# **Social Psychological Bulletin**

Psychologia Społeczna

# Narcissist Unmasked. Looking for the Narcissistic Decision-Making Mechanism: A Contribution From the Big Five

Radosław Rogoza<sup>1</sup>

<sup>1</sup> Cardinal Stefan Wyszyński University, Warsaw, Poland

**Corresponding author:** Radosław Rogoza (Cardinal Stefan Wyszyński University, ul. Wóycickiego 1/3, 01-938, Warsaw, Poland. E-mail: rogoza.radosław@gmail.com)

Handling editor: Jarosław Piotrowski (SWPS University of Social Science and Humanities, Poznań, Poland)

Received: 2 October 2017 • Accepted: 31 January 2018 • Published: 29 May 2018

**Citation:** Rogoza, R. (2018). Narcissist unmasked. Looking for the narcissistic decision-making mechanism: A contribution from the Big Five. *Social Psychological Bulletin*, *13*(2), Article e26623. https://doi.org/10.5964/spb. v13i2.26623

#### Abstract

The Narcissistic Admiration and Rivalry Concept is a model of narcissism that disentangles its bright and dark sides by introducing two strategies: admiration and rivalry. Although it is promising and explains the functioning of the narcissist, little is known about the trigger mechanisms that would explain how the strategy of admiration or rivalry is chosen. Based on the circumplex of personality metatraits model, we locate narcissism on the Delta-Minus metatrait. In the metaphor of the narcissistic pendulum, the narcissist at the starting point represents behaviour typical of the Delta-Minus metatrait. The initial decision is influenced by the activity of the amygdala and after conscious assessment, the pendulum could move in the opposite direction if the situational assessment was inadequate.

#### Keywords

narcissism; personality; metatraits

# A Roadmap

The current paper investigates what leads narcissists to behave either charmingly and aggressively. To scrutinize this issue, we divided the paper into three major sections. The first



section represents the introductory information on narcissism, i.e., we present that there is more than one (i.e., grandiose narcissism) form of narcissism, which we examine in greater detail within this section of the paper. We briefly present that although narcissism is frequently presented as a unidimensional construct, it can also be explained by more complex models. We see the most promising proposition within the Narcissistic Admiration and Rivalry Concept (NARC; Back et al., 2013), which interprets grandiose narcissism as a two-dimensional construct disentangling its bright strategy of admiration (tendency to approach social status through self-promotion) and the dark strategy of rivalry (antagonistic and defensive means of avoiding failure; Back et al., 2013). Even though it is a very promising conceptualization of grandiose narcissism, the NARC is not free of some limitations and in the current paper we illustrate a theoretical proposition which we believe is able to deal with the problem of what makes one strategy more likely to be chosen over another.

The second section of the paper is devoted to the theoretical explanation – in order to answer the formulated question, we use other existing personality trait theories with the focus on the Big Five Model of personality (McCrae & Costa, 1997). We begin this section with a literature search and a meta-analytic summary showing associations between narcissism and Big Five personality traits. According to the existing literature, we identify the central Big Five personality traits explaining narcissism in extraversion and low agreeableness, but also – we identify that the other Big Five traits also play their supporting role. This role is discussed in the context of personality metatraits in which we demonstrate that narcissism may be more generally explained by high Plasticity and low Stability. Finally, we combine all of these premises within the framework of the model of Circumplex of Personality Metatraits (Strus, Cieciuch, & Rowiński, 2014), where we elaborate that whereas high Plasticity and low Stability reveals the specific strategies of narcissism (admiration and rivalry respectively), the core of narcissism lies in Delta-Minus metatrait, which is in between them.

The last section is devoted to the synthesis of all gathered theoretical predictions. We introduce the theory-driven idea of the narcissistic pendulum, which allows us to answer the question of how a strategy is chosen. The concept of the narcissistic pendulum assumes that narcissists select their strategy based on a situational assessment and their individual differences in admiration and rivalry. The actual decision is made in a two-step procedure comprising an initial unconscious assessment followed by conscious re-interpretation, which we try to explain in the terms of biological functioning. The pendulum idea states that if the initial decision was to self-promote, then the pendulum moves towards an admiration strategy and using means of self-defence is less likely to occur. The discussed idea of the narcissistic pendulum is incorporated within the framework of the NARC model, expanding the description of the underlying motivational dynamics. Finally, as the idea of the narcissistic pendulum is a theoretical proposition, we provide a few examples of how it might be verified in future studies.



# Introduction

## Forms of Narcissism

Narcissism is a puzzling construct full of apparent paradoxes (Morf & Rhodewalt, 2001); in addition, different forms of narcissism are the subject of scientific interest. The most basic distinction is between vulnerable and grandiose narcissism (Wink, 1991). Vulnerable narcissism is related to defensiveness, insecurity, feelings of inadequacy and incompetence, and negative affect (Dickinson & Pincus, 2003; Miller et al., 2011), whereas grandiose narcissism is related to grandiosity, arrogance, self-absorption, and entitlement (Besser & Priel, 2010; Miller et al., 2011). Whereas vulnerable narcissism is related to more clinical outcomes, grandiose narcissism is related to normal narcissism (Miller, Lynam, Hyatt, & Campbell, 2017; Rogoza, Żemojtel-Piotrowska, Kwiatkowska, & Kwiatkowska, 2018). Although different forms of narcissism exist, the current paper focuses exclusively on grandiose narcissism; thus, each time we refer to narcissism, we mean grandiose narcissism.

#### **Grandiose Narcissism**

Studies of grandiose narcissism started to flourish alongside the development of the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The NPI is a forced-choice measure in which a respondent must choose between narcissistic versus non-narcissistic items that were prepared based on DSM-III (American Psychiatric Association, 1980) diagnostic criteria. Ackerman et al. (2011) argued that the NPI has a hierarchical structure that measures two different aspects of narcissism: adaptive and maladaptive narcissism. Adaptive narcissism is synonymous with Leadership/Authority (LA), whereas maladaptive narcissism represents Exhibitionism/Entitlement, and it could be further differentiated into Grandiose Exhibitionism (GE) and Entitlement/Exploitativeness (EE). The adaptiveness of LA is expressed in the lack of associations with pathological narcissism and the positive correlation with high global self-esteem, extraversion, assertiveness, selfenhancement, social potency, and goal persistence. Despite the common presence of GE and EE within maladaptive narcissism and some common features between these two (e.g., entitlement rage), Ackerman et al. (2011) argued that it is EE that accounts for the most explicitly negative outcomes of narcissism (i.e., antisocial tendencies, exploitativeness, devaluing others, disagreeableness), whereas GE is rather associated with positive outcomes (e.g., social potency, extraversion, goal persistence). Ackerman et al.'s (2011) description of maladaptive narcissism also corresponds to concerns raised by Brown, Budzek, and Tamborski (2009), who argued that narcissistic characteristics fall into two clusters: grandiosity and entitlement. EE is oriented towards others; it reflects the interpersonal clusters, while self-oriented GE represents the intrapersonal cluster of narcissism.

Back et al. (2013) contributed to the understanding of grandiose narcissism by introducing the two-dimensional process model of narcissism, the Narcissistic Admiration and Rivalry Concept (NARC). The NARC model overcomes some of the difficulties associated with the NPI, such as the historical DSM-III-based operationalization; the predominant



representation of dominant, assertive, and grandiose aspects of narcissism; and the narrow theoretical range of LA and EE (Back et al., 2013; Brown et al., 2009). Within the NARC model, the most basic goal of the narcissist is to maintain the grandiose self, which can be done in two separate but positively correlated ways: assertive, self-enhancing admiration or antagonistic, self-defensive rivalry (Back et al., 2013; Rogoza, Rogoza, & Wyszyńska, 2016). Each strategy comprises affective-motivational, cognitive, and behavioural facets. The motivation of the admiration strategy comes from striving for uniqueness, followed by cognitive grandiose fantasies, resulting in charming behaviour, whereas the motivation of the rivalry strategy comes from striving for supremacy followed by the cognitive devaluation of others, resulting in aggressive behaviour. In other words, the narcissist, to self-enhance, pursues confirmation that he is unique and special, fantasizes about being exceptional, and acts self-assuredly, which could result in socially desired outcomes. However, when the narcissist perceives something as a threat, he pursues supremacy over others, thinks of them as inferior, and acts aggressively, which could result in socially aversive outcomes. The NARC model integrates the idea of intra- and interpersonal aspects of narcissism (Brown et al., 2009) because both strategies comprise both aspects, i.e., narcissistic self-enhancement triggers not only intrapersonal grandiose fantasies but also interpersonal self-assured behaviour.

