

Seeking a Common Framework for Research on Narcissism: An Attempt to Integrate the Different Faces of Narcissism Within the Circumplex of Personality Metraits

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Abstract: The current paper presents a proposal for integrating different narcissism constructs (grandiose, vulnerable, communal, and collective) within the Circumplex of Personality Metraits (CPM), an integrative model of personality structure that could also be used to accommodate the narcissism spectrum model. The study was conducted on a community sample ($N = 781$ adults). The theoretically predicted locations of the different narcissism constructs within the CPM space were empirically verified using the structural summary method. We found that grandiose, vulnerable, and communal narcissism can be meaningfully located within the CPM, while the status of collective narcissism remains unclear. Thus, the CPM can serve as a personality matrix explaining the differences and similarities between the various faces of narcissism. © 2019 European Association of Personality Psychology

Key words: grandiose narcissism; vulnerable narcissism; collective narcissism; communal narcissism; Circumplex of Personality Metraits

Narcissism is a construct with multiple faces, some of which appear contradictory, such as bold and entitled versus shy and anxious (Ackerman, Donnellan, Roberts, & Fraley, 2016; Dickinson & Pincus, 2003), and which form two predominant dimensions of narcissism, known as grandiose and vulnerable (Miller et al., 2011). Importantly, the narcissism spectrum model (NSM) proposed by Krizan and Herlache (2018) managed to integrate grandiose and vulnerable narcissism within one platform despite these seemingly mutually exclusive characteristics. We continue this approach and argue that the NSM itself can be meaningfully located within the Circumplex of Personality Metraits (CPM; Strus, Ciecuch, & Rowiński, 2014), which provides broad personality underpinnings for the well-established grandiose and vulnerable narcissism (already integrated within the NSM), while also accommodating other more recently developed and less established narcissism constructs, such as communal (Gebauer, Sedikides, Verplanken, & Maio, 2012) and collective (Golec de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009) narcissism, within one


personality framework. The current paper discusses this integration proposal, including its empirical verification.

The narcissism spectrum model

The NSM distinguishes three key dimensions: the nearly orthogonal vulnerability and grandiosity dimensions are separated by self-importance, which is a shared narcissism phenotype common to both vulnerable and grandiose narcissism (Krizan & Herlache, 2018). Therefore, the NSM defines narcissism as *entitled self-importance* (Krizan, 2018). The vulnerability and grandiosity dimensions are consistent with Wink's (1991) seminal work differentiating between vulnerable-sensitive and grandiose-exhibitionist forms of narcissism, with the former described as withdrawn, anxious, shy, defensive, insecure, and inadequate, and the latter as bold, charming, aggressive, dominant, and superior (Ackerman et al., 2016; Back et al., 2013; Back, Schmukle, & Egloff, 2010; Brown, Freis, Carroll, & Arkin, 2016; Hendin & Cheek, 1997; Miller et al., 2011; Miller, Lynam, Hyatt, & Campbell, 2017; Rose, 2002; Wink, 1991). Although there is a general agreement that these two NSM dimensions represent different phenotypical forms of narcissism (Miller et al., 2011), they are generally uncorrelated in empirical studies (Foster, McCain, Hibberts, Brunell, & Johnson, 2015; Hendin & Cheek, 1997; Wink, 1991), which raises the question as to why they should be given the same label. Krizan and Herlache (2018) addressed this concern arguing that, despite being uncorrelated, the two dimensions share a common feature of self-importance, which is central to the narcissism spectrum.

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All of the data and syntaxes used for the analyses presented within the paper are stored at the Open Science Repository, which is available at the link https://osf.io/2zbvs/?view_only=8b56bf1e32d147a5a673f0c3494d25ff.

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Another advantage of the NSM is that it can incorporate other theoretical models of narcissism, such as the Narcissistic Admiration and Rivalry Concept (NARC; Back et al., 2013). The NARC has demonstrated its utility in differentiating the role of admiration (which corresponds to the NSM grandiosity dimension) and rivalry (which corresponds to the NSM self-importance dimension) in explaining envy, forgiveness, self-esteem, and values, for example (Back, 2018; Fatfouta, Zeigler-Hill, & Schröder-Abé, 2017; Geukes et al., 2017; Lange, Crusius, & Hagemeyer, 2016; Rogoza, Wyszynska, Maćkiewicz, & Ciecuch, 2016). The self-importance dimension reflects egotism, a sense of entitlement, and the belief that one deserves special treatment (Krizan & Herlache, 2018). According to the NSM, this dimension can be perceived to be the psychological core of narcissism because empirical studies have linked entitlement to both vulnerability and grandiosity (Miller et al., 2011; Miller et al., 2017). With self-importance at the centre, the natural expectation is that the other two narcissistic phenotypes would be adjacent to it. However, the observed organization of these phenotypes is dependent on temperamental strength—reactive and avoidant in vulnerability, and bold and approaching in grandiosity (Krizan & Herlache, 2018). In the NSM, the distance between these dimensions can be expressed in degrees; in the mathematical sense, vulnerability is almost orthogonal to grandiosity at an angle of nearly 90°, which has been supported by numerous empirical studies (e.g. Hendin & Cheek, 1997; Miller, et al., 2014; Wink, 1991). When the angle between the grandiosity and vulnerability dimensions exceeds 90°, the relationship between narcissistic features starts to be negative, which can be interpreted as an expression specific to a given form of narcissism (Krizan & Herlache, 2018). In summary, the NSM organizes individual differences in vulnerable, entitled, and grandiose narcissistic traits within a meaningful semicircular structure (Krizan & Herlache, 2018).

Narcissism constructs not captured by the narcissism spectrum model

Despite the fact that the NSM provides a promising perspective for research on grandiose and vulnerable narcissism and provides a theoretical space for NARC (Back et al., 2013), it fails to capture other recently developed constructs and theoretical models of narcissism such as the Agency-Communion (A-C; Gebauer et al., 2012) and Individual-Collective (I-C) models of narcissism (Golec de Zavala et al., 2009). Thus, whereas the NSM successfully integrates the most renowned forms of narcissism (i.e. grandiose, entitled, and vulnerable), it does not embrace other narcissistic constructs, such as communal (from the A-C model) and collective narcissism (from the I-C model), which have recently appeared in other fields of psychology. Further, these new constructs have already been used to explain other personality and social phenomena; therefore, understanding the relationship between the classic and new forms of narcissism is becoming more imperative. The current study is the first to systematically investigate this large array of narcissistic constructs.

Communal narcissism

This construct in the A-C model of narcissism is interpreted as an agentic trait fulfilling the same self-motives as grandiose narcissism but using communal rather than agentic means (Gebauer et al., 2012). This implies that while narcissism is all about grandiosity, entitlement, and power, these motives can be realized either in the agentic domain (e.g. by being entitled and exploitative) or alternatively in the communal domain (e.g. by being helpful and trustworthy in order to be admired by others for being helpful and trustworthy). Pincus et al. (2009), who was the first to study communal aspects of narcissism [in form of the Self-Sacrificing Self-Enhancement (SSSE) subscale of the Pathological Narcissism Inventory (PNI), providing empirical evidence that it projects onto the communal side of the interpersonal problems circumplex] found out that it is the only subscale to positively correlate with a coded measure (i.e. chart review of patient data) of homicidal ideation. Thus, although communal qualities may appear to contradict the definition of narcissism, they in fact constitute false and superficial expressions of the underlying agentic motives (Gebauer & Sedikides, 2017).

Collective narcissism

The I-C model assumes that individual narcissism (i.e. grandiose narcissism) can be successfully extended into the intergroup domain (Golec de Zavala et al., 2009). In this approach, collective narcissism is defined as ‘in-group identification tied to an emotional investment in an unrealistic belief about the unparalleled greatness of an in-group’ (Golec de Zavala et al., 2009, p. 1074). It introduces new theoretical insight into the research of narcissism as it is different from the previously described forms and predicts different outcomes such as social dominance orientation, right-wing authoritarianism, blind patriotism, and out-group hostility (Golec de Zavala et al., 2009; Golec de Zavala, Cichocka, & Iskra-Golec, 2013). As collective narcissism affects the intergroup domain (Golec de Zavala et al., 2009), it might be interpreted that the ego of collective narcissists is simply too weak to be expressed in an individual form, as it finds the strength it lacks via group identification. Nevertheless, collective narcissism can be still interpreted as entitled and self-important (according to Krizan and Herlache’s, 2018, definition of narcissism), while the differences between collective and other forms of narcissism can be seen in their manifestations, which may be caused by temperamental and personality underpinnings.

THE Circumplex of Personality Metraits AS A FRAMEWORK FOR THE INTEGRATION OF NARCISSISM CONSTRUCTS

While the NSM (Krizan & Herlache, 2018) was the first attempt to organize different forms of narcissism ranging from vulnerability to grandiosity, literature describes numerous expressions of narcissism that are not captured by this spectrum (such as communal and collective narcissism), and thus the question arises as to what is the relationship between these constructs. The interpretations of communal

and collective narcissism provided earlier suggest that entitled self-importance is also present in these forms of narcissism. Moreover, the NSM focuses on narcissistic traits and individual differences, so it is unclear how the NSM is related to broader models aimed at synthesizing the description of personality structure. There are a few examples supporting the need for such exploration in the personality literature: (i) Leary (1957) was probably the first to demonstrate that agency and communion can be used to describe narcissism (Bakan, 1966; Wiggins, 1979); (ii) Paulhus (2001) proposed the Big Five Model of Narcissism where he argued that personality traits can synthesize into an emergent personality type equivalent to narcissism; (iii) Rogoza, Żemojtel-Piotrowska, Kwiatkowska, and Kwiatkowska (2018) argued that the metatraits of personality from the Two-Factor Model of personality (i.e. Plasticity and Stability; Cieciuch & Strus, 2017; Digman, 1997; DeYoung, Peterson, & Higgins, 2002) can also be used to advance research on narcissism. These models, interpretations, and empirical results make the question of the relation between the NSM and other broader personality models even more important. The NSM is not directly related to the models mentioned earlier; however, the CPM (Strus & Cieciuch, 2017; Strus, Rowiński & Cieciuch, 2014) makes such an integration possible.

