), specifically contingent self-esteem, exploitativeness, grandiose fantasy, hiding the self, self-sacrificing self-enhancement and entitlement rage. However, the seventh PNI component, devaluing, separated into two discrete factors, that were labelled shame and social avoidance. All eight subscales assessing these factors were internally consistent.

13.1.3 Study 3

Study 3 was designed to investigate how the NPI and PNI subscales load on second-order factors (i.e., grandiose and vulnerable narcissism). Specifically, using the psychodynamic literature (e.g., Kernberg, 1970; Kohut, 1966) and the results of previous research (e.g., Ackerman & Donnellan, 2013; Besser & Priel, 2010; Bushman & Baumeister, 1998; Exline et al., 2004; Given-Wilson et al., 2011; Jones & Figueredo, 2012; Krizan & Johar, 2014; Nakayama & Nakaya, 2006; Okada, 2010; Pryor et al., 2008; Raskin & Novacek, 1991; Raskin et al., 1991b; Stucke & Sporer, 2002, Tomlinson, 2012; Wink, 1991), a confirmatory model in which the NPI and PNI subscales were specified to load on two second-order latent factors (i.e., grandiosity and

vulnerability) was evaluated. Five NPI and PNI subscales were specified to cross-load on both second-order factors as they appear to be common features of both narcissism expressions. These were the Entitlement, Exploitativeness, Attention Seeking, Grandiose Fantasy and Entitlement Rage subscales. NPI subscales of Authority, Vanity and Superiority were proposed to assess unique features of grandiose narcissism. Hence, they were only specified to load on the grandiosity second-order factor. Similarly, the PNI subscales of Contingent Self-esteem, Hiding the Self, Shame, Social Avoidance and Self-Sacrificing Self-Enhancement were proposed to assess unique features of vulnerable narcissism. Accordingly, they were specified to load on the vulnerability second-order factor. Although this model did not fit the data initially, modifications to it where error covariance between some subscales was permitted (since some combinations of subscales likely reflect other constructs in addition to narcissism, such as Machiavellianism, psychopathy, masochism and authentic pride) did fit.

The other model tested, that of Wright et al. (2010), specified that PNI-assessed Grandiose Fantasy, Exploitativeness, and Self-Sacrificing Self-Enhancement load on the grandiosity second-order factor and Contingent Self-Esteem, Hiding the Self, Entitlement Rage, Shame and Social Avoidance (referred to as Devaluing when these items are agglomerated) load on the vulnerability factor. This model also needed modification to improve an initial poor-fit. As for the alternate model, error covariance was respecified between some subscales where it was theoretically justifiable. Consequently, the model was a good-fit. However, Exploitativeness was not found to be a subscale of grandiose narcissism, as originally proposed by Wright and colleagues. Despite this, in Studies 4 and 5, it was included in the PNI-assessed grandiosity measure to be consistent with previous research using the PNI Grandiosity scale.

13.1.4 Study 4

In Study 4, the relationships of the two ways of assessing the narcissism expressions, evaluated in Study 3, with FFM personality domains were examined. It was proposed, based on the results of previous research (e.g., Bradlee & Emmons, 1992; Clark et al., 2010; Egan & McCorkindale, 2007; Hendin & Cheek, 1997; Holtzman et al., 2010; Houlcroft et al., 2012; Miller et al., 2011a, 2012c, 2012d; Paulhus & Williams, 2002; Rhodewalt & Morf, 1995; Ruiz et al., 2001; Samuel & Widiger, 2008; Vazire et al., 2008; Vernon et al., 2008) that narcissistic grandiosity should be positively related to extraversion and negatively related to neuroticism and agreeableness, whereas vulnerability should be negatively related to extraversion and agreeableness and positively related to neuroticism. Consistent with these predictions, both ways of assessing these narcissism expressions (i.e., PNI- and NPI/PNI-assessed grandiosity and vulnerability) showed expected relationships with FFM domains. Unique positive relationships to extraversion and negative ones to neuroticism were found for grandiosity, whereas vulnerability showed unique negative relationships to extraversion and positive ones to neuroticism. However, neither PNI-assessed grandiosity nor NPI/PNI-assessed vulnerability was uniquely and negatively related to agreeableness, although the zero-correlations of both measures with it were negative. NPI/PNI-assessed grandiosity was a more appropriate measure of grandiose narcissism than PNI-assessed grandiosity, whereas PNI-assessed vulnerability was a more appropriate measure than NPI/PNI-assessed vulnerability. However, the NPI/PNI-assessed expressions showed stronger relationships with extraversion and neuroticism than the PNI-assessed ones. Taken together, these results suggest that NPI content assesses pathological grandiosity, whereas PNI content assesses pathological vulnerability.

13.1.5 Study 5

Finally, in Study 5, the relationships of the two measures of grandiose and vulnerable narcissism with implicit and explicit self-esteem were investigated. Of specific interest was whether the relationships of PNI/PNI- and PNI-assessed grandiosity and vulnerability with explicit self-esteem would be moderated by implicit self-esteem in ways that are consistent with the mask model (Bromberg, 1983) and inverted mask proposition (Bosson & Prewitt-Freilino, 2007). Specifically, grandiose narcissism was expected to be positively associated with explicit self-esteem to the extent that implicit self-esteem was low. Vulnerable narcissism was expected to be negatively associated with explicit self-esteem to the extent that implicit self-esteem was high.

Implicit self-esteem was measured using a variant of a lexical decision task (Meyer & Schvaneveldt, 1971) to access the strength of association between idiosyncratic global and contextual self-stimuli with positive and negative valence. Moreover, positive implicit self-esteem was assessed separately from negative implicit self-esteem to minimize the impact of a positive bias that occurs for all implicit tasks (Greenwald & Banaji, 1995). As predicted, NPI/PNI-assessed grandiosity was positively related to explicit self-esteem and this was moderated by low positive and high negative (i.e., low) globally-assessed implicit self-esteem. Similarly, NPI/PNI-assessed vulnerability was negatively related to explicit self-esteem and this was moderated by high positive and low negative (i.e., high) globally-assessed implicit self-esteem. PNI-assessed grandiosity and vulnerability results were less consistent. PNI-assessed grandiosity was not related to self-esteem factors, whereas PNI-assessed vulnerability was negatively related to explicit self-esteem and this was moderated by *contextually*-assessed high positive and globally-assessed low negative implicit self-

esteem. Thus, it was concluded that NPI/PNI-assessed grandiosity and vulnerability were more appropriate measures, given that they consistently reflected proposed moderations of explicit self-esteem by the implicit form, outlined in the mask model and inverted mask proposition.

13.2 Comparison of the Current Findings to those of Previous Research and Implications for Theory

Many of the findings of the research reported in this thesis are consistent with theory and the results of previous research. These findings are now discussed in the light of those reported in the literature.

13.2.1 First-Order Factor Structures of the NPI and the PNI

Whilst the findings of this research are *not* consistent with research reporting 2-, 3- or 4-factor solutions for the 40-item NPI (e.g., Ackerman et al., 2011; Corry et al., 2008; Kubarych et al., 2004), these studies used different response formats for NPI items. Specifically, all have used the forced-choice response format (i.e., narcissistic versus non-narcissistic statements; see Section 3.1.1) whereas the present study presented participants with the narcissistic statements and asked them to indicate the extent to which they agreed or disagreed that these were self-descriptive, using a 6-point Likert-response scale. Past research has also used a variety of factor-analytic techniques that are likely to produce divergent solutions (Boldero et al., 2013). Like Boldero et al. (2013), the current research used EFA to determine the structure of the NPI. The current findings are consistent with those of Boldero and colleagues who found a seven-factor solution that essentially recovered Raskin and Terry's (1988) seven principal components.

Largely consistent with the results of Boldero et al. (2013), six of the NPI subscales were reliable. This finding can be contrasted with the results of previous research which has found that the NPI subscales, assessed using forced-choice items and based on Raskin and Terry's (1988) principal components analyses are not reliable (e.g., del Rosario & White, 2005; Foster & Campbell, 2007; Maxwell et al., 2011; McHoskey, 1995). This difference in results is likely due to the extra information obtained when a 6-point Likert response format is used for items (Lissitz & Green, 1975). The exception was the Self-Sufficiency subscale. This result is consistent with those other studies that have found that Self-Sufficiency typically has the lowest estimates of reliability of the NPI subscales (e.g., del Rosario & White, 2005; Foster & Campbell, 2007; Maxwell et al., 2011).

The EFA of the PNI essentially found six of the seven components reported by Pincus et al. (2009). However, the devaluing component was not found. Rather two factors were identified, specifically shame and social avoidance. These factors are theoretically linked to the devaluing of self and others in narcissism (Hahn, 2000). Therefore, it was concluded that Pincus et al.'s devaluing component is underpinned by these two factors. In addition, consistent with the results of previous research (Maxwell et al., 2011; Pincus et al., 2009), the PNI subscales were reliable.

13.2.2 Second-Order Factor Models of Grandiosity and Vulnerability

The second-order factor analyses conducted in Study 3 showed that a model of grandiose and vulnerable narcissism including subscales of both measures was a good fit. In contrast, the model including only PNI factors, despite being a good fit, was inconsistent with the results of Wright et al. (2010) because the exploitative factor failed to load on the grandiosity second-order factor. This outcome is consistent with the conclusion of Maxwell et al., (2011) that *both* the NPI and the PNI are relevant to the

assessment of grandiose and vulnerable narcissism. It is also consistent with the proposition that the NPI is a measure of grandiose narcissism that also assesses some vulnerable features (e.g., Bosson et al., 2008; Miller & Campbell, 2011). This latter finding is consistent with Bosson and Prewitt-Freilino's (2007) assumption that the Emmons' (1987) NPI Exploitativeness/Entitlement factor is a measure of vulnerable narcissism. Similarly, it is consistent with a view of the PNI as a measure of vulnerable narcissism that assesses some grandiose features (Miller et al., 2014). Furthermore, the finding that several NPI and PNI subscales cross-load on grandiosity and vulnerability factors in the NPI/PNI model, suggests that the vulnerable features assessed by the NPI and the grandiose features assessed by the PNI are relevant to both expressions. This result is consistent with the proposition that these are common narcissism features, outlined in the psychodynamic literature (e.g., Kernberg, 1970, Kohut, 1968).

Wright et al.'s (2010) model includes no common first-order factors and so PNI subscales are intended to be specific to *either* grandiosity or vulnerability but not both. The finding that the exploitativeness factor did not load on the proposed grandiosity factor is consistent with Jakšić et al.'s (2014) results. They found that this factor did not load on Wright et al.'s (2010) grandiosity factor in a CFA.

13.2.3 Common Features Assessed by NPI and PNI Subscales

The finding that entitlement and exploitativeness are common narcissism features is consistent with Maxwell and colleagues' (2011) results. They found that both the NPI and PNI assess these features. It is also consistent with the finding that entitlement is strongly linked to exploitativeness (e.g., Ackerman et al., 2011; Ackerman, Donnellan, & Robins, 2012; Barry & Wallace, 2010).

Three additional NPI and PNI subscales were found to assess common features of narcissism, specifically NPI-assessed Attention Seeking (i.e., NPI Exhibitionism) and

PNI-assessed Grandiose Fantasy and Entitlement Rage. The finding that attention seeking is a common feature is consistent with research that demonstrates that a craving of attention by those high in grandiosity is associated with the seeking of admiration whereas those high in vulnerability have a need for approval (Besser & Priel, 2010; Raskin et al., 1991b). The finding that grandiose fantasizing is a common feature is also consistent with the results of previous empirical studies. Specifically, Raskin and Novacek (1991) found that grandiose fantasizing was associated with NPI-assessed grandiosity, whereas Given-Wilson et al. (2011) found that fantasizing was associated with scores on the Hypersensitive Narcissism Scale, a brief measure of vulnerable narcissism. Finally, narcissistic rage was also found to be a common feature, assessed using the PNI Entitlement Rage subscale, consistent with studies that show grandiose and vulnerable narcissism are linked to aggression and reactive anger, respectively (Bushman & Baumeister, 1998; Krizan & Johar, 2014; Okada, 2010; Stucke & Sporer, 2002).

13.2.4 The Relationships of PNI- and NPI/PNI-assessed Grandiosity and Vulnerability to Neuroticism, Extraversion and Agreeableness

The results of Study 4 are consistent with the results of a majority of previous research examining the relationship of grandiosity and vulnerability with the FFM domains. Specifically, both PNI- and NPI/PNI-assessed grandiosity were positively associated with extraversion and negatively associated with neuroticism. The results for extraversion are consistent with many previous findings (e.g.,Bradlee & Emmons, 1992; Clark et al., 2010; Egan & McCorkindale, 2007; Miller et al., 2011a, 2012c; Rhodewalt & Morf, 1995; Ruiz et al., 2001). However, the results for neuroticism are not consistent with the results of previous research that has found that grandiosity is not associated with neuroticism (e.g., Brown et al., 2009; Egan & McCorkindale, 2007;

Holtzman et al., 2010; Miller et al., 2012d; Paulhus & Williams, 2002; Samuel & Widiger, 2008; Vazire et al., 2008; Vernon et al., 2008).

PNI- and NPI/PNI-assessed vulnerability were negatively related to extraversion and positively related to neuroticism; results that have been previously found for measures of vulnerable narcissism (Hendin & Cheek, 1997; Houlcroft et al., 2012). The finding of negative zero-order correlations of all narcissism measures with agreeableness is also consistent with previous correlational findings (e.g., Hendin & Cheek, 1997; Houlcroft et al., 2012; Egan & McCorkindale, 2007; Holtzman et al., 2010; Paulhus & Williams, 2002; Samuel & Widiger, 2008; Vazire et al., 2008; Vernon et al., 2008). These results support commonly-held views that those high in grandiose narcissism are more socially domineering, less distressed but as disagreeable as those high in vulnerable narcissism (Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991). These latter individuals distance themselves socially and experience greater distress as depression, anxiety and shame (Dickinson & Pincus, 2003; Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991).

PNI-assessed, but not NPI/PNI-assessed, vulnerability was uniquely associated with agreeableness after accounting for the relationship with PNI-assessed grandiosity. This suggests that the PNI primarily measures vulnerability, consistent with Miller et al.'s (2014) conclusion. PNI-assessed grandiosity was not a predictor of agreeableness. However, when NPI-assessed factors were included alongside those assessed by the PNI (i.e., NPI/PNI-assessed grandiosity), the resultant grandiosity measure was a predictor of agreeableness. This latter result is consistent with Miller and Campbell's (2011) assertion that the NPI assesses pathological content relevant to grandiose narcissism, given that agreeableness is negatively related to maladaptive outcomes (e.g.,

Exline et al., 2004; Luhtanen & Crocker, 2005; Miller et al., 2010; Widman & McNulty, 2010).

13.2.5 The Relationships of PNI- and NPI/PNI-assessed Grandiosity and Vulnerability to Implicit and Explicit Self-Esteem

In Study 5, consistent with the results of Jordan et al. (2003) and Zeigler-Hill (2006), NPI/PNI-assessed grandiosity was positively associated with explicit self-esteem and this relationship was moderated by implicit self-esteem, such that the association was stronger for those lower in implicit self-esteem. Similarly, consistent with Bosson and Prewitt-Freilino's (2007) results, NPI/PNI-assessed vulnerability was negatively associated with explicit self-esteem and this relationship was moderated by implicit self-esteem, such that the negative association was stronger for those with higher implicit self-esteem. However, the relationships of PNI-assessed grandiosity and vulnerability (Wright et al., 2010) with explicit self-esteem were not consistently moderated by implicit self-esteem. Indeed, these factors failed to account for variance in PNI-assessed grandiosity.

Thus, the results suggest that assessment using the new NPI/PNI-assessed measures reflects a proposed self-regulatory mechanism by which latent vulnerability is masked by self-grandiosity in grandiose narcissism and a corresponding one by which latent grandiosity is hidden behind observable vulnerability in vulnerable narcissism (Bromberg, 1983; Bosson & Prewitt-Freilino, 2007). Specifically, the latent vulnerability associated with grandiose narcissism is reflected in low *implicit* self-esteem and expressed in the vulnerable expression as low *explicit* self-esteem. Similarly, latent grandiosity associated with vulnerable narcissism is reflected in high *implicit* self-esteem and expressed in the grandiose expression as high *explicit* self-esteem. These differential patterns of explicit and implicit self-esteem are consistent

with the proposition that grandiosity and vulnerability are outward expressions of self-regulatory processes at the core of narcissism (Cain et al., 2008).

13.2.6 The Assessment of Implicit Self-Esteem

Study 5 also showed that a variant of a lexical decision task, specifically the MS task (Meyer & Schvaneveldt, 1971), could be used to measure implicit self-esteem, consistent with previous research that has used it to assess self-associations in memory (Brown & McConnell, 2009; Hugenberg & Bodenhausen, 2004; McConnell et al., 2009). Implicit self-esteem was assessed using separate indices of the associations of self with positive and negative concepts. This way of assessing self-esteem is consistent with Fiedler et al.'s (2006) assertion that the typical implicit self-esteem index formed by subtracting negative self-associations from the positive ones is problematic because, as Rossell and Nobre (2004) have found, stronger positive self-associations are generally faster than those of stronger negative associations.

Overall, globally-assessed idiosyncratic self-aspects appeared to be appropriate stimuli for the assessment of positive and negative implicit self-esteem, consistent with Bluemke and Friese (2012) who used them in a self-esteem IAT. Contextual idiosyncratic self-aspects (McConnell, 2011) were only uniquely associated with PNI-assessed vulnerability, where explicit self-esteem was moderated by contextually-assessed positive implicit self-esteem. However, *globally*-assessed negative implicit self-esteem was also a moderator of this relationship. This result is partially consistent with previous research suggesting that narcissistic vulnerability is associated with self-worth evaluations across situations (Fetterman & Robinson, 2010; Park et al., 2004; Pincus et al., 2009; Zeigler-Hill et al., 2008).

13.3 Implications of the Research and Future Directions

The research reported in this thesis has three important implications for future narcissism research. Firstly, the research has implications for how grandiose and vulnerable narcissism are conceptualized. Secondly, it has implications for how grandiose and vulnerable narcissism are assessed. Thirdly, it has implications for the use of the NPI and PNI as narcissism measures.