What is common between Ackerman et al. (2011) and Back et al. (2013) is the emphasis that the narcissist can wear two masks: one that is associated with positive social outcomes (LA and the admiration strategy) and a second that is associated with negative social outcomes (EE and the rivalry strategy). The understanding of narcissism that is adaptive on one hand and maladaptive on the other is also consistent with the long history of studies of narcissism (e.g., Emmons, 1984). However, neither of the existing models explains the process of how the narcissist chooses one mask over the other.

#### Weakness of the NARC Model: The Trigger Mechanism

Although the NARC model unravels some of the existing paradoxes related to narcissism (e.g., in regard to self-esteem, impulsivity, personality traits; Back et al., 2013) and explains the behavioural dynamics of two distinct narcissistic strategies, only a little emphasis is put on the trigger mechanism. We understand the trigger mechanism as the answer to the question of: *Why is one strategy chosen over another?* The existing trigger mechanism was excerpted from the self-regulatory process model of narcissism (Campbell & Campbell, 2009; Morf, Horvath, & Torchetti, 2011; Morf & Rhodewalt, 2001), which relies on situational logic, i.e., IF an opportunity arises to promote the grandiose self/perceived threat to self, THEN self-enhance/strike back (Morf et al., 2011). Although such a description is intuitive and provides good insight into narcissistic functioning, it is plausible only for situations in which the promotion opportunity or threat is obvious. We support the idea that narcissists behave in a specific manner in regard to situational assessment and its potential impact on the grandiose self; however, in our opinion, the trigger mechanism, especially in the context of alternating or unclear situations, has been relatively unexplored. Narcissism



is deeply rooted within personality and individual differences theory (Miller & Campbell, 2008), and because narcissistic admiration and rivalry are two distinct and coherent trait dimensions (Back et al., 2013), other trait theories may account for or explain the undiscovered trigger mechanism. We believe that the foundations and expansions of the Big Five Model of personality (McCrae & Costa, 1997) are vital for understanding the underlying motivational dynamics of narcissism; therefore, we present a review of this issue before proceeding to our explanation of the trigger mechanism.

# Theoretical Explanation: Narcissism and Big Five Personality Traits

# Narcissism and the Big Five Model of Personality: A Review of the Existing Literature

Personality traits, described as a relatively stable pattern of behaviour, thoughts, and emotions (McCrae & Costa, 2003), serve as a useful predictor in almost any area of psychological research (John & Srivastava, 1999); however, in the context of narcissism, many ambiguities exist. Table 1 presents the relationship between personality traits from the Big Five Model of personality (i.e., extraversion, openness to experience, agreeableness, neuroticism, and conscientiousness; McCrae & Costa, 1997) and narcissism. We searched the literature using three databases: PsycINFO, PsycARTICLES and Google Scholar for keywords *narcissism* and *Big Five*.

Most studies on the relationship between narcissism and Big Five personality traits have been conducted in university samples from English-speaking countries. Among all observed correlations, two traits in independently used methods of assessment constantly exhibited the highest associations with narcissism: extraversion and disagreeableness. Although some exceptions to this pattern exist, e.g., a lack of correlation with extraversion (Furnham, Hughes, & Marshall, 2013) or a positive correlation with agreeableness (Muris, Meesters, & Timmermans, 2013), the pattern of relationship is rather stable across different studies. The relationships between other Big Five personality traits and narcissism are visibly weaker; however, this does not imply that they do not exist. To investigate the role of the remaining Big Five personality traits in their relations to narcissism, we compared reported results to the existing meta-analyses and, moreover, we also computed the average effect size using the Hedges and Olkin (1985) method for calculating weighted summary correlation coefficient under fixed effects model. The average effect sizes, which are presented in Table 2, were estimated for all of the single construct measures (i.e., NPI, SD3, DTDD, NACE) in a joint analysis (k = 41), and separately for admiration and rivalry (k = 5).

The results from the current and previous meta-analyses confirmed that the role of extraversion and low agreeableness is superior to other Big Five personality traits in explaining narcissism. However, the average effect sizes of openness to experience and neuroticism were also relatively high. The current study is also the first to report the meta-analytic results regarding the dimensions of admiration and rivalry, suggesting that whereas an



	0
	,
	,
_	
, Ф	

	Traits
	e Personality
	Big Fiv
	and the
	Narcissism
	Between
	Coefficients
	Correlation (
	Reporting
	f the Studies
Table 1	Review o

				Measurement	Extraver-	Agreeable-	Onenness to		Conscien-
Study	Sample	Ν	Nationality	methods	sion	ness	experience	Neuroticism	tiousness
Ackerman et al. (2011)	University students	200	American	NPI (40), BFI	.44	35	.11	05	60.
Ames, Rose, and Anderson (2006)	University students	776	American	NPI (16), NEO- FFI	.36	23	.24	21	.14
Back et al. (2013)	Mixed (internet users)	1814	German	NARQ (A R), BFI-S	.31 11	04 42	.25 08	16 .19	.08 19
Barelds and Dijkstra (2010)	Community and University students	136	Dutch	NPI (40), NEO- FFI	.44	22	.27	29	.05
Book et al. (2016)	University students	419	Canadian	SD3, BFI	.50	-00	.26	28	.03
Brailovskaia, Bierhoff, and Margraf (2017)	University students	438	German	NPI (13), BFI- 10	.40	33	.08	21	60.
Brown, Budzek, and Tamborski (2009)	University students	740	American	NPI (37), BFI	.44	23	.22	14	03
Brunell et al. (2008)	University students	432	American	NPI (40), BFI	.42	16	.12	-00	.08
Clark, Lelchook, and Taylor (2010)	University students	323	American	NPI (40), IPIP	.47	11	.20	16	.05
Czarna, Jonason, Dufner, and Kossowska (2016)	University students	304	Polish	DTDD, BFI	.20	21	.04	.12	.01
Furnham, Hughes, and Marshall (2013)	Mostly university students	207	British	NPI (16), NEO- FFI	.01	22	.33	25	19
Gebauer, Sedikides, Verplanken, and Maio (2012)	Internet sample	314	German	NPI (16), BFI	.39	18	.27	21	.16
Gentile et al. (2013)	Mostly university students	636	American	NPI (13), NEO- PI-R	.25	53	04	16	.03
Geukes et al. (2017)	University students	299	German	NPI (40), NARQ (A R), BFI-S	.41 .43 08	14 06 33	.08 .20 03	36 25 .10	.11 .15 24
Jakobwitz and Egan (2006)	Community sam- ple (snowball)	82	Scottish	NPI (40), NEO- FFI	.10	43	.10	10	24
Jonason and Webster (2010)	University students	273	American	DTDD, BFI	.15	17	.15	10	17