First, the CPM model is based on two higher-order factors (i.e. metatraits), Alpha/Stability and Beta/Plasticity (Cieciuch & Strus, 2017); thus, it corresponds to the metatrait

perspective on narcissism (Rogoza et al., 2018). Second, the CPM was derived from Big Five research (Strus et al., 2014), and thus, it coincides with the Big Five Model of Narcissism (Paulhus, 2001). Third, Plasticity corresponds to agentic, and Stability corresponds to communal orientation (Paulhus & John, 1998), which is also supported in research suggesting a large overlap between agency and Plasticity, as well as between communion and Stability (Gebauer, Paulhus, & Neberich, 2013); thus, the CPM can dovetail the agency and communion model of personality (Wiggins, 1979).

Within the CPM, Alpha/Stability and Beta/Plasticity are the foundations of the model, and they are treated as orthogonal axes of a circumplex structure. The advantage of the CPM, in comparison with the other models, is (i) the supplementation by two other metatraits forming two additional axes, Gamma/Integration and Delta/Self-Restraint, that together with their negative poles form eight personality metatraits; and (ii) the theoretical meaning of these eight metatraits as a matrix for the interpretation of many psychological constructs from different areas (Strus & Cieciuch, 2017). Both the CPM model and its integrative potential have been demonstrated in empirical studies (e.g. Strus & Cieciuch, 2017). From the point of view of the current study, it is worth noting that the results obtained to date suggest that theoretical expectations for the location of neuroticism should be updated. In particular, neuroticism should be moved from the Alpha/Stability versus Disinhibition where it was originally expected to the Gamma/Integration versus

Table 1. Meaning of the eight metatraits in the Circumplex of Personality Metatraits

Metatrait	Big Five configuration	Meaning
Delta-Plus (Self-Restraint)	E−, O−, A+, C+ (N ₀)	Low emotionality (both negative and positive), high behavioural control, a tendency to adjust oneself (cf. Becker, 1999), conformism (cf. DeYoung et al., 2002), and conventionality.
Alpha-Plus (Stability)	N−, A+, C+ (E ₀ , O ₀)	Stability in the area of emotional, motivational, and social functioning (DeYoung et al., 2002), expressed as a general social adaptation tendency (Digman, 1997; Simsek, 2014), an ethical attitude towards the world, the ability to delay gratification and motivate oneself, and perseverance (cf. Becker, 1999).
Gamma-Plus (Integration)	N−, E+, O+, A+, C+	Well-being, a warm and prosocial attitude towards people, both intrapersonal and interpersonal harmony, openness to the world in all its richness, and effectiveness in attaining important goals (cf. Becker, 1999; Musek, 2007; Rushton & Irving, 2011).
Beta-Plus (Plasticity)	N−, E+, O+ (A ₀ , C ₀)	Cognitive and behavioural openness to change and engagement in new experiences, a tendency to explore (DeYoung et al., 2002), initiative and invention in social relations, as well as an orientation towards personal growth (Digman, 1997; cf. Becker, 1999; Simsek, 2014).
Delta-Minus (Sensation Seeking)	E+, O+, A−, C− (N ₀)	Broadly defined impulsiveness, high emotional lability, stimulation seeking, provocativeness, and expansiveness in interpersonal relations (cf. Becker, 1999; DeYoung, Peterson, Seguin, & Tremblay, 2008; 2010; Zuckerman, 1979).
Alpha-Minus (Disinhibition)	N+, A−, C− (E ₀ , O ₀)	High level of antisocial tendencies underpinned by unrestraint and low frustration tolerance, as well as aggression and antagonism towards people, social norms, and obligations (cf. Becker, 1999; Settles et al., 2012).
Gamma-Minus (Disharmony)	N+, E−, O−, A−, C−	Inaccessibility (distrust, coldness, distance) in interpersonal relationships, depressiveness, pessimism, and proneness to suffer from psychological problems (cf. Becker, 1999; Musek, 2007; Rushton & Irving, 2011).
Beta-Minus (Passiveness)	N+, E−, O− (A ₀ , C ₀)	Apathy, submissiveness in interpersonal relations, cognitive and behavioural passivity, as well as some type of inhibition and stagnation (cf. Becker, 1999).

Note: For abbreviations, see Figure 1; 0 = medium level of trait intensity (adopted from Strus & Cieciuch, 2017).

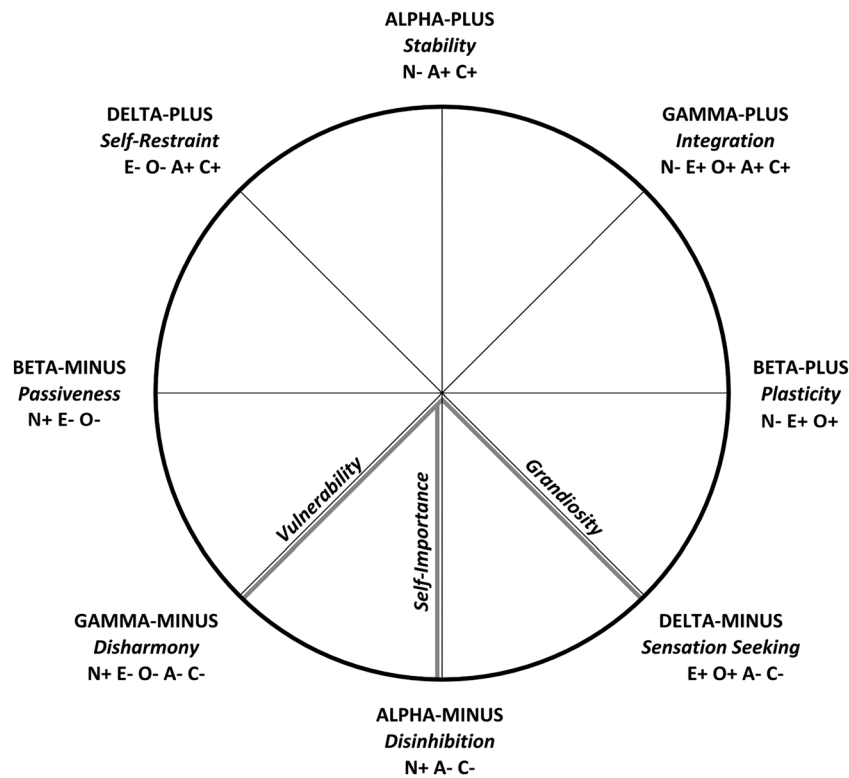


Figure 1. Graphical representation of the Circumplex of Personality Metatraits (Strus et al., 2014; black) and the narcissism spectrum model (Krizan & Herlache, 2018; grey). Note. N, Neuroticism; E, Extraversion; O, Openness to experience; A, Agreeableness; C, Conscientiousness. Location of N in the CPM is in concordance with the empirical results obtained by Strus and Ciecuch (2017).

Disharmony metatrait where empirical evidence suggests it may be located (Strus & Ciecuch, 2017). Table 1 presents the descriptive definitions of the revised metatraits, and Figure 1 presents a graphical representation of the revised model. Because the CPM has already demonstrated its utility in synthesizing different constructs such as basic values, affect, mental health, and temperament, within one personality framework (Strus & Ciecuch, 2017) one can expect that it may also be a promising approach to study narcissism.

How can the Circumplex of Personality Metatraits contribute to the integration of narcissism?

The CPM was inspired by the Five Factor Model (FFM) of personality (McCrae & Costa, 1997), but it is not simply a re-organization of the information from the FFM. Three issues are worth noting. First, the CPM is more parsimonious compared with FFM because the five-dimensional space of FFM is transformed into a two-dimensional space. Second, the theoretical potential of the two basic orthogonal axes Alpha/Stability and Beta/Plasticity is likely to be very high because these dimensions contain all the theoretical meaning from the Two-Factor Model of personality (Ciecuch & Strus, 2017), and many dual constructs corresponding to the Two-Factor Model also play an important theoretical role in the Cybernetic Big Five Theory proposed by DeYoung (2015). Third, turning the coordinate system of Alpha/Stability and Beta/Plasticity into a circumplex structure with eight metatraits with precisely defined

psychological content and angular locations makes it possible both to theorize about the relations between many constructs at different personality levels and to empirically test the corresponding hypotheses regarding the precisely formulated angles and coordinates.

As a consequence, the CPM offers two opportunities not provided by other models for theory and research. First, it provides the possibility to grasp the comprehensive personality underpinnings for various psychological constructs in terms of the broadest personality dimensions and to understand the former in light of the latter. Second, the CPM creates the opportunity to capture, clarify, and systematize the relationships between a very broad range of various psychological constructs and different theoretical models. Thus, its application in the field of narcissism research may help to integrate various theoretical models of narcissism.

We should be clear that the goal of the current study is not to replace the NSM (Krizan & Herlache, 2018) with the CPM (Strus et al., 2014), but rather, we aim to use the framework provided by the CPM to improve our understanding of narcissism and therefore to enrich the NSM. The CPM serves as a theory-based tool that can be used for the detection of mutual relations between the different theoretical models of narcissism and to predict their relations to other psychological constructs. Moreover, the CPM can be expressed in the same formal language as the NSM. Namely, we can hypothesize about the relations between variables, and we can also hypothesize about how whole models of narcissistic personalities are related one to another (which is not possible in the

case of the FFM). Knowing the latter, the CPM provides a necessary theoretical background required for the integration of theoretical knowledge originating from different branches of research on narcissism and as an effect—can advance narcissism theory by providing a common personality framework for many various forms of narcissism even if they have nothing in common at first glance.