13.3.1 Conceptualization of the Narcissism Expressions

In the research reported in this thesis, five subscales of the NPI and the PNI were found to assess common features of grandiose and vulnerable narcissism. These are central features of narcissism in the psycho-analytic literature (e.g., Kernberg, 1970; Kohut, 1966). The assessment of these common features by the NPI and PNI subscales supports a conceptualization of narcissism expressions that share a common core (Cain et al., 2008). There has been little consideration for features that are core to these expressions beyond that of entitlement (e.g., Ackerman & Donnellan, 2013; Exline et al., 2004; Jones & Figueredo, 2012; Pryor et al., 2008; Tomlinson, 2012). It is proposed that ongoing research needs to include common features in research for optimal conceptualization and assessment of the narcissism expressions.

13.3.2 Common Features in the Assessment of Narcissistic Expressions

It is possible that the common features discussed in the literature and explored in this research can be further reduced to constructs which distinguish between narcissistic expressions. Thus, these may be more accurately assessed by measuring characteristic expressions of a common feature exhibited by those high on grandiose or vulnerable narcissism.

13.3.2.1 Attention seeking. A distinction already exists with regard to attention seeking. The nature of attention seeking associated with grandiosity is a need for *admiration* whereas that associated with vulnerability is associated with a need for *approval* (Besser & Priel, 2010; Raskin et al., 1991b). Thus, items written to assess a need for admiration versus a need of approval should distinguish grandiosity from vulnerability and, therefore, represent unique aspects of the common feature of attention seeking.

13.3.2.2 Narcissistic rage. There are likely different forms of narcissistic rage associated with grandiosity and vulnerability. 'Rage' can be conflated with anger and aggression. However, aggression can occur without anger (Averill, 1983) as a way to dominate others (Ornstein & Ornstein, 1993). This suggests a plan to be aggressive rather than aggression as a spontaneous reaction to anger. Grandiose narcissism is more likely to reflect aggression in the service of achieving interpersonal domination (Miller et al., 2012a; Miller & Campbell, 2011; Wink 1991) whereas vulnerable narcissism involves reactive anger (Dickinson & Pincus, 2003; Miller et al., 2010). This is an important distinction since the operationalization of narcissistic rage in the PNI (i.e., the Entitlement Rage subscale) reflects the experience of reactive anger rather than planned aggression (see Appendix F). If a scale was developed in the future that assesses rage as a premeditated strategy to aggressively dominate others, this scale, together with the current PNI subscale, could distinguish narcissistic rage associated with grandiosity from that associated with vulnerability.

13.3.2.3 Grandiose fantasizing. Similar qualitative differences might exist in the nature of grandiose fantasizing. Those high in vulnerable narcissism may not fantasize realistically about power, sex and influence as those high in NPI-assessed grandiose narcissism appear to do (Raskin & Novacek, 1991). Cooper (2009) described

other narcissistic fantasies involving magical themes and self-omnipotence that reflect less realistic goals. Thus, it is possible that those high on vulnerable narcissism may have different grandiose fantasies than those high on grandiose narcissism and scales that assess these differences could be developed.

13.3.2.4 Exploitativeness. Finally, Dickinson and Pincus (2003) proposed that individuals high in grandiose narcissism are likely to be overtly exploitative. Less is known about how those high in vulnerable narcissism express exploitativeness, except that this expression is likely to be covert (Dickinson & Pincus, 2003). The question remains whether certain types of exploitative behavior are linked to vulnerable narcissism whereas others are linked to grandiose narcissism. Clearly, future research should explore characteristics that assess potential distinctions between narcissism expressions within identified common features in this research.

13.3.3 The Use and Interpretation of the NPI and the PNI in Research

The research, presented in this thesis, suggests that the NPI is primarily a measure of grandiosity whereas the PNI is primarily a measure of vulnerability. The results of the current research program indicate that the PNI has subscales that assess three common features of the expressions, specifically, grandiose fantasizing (assessed by the PNI Grandiose Fantasy factor), narcissistic rage (assessed by the PNI Entitlement Rage factor) and exploitativeness (assessed by the PNI Exploitativeness factor). Similarly, the NPI has three subscales that assess common features, specifically, entitlement (assessed by NPI Entitlement), attention seeking (assessed by NPI Exhibitionism) and also exploitativeness (assessed by NPI Exploitativeness). Therefore, if researchers want to measure narcissistic grandiosity and vulnerability appropriately, they should use scales that assess common features as well as distinct ones.

On balance, NPI/PNI-assessed grandiosity and vulnerability, derived from second-order factor analysis of NPI and PNI subscales, generally performed better than grandiosity and vulnerability assessed using the PNI. NPI/PNI-assessed grandiosity and vulnerability showed stronger predictive associations with FFM personality domains, where those high in grandiose narcissism are characterized as socially-dominant and less inclined towards distress (Miller & Campbell, 2011), whereas those high in the vulnerable expression are socially distancing and experience greater distress (Dickinson & Pincus, 2003). Both NPI/PNI measures showed negative zero-order relationships to agreeableness. NPI/PNI-assessed grandiosity and vulnerability are also related to the interaction of explicit and implicit self-esteem in ways that are consistent with the proposition that latent low self-esteem (i.e., implicit self-esteem) is associated with grandiose narcissism whereas low self-esteem is expressed in vulnerable narcissism (Bosson & Prewitt-Freilino, 2007; Jordan et al., 2003; Schröder-Abé et al., 2007). Therefore, these measures will be likely useful in future research examining grandiose and vulnerable narcissism. The use of the new measures of these expressions are consistent with Maxwell et al.'s (2011) recommendation that both NPI and the PNI be used together in narcissism research. The development of NPI/PNI-assessed grandiosity and vulnerability scales in this research extend Maxwell and colleagues' recommendation by distinguishing features assessed by the two scales that uniquely assess narcissism expressions, as well as identifying features that are common to both.

13.4 Limitations

The studies reported in this thesis are subject to limitations. First, none of the samples used in this research came from a clinical population. Nevertheless, much of the research using the NPI has used student samples (Cain et al., 2008) and the PNI's

first- and second-order factors have also been developed and investigated using undergraduate samples (Pincus et al., 2009; Wright et al., 2010). Moreover, subsequent research has mostly investigated the PNI in normal populations (Watson & Bagby, 2011). Thus, it is likely that undergraduate samples comprised an adequate population for this research.

An additional limitation is that in the current studies, narcissism was assumed to be a universal and stable personality dimension. It is possible that grandiose and vulnerable features are state-based phenomena (Levy, 2012), that likely have the same features associated with them as has been found in this trait-based investigation. However, the nature of state-based phenomena (i.e., changing more rapidly within the individual) may affect the test-retest reliability of the proposed grandiosity/vulnerability measures. This is a question for future research.

13.5 Conclusion

In this thesis, it has been argued that the new measures of grandiose and vulnerable narcissism, assessed using both the NPI and the PNI are more appropriate measures than those assessed only by the PNI, based on a proposition that grandiose and vulnerable expressions reflect a common narcissistic core (Cain et al., 2008) and, thus, share some features. Five narcissistic features assessed by NPI and PNI subscales were found to be common to both grandiosity and vulnerability using CFA. Moreover, the remaining subscales of the PNI were found to assess narcissistic vulnerability whereas the remaining scales of the NPI assessed narcissistic grandiosity.

The current research supports the proposition that pathological narcissism is underpinned by a self-esteem vulnerability and consequent dysfunction in interpersonal relationships. The results of the current research demonstrate that NPI/PNI-assessed

grandiosity and vulnerability are associated with self-esteem vulnerability, whether it is latent or expressed. For those high in narcissistic grandiosity, there is a latent vulnerability that appears to be countered by an extraverted, domineering personality style and a down-playing of personal distress. For those high in narcissistic vulnerability, this vulnerability appears to be expressed as an introverted, neurotic personality style which is balanced by unmet, high self-expectations (i.e., latent grandiosity). In both cases, vulnerability is linked to pathology via maladaptive interpersonal functioning, highlighted by a negative association with agreeableness that suggests antagonistic and potentially aggressive behavior.

Additional investigation of narcissistic features, such as attention seeking, grandiose fantasizing and narcissistic rage would be a useful line of continued study, given that these aspects were identified as common to both expressions, in addition to entitlement and exploitativeness. These common features may be reducible to subsets of characteristics that further distinguish the grandiose from the vulnerable expression. Measures informed by a thorough understanding of common and distinguishing features of the narcissistic expressions also require further validation for their associations with a range of maladaptive interpersonal behavior (e.g., sexual abuse, Zeigler-Hill et al., 2013; hostility, Ruiz et al., 2001, and; the inability to forgive, Exline et al., 2004) as well as to constructs such as pride (Tracy et al., 2009), empathy (Watson, Grisham, Trotter, & Biderman, 1984), and shame (Robins et al., 2001) that are relevant to pathological narcissism.

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References

Ackerman, R. A, Donnellan, M. B., & Robins, R. W. (2012). An item response theory analysis of the Narcissistic Personality Inventory. *Journal of Personality Assessment, 94,* 141–155. doi:10.1080/00223891.2011.645934

Ackerman, R. A., & Donnellan, M. B. (2013). Evaluating self-report measures of narcissistic entitlement. *Journal of Psychopathology and Behavioral Assessment, 35,* 460–474. doi:10.1007/s10862-013-9352-7

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment, 18,* 67–87. doi:10.1177/1073191110382845

Adler, J. M. (2011). Epistemological tension in the future of personality disorder diagnosis. *The American Journal of Psychiatry, 168,* 1221–1222. doi:10.1176/appi.ajp.2011.11060859

Akhtar, S., & Thomson, J. A. (1982). Overview: Narcissistic personality disorder. *The American Journal of Psychiatry, 139,* 12–20.

Akhtar, S. (2000). The shy narcissist. In J. Sandler, R. Michels, & P. Fonagy (Eds.), *Changing ideas in the a changing world: The revolution in psychoanalysis. Essays in honour of Arnold Cooper* (pp. 111–119). New York, NY: Karnac.

Akiskal, H. S., & Akiskal, K. K. (2005). TEMPS: Temperament Evaluation of Memphis, Pisa, Paris and San Diego. *Journal of Affective Disorders, 85,* 1–2. doi:10.1016/j.jad.2004.12.003

Alden, L. E., Wiggins, J. S., & Pincus, A. L. (1990). Construction of circumplex scales for the Inventory of Interpersonal Problems. *Journal of Personality Assessment, 55,* 521–536. doi:10.1080/00223891.1990.9674088

Algom, D., Chajut, E., & Lev, S. (2004). A rational look at the emotional stroop phenomenon: A generic slowdown, not a stroop effect. *Journal of Experimental Psychology: General, 133,* 323-338. doi: 10.1037/0096-3445.133.3.323

Almond, R. (2004). “I can do it (all) myself”: Clinical technique with defensive narcissistic self-sufficiency. *Psychoanalytic Psychology*, *21*, 371–384. doi: 10.1037/0736-9735.21.3.371

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: American Psychiatric Publishing, Inc.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. Text revision). Washington, DC: American Psychiatric Publishing, Inc.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed. Text revision). Washington, DC: American Psychiatric Publishing, Inc.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing, Inc.

Ansell, E. B. (2005). *The structure of narcissistic personality: adaptive and maladpative dimensions as an integrated model of narcissism*. Pennsylvania State University, Pennsylvania, United States.

Atlas, G. D., & Them, M. A. (2008). Narcissism and sensitivity to criticism: A preliminary investigation. *Current Psychology*, *27*, 62–76. doi:10.1007/s12144-008-9023-0

Averill, J. R. (1983). Studies on anger and aggression. Implications for theories of emotion. *American Psychologist*, *38*, 1145–1160. doi: 10.1037/0003-066X.38.11.1145

Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, *105*, 1013–1107. doi:10.1037/a0034431

Bagby, R. M., & Farvolden, P. (2004). The personality diagnostic questionnaire-4 (PDQ-4). In Michel Hersen (Ed.), *Comprehensive handbook of psychological assessment* (Vol. 2, pp. 122–133). Hoboken, NJ: John Wiley & Sons.

Bandalos, D., & Finney, S. (2001). Item parceling issues in structural equation modeling. In G. Marcoulides & R. Schumacker (Eds.), *New developments and techniques in structural equation modeling* (pp. 269–296). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Barelds, D. P. H., & Dijkstra, P. (2010). Narcissistic Personality Inventory: Structure of the adapted Dutch version. *Scandinavian Journal of Psychology*, *51*, 132–138. doi: 10.1111/j.1467-9450.2009.00737.x

Barry, C. T., Grafeman, S. J., Adler, K. K., & Pickard, J. D. (2007). The relations among narcissism, self-esteem, and delinquency in a sample of at-risk adolescents. *Journal of adolescence*, *30*, 933–942. doi:10.1016/j.adolescence.2006.12.003

Barry, C. T., Pickard, J. D., & Ansel, L. L. (2009). The associations of adolescent invulnerability and narcissism with problem behaviors. *Personality and Individual Differences*, *47*, 577–582. doi:10.1016/j.paid.2009.05.022

Barry, C. T., & Wallace, M. T. (2010). Current considerations in the assessment of youth narcissism: Indicators of pathological and normative development. *Journal of Psychopathology and Behavioral Assessment*, *32*, 479–489. doi:10.1007/s10862-010-9188-3

Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, *103*, 5–33.

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, *4*, 1–44. doi:10.1111/1529-1006.01431

Becker, B. E., & Luthar, S. S. (2007). Peer-perceived admiration and social preference: Contextual correlates of positive peer regard among suburban and urban adolescents. *Journal of Research on Adolescence: The Official Journal of the Society for Research on Adolescence, 17*, 117–144. doi:10.1111/j.1532-7795.2007.00514.x

Besser, A., & Priel, B. (2010). Grandiose narcissism versus vulnerable narcissism in threatening situations: Emotional reactions to achievement failure and interpersonal rejection. *Journal of Social and Clinical Psychology, 29,* 874-902. doi: 10.1521/jscp.2010.29.8.874

Blackburn, R., & Coid, J. W. (1999). Empirical clusters of DSM-III personality disorders in violent offenders. *Journal of Personality Disorders, 13,* 18–34. doi: 10.1521/pedi.1999.13.1.18

Blanton, H., Jaccard, J., Gonzales, P. M., & Christie, C. (2006). Decoding the implicit association test: Implications for criterion prediction. *Journal of Experimental Social Psychology, 42,* 192–212. doi:10.1016/j.jesp.2005.07.003

Block, J. (1961). *The Q-sort method in personality assessment and psychiatric research.* Springfield, IL: Thomas.

Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin, 117*, 187–215. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/7724687

Block, J. (2001). Millennial contrarianism: The Five-Factor approach to personality description 5 years later. *Journal of Research in Personality, 35,* 98–107. doi:10.1006/jrpe.2000.2293

Bluemke, M., & Friese, M. (2012). On the validity of idiographic and generic self-concept Implicit Association Tests: A core-concept model. *European Journal of Personality, 26,* 515–528. doi:10.1002/per.850

Bogart, L., Benotsch, E., & Pavlovic, J. (2004). Feeling superior but threatened: The relation of narcissism to social comparison. *Basic and Applied Social Psychology, 26*, 35-44. doi: 10.1207/s15324834basp2601_4

Boldero, J. M., Bell, R. C., & Hulbert, C. A. (2013). Grandiose and vulnerable narcissism: Underlying dimensions and correlates. In A. Morel & M. Durand (Eds.), *New developments in personality disorders research* (pp. 1-49). New York, NY: Nova Science.

Boldero, J. M., Rawlings, D., & Haslam, N. (2007). Convergence between GNAT-assessed implicit and explicit personality. *European Journal of Personality, 21*, 341–358. doi: 10.1002/per.622

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*, 20–28. doi:10.1037/0003-066X.59.1.20

Bosson, J K, Lakey, C. E., Campbell, W. K., Zeigler-Hill, V., Jordan, C. H., & Kernis, M. H. (2008). Untangling the links between narcissism and self-esteem: A theoretical and empirical review. *Social and Personality Psychology Compass, 2*, 1415–1439. doi: 10.1111/j.1751-9004.2008.00089.x

Bosson, J. K., & Prewitt-Freilino, J. L. (2007). Overvalued and ashamed: Considering the roles of self-esteem and self-conscious emotions in covert narcissism. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 407–425). New York, NY: Guilford Press.

Bosson, J. K., Swann, W. B., & Pennebaker, J. W. (2000). Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited? *Journal of Personality and Social Psychology, 79*, 631–643. doi:10.1037//0022-3514.79.4.631

Bosson, J., & Weaver, J. (2011). "I Love Me Some Me": Examining the links between narcissism and self-esteem. In W. K. Campbell & J. Miller (Eds.) *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatments* (pp. 261-271). Hoboken, NJ: John Wiley & Sons. doi:10.1002/9781118093108.ch23

Boudreau, J. W., Boswell, W. R., & Judge, T. A. (2001). Effects of Personality on Executive Career Success in the United States and Europe. *Journal of Vocational Behavior*, *58*, 53–81. doi:10.1006/jvbe.2000.1755

Bowen. N. K. (2014). Requesting and Using Modification Indices in Mplus, *Unpublished manuscript*. Retrieved from http://ssw.unc.edu/sswsig/sites/default/files/Modification%20Indices%20in%20Mplus%20%28NK%20Bowen%29.pdf

Bradlee, P. M., & Emmons, R. A. (1992). Locating narcissism within the interpersonal circumplex and the Five-Factor model. *Personality and Individual Differences*, *13*, 821–830. doi:10.1016/0191-8869(92)90056-U

Branden, N. (1995). *Six pillars of self-esteem*. New York, NY: Bantam.

Bromberg, P. (1983). The mirror and the mask: On narcissism and psychoanalytic growth. *Contemporary Psychoanalysis*, *19*, 359–387.