Review of the Studies Reporting	g Correlation Coeffic	ients Be	tween Narcis	ssism and the Big	Five Person	ality Traits			
				Measurement	Extraver-	Agreeable-	Openness to		Conscien-
Study	Sample	Ν	Nationality	methods	sion	ness	experience	Neuroticism	tiousness
Jonason, Kaufinan, Webster, and Geher (2013)	University students	123	American	DTDD, BFI	.12	14	15	.04	-00
Jonason, Li, and Teicher (2010)	University students	216	American	NPI (40), BFI	.37	17	.23	15	.01
Kubarych, Deary, and Austin (2004)	University students	338	Scottish	NPI, NEO-FFI	.36	36	.20	24	.04
Leckelt et al. (2018)	Convenience sample	11937	German, American and English	NARQ-S(A R), mixed person- ality assessment	.24 07	10 39	.18 08	12 .15	.04 16
Leckelt et al. (2018)	Representative sample	1920	German	NARQ-S(A R), BFI-S	.10 03	15 28	.17 .00	.00 .13	10 19
Lee and Ashton (2005)	University students	164	Canadian	NPI (40), BFI	.46	04	.24	21	.10
Maples, Lamkin, and Miller (2014)	Adults (Mturk)	287	American	DTDD, SD3, NPI (40), FFMRF	.08 .47 .41	30 27 39	.10 .18 .16	.14 29 29	13 .08 .14
Marshall, Lefringhausen, and Ferenczi (2015)	Mixed (Mturk)	555	American	NPI (13), BPP	.36	21	.14	04	04
Miller and Campbell (2008)	University students	271	American	NPI (40), NEO- PI-R	.39	53	.07	24	.18
Miller et al. (2010)	University students	361	American	NPI (40), NEO- PI-R	.33	49	.03	30	.15
Miller et al. (2011)	University students	238	American	NPI (23), NEO- PI-R	.46	57	.13	13	.05
Miller et al. (2014)	University students	274	American	NPI (40), NARQ(A R), BFI	.28 .21 10	.23 09 53	.08 .25 07	.04 13 .11	.06 .02 24
Miller, Hyatt, Maples-Keller, Carter, and Lynam (2017)	University students	341	American	NPI (40), NEO- FFI	.21	27	.03	17	01
Miller, Price, and Campbell (2012)	University students	148	American	NPI (40), NEO- PI-R	.24	51	05	24	.25

Table 1 (continued)

7

$\sim$
Ϋ́
ă
ň
Ę
-=
Ę
2
ĸ
S
~
<sup>a</sup>

Review of the Studies Reporting Correlation Coefficients Between Narcissism and the Big Five Personality Traits

				Measurement	Futravar.	A greenhe	Onennee to		Conscien-
Study	Sample	Ν	Nationality	methods	sion	ness	experience	Neuroticism	tiousness
Munro, Bore, and Powis (2005)	University students	217	New Zea- lander	NACE, IPIP-B5	07	62	10	.23	26
Muris, Meesters, and Timmer- mans (2013)	Adolescents	117	Dutch	DTDD, BFQ-C	.30	.48	.67	60.	.53
Özsoy, Rauthmann, Jonason and Ardic (2017)	University students	368	Turkish	DTDD, SD3, BFI	.22 .44	06 03	.15 .35	.12 04	.08 .16
Paulhus and Williams (2002)	University students	245	American	NPI (40), BFI	.42	36	.38	.02	06
Potard, Lignier, and Henry (2018)	University students	591	Canadian	NPI (40), BFI	.27	02	.24	.10	.02
Samuel and Widiger (2008)	University students	150	American	NPI (40), NEO- PI-R	.28	33	.15	17	.02
Savard, Simard, and Jonason (2017)	University students	394	Canadian	DTDD, NEO- FFI	.07	21	02	.30	07
Trzesniewski, Donnellan, and Robins (2008)	University students	18274	American	NPI (40), BFI	.49	14	.24	20	.12
Utz, Tanis, and Vermeulen (2012)	University students	198	Dutch	NPI (16), TIPI	.25	18	.11	-00	-00
Vernon, Villani, Vickers, and- Harris (2008)	Twins	139	American/ Canadian	NPI (40), NEO- PI-R	.36	37	.30	.15	03
Visser, Pozzebon, and Reina- Tamayo (2014)	University students	413	Canadian	SD3, BFI	.51	07	.27	22	01
<i>Note</i> . NPI = Narcissistic Person. Inventory: IPIP = International	ality Inventory; NAI   Personality Item Po	RQ = N ol; DT	Varcissistic Ad DD = Dark	dmiration and Ri Triad Dirty Doze	valry Quest en; SD3 = S	ionnaire; A = hort Dark Tr	Admiration; iad; FFMRF =	R = Rivalry; B. = Five-Factor N	FI = Big Five Aodel Rating

Tabl



= Ten Item Personality Inventory.

Form; BPP = Berkeley Personality Profile; NACE = Narcissism – Aloofness – Confidence – Empathy; BFQ-C = Big Five Questionnaire for Children; TIPI

#### Table 2

Meta-analysis	Extraversion	Agreeableness	Openness	Neuroticism	Conscien- tiousness
O'Boyle, Forsyth, Banks, Story, and White (2015)	.40(.36; .43)	29(48;10)	.20(.10; .30)	16(31;02)	.09(01; .18)
Vize, Lynam, Colli- son, and Miller (2018)	.32(.25; .38)	22(28;17)	.14(.09; .19)	.00(05; .05)	01(05; .04)
Muris, Merckelbach, Otgaar, and Meijer (2017)	.31(.18; .44)	21(34;08)	.15(.02; .28)	04(17; .08)	01(14; .12)
Current study – single construct measures	.43(.4244)	18(19;17)	.21(.20; .22)	16(17; .15)	.09(.08; .10)
Current study – NARQ/Admiration	.24(.22; .25)	09(11;07)	.19(.17; .20)	11(13;10)	.03(.01; .05)
Current study – NARQ/Rivalry	05(06;03)	38(40;37)	07(08;05)	.15(.14; .17)	17(19;16)

*Comparison of the Effect Sizes Between the Current and Existing Meta-Analyses on Narcissism and Its Relations with the Big Five Personality Traits* 

Note. Each effect size estimate was supplemented in 95% confidence interval in brackets.

observed relation with openness is more typical for admiration, a relation with neuroticism is more typical for rivalry. Thus, although it might be claimed that extraversion and low agreeableness represent the core features of narcissism, other traits also contribute to its explanation, but in a more general context.

# The Narcissist as Disagreeable Extravert

Paulhus (2001) in his minimalistic approach to narcissism, which was opposed to the more complex Morf and Rhodewalt's (2001) dynamic self-regulatory processing model of narcissism, was the first to suggest that the combination of the two Big Five personality traits–namely extraversion and low agreeableness–are able to synthesize the emergent personality type equivalent for narcissism. This claim was based on the seminal works of Leary (1957) and Wiggins (1979), who, using personality trait adjectives, developed a circumplex model of interpersonal behaviour in which the vertical axis represents agency and the horizontal axis communion. In this vein, Leary (1957) was probably the first to notice that narcissism is marked by high agency and low communion. Within the space of the Big Five Model of personality, Costa and McCrae (1995) argued that between the agency and communion axes, two additional axes explaining interpersonal behaviour can be introduced: extraversion and agreeableness. Because narcissism can be perceived as a vector cutting between high agency and low communion (Wiggins & Pincus, 1994), Paulhus (2001) pointed out that in the Big Five space this description reflects extraversion and low agreeableness.



The circumplex model of interpersonal behaviour (Wiggins, 1979, 1980) was one of the fundamental inspirations for the Abridged Big Five Dimensional Circumplex (Hofstee, De Raad, & Goldberg, 1992), which expanded on the Big Five traits. It is worth noting that Hofstee et al. (1992) developed ten circles that represent constellations of each of the Big Five traits with one another, but only the extraversion-agreeableness circumplex (presented in Figure 1) is of interest for the current manuscript.



*Figure 1*. Graphical representation of the extraversion-agreeableness circumplex. Designations ranging from I+/II- to II+/I- are from Goldberg (1999); the remaining designations were derived from the adjective lists in Hofstee et al. (1992).

Within this model, extraversion and agreeableness could be organized within a circumplex as two orthogonal axes. These axes represent pure facets of a given trait, with each pole representing its high or low intensity. Between these axes, four additional axes divide the circle into eight facets, with each facet representing a blend of the two basic Big Five traits (Goldberg, 1999). Because narcissism is associated with high extraversion and low agreeableness, we propose extracting the upper-left quadrant of the circle and interpreting it as the potential spectrum of interpretional behaviours of narcissists. From this perspective, the narcissist could act in four different ways: purely disagreeable (antagonism), disagreeable but with a blend of extraversion (rivalization), extroversive with a blend of disagreeableness (provocativeness), and purely extroversive (gregariousness).