LOCATING THE NARCISSISM SPECTRUM MODEL WITHIN THE CIRCUMPLEX OF PERSONALITY METATRAITS

Both the NSM (Krizan & Herlache, 2018) and the CPM (Strus et al., 2014; Strus & Cieciuch, 2017) are theoretical models that enable the integration of different constructs within one comprehensive framework, with the NSM focusing on narcissism dimensions and the CPM on a wide range of constructs from many areas of psychology, thus offering a matrix for far-reaching integration. The question arises here as to the relationship between the two models. One of the key assumptions underlying the NSM is temperamental differences, namely, the grandiose and vulnerability dimensions are hypothesized as high approach and high avoidance orientations, respectively. This has been confirmed empirically by establishing correlations between grandiosity and behavioural activation sensitivity and between vulnerability and behavioural inhibition sensitivity (Krizan & Herlache, 2018). Analysis of the same temperamental traits within the CPM yielded identical results for the dimensions of grandiosity and vulnerability, that is, a 90° angle (Krizan & Herlache, 2018), ranging from Gamma-Minus/Disharmony (avoidance) to Delta-Minus/Sensation Seeking (approach; Strus & Cieciuch, 2017).

Moreover, the NSM (Krizan & Herlache, 2018) can be interpreted in terms of its relations with the basic personality traits. Indeed, decades of empirical research on narcissism have led to three conclusions: (i) the core trait of narcissism (representing self-importance) is low agreeableness (Back et al., 2013; Muris, Merckelbach, Otgaar, & Meijer, 2017; Miller & Maples, 2011; Paulhus, 2001; Rogoza, Żemojtel-Piotrowska, Rogoza, Piotrowski, & Wyszynska, 2016; Rogoza, 2018); (ii) the distinctive trait of vulnerability but not grandiosity is neuroticism (i.e. it is positively related to the former and not related to the latter; Hendin & Cheek, 1997; Jauk, Weigle, Lehmann, Benedek, & Neubauer, 2017; Miller, Lynam, Hyatt, & Campbell, 2017; Miller, Lynam, Vize, et al., 2017); and (iii) the farther the NSM narcissisms move away from the core towards grandiosity or vulnerability, the greater the role of extraversion (high in grandiosity and low in vulnerability; Campbell & Miller, 2013; Hendin & Cheek, 1997; Houlcroft, Bore, & Munro, 2012; Miller et al., 2010; Miller, Lynam, Hyatt, & Campbell, 2017; Rogoza et al., 2018). Thus, within the CPM, the core of narcissism as identified by the NSM (i.e. the entitled self-importance; Krizan, 2018) could be viewed as located in Alpha-Minus/Disinhibition, while the basic dimension differentiating between vulnerable and grandiose forms of narcissism can be interpreted as the Beta-Plus/Plasticity and

Beta-Minus/Passiveness metatraits. As a result, the proposed location of the NSM within the CPM is consistently in accordance with all research conclusions discussed earlier. Figure 1 depicts the proposed location of the NSM within the CPM.

These expectations were already mentioned by Krizan and Herlache (2018), and, importantly, they can be successfully transferred to the CPM because the angles between grandiosity and vulnerability in the NSM are similar to those between Delta-Minus/Sensation Seeking and Gamma-Minus/Disharmony (Strus et al., 2014). Thus, we predict that the NSM dimensions correspond to metatraits ranging from Gamma-Minus/Disharmony (vulnerability) to Delta-Minus/Sensation Seeking (grandiosity) through Alpha-Minus/Disinhibition (self-importance), and that the differences between these dimensions can be described by using the Beta/Plasticity and Beta/Passiveness metatraits.

LOCATING COMMUNAL AND COLLECTIVE NARCISSISM WITHIN THE CIRCUMPLEX OF PERSONALITY METATRAITS

Before locating communal and collective narcissism within the CPM, some basic theoretical assumptions regarding the CPM model should be noted. Generally, the Alpha metatrait includes the meaning of emotional-motivational and social stability, as well as general social adaptation tendencies (Alpha-Plus/Stability) versus disinhibition with antagonism and antisocial tendencies, and likely self-importance (Alpha-Minus/Disinhibition). Therefore, narcissism is likely to be located in the Alpha-Minus area of the CPM (i.e. below the line of the Beta metatrait), and the area of Alpha-Plus (i.e. above the Beta line) is a communal, anti-narcissistic space. However, narcissism can be interpreted as deep self-injury, and research on its communal and collective faces suggests that in special circumstances narcissism could be manifested in socially adjusted forms. On the other hand, the socialization or social self-regulation meaning of the Alpha-Plus metatrait (Cieciuch & Strus, 2017) could be true, although superficial or general (and measured by self-descriptive measures), with some underlying complex personality dynamics. In other words, the area of Alpha-Minus is always antagonistic and often self-important and narcissistic. Alpha-Plus is always socialized and socially self-regulated, but it can also include the socialized faces of narcissism (i.e. communal and collective narcissism).

Communal narcissism

This construct is positively associated with grandiosity and is unrelated to self-reported self-importance (Fatfouta et al., 2017), which suggests that it should be located next to the metatrait Beta-Plus/Plasticity rather than next to Alpha-Minus/Disinhibition. The correlational pattern of communal narcissism with the basic personality traits (Gebauer et al., 2012) corresponds to the most socially desirable blend at the self-reported level (i.e. high extraversion, openness, conscientiousness, agreeableness, and low neuroticism), which is typical of Gamma-Plus/Integration (Musek, 2007; Strus & Cieciuch, 2017). Also, as communal narcissism is defined as an A-C trait (Gebauer et al., 2012), which

overlaps with high Plasticity and high Stability (Cieciuch & Strus, 2017; Gebauer et al., 2013), its place is likely to be opposite to that of vulnerable narcissism (at Gamma-Minus/Disharmony) and adjacent to grandiose narcissism (at Delta-Minus/Sensation Seeking) and thus placed close to Gamma-Plus/Integration.

Collective narcissism

Efforts to locate collective narcissism are mostly theory based as there is no empirical evidence concerning its relationship with personality traits. The only hint can be found in its positive but weak link to grandiose narcissism (Golec de Zavala, Cichocka, & Iskra-Golec, 2013). On the contrary, however, Golec de Zavala (2018, p. 79) claimed that 'collective narcissists engage in intergroup hostility to protect their vulnerable self-worth invested in in-group's exaggerated greatness', suggesting its link to vulnerable narcissism. The distinctive feature of collective narcissism, which is not present in different forms of narcissism, is that it is expressed indirectly, through other people (Golec de Zavala et al., 2009). This may imply that collective narcissists are too weak to express themselves and need a strong group to offer a natural defence of their vulnerable self-worth (Golec de Zavala, 2018). Hiding behind other people and their conventions, such individuals may be described as withdrawn and closed to new experiences and ideas, which corresponds to the metatrait Beta-Minus/Passiveness (Strus & Cieciuch, 2017). At the same time, being rigid, they perceive in-group members to be tolerant and socialize within the in-group and respect group norms (Golec de Zavala, 2011), which can also indicate agreeableness. Thus, collective narcissism may be expected to occur in greater proximity to Delta-Plus/Self-Restraint than to other metatraits (Strus & Cieciuch, 2017).

CURRENT STUDY

The data, the syntaxes, and the codebook presenting measures and procedures are available at <https://osf.io/2zbvs/>. The current study set out to empirically test the possibility of integrating multiple narcissism constructs within the space delineated by the personality metatraits as defined under the CPM. Our predictions regarding the hypothesized locations of the various narcissism constructs within the CPM are specified subsequently.

Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013)

The Narcissistic Admiration and Rivalry Questionnaire (NARQ) measures two distinct narcissistic dimensions, self-enhancing admiration and self-defensive rivalry (Back, 2018). Whereas admiration corresponds to the grandiose expression of narcissism, rivalry underlies its malevolent and entitled nature. According to Krizan and Herlache (2018), the NARQ is the best available marker of self-entitlement (rivalry) and a good marker of grandiosity (admiration) and is the recommended scale for exploring these features of the spectrum. In an empirical study comparing the NARQ dimensions with personality metatraits, Rogoza, Žemojtel-

Piotrowska, et al. (2016) found that admiration was more strongly related to Beta-Plus/Plasticity and rivalry was more strongly related to Alpha-Minus/Disinhibition. Because in the NSM framework grandiose narcissism reflects the grandiosity dimension expected to be found near the metatrait Delta-Minus/Sensation Seeking metatrait, general narcissism measured by the NARQ, which is a function of admiration and rivalry, is also thought to be found there. In turn, because admiration reflects achieving social status through self-promotion, and rivalry refers to an antagonistic means of protecting oneself from failure (Back et al., 2013), in addition to being related to Delta-Minus/Sensation Seeking, admiration is hypothesized to be located near Beta-Plus/Plasticity, and rivalry near Alpha-Minus/Disinhibition.

Narcissistic Personality Inventory-13 (Gentile et al., 2013)

The Narcissistic Personality Inventory-13 (NPI-13) is an abridged form (Gentile et al., 2013) of the classical Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). It measures the facets of narcissism distinguished in the theoretical model of Ackerman et al. (2011): adaptive narcissism being represented by Leadership/Authority, and maladaptive narcissism by the intrapersonal cluster of Grandiose Exhibitionism and the interpersonal cluster of Entitlement/Exploitativeness. Despite being the most popular measure of narcissism (Ackerman et al., 2016), Krizan and Herlache (2018) suggested that among its three factors, only Grandiose Exhibitionism could be treated as a good marker of narcissistic grandiosity, and thus it is expected to be located near Delta-Minus/Sensation Seeking. Although there is general agreement that Entitlement/Exploitativeness represents the most malevolent aspect of NPI-measured narcissism (Ackerman et al., 2011), suggesting a location near Alpha-Minus/Disinhibition, the status of Leadership/Authority is not clear. It should be noted that while Ackerman et al. (2011) posited that Leadership/Authority was the most adaptive component of narcissism, in Emmons's (1987) seminal work, it was moderately positively linked to Entitlement/Exploitativeness, and NPI studies conducted using different response formats demonstrated that leadership and manipulativeness may emerge from the very same factor (Ackerman et al., 2016). Given the aforementioned data, it is hard to make strong predictions, but Leadership/Authority might be hypothesized to be located near Delta-Minus/Sensation Seeking.