Brown, C. M., & McConnell, A. R. (2009). When chronic isn't chronic: The moderating role of active self-aspects. *Personality & Social Psychology Bulletin*, *35*, 3–15. doi:10.1177/0146167208324675

Brown, R. P, Budzek, K., & Tamborski, M. (2009). On the meaning and measure of narcissism. *Personality & Social Psychology Bulletin*, *35*, 951–964. doi:10.1177/0146167209335461

Brown, R. P., & Zeigler-Hill, V. (2004). Narcissism and the non-equivalence of self-esteem measures: A matter of dominance? *Journal of Research in Personality*, *38*, 585–592. doi:10.1016/j.jrp.2003.11.002

Buhrmester, M. D., Blanton, H., & Swann, W. B. (2011). Implicit self-esteem: Nature, measurement, and a new way forward. *Journal of Personality and Social Psychology*, *100*, 365–385. doi:10.1037/a0021341

Bushman, B J, & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, *75*, 219-229. doi: 10.1037/0022-3514.75.1.219

Bushman, B. J., Bonacci, A. M., van Dijk, M., & Baumeister, R. F. (2003). Narcissism, sexual refusal, and aggression: Testing a narcissistic reactance model of sexual coercion. *Journal of Personality and Social Psychology*, *84*, 1027–1040. doi:10.1037/0022-3514.84.5.1027

Cain, N. M., Pincus, A. L., & Ansell, E. B. (2008). Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. *Clinical Psychology Review*, *28*, 638–656. doi:10.1016/j.cpr.2007.09.006

Campbell, R. L., Eisner, S., & Riggs, N. (2010a). Sources of self-esteem: From theory to measurement and back again. *New Ideas in Psychology*, *28*, 338–349. doi:10.1016/j.newideapsych.2009.09.008

Campbell, W. K., Bonacci, A. M., Shelton, J., Exline, J. J., & Bushman, B. J. (2004). Psychological entitlement: interpersonal consequences and validation of a self-report measure. *Journal of Personality Assessment, 83*, 29–45. doi:10.1207/s15327752jpa8301_04

Campbell, W. K., Brunell, A. B., & Finkel, E. J. (2006). Narcissism, interpersonal self-regulation, and romantic relationships: An agency model approach. In K. D. Vohs & E. J. Finkel (Eds.) *Self and Relationships: Connecting Intrapersonal and Interpersonal Processes*, (pp. 57–83). New York, NY: Guilford Press.

Campbell, W. K., Bosson, J. K., Goheen, T. W., Lakey, C. E., & Kernis, M. H. (2007). Do narcissists dislike themselves "deep down inside"? *Psychological Science*, *18*, 227-229. doi:10.1111/j.1467-9280.2007.01880.x

Campbell, W. K. (2009). About narcissism and NPD. *Web of Narcissism*. Retrieved from http://www.webofnarcissism.com/forums/index.php?topic=6297.0

Campbell, W. K., Hoffman, B. J., Campbell, S. M., & Marchisio, G. (2010b). Narcissism in organizational contexts. *Human Resource Management Review, 21*. 268-284. doi:10.1016/j.hrmr.2010.10.007

Carroll, J. (1961). The nature of the data, or how to choose a correlation coefficient. *Psychometrika, 26*, 347–372. doi: 10.1007/BF02289768

Cater, T. E., Zeigler-Hill, V., & Vonk, J. (2011). Narcissism and recollections of early life experiences. *Personality and Individual Differences, 51*, 935–939. doi:10.1016/j.paid.2011.07.023

Cattell, R. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1*, 37–41. doi: 10.1207/s15327906mbr0102_10

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970). *Handbook for the sixteen personality factor questionnaire (16 PF): In clinical, educational, industrial, and research psychology, for use with all forms of the test.* Champaign, Ill: Institute for Personality and Ability Testing.

Chittka, T., Minkwitz, J., Thormann, J., Olbrich, S., Sander, C., Hegerl, U., & Himmerich, H. (2011). Vigilance and personality: Neuroticism and sensation seeking as important markers for emotional psychopathologies. *Pharmacopsychiatry, 21*, A17. doi: 10.1055/s-0031-1292458

Church, A. T., & Burke, P. J. (1994). Exploratory and confirmatory tests of the big five and Tellegen's three- and four-dimensional models. *Journal of Personality and Social Psychology, 66*, 93–114. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/8126653

Clark, M. A., Lelchook, A. M., & Taylor, M. L. (2010). Beyond the Big Five: How narcissism, perfectionism, and dispositional affect relate to workaholism. *Personality and Individual Differences, 48*, 786–791. doi:10.1016/j.paid.2010.01.013

Collins, A. M., & Loftus, E. F. (1975). A spreading-activation theory of semantic processing. *Psychological Review, 82*, 407–428. doi:10.1037//0033-295X.82.6.407

Cooper, A. M. (2009). The narcissistic-masochistic character. *Psychiatric Annals, 39*, 904–912. doi: 10.3928/00485718-20090924-02

Cooper, A. M., & Ronningstam, E. (1992). Narcissistic personality disorder. In A. Tasman & M. B. Riba (Eds.) *Review of Psychiatry, Volume 11* (pp. 80–97). Washington, DC: American Psychiatric Press.

Corry, N., Merritt, R. D., Mrug, S., & Pamp, B. (2008). The factor structure of the Narcissistic Personality Inventory. *Journal of Personality Assessment, 90*, 593–600. doi:10.1080/00223890802388590

Costa, P., McCrae, R., & Dye, D. (1991). Facet scales for agreeableness and conscientiousness: A revision of the NEO Personality Inventory. *Personality and Individual Differences, 12*, 887–898. doi: 10.1016/0191-8869(91)90177-D

Costa, P. T., & McCrae, R. R. (1978). Objective personality assessment. In M. Storandt, I. C. Siegler, & M. F. Elias (Eds.), *The clinical psychology of aging* (pp. 119–143). New York, NY: Plenum Publishing.

Costa, P. T., & McCrae, R. R. (1980). Still stable after all these years: Personality as a key to some issues in adulthood and old age. *Life Span Development and Behavior, 3*, 65–102.

Costa, P. T., & McCrae, R. R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO Personality Inventory. *Journal of Personality Assessment, 64*, 21–50. doi: 10.1207/s15327752jpa6401_2

Costello, A., & Osborne, J. (2005). Best practice in exploratory factor analysis: Four recommendations to get the most from your analysis. *Practical Assessment, Research and Evaluation, 10,* 1–9. Retrieved from http://pareonline.net/getvn.asp?v=10&n=7

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297–334.

Culpepper, S. A. (2013). The reliability and precision of total scores and IRT Estimates as a function of polytomous IRT parameters and latent trait distribution. *Applied Psychological Measurement, 37*, 201–225. doi: 10.1177/0146621612470210

Curran, P. J., West, S. G., Finch, J. F., Aiken, L., Bentler, P., & Kaplan, D. (1996). the robustness of test statistics to nonnormality and specification error in confirmatory factor analysis, *Psychological Methods, 1*, 16–29. doi: 10.1037/1082-989X.1.1.16

Daffern, M., Howells, K., & Ogloff, J. (2007). What's the point? Towards a methodology for assessing the function of psychiatric inpatient aggression. *Behaviour Research and Therapy, 45*, 101–111. doi:10.1016/j.brat.2006.01.011

Damarin, F., & Messick, S. (1965). Response styles as personality variables: A theoretical integration of multivariate research. *ETS Research Bulletin Series, 1965*, i–116.

de Cremer, D. & van Knippenberg, D. (2005). Cooperation as a function of leader self-sacrifice, trust, and identification. *Leadership & Organization Development Journal*, *26*, 355–369. doi: 10.1108/01437730510607853

de Houwer, J., Hermans, D., Rothermund, K., & Wentura, D. (2002). Affective priming of semantic categorisation responses. *Cognition & Emotion*, *16*, 643–666. doi:10.1080/02699930143000419

del Rosario, P. M., & White, R. M. (2005). The Narcissistic Personality Inventory: Test-retest stability and internal consistency. *Personality and Individual Differences*, *39*, 1075–1081. doi:10.1016/j.paid.2005.08.001

Deluga, R. (1997). Relationship among American presidential charismatic leadership, narcissism, and rated performance. *The Leadership Quarterly*, *8*, 49–65. doi: 10.1016/S1048-9843(97)90030-8

de Vries, M., & Miller, D. (1985). Narcissism and leadership: An object relations perspective. *Human Relations, 38*, 583–601. doi:10.1177/001872678503800606

DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology, 93*, 880–896. doi:10.1037/0022-3514.93.5.880

Dickinson, K. A., & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders, 17*, 188–207.

Digman, J. M., & Takemoto-Chock, N. K. (1981). Multivariate behavioral factors in the natural language of personality: Re-Analysis, comparison, and interpretation of six major studies. *Multivariate Behavioral Research, 16*, 149–170. doi: 10.1207/s15327906mbr1602_2

Diguer, L., Turmel, V., Da Silva Luis, R., Mathieu, V., Marcoux, L. a., & Lapointe, T. (2014). EPA-0614 – Development and initial structure analysis of a french version of the pathological narcissism inventory. *European Psychiatry, 29,* Supplement 1. Advance online publication. doi:10.1016/S0924-9338(14)77997-0

Edwards, J. (2011). The fallacy of formative measurement. *Organizational Research Methods, 14*, 370–388. doi:10.1177/1094428110378369

Egan, S., & Stelmack, R. M. (2003). A personality profile of Mount Everest climbers. *Personality and Individual Differences, 34*, 1491–1494. doi:10.1016/S0191-8869(02)00130-7

Egan, V., & Lewis, M. (2011). Neuroticism and agreeableness differentiate emotional and narcissistic expressions of aggression. *Personality and Individual Differences, 50*, 845–850. doi:10.1016/j.paid.2011.01.007

Egan, V., & McCorkindale, C. (2007). Narcissism, vanity, personality and mating effort. *Personality and Individual Differences, 43*, 2105–2115. doi:10.1016/j.paid.2007.06.034

Ellis, A. (2005). *The myth of self-esteem: How rational emotive behavior therapy can change your life forever.* Amherst, NY: Prometheus Books.

Ellis, H. (1927). Auto-erotism: A study of the spontaneous manifestations of the sexual impulse. In *Studies in the psychology of sex: Volume 1, the evolution of modesty, the phenomena of sexual periodicity, auto-eroticism* (3rd ed., pp. 161–325). Philadelphia, PA: F A Davis.

Ellis, H. (1914). *Impressions and comments*. Edinburgh, UK: Houghton Mifflin.

Ellis, L. (1987). Relationships of criminality and psychopathy with eight other apparent behavioral manifestations of sub-optimal arousal. *Personality and Individual Differences, 8,* 905–925. doi:10.1016/0191-8869(87)90142-5

Emmons, R. (1984). Factor analysis and construct validity of the Narcissistic Personality Inventory. *Journal of Personality Assessment, 48,* 291–300. doi: 10.1207/s15327752jpa4803_11

Emmons, R. A. (1987). Narcissism: Theory and measurement. *Journal of Personality and Social Psychology, 52,* 11-17. doi: 10.1037/0022-3514.52.1.11

Exline, J. J., Baumeister, R. F., Bushman, B. J., Campbell, W. K., & Finkel, E. J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology, 87,* 894–912. doi:10.1037/0022-3514.87.6.894

Eysenck, H. J. (1968). *Eysenck personality inventory.* San Diego: Educational and Industrial Testing Service.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4,* 272–299. doi:10.1037//1082-989X.4.3.272

Falkenbach, D. M., Howe, J. R., & Falki, M. (2013). Using self-esteem to disaggregate psychopathy, narcissism, and aggression. *Personality and Individual Differences, 54,* 815-820. doi:10.1016/j.paid.2012.12.017

Farwell, L., & Wohlwend-Lloyd, R. (1998). Narcissistic processes: Optimistic expectations, favorable self-evaluations, and self-enhancing attributions. *Journal of Personality, 66*, 65–83. doi: 10.1111/1467-6494.00003

Fast, N. J., Halevy, N., & Galinsky, A. D. (2012). The destructive nature of power without status. *Journal of Experimental Social Psychology, 48*, 391–394. doi:10.1016/j.jesp.2011.07.013

Fazio, R. H. (2001). On the automatic activation of associated evaluations: An overview. *Cognition & Emotion, 15*, 115-141. doi: 10.1080/02699930125908

Fetterman, A. K., & Robinson, M. D. (2010). Contingent self-importance among pathological narcissists: Evidence from an implicit task. *Journal of Research in Personality, 44*, 691–697. doi: 10.1016/j.jrp.2010.09.002

Fiedler, K., Messner, C., & Bluemke, M. (2006). Unresolved problems with the "I", the "A", and the "T": A logical and psychometric critique of the Implicit Association Test (IAT). *European Review of Social Psychology, 17*, 74–147. doi:10.1080/10463280600681248

Fleming, J. S., & Courtney, B. E. (1984). The dimensionality of self-esteem: II. Hierarchical facet model for revised measurement scales. *Journal of Personality and Social Psychology, 46*, 404–421. doi:10.1037//0022-3514.46.2.404

Floyd, F. J., & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment, 7*, 286–299. doi:10.1037//1040-3590.7.3.286

Flynn, F. J. (2005). Having an open mind: The impact of openness to experience on interracial attitudes and impression formation. *Journal of Personality and Social Psychology, 88*, 816–826. doi:10.1037/0022-3514.88.5.816

Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*, 39–50. doi: 10.2307/3151312

Fossati, A., Beauchaine, T. P., Grazioli, F., Carretta, I., Cortinovis, F., & Maffei, C. (2005). A latent structure analysis of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Narcissistic Personality Disorder criteria. *Comprehensive Psychiatry*, *46*, 361–367. doi:10.1016/j.comppsych.2004.11.006

Fossati, A., Borroni, S., Grazioli, F., Dornetti, L., Marcassoli, I., Maffei, C., & Cheek, J. (2009). Tracking the hypersensitive dimension in narcissism: Reliability and validity of the Hypersensitive Narcissism Scale, *247*, 235–247. doi:10.1002/pmh

Fossati, A., Feeney, J., Pincus, A., Borroni, S., & Maffei, C. (2014, July 28). The structure of pathological narcissism and its relationships with adult attachment styles: A Study of Italian nonclinical and clinical adult participants. *Psychoanalytic Psychology*. Advance online publication. http://dx.doi.org/10.1037/a0037175

Foster, J. D. (2006). Theoretical models of narcissism, sexuality, and relationship commitment. *Journal of Social and Personal Relationships*, *23*, 367–386. doi:10.1177/0265407506064204

Foster, J. D., & Campbell, W. K. (2007). Are there such things as "Narcissists" in social psychology? A taxometric analysis of the Narcissistic Personality Inventory. *Personality and Individual Differences*, *43*, 1321–1332. doi:10.1016/j.paid.2007.04.003

Fox, E., Russo, R., Bowles, R., & Dutton, K. (2001). Do threatening stimuli draw or hold visual attention in csubclinical anxiety? *Journal of Experimental Psychology: General, 130,* 681-700. doi: 10.1037/0096-3445.130.4.681

Gailliot, M., & Schmeichel, B. (2006). Is implicit self-esteem really unconscious? Implicit self-esteem eludes conscious reflection. *Journal of Articles in Support of the Null Hypothesis*, *3*, 73–83. Retrieved from http://www.jasnh.com/pdf/Vol3-No3-article1.pdf

Gerbing, D. W., & Anderson, J. C. (1984). On the meaning of correlated measurement errors. *Journal of Consumer Research, 11,* 572–580.

Gerrard, J. (2002). A sense of entitlement: Vicissitudes of working with "special"patients. *British Journal of Psychotherapy*, *19*, 173–188. doi: 10.1111/j.1752-0118.2002.tb00072.x

Given-Wilson, Z., McIlwain, D., & Warburton, W. (2011). Meta-cognitive and interpersonal difficulties in overt and covert narcissism. *Personality and Individual Differences, 50*, 1000–1005. doi:10.1016/j.paid.2011.01.014

Glassman, M. (1988). Kernberg and Kohut: A test of competing psychoanalytic models of narcissism. *Journal of the American Psychoanalytic Association, 36,* 597–625. doi:10.1177/000306518803600302

Glover, N., Miller, J. D., Lynam, D. R., Crego, C., & Widiger, T. A. (2012). The Five-Factor narcissism inventory: A Five-Factor measure of narcissistic personality traits. *Journal of personality assessment, 94*, 500–512. doi:10.1080/00223891.2012.670680

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26–34. doi: 10.1037/0003-066X.48.1.26

Gorsuch, R. L. (1983). *Factor analysis* (2nd. ed.). Hillsdale, NJ: Erlbaum

Govan, C. L., & Williams, K. D. (2004). Changing the affective valence of the stimulus items influences the IAT by re-defining the category labels. *Journal of Experimental Social Psychology, 40*, 357–365. doi: 10.1016/j.jesp.2003.07.002

Gramzow, R., & Tangney, J. P. (1992). Proneness to shame and the Narcissistic Personality. *Personality and Social Psychology Bulletin, 18,* 369–376. doi:10.1177/0146167292183014

Green, D., & Swets, J. (1966). *Signal detection theory and psychophysics (Vol. 1)*. New York: Wiley.

Greenwald, A G, & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102*, 4–27. doi: 10.1037/0033-295X.102.1.4

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74*, 1464–1480. doi: 10.1037/0022-3514.74.6.1464

Greenwald, A. G., & Farnham, S. D. (2000). Using the Implicit Association Test to measure. *Journal of Personality and Social Psychology, 79*, 1022–1038. doi:10.1037//0022-3514.79.6.I022

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: 1. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*, 197–216. doi:10.1037/0022-3514.85.2.197

Gregg, A. P., & Sedikides, C. (2010). Narcissistic fragility: Rethinking its links to explicit and implicit self-esteem. *Self and Identity, 9*, 142–161. doi:10.1080/15298860902815451

Gunderson, J., Ronningstam, E. F., & Smith, L. E. (1995). Narcissistic personality disorder. In W. J. Livesley (Ed.) *The DSM-IV personality disorders* (pp. 201-212). New York, NY: Guilford Press.

Hahn, W. (2000). Shame: Countertransference identifications in individual psychotherapy. *Psychotherapy, 37*, 10–21. doi: 10.1037/h0087670

Haigler, E. D., & Widiger, T. A. (2001). Experimental manipulation of NEO-PI-R Items. *Journal of Personality Assessment, 77*, 339-358. doi: 10.1207/S15327752JPA7702_14

Hall, R. J., Snell, A. F., & Foust, M. S. (1999). Item parceling strategies in SEM : Investigating the subtle effects of unmodeled secondary constructs. *Organizational Research Methods, 2*, 233–256. doi: 10.1177/109442819923002

Hart, S., & Hare, R. (1998). Association between psychopathy and narcissism: Theoretical views and empirical evidence. In E. Ronningstam (Ed.) *Disorders of narcissism: Diagnostic, clinical, and empirical implications* (pp. 415-436). Washington, DC: American Psychiatric Press.

Haslam, N., Holland, E., & Kuppens, P. (2012). Categories versus dimensions in personality and psychopathology: A quantitative review of taxometric research. *Psychological Medicine, 42*, 903–920. doi:10.1017/S0033291711001966

Haslam, N. (2003). The dimensional view of personality disorders: A review of the taxometric evidence. *Clinical Psychology Review, 23*, 75–93. doi: 10.1016/S0272-7358(02)00208-8

Hathaway, S. R., & McKinley, J. C. (1951). *Minnesota Multiphasic Personality Inventory; manual (Revised)*. Minnesota: Psychological Corporation.