#### The Narcissist as Unstable Plastic

Although the definition of a narcissist as a disagreeable extravert is appealing due to its simplicity, it denies all the observed associations with other personality traits. Back et al. (2013) provided evidence that the observed associations between narcissism and extraversion and narcissism and disagreeableness are due to the existence of two distinct strategies: only admiration was related to extraversion, and only rivalry was related to disagreeableness. Rogoza, Wyszyńska, Maćkiewicz, and Cieciuch (2016) replicated these results but also noted the shared variance within the structural equation model. It turned out that all Big Five traits explained 39% and 30% of the variance of admiration and rivalry, respectively. Alongside the observed pattern of relationship between narcissism and other personality traits, one can conclude that the narcissist is more than simply a disagreeable extravert.

Rogoza, Żemojtel-Piotrowska, Rogoza, Piotrowski, and Wyszyńska (2016) considered all the observed relationships between narcissistic admiration and rivalry and Big Five personality traits within a joint factor analysis and argued that admiration is related mostly to high extraversion and openness to experience, whereas rivalry is related mostly to low agreeableness and conscientiousness and high neuroticism. Such a constellation of the Big Five traits, also known as the Two Factor model of personality (Cieciuch & Strus, 2017), was first described by Digman (1997), who argued that such a pattern of relationship is not accidental but rather is due to two complementary metatraits of personality. DeYoung, Peterson, and Higgins (2002) described these metatraits as Plasticity (high extraversion and openness to experience) and Stability (high agreeableness, high conscientiousness, and low neuroticism). The Plasticity metatrait is related to the general pattern of exploration-where extraversion represents behavioural exploration and openness to experience represents cognitive exploration—whereas the Stability metatrait is associated with stable functioning in social interactions, cooperativeness, and honesty (Cieciuch & Strus, 2017; DeYoung, 2015). The metatraits of Plasticity and Stability also represent the agentic and communal orientation respectively (Paulhus & John, 1998) and therefore there is a strong overlap between agency and Plasticity and communion and Stability (Gebauer, Paulhus, & Neberich, 2013). Metatraits corroborate to the Wiggins (1979) interpersonal circumplex, and therefore as in accordance to Paulhus (2001), it can be claimed that whereas the metatraits of personality provide a more general insight into the interpersonal functioning of narcissists, the core of narcissism is mostly focused on extraversion and low agreeableness.

In this proposition, the narcissist is interpreted as Unstable Plastic (Rogoza, Żemojtel-Piotrowska et al., 2016). The superior role of extraversion thus could be explained by a behavioural exploration of narcissists that is not followed by cognitive exploration—narcissists during zero acquaintance are perceived as agreeable, self-confident, and kind (Back, Schmukle, & Egloff, 2010; Paulhus, 1998). However, this effect is quickly reversed due to a poor and unstable pattern of socialization, and then narcissists need to look for new acquaintances (Morf & Rhodewalt, 2001). From this perspective, Plasticity plays an evolu-



tionary adaptive role in the narcissist's everyday functioning because it is a tool to address the costs of low Stability (Jonason, Li, & Czarna, 2013).

# The Narcissist as Delta-Minus: A Contribution from the Circumplex of Personality Metatraits Model

Strus, Cieciuch, and Rowiński (2014) proposed a circumplex of personality metatraits (CPM) model that integrates current knowledge about the Big Five. The core of this model is two orthogonal metatraits, Plasticity (Beta) and Stability (Alpha), and two new metatraits: the Gamma metatrait, which is the reconceptualization of the general factor of personality (Musek, 2007), and the Delta metatrait, the presence of which was deduced based on the circular logic of the model. Each metatrait has two poles (i.e., Plus and Minus); however, a positive pole (i.e., Beta-Plus for Plasticity) is not the simple opposite of the simple opposite of summer. Both introduce new qualities (e.g., snow; Strus et al., 2014). The graphical representation of the model is presented in Figure 2.

The CPM is not only a theoretical model as it already demonstrated its utility in an empirical setting – the CPM integrates and predicts the relations with the Big Five traits of various psychological constructs such as mental health, affect, values, interpersonal traits



*Figure 2*. Graphical representation of the circumplex of personality metatraits model (Strus et al., 2014). N = Neuroticism; E = Extraversion; O = Openness to experience; A = Agreeableness; C = Conscientiousness.



and temperament (Strus & Cieciuch, 2017). Because narcissism is related to both Alpha-Minus and Beta-Plus, one can conclude that the origins of narcissism as a unidimensional construct are within the Delta-Minus metatrait (defined as broadly defined impulsiveness, high emotional liability, stimulation-seeking, provocativeness and expansiveness in interpersonal relations; Strus & Cieciuch, 2017) and not within the two orthogonal metatraits, which rather are more characteristic of the narcissistic strategies of admiration and rivalry.

The most basic goal of the narcissist is to maintain the grandiose self (Back et al., 2013), but in order to do so, the narcissist needs other people, a social mirror to underpin the role of interpersonal personality traits (Morf & Rhodewalt, 2001). Realization of this most basic goal may be achieved by two distinct strategies: one, relying on extraversion, that is closer to the Beta-Plus metatrait (Plasticity) and the other, relying on disagreeableness, that is closer to the Alpha-Minus metatrait (Disinhibition). Thus, one can conclude that narcissism is associated with the Delta-Minus (Sensation Seeking), which motivates social stimulation, and, depending on the situation, the behavioural dynamics are close to either Alpha-Minus or Beta-Plus. In other words, the true face of narcissism is the Delta-Minus, but what is visible in interpersonal behaviours is the alternating mask of Plastic-ity or Disinhibition. To summarize, the Delta-Minus is a personality predisposition of developing narcissism, i.e., each narcissist is a Delta-Minus, but not all Delta-Minuses are narcissists.

### Synthesis: The Narcissistic Pendulum Trigger Mechanism

The idea of the pendulum assumes that the core characteristics of personality traits encompassing a variety of possible expressions are located in the initial position. The metaphor of the pendulum explains how the core characteristics can switch to more specific strategies and these underlying dynamics can be illustrated via the movement of the pendulum. In the (unrealistic) situation when any other factor would influence the initial position of the pendulum, the trait in the social interaction would have equal probability to express itself in both manners – depending purely on the perceived situational assessment. The movement of the pendulum in either direction changes this state, i.e., the closer the pendulum is to the given strategy, the more probable it becomes that the trait will express accordingly to its position. But when the pendulum approaches its utmost, the expressions typical for the opposite strategy fade out and, thus, the trait expresses itself only in accordance to its position. After the social interaction ends, the pendulum goes back to its initial position.

Based on a review of existing personality models, we concluded that narcissism represents the Delta-Minus metatrait, which is the entrance to the investigation of the narcissistic strategies trigger mechanism. We agree with Morf et al. (2011) and Back et al. (2013) that a perceived ego threat or ego boost plays a crucial role in choosing an adequate strategy; however, our proposition may explain the underlying decision making process and it may contribute to a better understanding of the trigger mechanism in unclear situations. As admiration and rivalry can be interpreted not only as narcissistic strategies but also as



personality traits (Back et al., 2013), one can conclude that people will differ in the level of intensity of these individual differences. Indeed, the study of Wetzel, Leckelt, Gerlach, and Back (2016) pointed out that it is possible to distinguish a group of narcissists who score on admiration but not on rivalry. Subsequently, the investigation of the behavioural processes underlying narcissism demonstrated that in the first place, narcissists are more likely to try boosting the grandiose self by using the admiration strategy (Leckelt, Küfner, Nestler, & Back, 2015), while the impact of the rivalry strategy seems to increase over time (Leckelt et al., 2015). Taken together, one can conclude that admiration is the default strategy whilst rivalry is the strategy activated as a means of self-protection. The decision mechanism could be compared to a narcissistic pendulum, a graphical representation of which is presented in Figure 3.