Short Dark Triad (Jones & Paulhus, 2014)

The Short Dark Triad is a brief measure (Jones & Paulhus, 2014) of the Dark Triad traits (Paulhus & Williams, 2002), which include grandiose narcissism. Thus, in the current study, we expect it to be located near Delta-Minus/Sensation Seeking metatrait.

Dark Triad Dirty Dozen (Jonason & Webster, 2010)

The Dark Triad Dirty Dozen is another brief measure of the Dark Triad traits (Paulhus & Williams, 2002) inspired by Raskin and Hall's (1979; Raskin & Terry, 1988) seminal work on the NPI. The Dark Triad Dirty Dozen measures

the general grandiose narcissistic expression, and thus it is expected to emerge near Delta-Minus/Sensation Seeking.

Hypersensitive Narcissism Scale (Hendin & Cheek, 1997)

The Hypersensitive Narcissism Scale (HSNS) is a brief unidimensional measure of vulnerable narcissism (Hendin & Cheek, 1997). It captures anxiety and hypersensitivity, withdrawal, and feelings of being neglected, with items selected on the basis of their correlations with the Minnesota Multiphasic Personality Inventory (MMPI) narcissistic personality disorder scale. In line with Krizan and Herlache's (2018) suggestion that the HSNS is a good marker of narcissistic vulnerability, it is hypothesized to be a general indicator of Gamma-Minus/Disharmony.

Pathological Narcissism Inventory (Pincus et al., 2009)

This multidimensional instrument measures pathological expressions of vulnerable (PNI-V) and grandiose (PNI-G) narcissism (Pincus et al., 2009). The PNI-V consists of Contingent Self-Esteem, Hiding the Self, Devaluing, and Entitlement Rage, while the PNI-G includes Exploitativeness, SSSE, and Grandiose Fantasies (Wright, Lukowitsky, Pincus, & Conroy, 2010). According to Wright and Edershile (2018), the PNI-V is considered to primarily capture vulnerability with some elements of self-importance, while the PNI-G is considered to primarily capture self-importance, with elements of both vulnerability and grandiosity.

Among the scales associated with the PNI-V, Devaluing (e.g. 'Sometimes I avoid people because I'm concerned that they'll disappoint me') seems to be the least oriented towards socializing with other people, which is why it is expected to be found between Gamma-Minus/Disharmony and Beta-Minus/Passiveness. The next two scales of the PNI-V, Hiding the Self (e.g. 'I often hide my needs for fear that others will see me as needy and dependent') and Contingent Self-Esteem (e.g. 'I am preoccupied with thoughts and concerns that most people are not interested in me') represent a combination of heightened anxiety and withdrawal, which makes them typical indicators of vulnerability that should appear in the vicinity of Gamma-Minus/Disharmony. Finally, the last PNI-V scale, Entitlement Rage (e.g. 'I get mad when people do not notice all that I do for them'), measures the internalized expression of antagonism, which suggests a position between Gamma-Minus/Disharmony and Alpha-Minus/Disinhibition. The first scale of the PNI-G, Exploitativeness (e.g. 'I find it easy to manipulate people') is also associated with antagonism, but in a more externalizing manner, which is why it is predicted to be located between Delta-Minus/Sensation Seeking and Alpha-Minus/Disinhibition. The expectation for this position is also justified by the fact that all of these items were derived from the NPI item capturing Entitlement/Exploitativeness (Pincus et al., 2009). Because Grandiose Fantasies reflect a self-absorption typical of grandiose narcissism, this dimension seems to capture a specific aspect of grandiose narcissism and is hypothesized to be located near Delta-Minus/Sensation Seeking. Finally, the last scale of the PNI-G, SSSE (e.g. 'I help others in order to prove I'm a good person') is most strongly oriented towards other people, and so it is

expected to appear between Delta-Minus/Sensation Seeking and Beta-Plus/Plasticity.

Personality Inventory for DSM-5 (Krueger, Derringer, Markon, Watson, & Skodol, 2012)

The current study utilizes two Personality Inventory for DSM-5 subscales, namely, Attention Seeking and Grandiosity, designed to capture the pathological features of narcissism. Although these scales have not been analysed in the context of the NSM, owing to their connections to narcissistic personality disorder (Miller, Lynam, Hyatt, & Campbell, 2017), they are highly saturated with grandiose expressions of narcissism and are thus predicted to be positioned near Delta-Minus/Sensation Seeking.

Communal Narcissism Inventory (Gebauer et al., 2012)

This unidimensional measure taps the communal expressions of agentic narcissism. Specifically, despite reflecting warmth, trust, and helpfulness, it is positively related to typical indicators of agency, such as psychological entitlement, grandiosity, and power (Gebauer et al., 2012). As the Communal Narcissism Inventory items refer to very positive characteristics (e.g. 'I will bring freedom to the people and I will be able to solve world poverty'), it seems that a self-reported measure should locate communal narcissism near Gamma-Plus/Integration.

Collective Narcissism Scale (Golec de Zavala et al., 2009)

This is a unidimensional measure of collective narcissism. Given that ultimately narcissism is always negatively oriented towards other people, it was necessary to disentangle the narcissistic part of in-group identification from constructive identification. Golec de Zavala, Cichocka, and Bilewicz (2013) provided support for this hypothesis by demonstrating that although collective narcissism had a positive relation with collective self-esteem, strength of national identification, and positive national group identification, among all of these variables, only collective narcissism turned out to be a positive predictor of out-group negativity. Moreover, Golec de Zavala (2018) argued that collective narcissism is associated with vulnerable feelings of self-worth, which is protected by investment in in-group identification. Moreover, the Collective Narcissism Scale items reflect an abandonment of the individual self for the group (e.g. 'I insist upon my group getting the respect that is due to it' and 'If my group had a major say in the world, the world would be a much better place'), which is in line with the phenotypical descriptors of Delta-Plus/Self-Restraint (i.e. conformism and conventionality).

Metatraits

The personality metatraits distinguished under the CPM (Table 1; Strus et al., 2014), which provide the underlying matrix for the location of narcissism constructs, were measured with the CPM Questionnaire—a shortened form of the questionnaire used by Strus and Ciecuch (2017). The instrument used in the current study consists of 72 items (nine per scale) on which respondents rate themselves using a 5-point Likert scale.

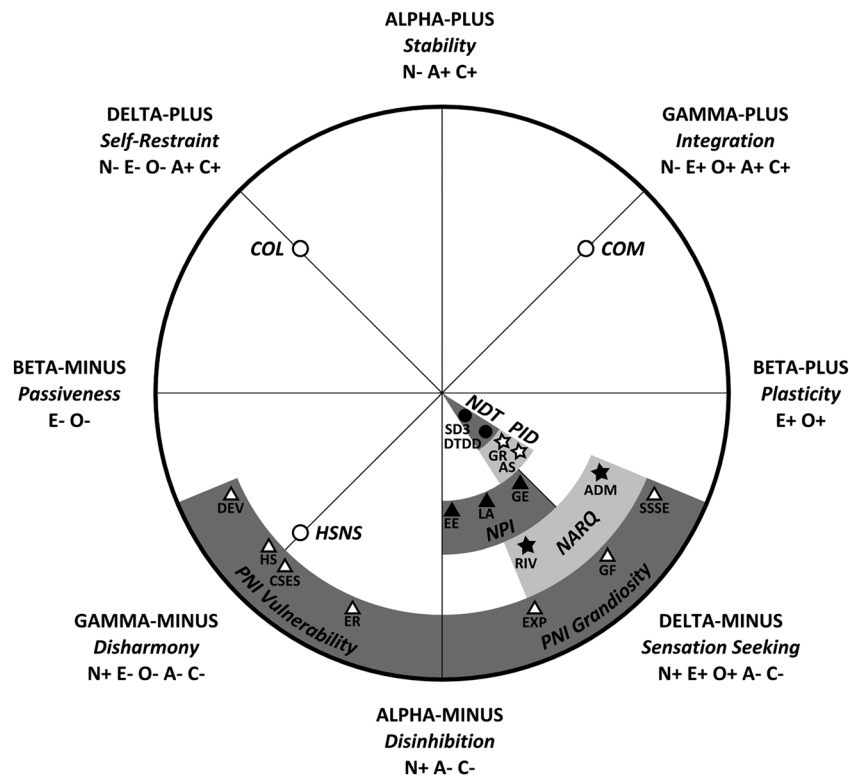


Figure 2. Graphical representation of the hypothesized locations of the various narcissism constructs. Note. PNI, Pathological Narcissism Inventory; DEV, Devaluing; HS, Hiding the Self; CSES, Contingent Self-Esteem; ER, Entitlement Rage; EXP, Exploitativeness; GF, Grandiose Fantasies; SSSE, Self-sacrificing Self-Enhancement; NARQ, Narcissistic Admiration and Rivalry Questionnaire; RIV, Rivalry; ADM, Admiration; NPI, Narcissistic Personality Inventory; EE, Entitlement/Exploitativeness; LA, Leadership/Authority; GE, Grandiose Exhibitionism; PID, Personality Inventory for *DSM-5*; GR, Grandiosity; AS, Attention Seeking; HSNS, Hypersensitive Narcissism Scale; NDT, Narcissism from the Dark Triad; SD3, Short Dark Triad; DTDD, Dark Triad Dirty Dozen; COM, Communal Narcissism; COL= Collective Narcissism; N, Neuroticism; E, Extraversion; O, Openness to Experience; A, Agreeableness; C, Conscientiousness. To maintain score comparability, a 6-point Likert scale was used for all of the narcissism measures (except for NPI-13, which has a forced-choice response format). Location of N in the CPM is in concordance with the empirical results obtained by Strus and Ciecuch (2017).

Summary of hypotheses

A summary of our expectations concerning the location of the various narcissism constructs, as measured by the scales dedicated to them, within the space delineated by personality metraits is given in Figure 2.