Helmreich, R., & Stapp, J. (1974). Short forms of the Texas Social Behavior Inventory (TSBI), an objective measure of self-esteem. *Bulletin of the Psychonomic Society, 4(5-A)*, 473–475.

Hendin, H. M., & Cheek, J. M. (1997). Assessing hypersensitive narcissism: A re-examination of Murray's Narcism Scale. *Journal of Research in Personality, 599*, 588–599.

Hibbard, S. (1989). Circumscribed manifestations of grandiosity in inhibited neurotics as opportunities for self-esteem enhancement. *The Psychotherapy Patient, 5*, 125-133. doi: 10.1300/J358v05n03_13

Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the implicit association test and explicit self-report measures. *Personality & Social Psychology Bulletin, 31*, 1369–1385. doi:10.1177/0146167205275613

Holtzman, N. S., Vazire, S., & Mehl, M. R. (2010). Sounds like a narcissist: Behavioral manifestations of narcissism in everyday life. *Journal of Research in Personality, 44*, 478–484. doi: 10.1016/j.jrp.2010.06.001

Horn, J. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika, 30*, 179–185. doi: 10.1007/BF02289447

Horvath, S., & Morf, C. C. (2010). To be grandiose or not to be worthless: Different routes to self-enhancement for narcissism and self-esteem. *Journal of Research in Personality*, *44*, 585–592. doi:10.1016/j.jrp.2010.07.002

Houlcroft, L., Bore, M., & Munro, D. (2012). Three faces of narcissism. *Personality and Individual Differences*, *53*, 274–278. doi:10.1016/j.paid.2012.03.036

Hoyle, R. H. (1995). *Structural equation modeling: Concepts, issues, and applications.* California: Sage Publications.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1–55.

Hugenberg, K., & Bodenhausen, G. V. (2004). Category membership moderates the inhibition of social identities. *Journal of Experimental Social Psychology*, *40*, 233–238. doi:10.1016/S0022-1031(03)00096-9

Hyler, S. E. (1994). *Personality diagnostic questionnaire-4. New York: New York State Psychiatric Institute*. New York, NY: New York State Psychiatric Institute.

Jablensky, M., Herrman, C., & Gureje, M. (2006). *People living with psychotic illness: An Australian study 1997–98* (pp. 1–22). Canberra, AU: Commonwealth Department of Health and Aged Care. Retrieved from http://www.psychiatry.uwa.edu.au/__data/assets/pdf_file/0005/2331698/1999-Jablensky-et-al-LowPrev-Bulletin1-AGPS.pdf

Jaccard, J., & Wan, C. K. (1995). Measurement error in the analysis of interaction effects between continuous predictors using multiple regression: Multiple indicator and structural equation approaches. *Psychological Bulletin, 117*, 348–357. doi:10.1037//0033-2909.117.2.348

Jaeger, W. K. (2004). Status seeking and social welfare: Is there virtue in vanity? *Social Science Quarterly, 85*, 361–379. doi:10.1111/j.0038-4941.2004.08502012.x

Jakšić, N., Milas, G., Ivezić, E., Wertag, A., Jokić-Begić, N., & Pincus, A. L. (2014). The Pathological Narcissism Inventory (PNI) in Transitional Post-War Croatia: Psychometric and Cultural Considerations. *Journal of Psychopathology and Behavioral Assessment* (published online, May 1). doi:10.1007/s10862-014-9425-2

Jang, K. L., Livesley, W. J., Angleitner, A., Riemann, R., & Vernon, P. A. (2002). Genetic and environmental influences on the covariance of facets defining the domains of the Five-Factor model of personality. *Personality and Individual Differences, 33*, 83–101. doi: 10.1016/S0191-8869(01)00137-4

Jensen-Campbell, L. A., & Graziano, W. G. (2001). Agreeableness as a moderator of interpersonal conflict. *Journal of personality*, *69*, 323–361. doi: 10.1111/1467-6494.00148

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., Vol. 2, pp. 102–138). New York, NY: Guilford.

Johnson, S. L., Sandrow, D., Meyer, B., Winters, R., Miller, I., Solomon, D., & Keitner, G. (2000). Increases in manic symptoms after life events involving goal attainment. *Journal of Abnormal Psychology*, *109*, 721–727. doi:10.1037//Q02I-843X.1G9.4.721

Jonason, P. K., Li, N. P., & Buss, D. M. (2010). The costs and benefits of the dark triad: Implications for mate poaching and mate retention tactics. *Personality and Individual Differences, 48*, 373–378. doi:10.1016/j.paid.2009.11.003

Jonason, P. K., & Tost, J. (2010). I just cannot control myself: The dark triad and self-control. *Personality and Individual Differences*, *49*, 611–615. doi:10.1016/j.paid.2010.05.031

Jones, D., & Figueredo, A. (2012). The core of darkness: Uncovering the heart of the dark triad. *European Journal of Personality*, *27*, 521-531. doi: 10.1002/per.1893

Jones, J. T., Pelham, B. W., Mirenberg, M. C., & Hetts, J. J. (2002). Name letter preferences are not merely mere exposure: Implicit egotism as self-regulation. *Journal of Experimental Social Psychology, 38*, 170–177. doi:10.1006/jesp.2001.1497

Jordan, C. H., Spencer, S. J., Zanna, M. P., Hoshino-Browne, E., & Correll, J. (2003). Secure and defensive high self-esteem. *Journal of Personality and Social Psychology, 85*, 969–978. doi: 10.1037/0022-3514.85.5.969

Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*, 141–151. doi:10.1177/001316446002000116

Kansi, J. (2003). The Narcissistic Personality Inventory: Applicability in a Swedish population sample. *Scandinavian Journal of Psychology*, *44*, 441–448. doi: 10.1046/j.1467-9450.2003.00365.x

Kernberg, F. (1985). *Borderline conditions and pathological narcissism*. Oxford, UK: Rowman & Littlefield.

Kernberg, O. F. (1988). Clinical dimensions of masochism. *Journal of the American Psychoanalytic Association, 36*, 1005–1029. doi:10.1177/000306518803600407

Kernberg, O. F. (1975). The treatment of the narcissistic personality. In *Borderline conditions and pathological narcissism* (pp. 227–262). New York, NY: Aronson.

Kernberg, O. F. (1970). Factors in the psychoanalytic treatment of narcissistic personalities. *Journal of the American Psychoanalytic Association, 18*, 51–85. doi:10.1177/000306517001800103

Kihlstrom, J. (1987). The cognitive unconscious. *Science, 237*, 1445–1452. doi:10.1126/science.3629249

Kihlstrom, J. F., & Klein, S. B. (1994). The self as a knowledge structure. In R. Wyer & T. Srull (Eds.), *Handbook of Social Cognition: Volume 1: Basic Processes* (Vol. 1, pp. 153–194). Hillsdale, NJ: Lawrence Erlbaum.

Kohut, H. (1966). Forms and transformations of narcissism. *Journal of the American Psychoanalytic Association*, *14*, 243–272. doi:10.1177/000306516601400201

Kohut, H. (1968). The psychoanalytic treatment of narcissistic personality disorders: Outline of a systematic approach. *The Psychoanalytic Study of the Child, 23*, 86-113.

Komarraju, M., & Karau, S. J. (2005). The relationship between the big five personality traits and academic motivation. *Personality and Individual Differences, 39*, 557–567. doi:10.1016/j.paid.2005.02.013

Koole, S. L., Dijksterhuis, A., & van Knippenberg, A. (2001). What's in a name: Implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology*, *80*, 669-685. doi: 10.1037/0022-3514.80.4.669

Koster, E. H. W., Crombez, G., Verschuere, B., & De Houwer, J. (2004). Selective attention to threat in the dot probe paradigm: Differentiating vigilance and difficulty to disengage. *Behaviour Research and Therapy*, *42*, 1183–1192. doi: 10.1016/j.brat.2003.08.001

Krishnakumar, J., & Nagar, A. L. (2007). On exact statistical properties of multidimensional indices based on principal components, factor analysis, MIMIC and structural equation models. *Social Indicators Research*, *86*, 481–496. doi: 10.1007/s11205-007-9181-8

Krizan, Z., & Johar, O. (2014). Narcissistic rage revisited. *Journal of Personality and Social Psychology*. No pagination specified. doi:10.1037/pspp0000013

Krizan, Z., & Suls, J. (2008). Are implicit and explicit measures of self-esteem related? A meta-analysis for the Name-Letter Test. *Personality and Individual Differences*, *44*, 521–531. doi:10.1016/j.paid.2007.09.017

Kubarych, T. S., Deary, I. J., & Austin, E. J. (2004). The Narcissistic Personality Inventory: Factor structure in a non-clinical sample. *Personality and Individual Differences*, *36*, 857–872. doi:10.1016/S0191-8869(03)00158-2

Leary, T. (1957). *Interpersonal diagnosis of personality; a functional theory and methodology for personality evaluation.* Oxford, UK: Ronald Press.

Lessard, J. S. (2008). *Deconstructing "Entitlement."* (Unpublished doctoral dissertation). University of California, Irvine.

Lessard, J., Greenberger, E., Chen, C., & Farruggia, S. (2011). Are youths' feelings of entitlement always "bad"?: Evidence for a distinction between exploitive and non-exploitive dimensions of entitlement. *Journal of Adolescence*, *34*, 521–529. doi:10.1016/j.adolescence.2010.05.014

Lester, P. E., & Bishop, L. K. (2000). *Handbook of tests and measurement in education and the social sciences.* Maryland: Scarecrow Press.

Levy, K. N. (2012). Subtypes, dimensions, levels, and mental states in narcissism and narcissistic personality disorder. *Journal of Clinical Psychology*, *68*, 886–897. doi:10.1002/jclp.21893

Lissitz, R. W., & Green, S. B. (1975). Effect of the number of scale points on reliability: A Monte Carlo approach, *Journal of Applied Psychology*, *60*, 10–13. doi: 10.1037/h0076268

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling: A Multidisciplinary Journal*, *9*, 151–173. doi:10.1207/S15328007SEM0902_1

Locke, K. (2009). Aggression, narcissism, self-esteem, and the attribution of desirable and humanizing traits to self versus others. *Journal of Research in Personality, 43*, 99-102. doi:10.1016/j.jrp.2008.10.003

Lord, R. G., & Brown, D. J. (2001). Leadership, values, and subordinate self-concepts. *The Leadership Quarterly*, *12*, 133–152. doi:10.1016/S1048-9843(01)00072-8

Lucas, R. E., Diener, E., Grob, A., Suh, E. M., & Shao, L. (2000). Cross-cultural evidence for the fundamental features of extraversion. *Journal of Personality and Social Psychology, 79*, 452–468. doi: 10.1037/0022-3514.79.3.452

Luhtanen, R. K., & Crocker, J. (2005). Alcohol use in college students: Effects of level of self-esteem, narcissism, and contingencies of self-worth. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors,* 19, 99–103. doi:10.1037/0893-164X.19.1.99

Malkin, M. L., Zeigler-Hill, V., Barry, C. T., & Southard, A. C. (2012). The view from the looking glass: How are narcissistic individuals perceived by others? *Journal of Personality, 81*, 1-15. doi:10.1111/j.1467-6494.2012.00780.x

Maslow, A. H. (1969). The farther reaches of human nature. *Journal of Transpersonal Psychology, 1*, 1–9.

Mathews, A., Mackintosh, B., & Fulcher, E. P. (1997). Cognitive biases in anxiety and attention to threat. *Trends in Cognitive Sciences, 1*, 340–345. doi:10.1016/S1364-6613(97)01092-9

Matteson, J. A., & Irving, J. A. (2006). Servant versus self-sacrificial leadership: A behavioral comparison of two follow-oriented leadership theories, *International Journal of Leadership Studies, 2*, 36–51. Retrieved from http://www.regentuniversityonline.com/acad/global/publications/ijls/new/vol2iss1/matteson/mair.pdf

Maxwell, K., Donnellan, M. B., Hopwood, C. J., & Ackerman, R. A. (2011). The two faces of Narcissus? An empirical comparison of the Narcissistic Personality Inventory and the Pathological Narcissism Inventory. *Personality and Individual Differences, 50*, 577–582. doi:10.1016/j.paid.2010.11.031

McCloskey, M. (1991). Networks and theories: The place of connectionism in cognitive science. *Psychological Science, 2,* 387–395. doi: 10.1111/j.1467-9280.1991.tb00173.x

McConnell, A. R. (2011). The multiple self-aspects framework: Self-concept representation and its implications. *Personality and Social Psychology Review, 15*, 3–27. doi:10.1177/1088868310371101

McConnell, A. R., Rydell, R. J., & Brown, C. M. (2009). On the experience of self-relevant feedback: How self-concept organization influences affective responses and self-evaluations. *Journal of Experimental Social Psychology, 45*, 695–707. doi:10.1016/j.jesp.2009.03.011

McCrae, R. R., & Costa, P. T. (1987). Validation of the Five-Factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*, 81–90. doi: 10.1037/0022-3514.52.1.81

McGregor, I., Nail, P. R., Marigold, D. C., & Kang, S. J. (2005). Defensive pride and consensus: Strength in imaginary numbers. *Journal of Personality and Social Psychology, 89*, 978–996. doi:10.1037/0022-3514.89.6.978

McHoskey, J. (1995). Narcissism and machiavellianism. *Psychological Reports, 77*, 755–759. doi: 10.2466/pr0.1995.77.3.755

McKinney, B. C., Kelly, L., & Duran, R. L. (2012). Narcissism or openness?: College students' use of Facebook and Twitter. *Communication Research Reports, 29*, 108–118. doi:10.1080/08824096.2012.666919

Mellsop, G., Hutton, J., & Delahunt, J. (1985). Dexamethasone suppression test as a simple measure of stress? *British Medical Journal, 290*, 1804–1806. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1415944/

Mellsop, G., & Kumar, S. (2007). Classification and diagnosis in psychiatry: The emperor's clothes provide illusory court comfort. *Psychiatry, Psychology and Law, 14*, 95-99. doi:10.1375/pplt.14.1.95

Ménard, K. S., & Pincus, A. L. (2012). Predicting overt and cyber stalking perpetration by male and female college students. *Journal of interpersonal violence, 27*, 2183–2207. doi:10.1177/0886260511432144

Meyer, D. E., & Schvaneveldt, R. W. (1971). Facilitation in recognizing pairs of words: Evidence of a dependence between retrieval operations. *Journal of Experimental Psychology, 90,* 227-234. doi: 10.1037/h0031564

Miller, J. D., & Campbell, W. K. (2008). Comparing clinical and social personality conceptualizations of narcissism. *Journal of Personality, 76,* 449–476. doi: 10.1111/j.1467-6494.2008.00492.x

Miller, J. D., & Campbell, W. K. (2010). The case for using research on trait narcissism as a building block for understanding narcissistic personality disorder. *Personality Disorders: Theory, Research, and Treatment, 1,* 180-191. doi: 10.1037/a0018229

Miller, J., & Campbell, W. K. (2011). Addressing criticisms of the Narcissistic Personality Inventory (NPI). In W. K. Campbell & J. Miller (Eds.) *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatments* (pp. 146–152). Hoboken, NJ: John Wiley & Sons. doi:10.1002/9781118093108.ch13

Miller, J. D., Dir, A., Gentile, B., Wilson, L., Pryor, L. R., & Campbell, W. K. (2010). Searching for a vulnerable dark triad: Comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *Journal of Personality, 78,* 1529–1564. doi:10.1111/j.1467-6494.2010.00660.x

Miller, J. D., Gentile, B., Wilson, L., & Campbell, W. K. (2012b). Grandiose and vulnerable narcissism and the DSM-5 pathological personality trait model. *Journal of Personality Assessment, 95,* 284-290. doi:10.1080/00223891.2012.685907

Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Campbell, W. K. (2011a). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality, 79,* 1013–1042. doi:10.1111/j.1467-6494.2010.00711.x

Miller, J. D., Maples, J., & Campbell, W. K. (2011b). Comparing the construct validity of scales derived from the Narcissistic Personality Inventory: A reply to Rosenthal and Hooley (2010). *Journal of Research in Personality, 45,* 401–407. doi:10.1016/j.jrp.2010.12.004

Miller, J. D., Price, J., & Campbell, W. K. (2012c). Is the Narcissistic Personality Inventory still relevant? A test of independent grandiosity and entitlement scales in the assessment of narcissism. *Assessment, 19*, 8–13. doi:10.1177/1073191111429390

Miller, J. D., Gentile, B., & Campbell, W. K. (2012d). A test of the construct validity of the Five-Factor Narcissism Inventory. *Journal of Personality Assessment, 95*, 377-387. doi:10.1080/00223891.2012.742903

Miller, J. D., Lynam, D. R., & Campbell, W. K. (2014). Measures of narcissism and their relations to dsm-5 pathological traits: A critical reappraisal. *Assessment*, (February) 1-7. doi:10.1177/1073191114522909

Miller, J. D., & Maples, J. (2011). Trait personality models of Narcissistic Personality Disorder, grandiose narcissism, and vulnerable narcissism. In W Keith Campbell & J. D. Miller (Eds.), *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatment* (pp. 71–88). Hoboken, NJ: John Wiley and Sons. doi:10.1002/9781118093108.ch7

Miller, J. D., Price, J., Gentile, B., Lynam, D. R., & Campbell, W. K. (2012a). Grandiose and vulnerable narcissism from the perspective of the interpersonal circumplex. *Personality and Individual Differences*, *53*, 507–512. doi: 10.1016/j.paid.2012.04.026

Millisecond. (2009). Inquisit 3.6 [Computer software]. Seattle, WA: Millisecond Software.

Modell, A. H. (1975). A narcissistic defence against affects and the illusion of self-sufficiency. *The International Journal of Psychoanalysis*, *56*, 275–282.

Morey, L. C., Waugh, M. H., & Blashfield, R. K. (1985). MMPI scales for DSM-III personality disorders: Their derivation and correlates. *Journal of Personality Assessment, 49*, 245–251.

Morey, L. C., & Stagner, B. H. (2012). Narcissistic pathology as core personality dysfunction: Comparing the DSM-IV and the DSM-5 proposal for narcissistic personality disorder. *Journal of Clinical Psychology*, *68*, 908–921. doi:10.1002/jclp.21895

Morf, C. (2000). Narcissism and intrinsic motivation: The role of goal congruence,. *Journal of Experimental Social Psychology*, *36*, 424–438. doi:10.1006/jesp.1999.1421

Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, *12*, 177–196.