The narcissistic pendulum is embedded within the Delta-Minus and inherits its core elements—social stimulation seeking and lability. When the narcissistic pendulum is in its initial position, the narcissist could behave either extroversively or disagreeably; the decision is based on whether the situation is perceived as ego threatening or boosting and influenced by the individual difference characteristics. The spectrum of possible expressions is based on a circular model of extraversion and agreeableness (Goldberg, 1999; Hofstee et al., 1992), in which we could localize: in the left-most position the most disagreeable antagonism, followed by the less agreeable and slightly extroverted rivalization; the right position begins with the more extroverted and slightly disagreeable provocativeness; then, in the right-most position, is the most extroverted gregariousness.

Once the narcissistic pendulum starts moving towards one end (i.e., the narcissist perceives a situation as ego threatening or ego boosting), as long as it does not reach the



*Figure 3*. Narcissistic pendulum of decision making. N = Neuroticism; E = Extraversion; O = Openness to experience; A = Agreeableness; C = Conscientiousness; NR = Narcissistic rivalry; NA = Narcissistic admiration.



farthest position, the situation could be reinterpreted. This means that the stimuli must be of adequate strength to activate a given strategy – and if not, we hypothesise that it is possible to switch to the alternative strategy. For example, the narcissist initially perceives a situation as ego boosting (e.g., a competition in which he feels comfortable), but after examination of his rivals, he notices someone dangerous and ego threatening, which sends the narcissistic pendulum in the opposite direction. Bearing in mind that admiration and rivalry are personality traits (Back et al., 2013), one might expect that different individuals will require different amount of stimulation to activate a given strategy. But as admiration is the narcissistic pendulum, it might be concluded that it might be slightly skewed towards Plasticity, which implies that it will move in this direction with more ease and turn towards Disinhibition when something goes wrong.

The narcissistic pendulum could also be compared to the neurophysiological mechanism that triggers the neuron's action potential. To switch from resting potential, a stimulus must be strong enough to pass the threshold potential, and when this occurs, the cell's membrane instantly and extensively depolarizes (i.e., triggering the action potential). If the stimulus is weaker than the threshold potential, then the action potential will not be triggered; however, if in a short period many weak stimuli occur, they may combine together to pass the threshold potential and activate the action potential, which is known as frequency summation (Kalat, 2016). The trigger mechanism of the neuron's action potential may apply to the narcissistic pendulum; in order to activate a narcissistic strategy, one strong stimulus (interpreted as a situational assessment of ego threat or ego boost) or many weak stimuli (the frequency summation mechanism) must pass the threshold potential. When this happens, the narcissistic pendulum rapidly approaches either Plasticity or Disinhibition. However, the threshold potential for admiration seems to be smaller than that for rivalry strategy (Leckelt et al., 2015), i.e., self-enhancement will be triggered even for a weak stimulus, whereas self-protection will be triggered for a strong stimulus or a series of moderate stimuli. If the threshold potential is not met, the pendulum does not have enough strength to move farther (i.e., the strategy will not be triggered), and only if different stimuli with sufficient strength occur may the pendulum swing in the opposite direction.

In the context of Plasticity and Disinhibition, the pendulum could approach them practically excluding extroversive or disagreeable behaviours; however, it always returns to its initial position. Although the narcissist could behave in a manner typical for Plasticity or Disinhibition, narcissism is still embedded within the Delta-Minus metatrait of personality. We emphasize that the Delta-Minus metatrait is predominant in narcissists, but this does not imply that other personality metatraits play a secondary role. Following Strus et al. (2014), individuals may be characterized by more than one personality metatrait, i.e., someone who is high in the Delta-Minus could also be high in Plasticity but lower in Disinhibition; similarly, someone who is high in the Delta-Minus could also be high in Disinhibition but lower in Plasticity. This also emphasizes the role of individual differences, as



someone who in addition to the Delta-Minus is also high on Plasticity will have a greater tendency to trigger the narcissistic admiration strategy; similarly, someone who is also high in Disinhibition will have a greater tendency to trigger the narcissistic rivalry strategy. In the context of the narcissistic pendulum, this could be compared to the spring mechanism: the higher someone is in Plasticity or Disinhibition, the stronger the elongation of the spring, requiring more strength in the initial level to switch to the opposite direction. Thus, on the basis of metatraits other than the Delta-Minus, individuals may prefer to choose one narcissistic strategy over another, and the more ego-threatening or -boosting the situation must be to trigger the opposite strategy.

#### **Biological Explanation**

Personality neuroscience offers a novel perspective for further reflections (DeYoung & Gray, 2009). The neural structure that may play an important role in explanation of the trigger mechanism is the amygdala, which is pivotal for processing emotional salience related to rewarding and threatening stimuli (Allen & DeYoung, 2016; Stillman, Van Bavel, & Cunningham, 2015). The amygdala is a subcortical structure (i.e., its activity cannot be consciously accessed and modified as, e.g., executive functions) that contributes to decision making (Bechara, 2005; Bechara, Damasio, Damasio, & Lee, 1999; Gupta, Koscik, Bechara, & Tranel, 2011; LeDoux, 2000). The role of the amygdala is especially important in fear-related processes (Gupta et al., 2011; LeDoux, 2000) owing to connections with each sensory processing area (e.g., auditory and visual) and with the cortex, which allows the amygdala to determine whether danger is present in the sensory world (LeDoux, 2000). The amygdala allows the brain to take a shortcut by omitting the cortical level of assessment so that the body is able to react before the threat is recognized by the cortex (LeDoux, 2000). For example, most people will step backwards (automatic defensive response) if they see a snake before they realize that the snake is really a snake. The connection with the cortex allows the amygdala to influence sensory processing in cortical areas, which could facilitate the processing of the stimuli (LeDoux & Armony, 1999; LeDoux, 2000).

In the context of narcissism, the amygdala may also play a vital role. The most basic goal of the narcissist is to maintain the grandiose self (Back et al., 2013), and in order to do so, he requires social stimulation (Morf & Rhodewalt, 2001). The constant need to protect the grandiose self may in turn result in a subconscious fear of other people (e.g., "What if others reject me?"). Thus, if the narcissist in order to maintain the grandiose self needs other people, and simultaneously he fears possible failure, then the role of the amygdala in the narcissist's social decision making may help explain the trigger mechanism.

#### Theoretical Input: Expansion of the NARC Model

In regard to our theoretical and biological assumptions, we propose expanding the NARC model (Back et al., 2013) to explain the trigger mechanism. A graphical representation of our proposed modification of the model is presented in Figure 4.





Figure 4. Expansion of the Narcissistic Admiration and Rivalry Concept.

Our expansion of the NARC model regarded the underlying motivational dynamics (in which we introduced consecutive expressions as predicted by the narcissistic pendulum) and location of the metatraits of personality within the model. As the Delta-Minus is expected to represent the core features of narcissism, it was located at the very beginning of the model and the Beta-Plus (Plasticity) and Alpha-Minus (Disinhibition), according to the literature (Rogoza, Żemojtel-Piotrowska et al., 2016), were assigned to the admiration and rivalry respectively. The most basic goal remains the same as in Back et al.'s (2013) proposition: the narcissist must maintain the grandiose self. The Delta-Minus is presented here as the source of observed commonalities between two narcissistic strategies (Back et al., 2013; Rogoza, Rogoza et al., 2016), as the core motive of the narcissist, which serves this goal of maintaining the grandiose self. The character of the Delta-Minus within narcissism is captured by the narcissist's entitled social expansiveness combined with low behavioural control, which is driven by the hedonistic urge to self-enhance (Morf et al., 2011). As such a pattern of behaviours is socially exploitative (Morf & Rhodewalt, 2001), lacking empathy but full of arrogance and haughtiness, it results in an unstable pattern of relationships (Czarna, Leifeld, Śmieja, Dufner, & Salovey, 2016; Leckelt et al., 2015).