Participants and procedure

Participants were $N = 781$ adults from a Polish community sample ($M_{age} = 46.35$; $SD_{age} = 15.44$; 57.5% women). This sample is representative of the general Polish population in terms of age and gender. More than one-third (35.3%) of participants resided in villages, with the rest living in small cities (up to 20 000 residents; 12.8%), medium-sized cities (20 000–100 000 residents; 20%), large cities (100 000–500 000 residents; 19.8%), and very large cities (>500 000 residents; 12%). Most participants had completed secondary education (50.6%), only a small percentage (10.9%) had primary education, and the remaining individuals (38.5%) have tertiary education. Most respondents rated their socio-economic status as neither good nor bad (34.4%), with the other responses being very bad (3.3%), bad (7%), rather bad (13.3%), rather good (29.6%), good (10.8%), and very good (1.5%). Respondents completed all the measures in a single session. Most participants were in a romantic relationship, both informal (18.6%) and formal (58.1%).

Respondents rated their self-esteem (assessed by Single-Item Self-Esteem Scale; Robins, Hendin, & Trzesniewski, 2001) as rather good ($M = 4.50$; $SD = 1.44$; $Max = 7$). We did not gather data on race and ethnicity, because as according to the Polish Ministry of the Interior and Administration, Poland is homogenous country with over 95% of residents being Caucasians speaking Polish. The questionnaires were presented in a random order. Data were collected by the Ariadna online data collection system. The sample size was not based on an a priori power analysis; rather, the study was available online for a fixed 1-week period.

Statistical analyses

Following Tracey’s (2000) recommendations, we analysed the assumed circumplex structure using different statistical procedures. (i) We began our analyses with an attempt to confirm the assumed circumplex structure of the metraits; (ii) next, we assessed whether different narcissism scales follow a sinusoidal pattern of relations to personality metraits; and (iii) we plotted the narcissism scores on the circumplex space of the CPM. The analyses were carried out in two rounds: an assessment of the broader general narcissism scales was followed by in-depth investigation of the more specific scales.

The confirmation of the circumplex structure was first tested using CircE (Grassi, Luccio, & Di Blas, 2010)—an R package designed to imitate CIRCUM (Browne, 1992), a specialized programme evaluating circumplex models using structural equation modelling (SEM). The results of CircE provide a confirmatory test of four circumplex models differing in terms of constraints. In the most constrained model, the circumplex structure is constrained to have equal communalities for all scales (i.e. it has an equal radius at each scale point) and equal spacing between the scales (e.g. 45° in eight-scale circumplex; Trucco, Wright, & Colder, 2013). The next two consecutive models are less stringent as they release one of the constraints. Specifically, the model can be constrained to have equal radii but not spacing or to have equal spacing but not radii. Finally, the fourth model is an unconstrained model in which neither the radii nor the spacing is constrained (Grassi et al., 2010; Trucco et al., 2013). The model is evaluated using standard SEM fit indices (i.e. Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA)). The conventional recommendation suggests that the CFI should exceed 0.900 and the RMSEA should not exceed 0.080 (Byrne, 1994). These criteria were recommended for standard measurement models and not for the assessment of circumplex models, in which high correlations between proximal variables are expected. In such situations, RMSEA values may be biased and should be interpreted with more caution (Sarlis, Satorra, & van der Veld, 2009; Steiger, 2000). We also considered an indicator for communality that consisted of the explained variance coefficients for each variable; thus, it describes the communality (or matching) of particular constructs in the two-factor space of the CPM model. Moreover, as the compared models are nested in terms of their constraints, we compared model fit using a chi-square difference test ($\Delta\chi^2$; Bollen, 1989) supplemented by the Akaike information criterion (AIC; Akaike, 1973). A significant $\Delta\chi^2$ and lower values of AIC suggest that the model explains the data better.

Subsequently, we tested whether the correlation coefficients between narcissism constructs and personality metatraits were organized within a meaningful circumplex structure; namely, did the correlations in the matrix drop and rise in magnitude as one moved away from the main diagonal (Tracey, 2000). We verified this hypothesis of the pattern of relations using the sinusoidal fit index (Hanel, Zacharopoulos, Mégardon, & Maio, 2018), which overcomes the subjectivity limitation of a pure visual inspection. Hanel et al. (2018) argued that values below 0.10 suggest very good fit, below 0.20 suggest good, and below 0.30 suggest acceptable fit.

To further explore the location of narcissism within the CPM, we used the structural summary method (SSM) from the circumplex R package (Zimmerman & Wright, 2017). The SSM is a technique for analysing circumplex data, and its goal is to evaluate how other constructs can be placed within a circumplex structure. To realize this goal, the correlations between all of the circumplex scales and external measures are plotted on the hypothesized circumplex structure.

These correlations are evaluated in terms of (i) elevation, which represents the mean correlation across the circumplex scales; (ii) amplitude, which represents the distance between the mean correlation and the peak correlation; (iii) angular displacement, which refers to the peak correlation relative to overall elevation, (i.e. the angular location within the circumplex); and (iv) model fit (R^2), which provides general information as to whether the analysed model fits the data. Elevation and amplitude values higher than $|.15|$ are notable and reflect differentiation or specificity of content. R^2 values $< .70$ represent unacceptable fit, values $< .70$ represent adequate, and values $< .80$ represent good fit (Wright et al., 2013; Wright, Pincus, Conroy, & Hilsenroth, 2009; Zimmerman & Wright, 2017). Estimates of all parameters are presented with their 95% confidence intervals.

RESULTS

Descriptive statistics and reliability estimates for the measures are presented in Table 2, while the intercorrelations

Table 2. Descriptive statistics and reliability estimates for measures of narcissism and personality metatraits

Scale	<i>M</i>	<i>SD</i>	α
Hypersensitive Narcissism Scale (HSNS)	3.19	0.79	.87
Narcissism from the Dark Triad			
Narcissism from the Dark Triad Dirty Dozen (DTDD)	2.95	1.02	.90
Narcissism from the Short Dark Triad (SD3)	3.09	0.67	.77
Narcissistic Admiration and Rivalry Questionnaire (NARQ)			
Admiration (ADM)	3.26	0.85	.90
Rivalry (RIV)	2.68	0.86	.89
Narcissistic Personality Inventory (NPI)			
Entitlement/Exploitativeness (EE)	0.17	0.24	.55
Grandiose Exhibitionism (GE)	0.21	0.26	.65
Leadership/Authority (LA)	0.18	0.27	.68
Pathological Narcissism Inventory (PNI)			
Contingent Self-Esteem (CSES)	2.86	0.88	.93
Exploitativeness (EXP)	3.21	0.89	.82
Self-Sacrificing Self-Enhancement (SSSE)	3.71	0.80	.82
Hiding the Self (HS)	3.63	0.76	.76
Grandiose Fantasies (GF)	2.89	1.06	.92
Devaluing (DEV)	3.04	0.87	.87
Entitlement Rage (ER)	3.01	0.92	.90
Personality Inventory for DSM-5 (PID)			
Attention Seeking (ATT)	0.98	0.70	.92
Grandiosity (GRA)	0.76	0.69	.90
Communal Narcissism Inventory (COM)	3.48	0.79	.94
Collective Narcissism Scale (COL)	3.64	0.96	.92
Circumplex of Personality Metatraits Questionnaire (CPM-Q)			
Delta-Plus/Self-Restraint	3.49	0.49	.80
Alpha-Plus/Stability	3.79	0.47	.81
Gamma-Plus/Integration	3.75	0.51	.84
Beta-Plus/Plasticity	3.53	0.53	.83
Delta-Minus/Sensation Seeking	2.85	0.56	.78
Alpha-Minus/Disinhibition	2.40	0.62	.83
Gamma-Minus/Disharmony	2.74	0.69	.87
Beta-Minus/Passiveness	2.90	0.52	.75

Table 3. Intercorrelations between general narcissism scales

	COL	COM	HSNS	PNI_V	PNI_G	NARQ	NPI	PID
COM	0.43							
HSNS	0.27	0.26						
PNI_V	0.31	0.27	0.68					
PNI_G	0.35	0.52	0.52	0.71				
NARQ	0.31	0.49	0.66	0.56	0.66			
NPI	0.14	0.25	0.29	0.25	0.44	0.52		
PID	0.25	0.38	0.43	0.42	0.56	0.66	0.51	
NDT	0.31	0.48	0.52	0.46	0.66	0.82	0.57	0.68

Note: A Bonferroni correction was applied (significant at $p = .005$). All correlations are significant.

COL, Collective Narcissism Scale; COM, Communal Narcissism Inventory; HSNS, Hypersensitive Narcissism Scale; NARQ, Narcissistic Admiration and Rivalry Questionnaire; NDT, Narcissism in the Dark Triad; NPI, Narcissistic Personality Inventory; PID, Personality Inventory for DSM-5; PNI_G, Pathological Narcissism Inventory-Grandiosity; PNI_V, Pathological Narcissism Inventory-Vulnerability.

between the general and specific narcissism scales are presented in Tables 3 and 4, respectively.

Verification of the underlying circumplex structure

Table 5 summarizes the model fit indices of all compared models: equal radius and spacing (Model 1), equal radius (Model 2) or spacing (Model 3), and unequal radius and spacing (Model 4).

According to the CFI, all of the compared models, including the most stringent model assuming equal radii and spacing, were well fitted to the data. However, the $\Delta\chi^2$ and AIC indicated that the less stringent models were generally better fitted to the data suggesting small deviations from the

Table 5. Summary of fit indices for CircE analyses

Model	χ^2	df	P	CFI	RMSEA	$\Delta\chi^2$	p	AIC
Circumplex of Personality Metatraits								
Model 1	299.23	26	10	0.918	0.121	—	—	207.31
Model 2	286.26	19	17	0.921	0.142	12.97	<.01	140.70
Model 3	194.07	19	17	0.947	0.116	105.16	<.001	0.20
Model 4	167.22	12	24	0.953	0.142	26.85	<.001	0.15

Note. Model 1 = equal radius and spacing; Model 2 = unequal radius and equal spacing; Model 3 = equal radius and unequal spacing; Model 4 = unequal radius and unequal spacing.