Morrison, A. P. (1983). Shame, ideal self, and narcissism. *Contemporary Psychoanalysis*, *19*, 295–318.

Morrone-Strupinsky, J. V., & Lane, R. D. (2007). Parsing positive emotion in relation to agentic and affiliative components of extraversion. *Personality and Individual Differences*, *42*, 1267–1278. doi:10.1016/j.paid.2006.10.005

Mulder, R. T., Newton-Howes, G., Crawford, M. J., & Tyrer, P. J. (2011). The central domains of personality pathology in psychiatric patients. *Journal of personality disorders*, *25*, 364–377. doi:10.1521/pedi.2011.25.3.364

Muthén, B. (2004). Correlations between factors. *Statmodel Discussion Forum*. Retrieved from http://www.statmodel2.com/discussion/messages/9/380.html?1372681230

Muthén, B., & Hofacker, C. (1988). Testing the assumptions underlying tetrachoric correlations. *Psychometrika.*, *53*, 563-578. Retrieved from http://link.springer.com/article/10.1007/BF02294408

Muthén, B. O., & Muthén, L. K. (1998-2013). *Mplus user's guide (sixth edition)*. *Los Angeles, CA*. Los Angeles, CA: Muthén & Muthén.

Nakayama, R., & Nakaya, M. (2006). Developmental transformation of narcissism in adolescents. *Japanese Journal of Educational Psychology*, *54*, 188–198.

Nelson, G., & Gilbertson, D. (1991). Machiavellianism revisited. *Journal of Business Ethics, 10*, 633–639. doi:10.1007/BF00382884

Nelson, D. L., & Xu, J. (1995). Effects of implicit memory on explicit recall: Set size and word-frequency effects. *Psychological Research, 57,* 203-214. doi: 10.1007/BF00431281

Netemeyer, R. G., Burton, S., & Lichtenstein, D. R. (2013). Trait aspects to of vanity: Measurement and relevance consumer behavior, *21*, 612–626. doi: 10.1086/209422

Nettle, D. (2004). Evolutionary origins of depression: A review and reformulation. *Journal of Affective Disorders, 81,* 91-102. doi:10.1016/j.jad.2003.08.009

Nettle, D. (2006). The evolution of personality variation in humans and other animals. *American Psychologist*, *61,* 622-631. doi: 10.1037/0003-066X.61.6.622

Nettle, D. (2005). An evolutionary approach to the extraversion continuum. *Evolution and Human Behavior*, *26*, 363–373. doi:10.1016/j.evolhumbehav.2004.12.004

Nosek, B. A., & Banaji, M. R. (2001). The Go/No-Go Association Task. *Social Cognition*, *19,* 625–666. doi:10.1521/soco.19.6.625.20886

Nuttin, J. (1985). Narcissism beyond Gestalt and awareness: The name letter effect. *European Journal of Social Psychology*, *15*, 353–361. doi: 10.1002/ejsp.2420150309

Nuttin, J. M. (1987). Affective consequences of mere ownership: The name letter effect in twelve European languages. *European Journal of Social Psychology*, *17*, 381–402. doi: 10.1002/ejsp.2420170402

Okada, R. (2010). The relationship between vulnerable narcissism and aggression in Japanese undergraduate students. *Personality and Individual Differences*, *49*, 113–118. doi:10.1016/j.paid.2010.03.017

Olson, M. A., & Fazio, R. H. (2004). Reducing the influence of extrapersonal associations on the Implicit Association Test: Personalizing the IAT. *Journal of Personality and Social Psychology, 86*, 653–667. doi: 10.1037/0022-3514.86.5.653

Ornstein, P. H., & Ornstein, A. (1993). Assertiveness, anger, rage, and destructive aggression: A perspective from the treatment process. In R. A. Glick & S. P. Roose (Eds.), *Rage, power, and aggression* (pp. 102–118). Grand Rapids, MI: Yale University Press.

Park, L. E., Crocker, J., & Mickelson, K. D. (2004). Attachment styles and contingencies of self-worth. *Personality & Social Psychology Bulletin, 30*, 1243–1254. doi: 10.1177/0146167204264000

Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development and Psychopathology, 21*, 913–938. doi: 10.1017/S0954579409000492

Paulhus, D. L. (2001). Normal narcissism: Two minimalist accounts. *Psychological Inquiry, 12*, 228–230.

Paulhus, D. L., Williams, K., & Harms, P. (2001, February 3). *Shedding light on the dark triad of personality: Narcissism, machiavellianism, and psychopathy*. Paper presented at Society for Personality and Social Psychology (SPSP) Convention, San Antonio, TX.

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, machiavellianism, and psychopathy. *Journal of Research in Personality, 36*, 556–563. doi: 10.1016/S0092-6566(02)00505-6

Pepper, L. J., & Strong, P. N. (1958). Judgmental subscales for the Mf scale of the MMPI. *Unpublished Manuscript.*

Perrine, N. E., & Brodersen, R. M. (2005). Artistic and scientific creative behavior: Openness and the mediating role of interests. *The Journal of Creative Behavior, 39*, 217–236. doi:10.1002/j.2162-6057.2005.tb01259.x

Phinney, C., & Gough, H. (1984). *California self-evaluation scales*. *Berkeley, CA:* Berkeley, CA.

Pimentel, C. (2007). *The impact of interpersonal rejection on self-esteem and mood in vulnerable narcissistic personalities, grandiose narcissistic personalities, and avoidant personalities: Experimental validation of vulnerable narcissism*. Pennsylvania State University, Pennsylvania, United States.

Pimental, C. A., Pincus, A. L., Ansell, E. B., White, C., Uliaszek, A., Wright, A. G., et al. (2004, July). *Initial derivation and validation of the Vulnerable Narcissism Scale.* Paper presented at the Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.

Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment; Psychological Assessment*, *21*, 365-379. doi: 10.1037/a0016530

Pincus, A., & Roche, M. (2011). Narcissistic grandiosity and narcissistic vulnerability. In W. K. Campbell & J. Miller (Eds.) *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatments* (pp. 31–40). Hoboken, NJ: John Wiley & Sons. doi:10.1002/9781118093108.ch4

Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology*, *6*, 421–446. doi:10.1146/annurev.clinpsy.121208.131215

Preacher, K. J. (2006). Quantifying Parsimony in Structural Equation Modeling. *Multivariate Behavioral Research, 41*, 227–259. doi: 10.1207/s15327906mbr4103_1

Pryor, L. R., Miller, J. D., & Gaughan, E. T. (2008). A comparison of the Psychological Entitlement Scale and the Narcissistic Personality Inventory's Entitlement Scale: Relations with general personality traits and personality disorders. *Journal of Personality Assessment, 90*, 517–520. doi:10.1080/00223890802248893

Ramanaiah, N. V., Detwiler, F. R., & Byravan, A. (1994). Revised NEO Personality Inventory profiles of narcissistic and nonnarcissistic people. *Psychological reports, 75*, 512–514. doi: 10.2466/pr0.1994.75.1.512

Raskin, R., & Hall, C. (1979). A narcissistic personality inventory. *Psychological reports, 45*, 590–603. doi: 10.2466/pr0.1979.45.2.590

Raskin, R., & Hall, C. (1981). The Narcissistic Personality Inventory: Alternative form reliability and further evidence of construct validity. *Journal of personality assessment, 45*, 159–162. doi: 10.1207/s15327752jpa4502_10

Raskin, R, & Novacek, J. (1991). Narcissism and the use of fantasy. *Journal of Clinical Psychology, 47*, 490–499. doi: 10.1002/1097-4679(199107)47:4<490::AID-JCLP2270470404>3.0.CO;2-J

Raskin, R, Novacek, J., & Hogan, R. (1991b). Narcissism, self-esteem, and defensive self-enhancement. *Journal of Personality, 59*, 19–38. doi: 10.1111/j.1467-6494.1991.tb00766.x

Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54*, 890–902.

Raskin, R., Novacek, J., & Hogan, R. (1991a). Narcissistic self-esteem management. *Journal of Personality and Social Psychology, 60*, 911–918. doi: 10.1037//0022-3514.60.6.911

Ratcliff, R., & Smith, P. L. (2004). A comparison of sequential sampling models for two-choice reaction time. *Psychological Review, 111*, 333-367. doi: 10.1037/0033-295X.111.2.333

Rathvon, N., & Holmstrom, R. (1996). An MMPI-2 portrait of narcissism. *Journal of Personality Assessment, 66*, 1–19. doi:10.1207/s15327752jpa6601_1

Reise, S. P., Waller, N. G., & Comrey, A. L. (2000). Factor analysis and scale revision. *Psychological Assessment, 12*, 287–297. doi:10.1037//1040-3590.12.3.287

Reynolds, E., & Lejuez, C. (2011). Narcissism in the DSM. In W. K. Campbell & J. Miller (Eds.) *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatments* (pp. 14-19). Hoboken, NJ: John Wiley & Sons. doi:10.1002/9781118093108.ch2

Rhodewalt, F., & Morf, C. C. (1995). Self and interpersonal correlates of the Narcissistic Personality Inventory: A review and new findings. *Journal of Research in Personality, 29,* 1–23. doi: 10.1006/jrpe.1995.1001

Robins, R., Tracy, J., & Shaver, P. (2001). Shamed into self-love: Dynamics, roots, and functions of narcissism. *Psychological Inquiry, 12*, 230–236. doi: 10.2307/1449481

Ronningstam, E. F. (2005). *Identifying and understanding the narcissistic personality*. New York, NY: Oxford University Press.

Ronningstam, E. F. (2013). An update on narcissistic personality disorder. *Current Opinion in Psychiatry, 26,* 102-106. doi: 10.1097/YCO.0b013e328359979c

Rose, P. (2002). The happy and unhappy faces of narcissism. *Personality and Individual Differences, 33,* 379–391. doi: 10.1016/S0191-8869(01)00162-3

Rosenberg, M. (1965). *Society and the adolescent self-image.* New Jersey: Princeton University Press.

Rosenberg, M., Schooler, C., Schoenbach, C., & Rosenberg, F. (1995). Global self-esteem and specific self-esteem: Different concepts, different outcomes. *American Sociological Review, 60,* 141–156. doi: 10.2307/2096350

Rosenthal, S. A., & Hooley, J. M. (2010). Narcissism assessment in social–personality research: Does the association between narcissism and psychological health result from a confound with self-esteem? *Journal of Research in Personality, 44,* 453–465. doi:10.1016/j.jrp.2010.05.008

Rosenthal, S. A., Montoya, R. M., Ridings, L. E., Rieck, S. M., & Hooley, J. M. (2011). Further evidence of the Narcissistic Personality Inventory's validity problems: A meta-analytic investigation—Response to Miller, Maples, and Campbell (this issue). *Journal of Research in Personality, 45*, 408–416. doi:10.1016/j.jrp.2011.06.004

Ross, S., Yarczower, M., & Williams, G. (1956). Recognitive thresholds for words as a function of set and similarity. *The American Journal of Psychology*, *69*, 82–86. doi: 10.2307/1418118

Ross, S. R., Stewart, J., Mugge, M., & Fultz, B. (2001). The imposter phenomenon, achievement dispositions, and the five factor model. *Personality and Individual Differences*, *31*, 1347–1355. doi: 10.1016/S0191-8869(00)00228-2

Rossell, S. L., & Nobre, A. C. (2004). Semantic priming of different affective categories. *Emotion*, *4*, 354–363. doi: 10.1037/1528-3542.4.4.354

Rothermund, K., Wentura, D., & Bak, M. (2001). Automatic attention to stimuli signalling chances and dangers: Moderating effects of positive and negative goal and action contexts. *Cognition & Emotion, 15*, 231-248. doi: 10.1080/02699930126213

Ruggiero, G. M., Veronese, G., Castiglioni, M., & Sassaroli, S. (2011). Grandiose fantasies and low self-esteem: An experimental study. *Psychological Studies*, *56*, 368–372. doi:10.1007/s12646-011-0095-9

Ruiz, J. M., Smith, T. W., & Rhodewalt, F. (2001). Distinguishing narcissism and hostility: Similarities and differences in interpersonal circumplex and Five-Factor correlates. *Journal of personality assessment*, *76*, 537–555. doi: 10.1207/S15327752JPA7603_12

Ruscio, J., & Roche, B. (2012). Determining the number of factors to retain in an exploratory factor analysis using comparison data of known factorial structure. *Psychological Assessment, 24*, 282–292. doi:10.1037/a0025697

Russell, B. (2006). *The conquest of happiness*. Oxfordshire, UK: Routledge.

Ryan, R. M., Huta, V., & Deci, E. L. (2006). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies, 9,* 139–170. doi: 10.1007/s10902-006-9023-4

Samuel, D. B., & Gore, W. L. (2012). Maladaptive variants of conscientiousness and agreeableness. *Journal of Personality, 80,* 1669–1696. doi:10.1111/j.1467-6494.2012.00770.x

Samuel, D. B., & Widiger, T. (2008). Convergence of narcissism measures from the perspective of general personality functioning. *Assessment, 15,* 364–374. doi: 10.1177/1073191108314278

Sass, D. A., & Schmitt, T. A. (2010). A comparative investigation of rotation criteria within exploratory factor analysis. *Multivariate Behavioral Research, 45,* 73–103. doi: 10.1080/00273170903504810

Schonemann, P. (1990). Facts, fictions, and common sense about factors and components. *Multivariate Behavioral Research, 25,* 47-51. doi: 10.1207/s15327906mbr2501_5

Schröder-Abé, M., Rudolph, A., & Schütz, A. (2007). Self-esteem is not necessarily advantageous: Discrepancies between explicit and implicit self-esteem and their relationship with anger expression and psychological health. *European Journal of Personality, 21,* 319–339. doi:10.1002/per.626

Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy?: Self-esteem matters. *Journal of Personality and Social Psychology, 87,* 400–416. doi:10.1037/0022-3514.87.3.400

Serkownek, K. (1975). Subscales for scale 5 and 0 of the MMPI. *Unpublished Manuscript.*

Shah, R., & Waller, G. (2000). Parental style and vulnerability to depression: The role of core beliefs. *The Journal of Nervous and Mental Disease, 188,* 19–25. Retrieved from http://ovidsp.tx.ovid.com

Shaw, D. S., Winslow, E. B., Owens, E. B., Vondra, J. I., Cohn, J. F., & Bell, R. Q. (1998). The development of early externalizing problems among children from low-income families: A transformational perspective. *Journal of Abnormal Child Psychology, 26,* 95–107. doi: 10.1023/A:1022665704584

Siegle, G. J. (1994). The balanced affective word list creation program. Retrieved from *http://www. sci. sdsu. edu/CAL/wordlist*.

Siegle G. J., Ingram, R. E., & Matt, G. E. (2002). Affective Interference: An explanation for negative attention biases in dysphoria? *Cognitive Therapy and Research, 26,* 73-87. doi: 10.1023/A:1013893705009

Simms, L. J., & Clark, L. A. (2006). The Schedule for Nonadaptive and Adaptive Personality (SNAP): A Dimensional Measure of Traits Relevant to Personality and Personality Pathology. In S. Strack (Ed.), *Differentiating normal and abnormal personality* (2nd ed., pp. 431–450). New York, NY: Springer Publishing Co.

Skeem, J. L., Poythress, N., Edens, J. F., Lilienfeld, S. O., & Cale, E. M. (2003). Psychopathic personality or personalities? Exploring potential variants of psychopathy and their implications for risk assessment. *Aggression and Violent Behavior, 8,* 513–546. doi:10.1016/S1359-1789(02)00098-8

Smith, E., & DeCoster, J. (2000). Dual-process models in social and cognitive psychology: Conceptual integration and links to underlying memory systems. *Personality and Social Psychology Review, 4,* 108–133. doi:10.1207/S15327957PSPR0402

Smolkowski, K. (2007). Correlated errors in CFA and SEM models. *Unpublished manuscript.* Retrieved from http://www.ori.org/~keiths/Files/Tips/Stats_SEMErrorCorrs.html

Snyder, C. R., Smith, T. W., Augelli, R. W., & Ingram, R. E. (1985). On the self-serving function of social anxiety: Shyness as a self-handicapping strategy. *Journal of Personality and Social Psychology, 48,* 970–980. doi: 10.1037/0022-3514.48.4.970

Steiger, J. (1990). Some additional thoughts on components, factors, and factor indeterminancy. *Multivariate Behavioral Research, 25*, 41–45. doi: 10.1207/s15327906mbr2501_4

Streiner, D. L. (2012). Figuring out factors: The use and misuse of factor analysis. In D. L. Streiner (Ed.), *A Guide for the Statistically Perplexed: Selected Readings for Clinical Researchers* (pp. 110–122). Toronto, CA: University of Toronto Press.

Streiner, D. L. (2003). Starting at the beginning: An introduction to coefficient alpha and internal consistency. *Journal of Personality Assessment, 80*, 99–103. doi:10.1207/S15327752JPA8001_18

Stucke, T. S., & Sporer, S. L. (2002). When a grandiose self-image is threatened: Narcissism and self-concept clarity as predictors of negative emotions and aggression following ego-threat. *Journal of Personality, 70*, 509–532. doi: 10.1111/1467-6494.05015

Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681–706). Hillsdale, NJ: Lawrence Erlbaum Associates.