The affective-motivational component originating from the Delta-Minus is social stimulation seeking. We excluded any cognitive components from this part of the model because we believe that the initial assessment of perceived ego threat or ego boost is the result of amygdala activity. If the initial assessment threatens the grandiose self, the narcissist could behave more disagreeably to prevent the threat (rivalization), and if the initial



assessment boosts the grandiose self, the narcissist could behave more extroversively to gain more attention (provocativeness). During the next step of the trigger mechanism, the information is reinterpreted at the cortex level, and if the initial assessment was inad-equate, this results in reinterpretation and a change in the strategy, resulting in gregarious or antagonistic behaviour. If the situation is interpreted as ego boosting, the admiration strategy is triggered; if the situation is interpreted as ego threatening, the rivalry strategy is triggered. Although the admiration and rivalry strategies may be reminiscent of the Plasticity and Disinhibition metatraits, like someone wearing a mask at a banquet, they are only heading towards them; as the narcissistic pendulum comes back to the start, the core of the narcissism remains within the Delta-Minus.

### **Future Directions**

The ideas discussed in the current paper offer a new perspective on the interpretation of narcissism; however, they should be empirically verified. The verification may focus on one hand on underlying motivational dynamics and on the other on the behavioural expressions of narcissism. Our question related to underlying motivational dynamics concerns whether the mechanism of the narcissistic pendulum could be empirically verified. Although this may be difficult to assess, we believe that it is the amygdala activity that would be associated with deciding which narcissistic strategy should be activated. To test this hypothesis, neurological techniques such as functional magnetic resonance imaging, positron emission tomography, or the electroencephalogram may play a crucial role. Our question related to the behavioural expressions of narcissism concerns whether it is possible to observe within-person variability of the two narcissistic strategies. We believe that it is possible to observe within-person behaviour typical of both strategies (e.g., charm and aggression), depending on the person's situational assessment. We hypothesize that the admiration strategy would more frequently be activated for narcissists; however, we also expect that the role of the rivalry strategy is more important than it seems because its role may be diminished within self-reported data, as admitting to socially aversive thoughts and behaviours in a questionnaire may threaten the grandiose self. A method that is suited for testing a hypothesis related to everyday behaviour is naturalistic observation. The Electronically Activated Recorder (EAR; Mehl, Pennebaker, Crow, Dabbs, & Price, 2001) is an example of direct measurement of everyday behaviour via recording of ambient sounds. The results from the EAR are more objective; since they are recorded automatically throughout the day (Mehl & Robbins, 2012), they are not influenced by the social need for approval. Because narcissists are trying to boost the grandiose self at the first opportunity, the self-reported results may be distorted; therefore, looking for an alternative to self-reported methods of assessment is a promising approach. Investigation of both discussed future directions may shed new light on narcissism itself, embed it within other psychological theories and help explain the fundamentals of narcissistic behaviour.



# Funding

This work was supported by grant 2015/19/N/HS6/00685 from the National Science Centre, Poland

# **Competing Interests**

The author has declared that no competing interests exist.

# Acknowledgements

The author has no support to report.

# References

- 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(1), 67–87. https://doi.org/10.1177/1073191110382845
- Allen, T. A., & DeYoung, C. G. (2016). Personality neuroscience and the Five Factor Model. In T. A. Widiger (Ed.), Oxford Handbook of the Five Factor Model. New York, NY, USA: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199352487.013.26
- Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, 40(4), 440–450. https://doi.org/10.1016/j.jrp.2005.03.002
- 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(6), 1013–1037. https://doi.org/10.1037/a0034431
- Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at the first sight? Decoding the narcissism-popularity link at zero acquaintance. *Journal of Personality and Social Psychology*, 98(1), 132–145. https://doi.org/10.1037/a0016338
- Barelds, D. P. H., & Dijkstra, P. (2010). Narcissistic personality inventory: Structure of the adapted Dutch version. Scandinavian Journal of Psychology, 51(2), 132–138. https://doi.org/10.1111/ j.1467-9450.2009.00737.x
- Bechara, A. (2005). Decision making, impulse control and loss of willpower to resist drugs: A neurocognitive perspective. *Nature Neuroscience*, 8(11), 1458–1463. https://doi.org/10.1038/nn1584
- Bechara, A., Damasio, H., Damasio, A. R., & Lee, G. P. (1999). Different contributions of the human amygdala and ventromedial prefrontal cortex to decision-making. *The Journal of Neuroscience : The Official Journal of the Society for Neuroscience*, 19(13), 5473–5481. https://doi.org/10.1523/ JNEUROSCI.19-13-05473.1999



- 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(8), 874–902. https://doi.org/10.1521/jscp.2010.29.8.874
- Book, A., Visser, B. A., Blais, J., Hosker-Field, A., Methot-Jones, T., Gauthier, N. Y., . . . D'Agata, M. T. (2016). Unpacking more "evil": What is the core of the dark tetrad? *Personality and Individual Differences*, 90, 269–272. https://doi.org/10.1016/j.paid.2015.11.009
- Brailovskaia, J., Bierhoff, H. W., & Margraf, J. (2017). How to identify narcissism with 13 items? Validation of the German Narcissistic Personality Inventory-13 (G-NPI-13). Assessment; Advance online publication. https://doi.org/10.1177/1073191117740625
- Brown, R. P., Budzek, K., & Tamborski, M. (2009). On the meaning and measure of narcissism. Personality and Social Psychology Bulletin, 35(7), 951–964. https://doi.org/10.1177/0146167209335461
- Brunell, A. B., Gentry, W. A., Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., & DeMarree, K. G. (2008). Leader emergence: The case of the narcissistic leader. *Personality and Social Psychology Bulletin*, 34(12), 1663–1676. https://doi.org/10.1177/0146167208324101
- Campbell, W. K., & Campbell, S. M. (2009). On the self-regulatory dynamics created by the peculiar benefits and costs of narcissism: A contextual reinforcement model and examination of leadership. Self and Identity, 8(2-3), 214–232. https://doi.org/10.1080/15298860802505129
- Cieciuch, J., & Strus, W. (2017) Two-Factor Model of personality. In V. Zeigler-Hill, & T. Shackelford (Eds.), *Encyclopedia of Personality and Individual Differences*. Springer International Publishing AG. https://doi.org/10.1007/978-3-319-28099-8
- 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(7), 786–791. https://doi.org/10.1016/j.paid.2010.01.013
- Costa, P. T., Jr., & McCrae, R. R. (1995). Domains and factors: Hierarchical personality assessment using the NEO personality inventory. *Journal of Personality Assessment*, 64(1), 21–50. https:// doi.org/10.1207/s15327752jpa6401\_2
- Czarna, A. Z., Jonason, P. K., Dufner, M., & Kossowska, M. (2016). The Dirty Dozen scale: Validation of a Polish version and extension of the nomological net. *Frontiers in Psychology*, 7. https://doi. org/10.3389/fpsyg.2016.00445
- Czarna, A. Z., Leifeld, P., Śmieja, M., Dufner, M., & Salovey, P. (2016). Do narcissism and emotional intelligence win us friends? Modeling dynamics of peer popularity using inferential network analysis. *Personality and Social Psychology Bulletin*, 42(11), 1588–1599. https://doi. org/10.1177/0146167216666265
- DeYoung, C. G. (2015). Cybernetic Big Five Theory. Journal of Research in Personality, 56, 33–58. https://doi.org/10.1016/j.jrp.2014.07.004
- DeYoung, C. G., & Gray, J. R. (2009). Personality neuroscience: Explaining individual differences in affect, behavior, and cognition. In P. J. Corr & G. Matthews (Eds.), *The Cambridge handbook of personality* (pp. 323–346). New York, NY, USA: Cambridge University Press.
- DeYoung, C. G., Peterson, J. B., & Higgins, D. M. (2002). Higher-order factors of the Big Five predict conformity: Are there neuroses of health? *Personality and Individual Differences*, 33(4), 533–552. https://doi.org/10.1016/S0191-8869(01)00171-4