AIC, Akaike information criterion; P, number of estimated parameters.

assumed circumplex structure. The RMSEA value was below the acceptable range in all compared models later, again suggesting similar deviations from the assumed circumplex structure, a finding that is in line with the results reported in the literature (e.g. Yik, Russell, & Steiger, 2011). Taking all of these results into account, we concluded that although the circumplex structure of CPM was not perfectly confirmed, we could continue analyses on the relations between metatraits and various narcissistic constructs because the CFI suggests that all models, including the one with radii and spacing being equal, fit the data sufficiently well.

Test of the sinusoidal relations between different narcissism scales and personality metatraits

The zero-order correlations between the different narcissism scales and the personality metatraits as well as the results of the sinusoidal relations test are presented in Table 6.

Of all of the analysed scales—each single narcissism scale was very well fitted, with the exception of collective narcissism. This indicates that these scales follow a

Table 4. Intercorrelations between specific narcissism scales

	DEV	HS	CSES	ER	EXP	GF	SSSE	ADM	RIV	EE	LA	GE	AS	GR	SD3	DTDD	HSNS	COM
HS	0.66																	
CSES	0.79	0.54																
ER	0.74	0.53	0.84															
EXP	0.33	0.29	0.44	0.54														
GF	0.62	0.45	0.73	0.70	0.51													
SSSE	0.42	0.43	0.49	0.46	0.46	0.46												
ADM	0.21	0.18	0.33	0.41	0.58	0.46	0.48											
RIV	0.52	0.37	0.62	0.67	0.39	0.55	0.27	0.49										
EE	0.15	0.17	0.23	0.38	0.37	0.31	0.08	0.29	0.37									
LA	0.06	0.08	0.16	0.28	0.41	0.25	0.18	0.37	0.29	0.47								
GE	0.03	0.01	0.13	0.23	0.34	0.23	0.21	0.44	0.24	0.19	0.34							
AS	0.25	0.16	0.43	0.46	0.51	0.44	0.35	0.57	0.47	0.31	0.41	0.38						
GR	0.31	0.23	0.41	0.47	0.49	0.43	0.31	0.54	0.53	0.37	0.38	0.29	0.73					
SD3	0.16	0.06	0.33	0.39	0.61	0.40	0.40	0.78	0.44	0.32	0.45	0.47	0.60	0.57				
DTDD	0.39	0.24	0.57	0.60	0.51	0.59	0.42	0.70	0.66	0.37	0.38	0.38	0.61	0.58	0.71			
HSNS	0.61	0.50	0.61	0.64	0.34	0.55	0.35	0.42	0.72	0.32	0.16	0.18	0.36	0.44	0.31	0.60		
COM	0.22	0.19	0.27	0.26	0.45	0.32	0.52	0.60	0.25	0.07	0.22	0.26	0.32	0.38	0.50	0.42	0.26	
COL	0.26	0.23	0.29	0.30	0.26	0.23	0.37	0.33	0.21	0.05	0.11	0.16	0.24	0.23	0.30	0.28	0.27	0.43

Note: A Bonferroni correction was applied (significant at $p = .002$). All correlations above .08 are significant.

ADM, Admiration; AS, Attention Seeking; COL, Collective Narcissism Scale; COM, Communal Narcissism Inventory; CSES, Contingent Self-Esteem; DEV, Devaluation; DTDD, Dark Triad Dirty Dozen; EE, Entitlement/Exploitativeness; ER, Entitlement Rage; EXP, Exploitativeness; GE, Grandiose Exhibitionism; GF, Grandiose Fantasies; GR, Grandiosity; HS, Hiding the Self; HSNS, Hypersensitive Narcissism Scale; LA, Leadership/Authority; RIV, Rivalry; SD3, Short Dark Triad; SSSE, Self-Sacrificing Self-Enhancement.

Table 6. Zero-order correlation matrix between narcissism scales and the metatraits of personality as well as the estimates of the sinusoidal fit index

	D+	A+	G+	B+	D-	A-	G-	B-	SFI
General narcissism scales									
COL	0.06	0.04	0.03	0.07	0.08	-0.06	-0.09	-0.07	0.31
COM	0.01	0.16	0.19	0.30	0.18	-0.17	-0.25	-0.29	0.08
HSNS	-0.17	-0.39	-0.42	-0.21	0.13	0.36	0.37	0.08	0.01
PNI_V	-0.18	-0.43	-0.44	-0.22	0.15	0.38	0.38	0.11	0.01
PNI_G	-0.23	-0.20	-0.07	0.16	0.34	0.19	0.01	-0.26	0.03
NARQ	-0.23	-0.24	-0.11	0.12	0.34	0.28	0.00	-0.22	0.03
NPI	-0.28	-0.19	-0.04	0.20	0.36	0.29	-0.06	-0.34	0.04
PID	-0.28	-0.25	-0.09	0.15	0.43	0.26	-0.03	-0.25	0.03
NDT	-0.19	-0.20	-0.02	0.23	0.41	0.20	-0.12	-0.31	0.06
Specific narcissism scales									
DEV	-0.09	-0.40	-0.44	-0.25	0.07	0.30	0.40	0.17	0.01
HS	-0.03	-0.17	-0.26	-0.14	-0.02	0.13	0.26	0.10	0.03
CSES	-0.20	-0.46	-0.42	-0.23	0.21	0.38	0.36	0.12	0.01
ER	-0.28	-0.45	-0.40	-0.16	0.23	0.49	0.30	0.01	0.01
EXP	-0.28	-0.16	0.04	0.31	0.42	0.17	-0.13	-0.37	0.02
GF	-0.26	-0.36	-0.29	-0.07	0.26	0.35	0.24	-0.07	0.01
SSSE	0.00	0.10	0.14	0.20	0.14	-0.12	-0.15	-0.22	0.08
ADM	-0.18	0.01	0.19	0.40	0.35	0.01	-0.26	-0.43	0.03
RIV	-0.22	-0.43	-0.39	-0.19	0.23	0.46	0.26	0.05	0.02
EE	-0.25	-0.27	-0.21	0.05	0.21	0.35	0.15	-0.18	0.03
LA	-0.19	-0.12	-0.03	0.19	0.27	0.20	-0.08	-0.27	0.06
GE	-0.19	-0.06	0.13	0.22	0.31	0.11	-0.18	-0.30	0.03
AS	-0.31	-0.24	-0.03	0.18	0.46	0.23	-0.07	-0.28	0.03
GR	-0.20	-0.22	-0.13	0.10	0.33	0.24	0.01	-0.18	0.04
SD3	-0.21	-0.09	0.16	0.39	0.45	0.09	-0.27	-0.44	0.05
DTDD	-0.15	-0.25	-0.14	0.09	0.33	0.25	-0.01	-0.19	0.09

Note: A-, Alpha-Minus/Disinhibition; A+, Alpha-Plus/Stability; ADM, Admiration; AS, Attention Seeking; B-, Beta-Minus/Passiveness; B+, Beta-Plus/Plasticity; COL, Collective Narcissism Scale; COM, Communal Narcissism Inventory; CSES, Contingent Self-Esteem; D-, Delta-Minus/Sensation Seeking; D+, Delta-Plus/Self-Restraint; DEV, Devaluation; DTDD, Dark Triad Dirty Dozen; EE, Entitlement/Exploitativeness; ER, Entitlement Rage; EXP, Exploitativeness; G-, Gamma-Minus/Disharmony; G+, Gamma-Plus/Integration; GE, Grandiose Exhibitionism; GF, Grandiose Fantasies; GR, Grandiosity; HS, Hiding the Self; HSNS, Hypersensitive Narcissism Scale; LA, Leadership/Authority; NARQ, Narcissistic Admiration and Rivalry Questionnaire; NDT, Narcissism in the Dark Triad; NPI, Narcissistic Personality Inventory; PID, Personality Inventory for DSM-5; PNI_G, Pathological Narcissism Inventory-Grandiosity; PNI_V, Pathological Narcissism Inventory-Vulnerability; RIV, Rivalry; SD3, Short Dark Triad; SFI, sinusoidal fit index; SSSE, Self-Sacrificing Self-Enhancement.

sinusoidal pattern of relations to the personality metatraits. Collective narcissism was the most weakly related to the personality metatraits, and the sinusoidal fit index values were at the boundary of the acceptable range confirming the sinusoidal relations. Communal narcissism and SSSE were most strongly related to Beta-Plus/Plasticity, but they were the only narcissism scales that were also positively related to Alpha-Plus/Stability, suggesting their (at least partial) distinctiveness from the other narcissistic constructs. Among the grandiose narcissism scales, most of them were most strongly related to Delta-Minus/Sensation Seeking, which corroborates their expected locations within the CPM. There were some exceptions; however, they could be mostly predicted by theory. For example, admiration was more strongly related to Beta-Plus/Plasticity, rivalry, entitlement rage, and entitlement/exploitativeness were more strongly related to Alpha-Minus/Disinhibition. The vulnerable narcissism scales were mostly related to Gamma-Minus/Disharmony and Alpha-Minus/Disinhibition, which also corroborates their expected locations. Thus, a very good sinusoidal pattern of relations and the theoretically predicted pattern of relations between the different narcissistic constructs and the personality metatraits serve as additional indicators confirming the underlying circumplex structure.

Locating narcissism within the Circumplex of Personality Metatraits

We used the SSM (Zimmerman & Wright, 2017) to further explore how the narcissistic constructs could be projected onto the circumplex space of the CPM. These results are presented in Table 7.