Tomlinson, E. C. (2012). An integrative model of entitlement beliefs. *Employee Responsibilities and Rights Journal, 25*, 67-87. doi:10.1007/s10672-012-9208-4

Tracy, J. L., Cheng, J. T., Robins, R. W., & Trzesniewski, K. H. (2009). Authentic and hubristic pride: The affective core of self-esteem and narcissism. *Self and Identity, 8*, 196–213. doi: 10.1080/15298860802505053

Tritt, S. M., Ryder, A. G., Ring, A. J., & Pincus, A. L. (2010). Pathological narcissism and the depressive temperament. *Journal of Affective Disorders, 122*, 280–284. doi:10.1016/j.jad.2009.09.006

Twenge, J. M., & Campbell, W. K. (2003). "Isn't it fun to get the respect that we're going to deserve?" Narcissism, social rejection, and aggression. *Personality & Social Psychology bulletin, 29*, 261–272. doi:10.1177/0146167202239051

Tyson, P., & Tyson, R. (1984). Narcissism and superego development. *Journal of the American Psychoanalytic Association, 32*, 75–98. doi: 10.1177/000306518403200106

Vater, A., Schröder-Abé, M., Schütz, A., Lammers, C.-H., & Roepke, S. (2010). Discrepancies between explicit and implicit self-esteem are linked to symptom severity in borderline personality disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, *41*, 357–364. doi:10.1016/j.jbtep.2010.03.007

Vazire, S., Naumann, L. P., Rentfrow, P. J., & Gosling, S. D. (2008). Portrait of a narcissist: Manifestations of narcissism in physical appearance. *Journal of Research in Personality*, *42*, 1439–1447. doi:10.1016/j.jrp.2008.06.007

Velicer, W. (1976). Determining the number of components from the matrix of partial correlations. *Psychometrika, 41*, 321-327. Retrieved from http://link.springer.com/article/10.1007/BF02293557

Velicer, W., & Jackson, D. (1990). Component analysis versus common factor analysis: Some further observations. *Multivariate Behavioral Research, 25*, 97–114. Retrieved from http://www.researchgate.net/publication/233323460_Component_Analysis_versus_Common_Factor_Analysis_Some_Further_Observations/file/d912f50b683f70f8cf.pdf

Vernon, P. A., Villani, V. C., Vickers, L. C., & Harris, J. A. (2008). A behavioral genetic investigation of the dark triad and the Big 5. *Personality and Individual Differences, 44*, 445–452. doi:10.1016/j.paid.2007.09.007

Vestre, N. D. (1984). Irrational beliefs and self-reported depressed mood. *Journal of Abnormal Psychology*, *93*, 239–241. doi: 10.1037/0021-843X.93.2.239

Vidal, G. (1981, March 12). Vidal: I'm at the top of a very tiny heap. *The New York Times,* Section C, p. 17, Column 1.

Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls with perceived opportunity for glory. *Journal of Personality and Social Psychology, 82,* 819–834. doi:10.1037//0022-3514.82.5.819

Washburn, J. J., McMahon, S. D., King, C. A., Reinecke, M. A., & Silver, C. (2004). Narcissistic features in young adolescents: Relations to aggression and internalizing symptoms. *Journal of Youth and Adolescence, 33,* 247–260. doi:10.1023/B:JOYO.0000025323.94929.d9

Watson, C., & Bagby, M. (2011). The assessment of narcissistic personality disorder. In W. K. Campbell & J. Miller (Eds.) *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatments* (pp. 119–132). Hoboken, NJ: John Wiley & Sons. doi:10.1002/9781118093108.ch11

Watson, P. J., Grisham, S. O., Trotter, M. V, & Biderman, M. D. (1984). Narcissism and empathy: Validity evidence for the Narcissistic Personality Inventory. *Journal of Personality Assessment, 48,* 301–305. doi:10.1207/s15327752jpa4803_12

Watson, P. J., Hickman, S. E., & Morris, R. J. (1996). Self-reported narcissism and shame: defensive self-esteem and continuum testing hypothesis, *Personality and Individual Differences, 21,* 253-259. doi: 10.1016/0191-8869(96)00063-3

Watson, P. J., Sawrie, S. M., Greene, R. L., & Arredondo, R. (2002). Narcissism and depression: MMPI-2 evidence for the continuum hypothesis in clinical samples. *Journal of Personality Assessment, 79,* 85–109. doi:10.1207/S15327752JPA7901_06

Watson, P. J., Taylor, D., & Morris, R. J. (1987). Narcissism, sex roles, and self-functioning. *Sex Roles, 16,* 335–350. doi: 10.1007/BF00289546

Watson, P. J., Varnell, S. P., & Morris, R. J. (2000). Self-reported narcissism and perfectionism: An ego-psychological perspective and the continuum hypothesis, *Imagination, Cognition and Personality, 19,* 59-69. doi: 10.2190/MD51-7P8N-WEYE-9H3X

Watson, P., Little, T., Sawrie, S. M., & Biderman, M. D. (1992). Measures of the narcissistic personality: Complexity of relationships with self-esteem and empathy. *Journal of Personality Disorders*, *6*, 434–450. doi: 10.1521/pedi.1992.6.4.434

Watson, P., Morris, R., & Miller, L. (1998). Narcissism and the self as continuum: Correlations with assertiveness and hypercompetitiveness. *Imagination, Cognition and Personality, 17,* 249-259. doi: 10.2190/29JH-9GDF-HC4A-02WE

Westen, D. (1999). The Scientific Status of Unconscious Processes: Is Freud Really Dead? *Journal of the American Psychoanalytic Association, 47,* 1061–1106. doi:10.1177/000306519904700404

Widman, L., & McNulty, J. K. (2010). Sexual narcissism and the perpetration of sexual aggression. Archives of Sexual Behavior, *39,* 926–939. doi:10.1007/s10508-008-9461-7

Widiger, T. (2005). Five factor model of personality disorder: Integrating science and practice. *Journal of Research in Personality, 39,* 67-83. doi: 10.1016/j.jrp.2004.09.010

Widiger, T. A., Lynam, D. R., Miller, J. D., & Oltmanns, T. F. (2012). Measures to assess maladaptive variants of the Five-Factor model. *Journal of Personality Assessment*, *94*, 450–455. doi: 10.1080/00223891.2012.677887

Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology, 37,* 395–412. doi:10.1037//0022-3514.37.3.395

Wiggins, J. S., & Pincus, A. L. (1989). Conceptions of personality disorders and dimensions of personality. *Psychological Assessment, 1*, 305–316. doi:10.1037//1040-3590.1.4.305

Wilson, D. S., Near, D., & Miller, R. R. (1996). Machiavellianism: A synthesis of the evolutionary and psychological literatures. *Psychological Bulletin, 119,* 285–299. doi:10.1037/0033-2909.119.2.285

Wink, P. (1991). Two faces of narcissism. *Journal of Personality and Social Psychology*, *61*, 590–597.

Wink, P., & Gough, H. G. (1990). New narcissism scales for the California Psychological Inventory and MMPI. *Journal of Personality Assessment*, *54*, 446–462.

Wood, J., Tataryn, D., & Gorsuch, R. (1996). Effects of under-and overextraction on principal axis factor analysis with varimax rotation. *Psychological Methods*, *1*, 354–365. Retrieved from http://psycnet.apa.org/journals/met/1/4/354/

Wright, A. G. C., Lukowitsky, M. R., Pincus, A. L., & Conroy, D. E. (2010). The higher order factor structure and gender invariance of the Pathological Narcissism Inventory. *Assessment*, *17*, 467–483. doi:10.1177/1073191110373227

Yates, A. (1987). *Multivariate exploratory data analysis: A perspective on exploratory factor analysis*. Albany, NY: State University of New York Press.

You, J., Leung, F., Lai, K. K. Y., & Fu, K. (2012). Factor structure and psychometric properties of the Pathological Narcissism Inventory among Chinese university students. *Journal of Personality Assessment*, *95*, 309-318. doi:10.1080/00223891.2012.718303

Zeigler-Hill, V. (2006). Discrepancies between implicit and explicit self-esteem: Implications for narcissism and self-esteem instability. *Journal of Personality*, *74*, 119–144. doi: 10.1111/j.1467-6494.2005.00371.x

Zeigler-Hill, V., & Besser, A. (2011). Humor style mediates the association between pathological narcissism and self-esteem. *Personality and Individual Differences, 50*, 1196-1201. doi: 10.1016/j.paid.2011.02.006

Zeigler-Hill, V., & Jordan, C. H. (2012). Behind the mask: Narcissism and implicit self-esteem. In W. K. Campbell & J. Miller (Eds.) *The handbook of narcissism and Narcissistic Personality Disorder: Theoretical approaches, empirical findings, and treatments* (pp. 101–115). John Wiley & Sons, Inc. doi:10.1002/9781118093108.ch9

Zeigler-Hill, V., Clark, C. B., & Pickard, J. D. (2008). Narcissistic subtypes and contingent self-esteem: Do all narcissists base their self-ssteem on the same domains? *Journal of Personality, 76*, 753-774. doi:10.1111/j.1467-6494.2008.00503.x

Zeigler-Hill, V., & Besser, A. (2012). A glimpse behind the mask: Facets of narcissism and feelings of self-worth. *Journal of Personality Assessment, 95*, 249-260. doi:10.1080/00223891.2012.717150

Zeigler-Hill, V., Enjaian, B., & Essa, L. (2013). The role of narcissistic personality features in sexual aggression. *Journal of Social and Clinical Psychology, 32*, 186–199. doi:10.1521/jscp.2013.32.2.186

Zwick, W. R., & Velicer, W. (1982). Factors influencing four rules for determining the number of components to retain. *Multivariate Behavioral Research, 17*, 253–269. Retrieved from http://www.tandfonline.com/doi/abs/10.1207/s15327906mbr1702_5

Zwick, W. R., & Velicer, W. F. (1986). Comparison of five rules for determining the number of components to retain. *Psychological Bulletin, 99*, 432-442.

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Appendices

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Appendix A. The Vulnerable Narcissism Item Pool (from Ansell, 2005)

NB. * denotes item in PNI (Pincus et al., 2009)

1*. I often fantasize about being recognized for my accomplishments.

2. I am afraid that the people that I admire will see right through me.

3. Sometimes I feel ashamed of my needs.

4*. My self-esteem fluctuates a lot.

5. One of my biggest fears is not having an impact on others.

6*. If I ruled the world it would be a better place.

7*. I sometimes need important others in my life to reassure me of my self-worth.

8. Sometimes I try to appear important when inside I feel really insignificant.

9*. Sacrificing for others makes me the better person.

10*. Sometimes I avoid people because I'm afraid they won't do what I want them to do.

11*. When people don't notice me, I start to feel bad about myself.

12. Sometimes I try to act strong when inside I really feel vulnerable.

13*. I can usually talk my way out of anything.

14*. When others don't notice me, I start to feel worthless.

15*. It's hard for me to feel good about myself when I'm alone.

16. I think I'm better than most people, but I'm not able to show it well.

17. I notice that I feel a sense of elation when I impress people whom I admire.

18. I am very aware of how others perceive me.

19. I have difficulty making genuine connections with people.

20*. I find it easy to manipulate people.

21*. I can get pretty angry when others disagree with me.

22. I am often disappointed when people don't notice all that I do for them.

23. Sometimes I try to get others to have sex with me in order to feel good about myself.

24*. I am disappointed when people don't notice me.

25*. Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.

26. I often fantasize about people recognizing all that I do for them.

27*. I insist upon getting the respect that is due to me.

28. Sometimes I feel I am better than most people and other times I feel I'm no good.

29*. When others don't meet my expectations, I often feel ashamed about what I wanted.

30*. I often find myself envying others' accomplishments.

31*. I need others to acknowledge me.

32*. Sometimes I avoid people because I'm concerned that they'll disappoint me.

33*. I feel important when others rely on me.

34*. I can read people like a book.

35. I often fantasize about having revenge against people who have wronged me.

36*. I sometimes feel ashamed about my expectations of others when they disappoint me.

37. It upsets me when people don't notice how good a person I am.

38. I wish others could know what I want and feel without me having to tell them.

39. I secretly think I'm smarter than most of the bosses I've had.

40*. I often fantasize about performing heroic deeds.

41*. I want to amount to something in the eyes of the world.

42*. It's hard for me to feel good about myself unless I know other people like me.

43*. Sometimes it's easier to be alone than to face not getting everything I want from other people.

44. I often feel that other people are talking about me.

45. My willingness to tolerate hardship separates me from other people.

46. I often fantasize about others being jealous of me.

47. Being connected to someone I admire makes me feel better about myself.

48*. When others disagree with me, I start to feel worthless.

49*. When I do things for other people, I expect them to do things for me.

50. If my accomplishments are not big, it is as if I did not do anything at all.

51. I try very hard to show others that I'm interested in them, but deep down I know I'm not really that interested.

52. Since I don't usually get what I want in relationships, I usually just avoid people.

53. It's more important to be respected than to be liked.

54. I don't think others recognize my gifts and special attributes.

55*. I often fantasize about having a huge impact on the world around me.

56*. I often hide my needs for fear that others will see me as needy and dependent.

57*. Everybody likes to hear my stories.

58*. I get angry when criticized.

59. I sometimes blame others even when I feel like it's really my fault on the inside.

60. I am envious of people who are more successful than me.

61. People have told me I am sensitive, fragile, or easily hurt emotionally.

62. I often fantasize about being feared by others.

63. I often become bored with topics that have nothing to do with me.

64. When I help someone out, I secretly feel like I'm "better than them."

65. I often become very depressed when others notice my inefficiencies.

66*. I hate asking for help.

67. I expect a great deal from other people.

68. I wish that people would recognize my suffering.

69. I sometimes use drugs or alcohol to stop feeling empty or bad about myself.

70. I would rather receive "negative attention" than none at all.

71*. I often fantasize about being rewarded for my efforts.

72. Sometimes I try to get reactions out of people just to be sure they notice me.

73. I think it's important for me to show interest in others, but underneath I don't feel connected to them.

74*. When others get a glimpse of my needs, I feel anxious and ashamed.

75*. I will never be satisfied until I get all that I deserve.

76. I spend a lot of time fantasizing about being able to control people.

77. When someone important thinks negatively of me, it is even worse than feeling negative about myself.

78. If I can't get everything I want from a relationship, I typically look for a new one.

79*. I am preoccupied with thoughts and concerns that most people are not interested in me.

80. Sometimes I fear that if I am not great, I am no good at all.

81. It's hard for me to accept others' compliments even though inside I agree with them.

82*. When others disappoint me, I often get angry at myself.

83. I always try to appear interested in what others are saying, even though I often don't care.

84*. I have a strong will to power.

85. I am always trying to determine how others feel about me.

86*. I like to have friends who rely on me because it makes me feel important.

87. I wish I were better able to socialize with those I admire.

88. I often feel ashamed when I compete with other people.

89*. I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.

90. I do admirable things that go unnoticed by others.

91. When I get down, I feel more empty than sad.

92*. When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself.

93*. I can make anyone believe anything I want them to.

94*. I often fantasize about being admired and respected.

95*. I typically get very angry when I'm unable to get what I want from others.

96*. It's hard to feel good about myself unless I know other people admire me.

97. I rarely feel motivated to do things unless I know it will make an impression on people.

98*. I often fantasize about accomplishing things that are probably beyond my means.

99. If I am disappointed with myself, I put everything and everybody on hold until I can feel better.

100. Only when I'm gone will people truly appreciate me.

101*. I get annoyed by people who are not interested in what I say or do.

102. It's hard to show others the weaknesses I feel inside.

103*. I can make myself feel good by caring for others.

104. I am sometimes impressed by the impact that my presence has on my surroundings.

105. I deserve more respect than most people, but seem to have difficulty getting it.

Appendix B. Narcissistic Personality Inventory (Raskin & Terry, 1988)

Please indicate how much each of the following statements describes you. You will indicate this by selecting one of the following options: (i.e., strongly agree, moderately agree, slightly agree, slightly disagree, moderately disagree, strongly disagree).

1. I have a natural talent for influencing people.
2. Modesty doesn't become me.
3. I would do almost anything on a dare
4. I know that I am good because everybody keeps telling me so.
5. If I ruled the world it would be a better place.
6. I can usually talk my way out of anything.
7. I like to be the center of attention.
8. I will be a success.
9. I think I am a special person.
10. I see myself as a good leader.
11. I am assertive.
12. I like to have authority over other people.
13. I find it easy to manipulate people.
14. I insist upon getting the respect that is due me.
15. I like to show off my body.
16. I can read people like a book.
17. I like to take responsibility for making decisions.
18. I want to amount to something in the eyes of the world.
19. I like to look at my body.
20. I will usually show off if I get the chance.
21. I always know what I am doing.
22. I rarely depend on anyone else to get things done.
23. Everybody likes to hear my stories.
24. I expect a great deal from other people.
25. I will never be satisfied until I get all that I deserve.
26. I like to be complimented.
27. I have a strong will to power.
28. I like to start new fads and fashions.
29. I like to look at myself in the mirror.
30. I really like to be the center of attention.
31. I can live my life in any way I want to.
32. People always seem to recognize my authority.
33. I would prefer to be a leader.
34. I am going to be a great person.
35. I can make anybody believe anything I want them to.
36. I am a born leader.
37. I wish somebody would someday write my biography.
38. I get upset when people don't notice how I look when I go out in public.
39. I am more capable than other people.
40. I am an extraordinary person.