- Dickinson, K. A., & Pincus, A. R. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders*, 17(3), 188–207. https://doi.org/10.1521/ pedi.17.3.188.22146
- Digman, J. M. (1997). Higher-order factors of the Big Five. Journal of Personality and Social Psychology, 73(6), 1246–1256. https://doi.org/10.1037/0022-3514.73.6.1246
- Emmons, R. A. (1984). Factor analysis and construct validity of the Narcissistic Personality Inventory. *Journal of Personality Assessment*, 48(3), 291–300. https://doi.org/10.1207/s15327752jpa4803\_11
- Furnham, A., Hughes, D. J., & Marshall, E. (2013). Creativity, OCD, narcissism and the Big Five. *Thinking Skills and Creativity*, 10, 91–98. https://doi.org/10.1016/j.tsc.2013.05.003
- Gebauer, J. E., Paulhus, D. L., & Neberich, W. (2013). Big Two personality and religiosity across cultures: Communals as religious conformists and agentics as religious contrarians. Social Psychological & Personality Science, 4(1), 21–30. https://doi.org/10.1177/1948550612442553
- Gebauer, J. E., Sedikides, C., Verplanken, B., & Maio, G. R. (2012). Communal narcissism. Journal of Personality and Social Psychology, 103(5), 854–878. https://doi.org/10.1037/a00296292
- Gentile, B., Miller, J. D., Hoffman, B. J., Reidy, D. E., Zeichner, A., & Campbell, W. K. (2013). A test of two brief measures of grandiose narcissism: The Narcissistic Personality Inventory–13 and the Narcissistic Personality Inventory–16. *Psychological Assessment*, 25(4), 1120–1136. https://doi. org/10.1037/a0033192
- Geukes, K., Nestler, S., Hutteman, R., Dufner, M., Küfner, A. C. P., Egloff, B., . . . Back, M. D. (2017). Puffed-up but shaky selves: State self-esteem level and variability in narcissists. *Journal of Personality and Social Psychology*, 112(5), 769–786. https://doi.org/10.1037/pspp0000093
- Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.). *Personality psychology in Europe* (Vol. 7, pp. 7–28). Tilburg, Netherlands: Tilburg University Press.
- Gupta, R., Koscik, T. R., Bechara, A., & Tranel, D. (2011). The amygdala and decision making. *Neuropsychologia*, 49(4), 760–766. https://doi.org/10.1016/j.neuropsychologia.2010.09.029
- Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis*. London, United Kingdom: Academic Press.
- Hofstee, W. K. B., De Raad, B., & Goldberg, L. R. (1992). Integration of the big five and circumplex approaches to trait structure. *Journal of Personality and Social Psychology*, 63(1), 146–163. https://doi.org/10.1037/0022-3514.63.1.146
- Jakobwitz, S., & Egan, V. (2006). The dark triad and normal personality traits. *Personality and Individual Differences*, 40(2), 331–339. https://doi.org/10.1016/j.paid.2005.07.006
- 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., pp. 102–138). New York, NY, USA: Guilford Press.
- Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the Dark Triad. *Psy-chological Assessment*, 22(2), 420–432. https://doi.org/10.1037/a0019265
- Jonason, P. K., Kaufman, S. B., Webster, G. D., & Geher, G. (2013). What lies beneath the Dark Triad Dirty Dozen: Varied relations with the Big Five. *Individual Differences Research*, *11*, 81–90.



- Jonason, P. K., Li, N. P., & Czarna, A. Z. (2013). Quick and dirty: Some psychosocial costs associated with the Dark Triad in three countries. *Evolutionary Psychology*, 11(1), 172–185. https://doi. org/10.1177/147470491301100116
- Jonason, P. K., Li, N. P., & Teicher, E. A. (2010). Who is James Bond?: The Dark Triad as an agentic social style. *Individual Differences Research*, *8*, 111–120.
- Kalat, J. W. (2016). *Biological Psychology* (12<sup>th</sup> edition). North Carolina, NC, USA: North Carolina State University.
- 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(4), 857–872. https://doi.org/10.1016/S0191-8869(03)00158-2
- Leary, T. (1957). Interpersonal diagnosis of personality. New York, NY, USA: Ronald.
- Leckelt, M., Küfner, A. C. P., Nestler, S., & Back, M. D. (2015). Behavioral processes underlying the decline of narcissists' popularity over time. *Journal of Personality and Social Psychology*, 109(5), 856–871. https://doi.org/10.1037/pspp0000057
- Leckelt, M., Wetzel, E., Gerlach, T. M., Ackerman, R. A., Miller, J. D., Chopik, W. J., ... Back, M. D. (2018). Validation of the Narcissistic Admiration and Rivalry Questionnaire short scale (NARQ-S) in convenience and representative samples. *Psychological Assessment*, 30(1), 86–96. https://doi.org/10.1037/pas0000433
- LeDoux, J. E. (2000). Emotion circuits in the brain. Annual Review of Neuroscience, 23(1), 155–184. https://doi.org/10.1146/annurev.neuro.23.1.155
- LeDoux, J. E., & Armony, J. L. (1999). How danger is encoded: towards a systems, cellular, and computational understanding of cognitive-emotional interactions in fear circuits. In M. S. Gazzaniga (Ed.), *The cognitive neurosciences* (pp. 1067–1079). Cambridge, MA, USA: MIT Press.
- Lee, K., & Ashton, M. C. (2005). Psychopathy, Machiavellianism, and narcissism in the Five-Factor Model and the HEXACO model of personality structure. *Personality and Individual Differences*, 38, 1571–1582. https://doi.org/10.1016/j.paid.2004.09.016
- Maples, J. L., Lamkin, J., & Miller, J. D. (2014). A test of two brief measures of the Dark Triad: The Dirty Dozen and Short Dark Triad. *Psychological Assessment*, 26(1), 326–331. https://doi. org/10.1037/a0035084
- Marshall, T., Lefringhausen, K., & Ferenczi, N. (2015). The Big Five, self-esteem, and narcissism as predictors of the topics people write about in Facebook status updates. *Personality and Individual Differences*, 85, 35–40. https://doi.org/10.1016/j.paid.2015.04.039
- McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *The American Psychologist*, 52(5), 509–516. https://doi.org/10.1037/0003-066X.52.5.509
- McCrae, R. R., & Costa, P. T. (2003). Personality in adulthood. A Five-Factor Theory perspective. New York, NY, USA: Guilford Press.
- Mehl, M. R., Pennebaker, J. W., Crow, D. M., Dabbs, J., & Price, J. H. (2001). The Electronically Activated Recorder (EAR): A device for sampling naturalistic daily activities and conversations. *Behavior Research Methods, Instruments, & Computers, 33*(4), 517–523. https://doi.org/10.3758/ BF03195410



- Mehl, M. R., & Robbins, M. L. (2012). Naturalistic observation sampling. The Electronically Activated Recorder (EAR) (pp. 176–192). In M. R. Mehl, T. S. Conner (Eds.), *Handbook of research methods for studying daily life*. New York, NY, USA: Guilford Press.
- Miller, J. D., & Campbell, W. K. (2008). Comparing clinical and social-personality approaches to narcissism. *Journal of Personality*, 76(3), 449–476. https://doi.org/10.1111/j.1467-6494.2008.00492.x
- 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. https://doi.org/10.1111/j.1467-6494.2010.00660.x
- Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Keith Campbell, W. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality*, 79(5), 1013–1042. https://doi.org/10.1111/j.1467-6494.2010.00711.x
- Miller, J. D., Hyatt, C. S., Maples-Keller, J. L., Carter, N. T., & Lynam, D. R. (2017). Psychopathy and Machiavellianism: A distinction without a difference? *Journal of Personality*, 85(4), 439–453. https://doi.org/10.1111/jopy.12251
- Miller, J. D., Lynam, D. R., Hyatt, C. S., & Campbell, W. K. (2017). Controversies in narcissism. Annual Review of Clinical Psychology, 13(1), 291–315. https://doi.org/10.1146/annurevclinpsy-032816-045244
- Miller, J. D., McCain, J., Lynam, D., Few, L. R., Gentile, B., MacKillop, J., & Campbell, W. K. (2014). A comparison of the criterion validity of popular measures of narcissism and narcissistic personality disorder via the use of expert ratings. *Psychological Assessment*, 26(3), 958–969. https://doi. org/10.1037/a0036613
- Miller, J. D., Price, J., & Campbell, W. K. (2012). Is the Narcissistic Personality Inventory still relevant? A test of independent grandiosity and entitlement scales in the assessment of narcissism. *Assessment*, 19(1), 8–13. https://doi.org/10.1177/1073191111429390
- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic selfregulatory processing model. *Psychological Inquiry*, 12(4), 177–196. https://doi.org/10.1207/ S15327965PLI1204\_1
- Morf, C. C., Horvath, S., & Torchetti, L. (2011). Narcissistic self- enhancement: Tales of (successful?) self-portrayal. In M. D. Alicke & C. Sedikides (Eds.), *Handbook of self-enhancement and self-protection* (pp. 399–424). New York, NY, USA: Guilford Press.
- Munro, D., Bore, M., & Powis, D. (2005). Personality factors in professional ethical behavior: Studies of empathy and narcissism. *Australian Journal of Psychology*, 57(1), 49–60. https://doi.org/10.108 0/00049530412331283453
- Muris, P., Meesters, C., & Timmermans, A. (2013). Some youths have a gloomy side: Correlates of the Dark Triad personality traits in non-clinical adolescents. *Child Psychiatry and Human Development*, 44(5), 658–665. https://doi.org/10.1007/s10578-013-0359-9
- Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the Dark Triad (narcissism, Machiavellianism, and psychopathy). *Perspectives on Psychological Science*, 12(2), 183–204. https://doi. org/10.1177/1745691616666070