All of the analysed models, on both the general and specific levels, were well fitted to the data; however, while the fit of collective narcissism was adequate, the remaining narcissistic constructs were visibly better fitted. The correlations of most of the narcissism scales with the personality metatraits (except for NPI) were elevated to a notable level, which suggests that narcissism is a more complex construct, representing a blend of different traits that cannot be reduced to a single metatrait. The amplitudes of most of the narcissism scales were also above the assumed threshold, which means that there was a notable distance between the peak correlation and the mean correlation with all of the metatraits. This suggests that most of the narcissism scales are more strongly related to one of the metatraits. Taking the estimates of both elevation and amplitude into account, one may suggest that although the narcissism constructs indeed have a complex structure associated with different

Table 7. Structural summary statistics with 95% confidence intervals for the different narcissism scales

	Elevation	Alpha	Beta	Amplitude	Displacement	R ²
General narcissism scales						
COL	0.18 [0.14, 0.22]	0.06 [0.00, 0.12]	0.06 [0.00, 0.11]	0.09 [0.03, 0.15]	48.95 [5.30, 92.47]	.741
COM	0.23 [0.18, 0.28]	0.15 [0.09, 0.21]	0.23 [0.18, 0.29]	0.28 [0.21, 0.34]	33.64 [22.43, 43.29]	.931
HSNS	0.18 [0.13, 0.24]	-0.31 [-0.38, -0.25]	-0.14 [-0.19, -0.09]	0.34 [0.27, 0.41]	245.23 [237.50, 253.24]	.993
PNI_V	0.21 [0.16, 0.27]	-0.33 [-0.39, -0.27]	-0.15 [-0.20, -0.11]	0.36 [0.30, 0.43]	245.13 [239.20, 251.26]	.995
PNI_G	0.23 [0.17, 0.29]	-0.15 [-0.21, -0.09]	0.17 [0.12, 0.22]	0.23 [0.18, 0.27]	318.18 [302.37, 333.75]	.939
NARQ	0.20 [0.15, 0.26]	-0.19 [-0.25, -0.13]	0.15 [0.10, 0.20]	0.24 [0.20, 0.29]	307.68 [293.68, 323.26]	.930
NPI	0.07 [0.03, 0.10]	-0.19 [-0.24, -0.13]	0.22 [0.16, 0.28]	0.29 [0.24, 0.33]	319.21 [306.76, 332.51]	.942
PID	0.16 [0.11, 0.20]	-0.20 [-0.25, -0.15]	0.18 [0.14, 0.24]	0.27 [0.24, 0.32]	312.51 [301.13, 324.93]	.936
NDT	0.19 [0.14, 0.24]	-0.13 [-0.19, -0.07]	0.22 [0.17, 0.28]	0.26 [0.22, 0.31]	329.26 [314.62, 343.53]	.887
Specific narcissism scales						
DEV	0.20 [0.14, 0.26]	-0.29 [-0.35, -0.22]	-0.20 [-0.25, -0.15]	0.35 [0.28, 0.41]	234.91 [226.81, 242.47]	.992
HS	0.18 [0.13, 0.24]	-0.13 [-0.19, -0.06]	-0.13 [-0.18, -0.08]	0.18 [0.12, 0.24]	223.88 [207.43, 237.26]	.964
CSES	0.19 [0.13, 0.24]	-0.35 [-0.40, -0.28]	-0.14 [-0.18, -0.09]	0.37 [0.31, 0.43]	248.56 [241.99, 255.25]	.991
ER	0.18 [0.13, 0.24]	-0.37 [-0.43, -0.31]	-0.07 [-0.12, -0.02]	0.38 [0.31, 0.44]	259.32 [252.81, 266.76]	.984
EXP	0.20 [0.14, 0.25]	-0.12 [-0.18, -0.06]	0.28 [0.23, 0.34]	0.31 [0.26, 0.36]	336.97 [325.20, 348.23]	.956
GF	0.16 [0.11, 0.21]	-0.30 [-0.35, -0.24]	-0.01 [-0.06, 0.05]	0.30 [0.24, 0.35]	268.47 [258.63, 279.76]	.988
SSSE	0.21 [0.16, 0.26]	0.11 [0.05, 0.17]	0.16 [0.11, 0.22]	0.20 [0.13, 0.26]	33.74 [16.88, 48.55]	.930
ADM	0.21 [0.16, 0.26]	0.03 [-0.04, 0.08]	0.34 [0.29, 0.39]	0.34 [0.29, 0.39]	4.38 [353.66, 13.76]	.962
RIV	0.14 [0.09, 0.19]	-0.35 [-0.40, -0.29]	-0.09 [-0.14, -0.03]	0.36 [0.30, 0.42]	256.43 [248.43, 265.01]	.973
EE	0.02 [-0.01, 0.05]	-0.26 [-0.31, -0.20]	0.06 [0.00, 0.12]	0.27 [0.22, 0.32]	283.15 [270.17, 297.69]	.949
LA	0.07 [0.04, 0.11]	-0.12 [-0.17, -0.06]	0.18 [0.12, 0.23]	0.21 [0.17, 0.26]	326.13 [308.84, 343.77]	.918
GE	0.05 [0.01, 0.09]	-0.05 [-0.11, 0.00]	0.24 [0.19, 0.29]	0.24 [0.20, 0.30]	347.85 [333.45, 0.68]	.950
AS	0.14 [0.10, 0.18]	-0.19 [-0.24, -0.14]	0.22 [0.17, 0.27]	0.29 [0.25, 0.34]	319.49 [308.03, 331.04]	.950
GR	0.15 [0.11, 0.20]	-0.18 [-0.24, -0.13]	0.12 [0.07, 0.17]	0.22 [0.18, 0.26]	302.95 [287.93, 318.19]	.913
SD3	0.16 [0.12, 0.20]	-0.05 [-0.11, 0.02]	0.35 [0.30, 0.41]	0.35 [0.30, 0.41]	352.62 [341.16, 2.68]	.944
DTDD	0.19 [0.14, 0.24]	-0.18 [-0.24, -0.12]	0.12 [0.06, 0.17]	0.21 [0.16, 0.27]	303.44 [286.54, 322.51]	.852

Note: Estimates of Alpha correspond to Stability, and estimates of Beta correspond to Plasticity. Collective and communal narcissism as well as HSNS were also analysed in addition to the specific narcissism scales, but owing to having exactly same estimates, they are only shown alongside the general narcissism scales. ADM = Admiration; Amplitude, distance between mean and peak correlation; AS, Attention Seeking; COL, Collective Narcissism Scale; COM, Communal Narcissism Inventory; CSES, Contingent Self-Esteem; DEV, Devaluation; Displacement, angular location within the circumplex; DTDD, Dark Triad Dirty Dozen; EE, Entitlement/Exploitativeness; Elevation, mean correlation across the circumplex scales; ER, Entitlement Rage; EXP, Exploitativeness; GE, Grandiose Exhibitionism; GF, Grandiose Fantasies; GR, Grandiosity; HS, Hiding the Self; HSNS, Hypersensitive Narcissism Scale; LA, Leadership/Authority; NARQ, Narcissistic Admiration and Rivalry Questionnaire; NDT, Narcissism in the Dark Triad; NPI, Narcissistic Personality Inventory; PID, Personality Inventory for DSM-5; PNI_G, Pathological Narcissism Inventory-Grandiosity; PNI_V, Pathological Narcissism Inventory-Vulnerability; R², model fit to the data; RIV, Rivalry; SD3, Short Dark Triad; SSSE, Self-Sacrificing Self-Enhancement.

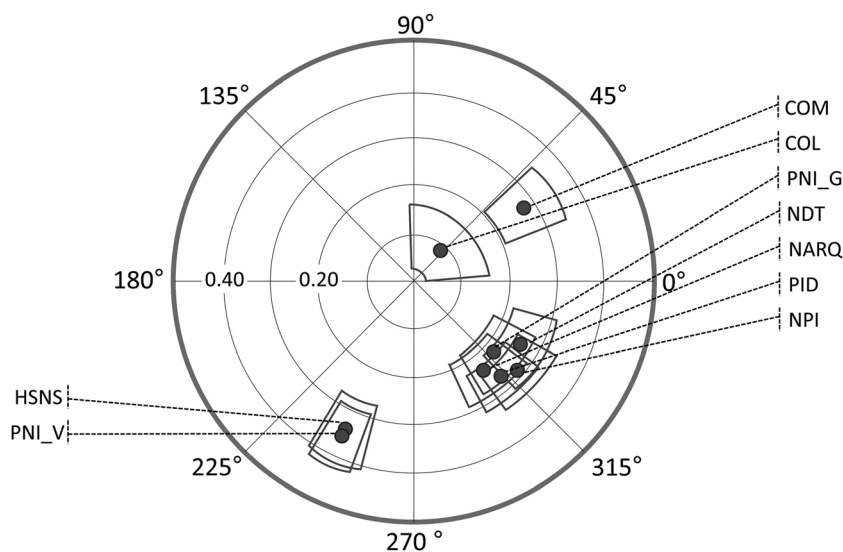


Figure 3. Angular displacement of general narcissism scales projected on the space of Circumplex of Personality Metatraits. COM, Communal Narcissism Inventory; COL, Collective Narcissism Scale; PNI_G, Pathological Narcissism Inventory-Grandiosity; NDT, Narcissism in the Dark Triad; NARQ, Narcissistic Admiration and Rivalry Questionnaire; PID, Personality Inventory for DSM-5; NPI, Narcissistic Personality Inventory; PNI_V, Pathological Narcissism Inventory-Vulnerability; HSNS, Hypersensitive Narcissism Scale.

metatraits, they also represent specificity. Thus, although narcissism cannot be reduced to a blend of the metatraits, it could be successfully located within the space of CPM. Figure 3 presents the angular displacement of the general narcissism scales.

The results mostly corroborated the expected locations of narcissistic constructs within the space of the CPM. More specifically, the general scales measuring vulnerable narcissism (HSNS and PNI-V) were located near Gamma-Minus/Disharmony, those measuring grandiose narcissism (NPI, NARQ, PNI-G, Personality Inventory for *DSM-5*, and Narcissism in the Dark Triad) were located near Delta-Minus/Sensation Seeking, and the scores from the communal narcissism inventory (COM) were located near the Gamma-Plus/Integration metatrait. Only collective narcissism deviated from the expected location (i.e. near Delta-Plus/Self-Restraint) and was instead located near Gamma-Plus/Integration. Moreover, collective narcissism was located almost in the middle of the CPM, and its confidence intervals cover the whole first quadrant, which makes its interpretation ambiguous.