Appendix C. Descriptive Statistics for NPI Items

Item	*M*	*SD*	Skewness (*SE* = .10)	Kurtosis (*SE* = .19)
#1	3.60	1.27	-0.17	-0.64
#2	2.67	1.16	0.40	-0.11
#3	2.34	1.42	0.90	-0.12
#4	3.01	1.25	0.00	-0.72
#5	2.94	1.49	0.30	-0.88
#6	3.46	1.34	<.01	-0.70
#7	2.86	1.42	0.40	-0.75
#8	4.52	1.10	-0.61	0.33
#9	3.88	1.30	-0.35	-0.34
#10	3.92	1.31	-0.44	-0.42
#11	3.81	1.21	-0.17	-0.37
#12	3.30	1.30	-0.06	-0.67
#13	3.00	1.39	0.22	-0.88
#14	3.45	1.31	0.09	-0.69
#15	2.47	1.37	0.64	-0.50
#16	3.78	1.38	-0.25	-0.78
#17	4.20	1.27	-0.59	-0.17
#18	4.60	1.25	-0.91	0.48
#19	2.91	1.47	0.27	-0.91
#20	2.86	1.37	0.29	-0.69
#21	3.25	1.31	0.13	-0.61
#22	3.86	1.33	-0.12	-0.86
#23	3.36	1.13	-0.07	-0.35
#24	3.54	1.33	-0.04	-0.67
#25	3.13	1.44	0.25	-0.85
#26	4.70	1.15	-0.99	1.01
#27	3.49	1.30	-0.03	-0.60
#28	2.74	1.37	0.40	-0.69
#29	3.40	1.48	-0.03	-0.88
#30	2.52	1.43	0.64	-0.58
#31	4.17	1.35	-0.45	-0.52
#32	3.14	1.24	0.11	-0.72
#33	3.83	1.38	-0.34	-0.62
#34	4.32	1.14	-0.55	0.26
#35	2.92	1.25	0.26	-0.58
#36	3.17	1.36	0.16	-0.76
#37	2.70	1.59	0.58	-0.80
#38	2.55	1.30	0.58	-0.41
#39	3.53	1.14	-0.19	-0.30
#40	3.47	1.26	-0.08	-0.39

N = 650

Appendix D. Pearsons Inter-correlations Among NPI Items

item	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30	#31	#32	#33	#34	#35	#36	#37	#38	#39	#40
#1	-	.08	.23	.25	.23	.46	.26	.31	.25	.49	.45	.37	.49	.26	.23	.36	.25	.13	.19	.24	.27	.09	.38	.13	.18	.10	.34	.26	.13	.28	.10	.57	.44	.24	.50	.50	.20	.13	.35	.25
#2		-	.19	.17	.14	.12	.28	.03	.12	.10	.06	.22	.18	.21	.15	.04	-.02	.04	.12	.30	.02	-.02	.08	.16	.24	.08	.16	.15	.18	.28	.00	.12	.09	.06	.16	.15	.15	.32	.13	.12
#3			-	.14	.15	.26	.26	.07	.11	.11	.13	.18	.20	.17	.21	.07	.08	.07	.17	.29	.08	.03	.21	.12	.22	.03	.22	.32	.16	.32	.06	.14	.16	.04	.26	.18	.18	.20	.12	.11
#4				-	.22	.15	.29	.30	.40	.20	.17	.24	.22	.19	.28	.17	.11	.16	.30	.29	.30	.04	.31	.12	.19	.25	.22	.20	.29	.27	.21	.30	.19	.38	.28	.20	.27	.18	.32	.44
#5					-	.18	.25	.16	.30	.26	.14	.25	.29	.25	.28	.19	.18	.18	.19	.23	.17	.12	.22	.23	.24	.13	.27	.18	.17	.23	.11	.20	.20	.23	.31	.30	.33	.15	.33	.30
#6						-	.27	.14	.17	.23	.26	.28	.56	.21	.18	.36	.15	.12	.08	.22	.14	.12	.31	.24	.22	.15	.25	.27	.11	.30	.07	.33	.24	.13	.51	.30	.21	.15	.25	.13
#7							-	.04	.23	.20	.15	.41	.33	.33	.36	.14	.02	.08	.25	.55	.06	-.03	.30	.24	.32	.30	.26	.33	.31	.78	.08	.24	.27	.09	.30	.21	.30	.43	.23	.21
#8								-	.46	.40	.32	.15	.10	.14	.23	.07	.30	.12	.28	.11	.31	.13	.23	.11	.09	.14	.29	.16	.30	.12	.40	.26	.32	.66	.20	.32	.15	-.04	.36	.52
#9									-	.31	.25	.22	.18	.25	.38	.10	.12	.17	.38	.31	.23	.04	.33	.20	.19	.30	.26	.27	.41	.24	.31	.23	.20	.56	.24	.25	.26	.12	.36	.69
#10										-	.46	.38	.24	.18	.23	.22	.37	.21	.18	.16	.18	.11	.29	.16	.10	.14	.35	.17	.20	.23	.07	.53	.70	.31	.23	.68	.18	.07	.35	.31
#11											-	.35	.28	.18	.20	.19	.35	.10	.15	.12	.22	.19	.23	.16	.14	.07	.27	.17	.12	.13	.19	.46	.40	.22	.24	.46	.07	.01	.31	.22
#12												-	.44	.34	.28	.14	.20	.17	.20	.41	.11	.08	.21	.26	.34	.22	.39	.24	.23	.39	.00	.42	.39	.12	.34	.37	.28	.27	.38	.21
#13													-	.26	.27	.39	.18	.17	.15	.33	.15	.17	.26	.23	.29	.16	.32	.23	.14	.34	.06	.35	.25	.08	.60	.27	.24	.22	.35	.18
#14														-	.17	.17	.16	.13	.14	.30	.16	.06	.18	.31	.45	.21	.32	.22	.23	.31	.05	.22	.21	.20	.26	.22	.28	.30	.23	.22
#15															-	.10	.10	.14	.66	.38	.14	-.05	.28	.13	.20	.24	.26	.28	.52	.39	.23	.18	.15	.25	.24	.23	.23	.26	.22	.34
#16																-	.19	.17	.05	.10	.16	.24	.23	.16	.10	.04	.19	.14	.00	.12	.06	.29	.22	.13	.42	.25	.11	.09	.26	.10
#17																	-	-.03	.06	.02	.24	.34	.16	.10	.11	-.01	.23	.10	.08	.07	.16	.31	.36	.23	.12	.31	.04	-.02	.24	.19
#18																		-	.08	.16	-.04	.04	.15	.18	.20	.28	.22	.12	.12	.07	.02	.05	.22	.16	.17	.14	.26	.15	.18	.08
#19																			-	.30	.17	-.03	.23	.10	.16	.22	.16	.20	.70	.30	.20	.14	.14	.27	.17	.15	.21	.20	.23	.38
#20																				-	.13	-.02	.27	.24	.35	.32	.23	.28	.33	.52	.08	.22	.17	.13	.29	.17	.32	.34	.31	.25
#21																					-	.23	.20	.10	.21	-.02	.19	.10	.14	.09	.17	.29	.14	.27	.26	.17	.09	.01	.32	.26
#22																						-	.09	.09	.10	-.09	.08	.06	-.04	-.03	.10	.10	.09	.10	.14	.09	.03	-.02	.25	.04
#23																							-	.18	.17	.17	.26	.29	.21	.29	.15	.33	.29	.30	.35	.33	.24	.13	.31	.31
#24																								-	.39	.18	.21	.20	.19	.24	.00	.15	.18	.14	.25	.16	.19	.19	.30	.19
#25																									-	.19	.30	.30	.23	.35	-.05	.16	.16	.15	.32	.11	.30	.37	.29	.17
#26																										-	.18	.13	.27	.24	.14	.05	.09	.17	.10	.06	.21	.22	.14	.15
#27																											-	.22	.19	.28	.12	.31	.38	.23	.29	.31	.27	.15	.28	.29
#28																												-	.26	.35	.09	.19	.23	.14	.24	.21	.34	.33	.18	.22
#29																													-	.36	.21	.11	.15	.31	.15	.13	.27	.26	.23	.35
#30																														-	.06	.24	.30	.15	.27	.23	.30	.46	.21	.22
#31																															-	.05	.02	.37	.08	.09	.04	.00	.18	.32
#32																																-	.47	.21	.39	.53	.14	.10	.36	.24
#33																																	-	.24	.23	.64	.18	.13	.30	.24
#34																																		-	.16	.30	.18	.04	.32	.60
#35																																			-	.29	.24	.17	.40	.25
#36																																				-	.16	.10	.36	.28
#37																																					-	.27	.25	.24
#38																																						-	.10	.02
#39																																							-	.39
#40																																								-

N = 650; correlations *r* = > ±.08 are significant at *p* < .05

Appendix E. Descriptive Statistics for Extracted NPI Factors

Factor	*M*	*SD*	Skewness (*SE* = .10)	Kurtosis (*SE* = .19)
EXP	3.35	.93	0.12	-0.26
SUP	3.84	.85	-0.34	0.15
AUTH	3.57	1.03	-0.09	-0.36
AS	2.65	1.08	0.52	-0.16
VAN	2.93	1.25	0.27	-0.59
ENT	3.32	.73	0.12	0.12
SS	3.77	.93	-0.02	-0.33

N = 650

EXP = Exploitativenness; SUP = Superiority; AUTH = Authority; AS = Attention Seeking; VAN = Vanity; ENT = Entitlement; SS = Self Sufficiency.

Appendix F. Pathological Narcissism Inventory (Pincus et al., 2009)

Please indicate how much each of the following statements describes you. You will indicate this by selecting one of the following options: (i.e., strongly agree, moderately agree, slightly agree, slightly disagree, moderately disagree, strongly disagree).

1. I often fantasize about being admired and respected.
2. My self-esteem fluctuates a lot.
3. I sometimes feel ashamed about my expectations of others when they disappoint me.
4. I can usually talk my way out of anything.
5. It's hard to feel good about myself when I'm alone.
6. I can make myself feel good by caring for others.
7. I hate asking for help.
8. When people don't notice me, I start to feel bad about myself.
9. I often hide my needs for fear that others will see me as needy and dependent.
10. I can make anyone believe anything I want them to.
11. I get mad when people don't notice all that I do for them.
12. I get annoyed by people who are not interested in what I say or do.
13. I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.
14. I often fantasize about having a huge impact on the world around me.
15. I find it easy to manipulate people.
16. When others don't notice me, I start to feel worthless.
17. Sometimes I avoid people because I'm concerned that they'll disappoint me.
18. I typically get very angry when I'm unable to get what I want from others.
19. I sometimes need important others in my life to reassure me of my self-worth.
20. When I do things for other people, I expect them to do things for me.
21. When others don't meet my expectations, I often feel ashamed about what I wanted.
22. I feel important when others rely on me.
23. I can read people like a book.
24. When others disappoint me, I often get angry at myself.
25. Sacrificing for others makes me the better person.
26. I often fantasize about accomplishing things that are probably beyond my means.
27. Sometimes I avoid people because I'm afraid they won't do what I want them to.
28. It's hard to show others the weaknesses I feel inside.
29. I get angry when criticized.
30. It's hard to feel good about myself unless I know other people admire me.
31. I often fantasize about being rewarded for my efforts.
32. I am preoccupied with thoughts and concerns that most people are not interested in me.
33. I like to have friends who rely on me because it makes me feel important.
34. Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.
35. Everybody likes to hear my stories.
36. It's hard for me to feel good about myself unless I know other people like me.
37. It irritates me when people don't notice how good a person I am.
38. I will never be satisfied until I get all that I deserve.
39. I try to show what a good person I am through my sacrifices.
40. I am disappointed when people don't notice me.
41. I often find myself envying others' accomplishments.
42. I often fantasize about performing heroic deeds.
43. I help others in order to prove I'm a good person.
44. It's important to show people I can do it on my own, even if I have some doubts inside.
45. I often fantasize about being recognized for my accomplishments.
46. I can't stand relying on other people because it makes me feel weak.
47. When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself.
48. I need others to acknowledge me.
49. I want to amount to something in the eyes of the world.
50. When others get a glimpse of my needs, I feel anxious and ashamed.
51. Sometimes it's easier to be alone than to face not getting everything I want from other people.
52. I can get pretty angry when others disagree with me.

Appendix G. Descriptive Statistics for PNI Items

Item	*M*	*SD*	Skewness (*SE* = .10)	Kurtosis (*SE* = .20)
#1	3.97	1.40	-0.47	-0.53
#2	4.19	1.48	-0.49	-0.73
#3	3.22	1.39	0.18	-0.83
#4	3.38	1.35	0.02	-0.75
#5	3.13	1.52	0.23	-1.00
#6	4.62	1.15	-0.89	0.75
#7	3.69	1.51	-0.09	-1.00
#8	3.21	1.39	0.09	-0.79
#9	3.79	1.46	-0.25	-0.89
#10	2.83	1.26	0.33	-0.63
#11	3.51	1.46	-0.02	-0.87
#12	3.36	1.36	-0.06	-0.72
#13	4.45	1.42	-0.72	-0.45
#14	4.16	1.42	-0.48	-0.62
#15	2.95	1.43	0.26	-0.94
#16	3.15	1.41	0.18	-0.77
#17	2.71	1.36	0.52	-0.55
#18	2.74	1.34	0.52	-0.43
#19	4.07	1.35	-0.52	-0.38
#20	3.31	1.40	0.06	-0.85
#21	2.90	1.35	0.45	-0.52
#22	4.46	1.13	-0.66	0.40
#23	3.74	1.40	-0.28	-0.85
#24	2.96	1.39	0.37	-0.68
#25	3.83	1.25	-0.38	-0.25
#26	4.35	1.37	-0.63	-0.36
#27	2.52	1.31	0.57	-0.52
#28	4.08	1.43	-0.40	-0.74
#29	3.45	1.35	-0.08	-0.71
#30	3.27	1.42	0.03	-0.90
#31	3.95	1.38	-0.37	-0.68
#32	3.28	1.53	0.10	-1.10
#33	3.86	1.37	-0.37	-0.49
#34	2.60	1.31	0.55	-0.52
#35	3.30	1.18	0.01	-0.47
#36	3.50	1.49	-0.09	-1.00
#37	3.14	1.38	0.14	-0.76
#38	3.05	1.47	0.29	-0.91
#39	3.40	1.32	-0.05	-0.79
#40	3.32	1.36	0.02	-0.83
#41	3.99	1.41	-0.39	-0.63
#42	3.60	1.58	-0.10	-1.08
#43	3.48	1.40	-0.16	-0.80
#44	4.36	1.23	-0.64	-0.01
#45	4.04	1.40	-0.41	-0.60
#46	3.35	1.52	0.15	-0.96
#47	3.21	1.38	0.13	-0.79
#48	3.56	1.35	-0.16	-0.73
#49	4.60	1.27	-0.88	0.34
#50	3.24	1.41	0.12	-0.88
#51	3.19	1.53	0.16	-1.03
#52	2.80	1.32	0.28	-0.89

N = 573

Appendix H. Pearsons Inter-correlations Among PNI Items

Item	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30	#31	#32	#33	#34	#35	#36	#37	#38	#39	#40	#41	#42	#43	#44	#45	#46	#47	#48	#49	#50	#51	#52
#1	-	.30	.27	.14	.22	.13	.07	.36	.24	.12	.34	.33	.11	.46	.15	.42	.18	.32	.30	.34	.27	.34	.03	.22	.19	.42	.25	.20	.32	.45	.56	.36	.40	.26	.13	.39	.38	.33	.32	.42	.42	.48	.35	.28	.65	.16	.33	.41	.33	.22	.24	.25
#2		-	.28	.00	.50	.09	.24	.41	.43	.00	.30	.16	.12	.22	.04	.47	.23	.28	.35	.19	.29	.23	.10	.26	.15	.29	.23	.45	.28	.41	.28	.49	.28	.26	-.06	.42	.25	.18	.24	.38	.41	.25	.23	.24	.28	.21	.42	.32	.24	.35	.26	.22
#3			-	.11	.27	.10	.17	.29	.34	.07	.32	.32	.12	.16	.13	.37	.31	.40	.24	.24	.60	.18	.08	.44	.12	.17	.38	.24	.29	.32	.17	.32	.25	.31	.02	.31	.27	.20	.18	.30	.24	.14	.14	.17	.15	.27	.39	.27	.06	.34	.26	.25
#4				-	.03	.01	.06	.07	.02	.53	.11	.17	.04	.18	.58	.07	.08	.24	-.02	.19	.12	.10	.40	.08	.10	.08	.10	.03	.16	.04	.13	.07	.10	.04	.29	.01	.16	.27	.12	.07	.03	.17	.16	.09	.16	.12	.08	.10	.14	.06	.03	.22
#5					-	.08	.27	.45	.40	.05	.25	.18	.10	.14	.01	.52	.24	.25	.41	.17	.24	.25	.11	.30	.12	.14	.22	.33	.22	.45	.18	.48	.32	.27	-.05	.48	.24	.17	.22	.37	.33	.15	.22	.17	.19	.23	.43	.32	.19	.36	.20	.21
#6						-	.02	.10	.11	-.06	.15	.01	.03	.15	-.07	.13	.05	-.06	.16	.01	.14	.32	.02	.10	.36	.12	.03	.08	.04	.08	.05	.04	.25	.04	.07	.08	.12	.00	.33	.06	.10	.15	.30	.12	.08	-.02	.11	.10	.17	.05	.04	.06
#7							-	.16	.37	.12	.11	.17	.18	.06	.13	.22	.20	.13	.05	.07	.15	.07	.21	.13	.13	.12	.11	.24	.13	.13	.07	.24	.12	.11	-.05	.15	.16	.07	.13	.11	.16	.04	.15	.25	.02	.48	.15	.04	.11	.32	.20	.17
#8								-	.38	.06	.42	.41	.08	.17	.08	.69	.32	.42	.43	.32	.36	.28	.06	.28	.10	.23	.35	.30	.32	.55	.30	.57	.34	.41	.01	.53	.46	.25	.25	.63	.43	.21	.29	.16	.31	.20	.54	.50	.15	.36	.28	.27
#9									-	.02	.26	.21	.21	.12	.08	.40	.31	.19	.29	.15	.39	.20	.14	.26	.05	.19	.28	.47	.24	.34	.15	.43	.30	.30	-.10	.34	.22	.12	.16	.29	.29	.12	.24	.25	.13	.42	.36	.28	.17	.55	.33	.19
#10										-	.13	.18	.06	.18	.65	.04	.10	.25	-.04	.17	.09	.08	.46	.05	.11	.08	.08	.00	.14	.04	.18	.07	.10	.13	.37	.02	.18	.35	.13	.09	.05	.17	.08	.04	.12	.23	.09	.13	.19	.05	.04	.22
#11											-	.45	.11	.21	.15	.42	.36	.47	.33	.47	.31	.26	.11	.27	.25	.20	.33	.18	.43	.35	.31	.32	.31	.41	.15	.34	.56	.28	.34	.40	.31	.23	.31	.25	.32	.20	.42	.40	.17	.22	.25	.40
#12												-	.12	.21	.18	.37	.25	.41	.20	.39	.28	.22	.07	.18	.09	.18	.33	.09	.38	.32	.32	.29	.25	.31	.17	.31	.42	.29	.23	.40	.26	.17	.17	.19	.29	.22	.28	.35	.14	.19	.20	.38
#13													-	.06	.02	.07	.13	.10	.08	.06	.09	.06	.16	.06	.08	.11	.10	.30	.18	.11	.13	.13	.10	.13	.04	.08	.09	.13	.06	.04	.16	.01	.07	.17	.09	.16	.10	.01	.12	.11	.10	.10
#14														-	.14	.26	.19	.23	.22	.18	.18	.25	.12	.17	.17	.44	.17	.13	.15	.20	.42	.22	.24	.21	.18	.16	.22	.24	.30	.23	.25	.57	.19	.28	.50	.21	.19	.21	.50	.17	.16	.15
#15															-	.09	.07	.26	.01	.21	.10	.07	.39	.05	.08	.10	.12	.05	.18	.07	.19	.09	.10	.11	.27	.04	.18	.32	.09	.14	.10	.20	.10	.07	.16	.24	.10	.16	.17	.15	.06	.22
#16																-	.33	.44	.46	.33	.39	.33	.07	.35	.17	.27	.37	.34	.34	.58	.30	.57	.40	.42	-.02	.59	.45	.27	.31	.63	.46	.27	.30	.20	.36	.22	.57	.51	.20	.42	.27	.28
#17																	-	.41	.24	.26	.30	.18	.09	.27	.12	.16	.51	.26	.20	.25	.21	.36	.26	.62	.03	.19	.36	.23	.28	.28	.19	.19	.18	.22	.23	.30	.31	.28	.07	.29	.43	.27
#18																		-	.28	.43	.39	.17	.09	.33	.11	.18	.48	.14	.46	.33	.30	.34	.26	.43	.15	.32	.47	.47	.24	.39	.37	.21	.22	.15	.29	.29	.44	.36	.12	.28	.30	.45
#19																			-	.26	.28	.34	.01	.27	.17	.22	.26	.30	.21	.47	.26	.40	.36	.29	.01	.47	.29	.18	.26	.39	.36	.20	.30	.27	.31	.14	.42	.47	.25	.31	.27	.17
#20																				-	.24	.22	.08	.15	.17	.16	.33	.10	.31	.31	.36	.27	.29	.33	.14	.30	.48	.33	.28	.39	.28	.21	.31	.15	.34	.16	.30	.36	.10	.15	.18	.28
#21																					-	.17	.03	.51	.14	.19	.42	.20	.29	.34	.20	.32	.30	.35	.03	.30	.28	.17	.30	.36	.33	.20	.26	.19	.19	.31	.46	.31	.08	.42	.30	.32
#22																						-	.09	.16	.30	.21	.15	.12	.21	.36	.32	.30	.63	.22	.07	.38	.26	.19	.35	.29	.29	.35	.39	.22	.34	.09	.29	.39	.27	.21	.15	.16
#23																							-	.04	.13	.07	-.02	.11	.05	.03	.01	.14	.08	.06	.24	.03	.14	.12	.08	.00	.00	.03	.09	.12	.01	.22	.01	.06	.17	.11	.04	.09
#24																								-	.10	.19	.38	.22	.26	.32	.15	.30	.23	.27	.02	.27	.23	.15	.24	.29	.26	.18	.20	.13	.19	.27	.42	.25	.11	.35	.32	.26
#25																									-	.21	.13	.14	.17	.20	.20	.17	.28	.15	.08	.19	.27	.15	.51	.17	.15	.26	.40	.19	.22	.09	.21	.17	.13	.04	.10	.21
#26																										-	.16	.27	.20	.28	.47	.29	.23	.18	.03	.27	.20	.26	.26	.27	.34	.42	.21	.27	.43	.19	.29	.20	.29	.18	.21	.14
#27																											-	.23	.26	.31	.20	.35	.23	.55	.00	.28	.34	.29	.27	.33	.26	.20	.18	.09	.22	.30	.43	.31	.01	.35	.50	.37
#28																												-	.17	.28	.20	.33	.19	.25	-.12	.28	.14	.13	.18	.26	.27	.14	.18	.25	.18	.27	.32	.20	.17	.40	.28	.12
#29																													-	.30	.30	.29	.26	.24	.02	.25	.42	.35	.24	.33	.35	.23	.22	.22	.26	.19	.35	.30	.20	.23	.24	.55
#30																														-	.39	.54	.44	.33	.06	.71	.40	.28	.32	.51	.47	.29	.36	.20	.37	.17	.51	.56	.19	.37	.22	.19
#31																															-	.28	.34	.31	.16	.29	.35	.39	.31	.38	.41	.47	.30	.26	.70	.15	.32	.36	.36	.20	.24	.24
#32																																-	.43	.44	-.07	.57	.40	.27	.30	.54	.41	.28	.34	.21	.29	.28	.51	.45	.17	.43	.41	.27
#33																																	-	.34	.06	.45	.35	.22	.39	.40	.36	.33	.42	.26	.40	.17	.40	.43	.23	.31	.27	.25
#34																																		-	.04	.34	.43	.33	.33	.42	.26	.22	.24	.17	.29	.30	.44	.37	.11	.27	.42	.31
#35																																			-	.01	.17	.19	.13	.08	-.06	.16	.09	.06	.15	.03	-.01	.11	.13	-.08	-.11	.11
#36																																				-	.38	.23	.27	.50	.45	.26	.34	.22	.34	.16	.54	.53	.18	.37	.21	.24
#37																																					-	.36	.41	.53	.29	.27	.32	.24	.37	.24	.40	.47	.14	.24	.28	.42
#38																																						-	.24	.29	.29	.22	.22	.24	.36	.24	.31	.30	.21	.17	.24	.29
#39																																							-	.31	.30	.35	.47	.26	.27	.21	.34	.29	.17	.22	.26	.29
#40																																								-	.43	.32	.33	.19	.41	.19	.54	.55	.15	.30	.27	.32
#41																																									-	.29	.35	.28	.43	.22	.47	.42	.28	.37	.24	.24
#42																																										-	.27	.19	.55	.14	.25	.27	.38	.19	.22	.24
#43																																											-	.25	.34	.21	.33	.37	.24	.21	.17	.25
#44																																												-	.30	.33	.21	.20	.35	.24	.18	.16
#45																																													-	.15	.31	.40	.38	.22	.24	.26
#46																																														-	.30	.15	.19	.39	.31	.27
#47																																															-	.48	.22	.45	.35	.35
#48																																																-	.19	.34	.26	.28
#49																																																	-	.18	.12	.13
#50																																																		-	.38	.28
#51																																																			-	.30
#52																																																				-