- Musek, J. (2007). A general factor of personality: Evidence of the Big One in the five-factor model. *Journal of Research in Personality*, 41(6), 1213–1233. https://doi.org/10.1016/j.jrp.2007.02.003
- O'Boyle, E. H., Forsyth, D. R., Banks, G. C., Story, P. A., & White, C. D. (2015). A meta-analytic test of redundancy and relative importance of the Dark Triad and Five-Factor Model of personality. *Journal of Personality*, 83(6), 644–664. https://doi.org/10.1111/jopy.12126
- Özsoy, E., Rauthmann, J. F., Jonason, P. K., & Ardic, K. (2017). Reliability and validity of the Turkish version of Dark Triad Dirty Dozen (DTDD-T), Short Dark Triad (SD3-T), and Single Item Narcissism Scale (SINS-T). *Personality and Individual Differences*, 117, 11–14. https://doi. org/10.1016/j.paid.2017.05.019
- Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic bias in self-perceptions: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, 66(6), 1025–1060. https://doi.org/10.1111/1467-6494.00041
- Paulhus, D. L. (1998). Intrapersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 74(5), 1197–1208. https://doi. org/10.1037/0022-3514.74.5.1197
- Paulhus, D. L. (2001). Normal narcissism: Two minimalist accounts. *Psychological Inquiry*, 12, 228– 230. https://doi.org/10.1207/S15327965PLI1204\_2
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556–563. https://doi. org/10.1016/S0092-6566(02)00505-6
- Potard, C., Lignier, B., & Henry, A. (2018). Psychometric properties of a French version of the Narcissistic Personality Inventory in young adults. *Swiss Journal of Psychology*, 77(1), 23–32. https:// doi.org/10.1024/1421-0185/a000204
- Raskin, R. N., & Hall, C. S. (1979). The narcissistic personality inventory. *Psychological Reports*, 45(2), 590. https://doi.org/10.2466/pr0.1979.45.2.590
- Rogoza, R., Rogoza, M., & Wyszyńska, P. (2016). Polska adaptacja modelu narcystycznego podziwu i rywalizacji [Polish adaptation of the Narcissistic Admiration and Rivalry Concept]. Polskie Forum Psychologiczne, 21, 410–431. https://doi.org/10.14656/PFP20160306
- Rogoza, R., Wyszyńska, P., Maćkiewicz, M., & Cieciuch, J. (2016). Differentiation of the two narcissistic faces in their relations to personality traits and basic values. *Personality and Individual Differences*, 95, 85–88. https://doi.org/10.1016/j.paid.2016.02.038
- Rogoza, R., Żemojtel-Piotrowska, M., Kwiatkowska, M. M., & Kwiatkowska, K. (2018). The bright, the dark, and the blue face of narcissism: The spectrum of narcissism in its relations to the metatraits of personality, self-esteem, and nomological network of shyness, loneliness and empathy. *Frontiers in Psychology*, 9, 343. https://doi.org/10.3389/fpsyg.2018.00343
- Rogoza, R., Żemojtel-Piotrowska, M., Rogoza, M., Piotrowski, J., & Wyszyńska, P. (2016). Narcissistic admiration and rivalry in the context of personality metatraits. *Personality and Individual Differences*, 102, 180–185. https://doi.org/10.1016/j.paid.2016.07.003
- Samuel, D. B., & Widiger, T. A. (2008). Convergence of narcissism measures from the perspective of general personality functioning. *Assessment*, 15(3), 364–374. https://doi. org/10.1177/1073191108314278



- Savard, C., Simard, C., & Jonason, P. K. (2017). Psychometric properties of the French-Canadian version of the Dark Triad Dirty Dozen. *Personality and Individual Differences*, 119, 122–128. https://doi.org/10.1016/j.paid.2017.06.044
- Stillman, P. E., Van Bavel, J. J., & Cunningham, W. A. (2015). Valence asymmetries in the human amygdala: Task relevance modulates amygdala responses to positive more than negative affective cues. *Journal of Cognitive Neuroscience*, 27(4), 842–851. https://doi.org/10.1162/jocn\_a\_00756
- Strus, W., & Cieciuch, J. (2017). Towards a synthesis of personality, temperament, motivation, emotion and mental health models within the Circumplex of Personality Metatraits. *Journal of Research in Personality*, 66, 70–95. https://doi.org/10.1016/j.jrp.2016.12.002
- Strus, W., Cieciuch, J., & Rowiński, T. (2014). The circumplex of personality metatraits: A synthesizing model of personality based on the Big Five. *Review of General Psychology*, 18(4), 273–286. https://doi.org/10.1037/gpr0000017
- Trzesniewski, K. H., Donnellan, M. B., & Robins, R. W. (2008). Is "generation me" really more narcissistic than previous generations? *Journal of Personality*, 76(4), 903–918. https://doi.org/10.1111/ j.1467-6494.2008.00508.x
- Utz, S., Tanis, M., & Vermeulen, I. (2012). It is all about being popular: The effects of need for popularity on social network site use. *Cyberpsychology, Behavior, and Social Networking*, 15(1), 37–42. https://doi.org/10.1089/cyber.2010.0651
- 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(2), 445–452. https:// doi.org/10.1016/j.paid.2007.09.007
- Visser, B. A., Pozzebon, J. A., & Reina-Tamayo, M. (2014). Status-driven risk taking: Another "dark" personality? *Canadian Journal of Behavioural Science*, 46(4), 485–496. https://doi.org/10.1037/ a0034163
- Vize, C. E., Lynam, D. R., Collison, K. L., & Miller, J. D. (2018). Differences among dark triad components: A meta-analytic investigation. *Personality Disorders: Theory, Research, and Treatment*, 9(2), 101–111. https://doi.org/10.1037/per0000222
- Wetzel, E., Leckelt, M., Gerlach, T. M., & Back, M. D. (2016). Distinguishing subgroups of narcissists with latent class analysis. *European Journal of Personality*, 30(4), 374–389. https://doi. org/10.1002/per.2062
- Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology*, 37(3), 395–412. https://doi.org/10.1037/0022-3514.37.3.395
- Wiggins, J. S. (1980). Circumplex models of interpersonal behavior. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 1, pp. 265–293). Beverly Hills, CA, USA: Sage.
- Wiggins, J. S., & Pincus, A. L. (1994). Agency and communion as conceptual coordinates for understanding and measurement of interpersonal behavior. In P. T. Costa & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (pp. 73–93). Washington, DC, USA: American Psychological Association.
- Wink, P. (1991). Two faces of narcissism. Journal of Personality and Social Psychology, 61(4), 590–597. https://doi.org/10.1037/0022-3514.61.4.590