N = 573; correlations *r* = > ±.08 are significant at *p* < .05

Appendix I. Descriptive Statistics for Extracted PNI Factors

Factor	*M*	*SD*	Skewness (*SE* = .10)	Kurtosis (*SE* = .20)
CSE	3.52	1.01	-0.16	-0.52
EXP	3.24	0.97	0.16	-0.43
SH	3.02	1.13	0.33	-0.39
GF	4.09	1.04	-0.37	-0.24
HS	3.85	0.91	-0.20	-0.26
SSSE	3.96	0.89	-0.33	-0.03
ER	3.17	0.96	0.08	-0.29
SA	2.75	1.09	0.23	-0.59

N = 573

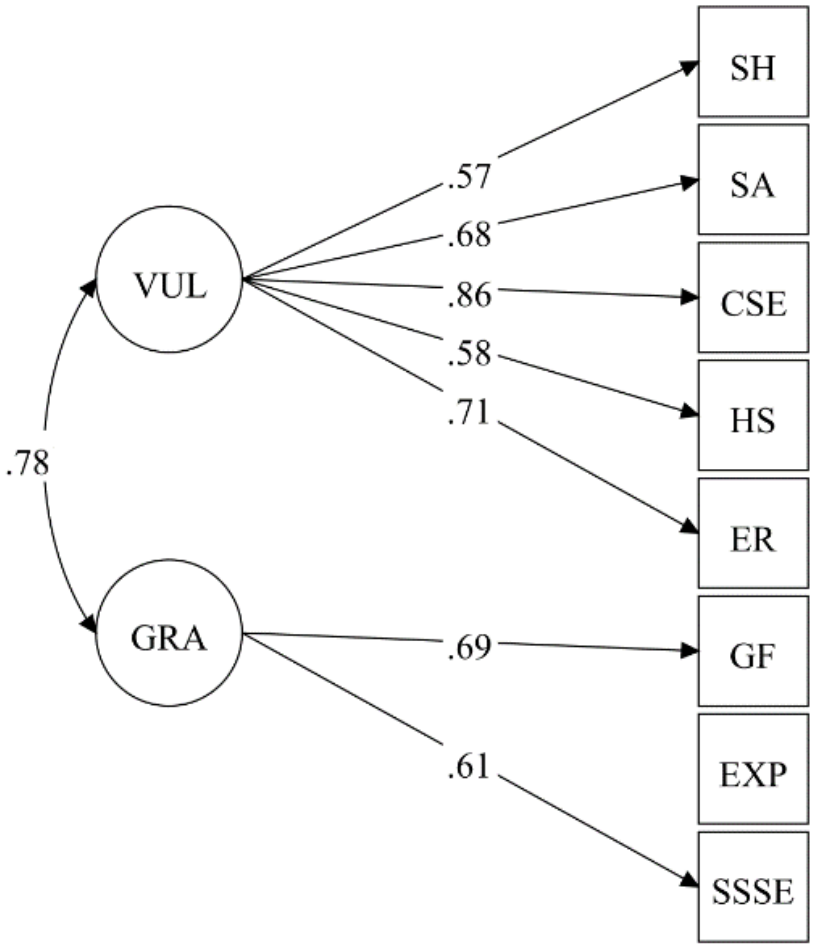
CSE = Contingent Self-Esteem; EXP = Exploitativeness; SH = Shame; GF = Grandiose Fantasy; HS = Hiding the Self; SSSE = Self-Sacrificing Self-Enhancement; ER = Entitlement Rage; SA = Social Avoidance.

Appendix J. Intercorrelations Among NPI and PNI Subscales

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Exploitativeness	-	.07	.07	.03	.18**	.07	.09	.23**	.17**	.44**	.35**	.10	.42**
2. Shame		-	.42**	.48**	.40**	.20**	.28**	.39**	-.19**	-.11	.15**	-.04	.22**
3. Social Avoidance			-	.55**	.46**	.32**	.27**	.54**	-.15**	-.03	.28**	-.02	.45**
4. Contingent Self-Esteem				-	.49**	.52**	.44**	.61**	-.26**	-.17**	.32**	-.03	.45**
5. Hiding the Self					-	.26**	.24**	.34**	-.27**	-.09	.10	-.10	.29**
6. Grandiose Fantasy						-	.41**	.40**	.08	.13*	.35**	.12*	.52**
7. Self-Sacrificing Self-Enhancement							-	.35**	.05	-.01	.10	.02	.29**
8. Entitlement Rage								-	.01	.09	.45**	.13*	.63**
9. Superiority									-	.37**	.21**	.38**	.26**
10. Authority										-	.31**	.17**	.43**
11. Attention Seeking											-	.35**	.60**
12. Vanity												-	.26**
13. Entitlement													-

N = 308; * $p < .05$; ** $p < .01$ two-tailed

Appendix K. Second-Order Factor Analysis of the PNI Grandiosity and Vulnerability Factors (Wright et al., 2010)



N = 308; VUL = Vulnerable latent factor; GRA = Grandiose latent factor; ESE = Explicit Self-Esteem; AS = Attention Seeking; ENT = Entitlement; EXP = Exploitativenness; SH = Shame; SA = Social Avoidance; CSE = Contingent Self-Esteem; HS = Hiding the Self; SSSE = Self-Sacrificing Self-Enhancement; ER = Entitlement Rage; GF = Grandiose Fantasy; AUTH = Authority; SUP = Superiority; VAN = Vanity.

Appendix L. Rosenberg Self-Esteem Scale (Rosenberg, 1965)

The scale is a ten item Likert scale with items answered on a six point scale - from strongly agree to strongly disagree.

Instructions: This questionnaire asks you about how you see yourself. Each question asks the extent to which you agree with a statement. You will indicate this by selecting one of the following options: (i.e., strongly agree, moderately agree, slightly agree, slightly disagree, moderately disagree, strongly disagree)

1. On the whole, I am satisfied with myself.
2.* At times, I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5.* I feel I do not have much to be proud of.
6.* I certainly feel useless at times.
7. I feel that I'm a person of worth, at least on an equal plane with others.
8.* I wish I could have more respect for myself.
9.* All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Scoring: SA=3, A=2, D=1, SD=0. Items with an asterisk are reverse scored, that is, SA=0, A=1, D=2, SD=3. Sum the scores for the 10 items. The higher the score, the higher the self- esteem.

Appendix M. Word Stimuli Used in Meyer and Schvaneveldt (1971; Study 2) Task

Neutral valence distracters
"ladder" "pencil" "copper" "table" "tray" "fluid" "vegetable" "meter" "spatula" "square"

Positive valence words
"happiness" "cheer" "medal" "trust" "warmth"

Negative valence words
"abuse" "humiliate" "curse" "awful" "damage"

Associated words (read pairs vertically)
"shoe" "apple" "bread" "book" "ceiling" "nurse" "pen" "broom" "knife" "tank"
"foot" "orange" "butter" "library" "floor" "doctor" "paper" "mop" "fork" "war"

Non-associated words (read pairs vertically)
"foot" "orange" "butter" "library" "floor" "doctor" "paper" "mop" "fork" "war"
"apple" "bread" "book" "ceiling" "nurse" "pen" "broom" "knife" "tank" "shoe"

Non-words (to be paired with all stimuli combinations including idiographic words)
"glonar" "fram" "seart" "pronable" "poining" "affoth" "albort" "horm" "larted" "sploon")
"nart" "mave" "glost" "grinty" "stornia" "grib" "plear" "worangth" "glost" "morb"
"thale" "beld" "fantible" "clust" "nurpe" "pont" "broon" "unpil" "blorp" "shup"
"foth" "clurb" "budden" "blook" "florp" "doctal" "plater" "molp" "fornt" "throinty")
"clonterie" "clett" "grourn" "volms" "fenth" "sneuch" "yusks" "fusk" "plood" "jirn")
"yold" "splon" "stilth" "vaume" "kloab" "glaign" "rhoun" "keeb" "gnith" "talborta")
"krip" "splan" "gwerg" "bontigly" "scruig" "phlod" "thork" "swelbs" "fourch" "whuf")
"kwoa" "brec" "klood" "norinthon" "rhaum" "shruin" "grawt" "prauch" "skamb" "skrous")

Hypothetical examples of idiographic roles/activities (five positive and five negative valence)
“student” “son” “friend” “athlete” “musician” “procrastinator” “critic” “rebel” “coward” “gossiper”

Hypothetical examples of global idiographic self-descriptors
“John” “Smith” “November” “Brunswick” “Melbourne”

Appendix N. Participant Demographic Survey

1. Are you male or female?
2. What is your age in years?
3. Where were you born?
4. If you were not born in Australia, how long have you lived here (in years)?

Appendix O. The Big Five Aspects Scale (DeYoung et al., 2007)

Here are a number of characteristics that may or may not describe you. For example, do you agree that you seldom feel blue? Please fill in the number that best indicates the extent to which you agree or disagree with each statement listed below. Be as honest as possible, but rely on your initial feeling and do not think too much about each item.

Use the following scale:

1 - - - - - - - - 2 - - - - - - - - - 3 - - - - - - - - - 4 - - - - - - - - 5

Strongly Disagree	**Neither Agree Nor Disagree**	**Strongly Agree**

1. Seldom feel blue.
2. Am not interested in other people's problems.
3. Carry out my plans.
4. Make friends easily.
5. Am quick to understand things.
6. Get angry easily.
7. Respect authority.
8. Leave my belongings around.
9. Take charge.
10. Enjoy the beauty of nature.
11. Am filled with doubts about things.
12. Feel others' emotions.
13. Waste my time.
14. Am hard to get to know.
15. Have difficulty understanding abstract ideas.
16. Rarely get irritated.
17. Believe that I am better than others.
18. Like order.
19. Have a strong personality.
20. Believe in the importance of art.
21. Feel comfortable with myself.
22. Inquire about others' well-being.
23. Find it difficult to get down to work.
24. Keep others at a distance.
25. Can handle a lot of information.
26. Get upset easily.
27. Hate to seem pushy.
28. Keep things tidy.
29. Lack the talent for influencing people.
30. Love to reflect on things.
31. Feel threatened easily.
32. Can't be bothered with other's needs.
33. Mess things up.
34. Reveal little about myself.
35. Like to solve complex problems.
36. Keep my emotions under control.
37. Take advantage of others.
38. Follow a schedule.
39. Know how to captivate people.
40. Get deeply immersed in music.
41. Rarely feel depressed.
42. Sympathize with others' feelings.
43. Finish what I start.
44. Warm up quickly to others.
45. Avoid philosophical discussions.
46. Change my mood a lot.
47. Avoid imposing my will on others.
48. Am not bothered by messy people.
49. Wait for others to lead the way.
50. Do not like poetry.
51. Worry about things.
52. Am indifferent to the feelings of others.
53. Don't put my mind on the task at hand.
54. Rarely get caught up in the excitement.
55. Avoid difficult reading material.
56. Rarely lose my composure.
57. Rarely put people under pressure.
58. Want everything to be "just right."
59. See myself as a good leader.
60. Seldom notice the emotional aspects of paintings and pictures.
61. Am easily discouraged.
62. Take no time for others.
63. Get things done quickly.
64. Am not a very enthusiastic person.
65. Have a rich vocabulary.
66. Am a person whose moods go up and down easily.
67. Insult people.
68. Am not bothered by disorder.
69. Can talk others into doing things.
70. Need a creative outlet.
71. Am not embarrassed easily.
72. Take an interest in other people's lives.
73. Always know what I am doing.
74. Show my feelings when I'm happy.
75. Think quickly.
76. Am not easily annoyed.
77. Seek conflict.
78. Dislike routine.
79. Hold back my opinions.
80. Seldom get lost in thought.
81. Become overwhelmed by events.
82. Don't have a soft side.
83. Postpone decisions.
84. Have a lot of fun.
85. Learn things slowly.
86. Get easily agitated.
87. Love a good fight.
88. See that rules are observed.
89. Am the first to act.
90. Seldom daydream.
91. Am afraid of many things.
92. Like to do things for others.
93. Am easily distracted.
94. Laugh a lot.
95. Formulate ideas clearly.
96. Can be stirred up easily.
97. Am out for my own personal gain.
98. Want every detail taken care of.
99. Do not have an assertive personality.
100. See beauty in things that others might not notice.

Cont'd over page

BFAS Scoring Key:

Neuroticism
Withdrawal: 1R, 11, 21R, 31, 41R, 51, 61, 71R, 81, 91
Volatility: 6, 16R, 26, 36R, 46, 56R, 66, 76R, 86, 96

Agreeableness
Compassion: 2R,12, 22, 32R, 42, 52R, 62R, 72, 82R, 92
Politeness: 7, 17R, 27, 37R, 47, 57, 67R, 77R, 87R, 97R

Conscientiousness
Industriousness: 3, 13R, 23R, 33R, 43, 53R, 63, 73, 83R, 93R
Orderliness: 8R, 18, 28, 38, 48R, 58, 68R, 78R, 88, 98

Extraversion
Enthusiasm: 4, 14R, 24R, 34R, 44, 54R, 64R, 74, 84, 94
Assertiveness: 9, 19, 29R, 39, 49R, 59, 69, 79R, 89, 99R

Openness/Intellect
Intellect: 5, 15R, 25, 35, 45R, 55R, 65, 75, 85R, 95
Openness: 10, 20, 30, 40, 50R, 60R, 70, 80R, 90R, 100

Reverse response scores for items followed by "R" (i.e. 1=5, 2=4, 4=2, 5=1). To compute scale scores, average completed items within each scale. To compute Big Five scores, average scores for the two aspects within each domain.