Figure 4 presents the angular locations of the specific narcissism scales projected onto the CPM. Note that for the clarity purposes, we present the SSM results on the two circumplexes; however, all of the specific narcissism scales (in addition to the general scales of communal and collective narcissism and HSNS, which are not presented here owing to the replicated estimates from analysis on general scales), were analysed in a single model.

Our results mostly corroborated the hypothesized locations of the specific narcissism scales. Namely, vulnerable narcissism scales were located within the third quadrant,

and grandiose narcissism scales were located within the fourth quadrant. However, there were three notable deviations: (i) although narcissistic rivalry was located near Alpha-Minus/Disinhibition as expected, its location was found in the vulnerable narcissism quadrant (i.e. it was located closer to the Gamma-Minus/Disharmony than to the Delta-Minus/Sensation Seeking); (ii) PNI Exploitativeness was located near Delta-Minus/Sensation Seeking as expected, but it was found closer to Beta-Plus/Plasticity than Alpha-Minus/Disinhibition; and (iii) PNI SSSE was found in the communal narcissism quadrant (i.e. near Gamma-Plus/Integration instead of being located near Beta-Plus/Plasticity). Thus, except for these deviations, our results were generally in accordance with our expectations regarding the specific locations of the narcissism scales within the framework of personality metatraits.

DISCUSSION

While there is a considerable body of literature describing a variety of narcissism constructs (e.g. Back et al., 2013; Gebauer & Sedikides, 2017; Golec de Zavala et al., 2009; Miller, Lynam, Hyatt, & Campbell, 2017; Pincus & Lukowitsky, 2010), it is yet to be systematically organized within a common personality space. To date, only the recently introduced NSM (Krizan & Herlache, 2018) has offered a theoretical, synthetic view of (some) narcissism constructs. Still, although it undoubtedly constitutes a major contribution to the integration of previous research in the field of narcissism, it fails to cover the entire spectrum of narcissistic manifestations, leaving out the more recent and thus

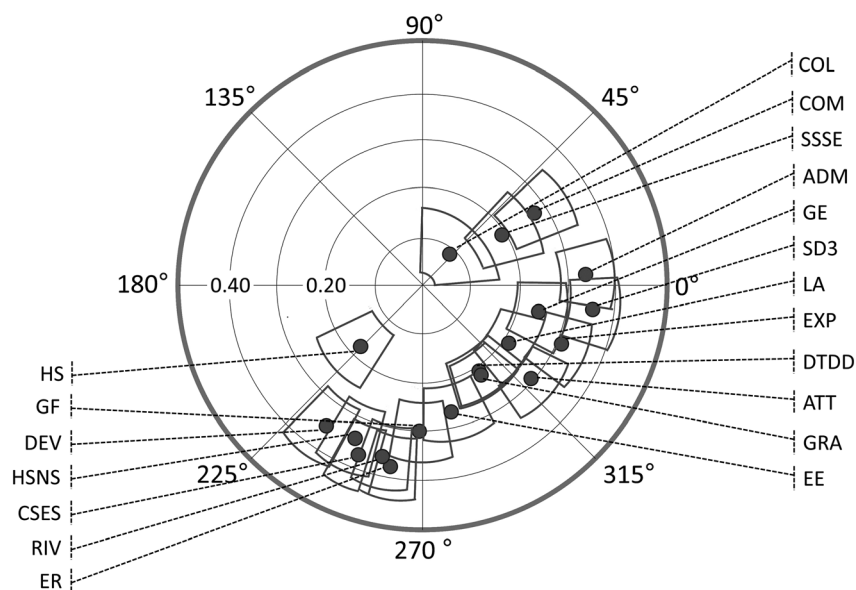


Figure 4. Angular displacement of specific narcissism scales projected onto the space of Circumplex of Personality Metatraits. COL, Collective Narcissism Scale; COM, Communal Narcissism Inventory; SSSE, Self-Sacrificing Self-Enhancement; ADM, Admiration; GE, Grandiose Exhibitionism; SD3, Short Dark Triad; LA, Leadership/Authority; EXP, Exploitativeness; DTDD, Dark Triad Dirty Dozen; ATT, Attention Seeking; GRA, Grandiosity; EE, Entitlement/Exploitativeness; ER, Entitlement Rage; RIV, Rivalry; CSES, Contingent Self-Esteem; HSNS, Hypersensitive Narcissism Scale; DEV, Devaluation; GF, Grandiose Fantasies; HS, Hiding the Self.

less explored, communal, and collective narcissism (Gebauer et al., 2012; Golec de Zavala et al., 2009).

The current study continues the approach proposed by the NSM and tries to integrate different narcissism constructs within the broad theoretical model of personality structure (i.e. the CPM model). The CPM could serve as a kind of matrix in which different (narcissism) constructs are located, revealing their meaning on a common space as determined by their location in this matrix, while maintaining some additional, unique, and specific meaning (Strus et al., 2014; Strus & Cieciuch, 2017). The CFI values confirmed that the eight metatraits distinguished within the CPM assume a circumplex structure and have equal radii and spacing of approximately 45°. However, the RMSEA values were higher than the conventional standard, although they were similar to other studies investigating the circumplex structure of psychological constructs (Yik et al., 2011). RMSEA values might become inflated when variables are highly correlated even if the model reproduces the correlation matrix well (Browne, MacCallum, Kim, Andersen, & Glaser, 2002; Saris et al., 2009; Steiger, 2000) and because the systematic errors introduced by the specific method of measurement are not taken into account in the evaluation of the circumplex structure in SEM (Green, Goldman, & Salovey, 1993).

Moreover, we provided support that our approach is not at all reductionist as not a single narcissism construct correlated with personality metatraits stronger than $r = .50$, but all of them (with the exception of collective narcissism) followed a sinusoidal pattern of relations, thus confirming their circular character. This emphasizes that while the metatraits and narcissism are related to some extent, narcissism constructs cannot be reduced to the metatraits because of the unique content of narcissism and the very broad meaning of the metatraits. Although the NPI and its subscales failed to reach such criterion, it should be noted that it was the only measure with binary response format, which might potentially influenced estimated results. Indeed, existing studies seems to be favourable for the continuous response setting of the NPI (Ackerman et al., 2016; Grosz et al., 2017; Wetzel, Roberts, Fraley, & Brown, 2016). Thus, as the results confirmed the underlying circumplex structure of the CPM and the narcissism aspects within it, we further explored where the different narcissism constructs are located.

Discussion of grandiose and vulnerable narcissism

Our results indicate that the structure of narcissistic constructs predicted by the NSM (Krizan & Herlache, 2018) has been supported in the CPM model (Strus et al., 2014; Strus & Cieciuch, 2017). Grandiose and vulnerable narcissism has been found to coincide with the Alpha-Minus/Disinhibition radius, which represents antagonism towards people, norms, and obligations (Strus & Cieciuch, 2017). Indeed, the description of this metatrait exhibits a striking similarity to what the NSM terms the shared (grandiose and vulnerable) narcissistic phenotype of entitlement and self-importance (Krizan & Herlache, 2018). The dimensions belonging to both grandiose (rivalry; Back et al., 2013) and

vulnerable narcissism (entitlement rage; Wright et al., 2010) are found in the immediate vicinity of Alpha-Minus/Disinhibition. This confirms the NSM proposal (Krizan & Herlache, 2018) that this dimension forms the common core of these two narcissism constructs.

Vulnerable narcissism has been found to be located in greatest proximity to Gamma-Minus/Disharmony, which is primarily defined by high neuroticism, just as expected (Strus & Cieciuch, 2017). Apart from neuroticism, of great interest is the nature of its other major component, which has been the subject of much debate: Miller, Lynam, Vize, et al. (2017) suggested a relationship with low agreeableness in contrast to Rogoza et al. (2018) who argued for low extraversion. The present results corroborate both of these claims as some entitlement rage has been found to represent social antagonism and was located near Alpha-Minus/Disinhibition, while hiding the self represents apathy and submissiveness, and was located near Beta-Minus/Passiveness. A structural mirror image pattern of these phenomenological characteristics has been identified for grandiose narcissism: Its core was located at Delta-Minus/Sensation Seeking, while rivalry corresponding to social antagonism was located near Alpha-Minus/Disinhibition, and admiration to sociability and dominance was located near Beta-Plus/Plasticity (Back et al., 2013). As the distinction between admiration and rivalry explains some of the existing ambiguities (e.g. with regard to their differential impact on behavioural processes; Leckelt, Küfner, Nestler, & Back, 2015), we believe that the cornerstones developed in grandiose narcissism research could be successfully applied to other narcissism constructs. For example, the two-dimensional structure presented in the NARC could potentially be applied to vulnerable narcissism. The locations of entitlement rage and hiding the self seem to give credence to this hypothesis, but more research is needed to empirically verify it.

Discussion of communal and collective narcissism

Finally, in addition to confirming our expectations for the NSM dimensions (Krizan & Herlache, 2018), we also confirmed our expectations for the other narcissistic manifestations of personality, although their locations were the most difficult to confirm. The communal and collective forms of narcissism were identified above the Beta/Plasticity and Passiveness metatrait line, near Gamma-Plus/Integration, which represents warm and prosocial attitudes towards people (Strus & Cieciuch, 2017). This result might explain the differences between expressions of communal and collective narcissism and those of grandiose and vulnerable narcissism.

Communal narcissism has been found to be related to a prosocial attitude combined with intrapersonal and interpersonal harmony (Gamma-Plus/Integration metatrait), which is generally not regarded as consistent with a narcissistic personality and at first glance might even contradict the definition of narcissism as antagonistic (Krizan, 2018). However, communal narcissists have the same global self-evaluations of exceptional self-importance, entitlement, and social power as grandiose narcissists, but they self-enhance in communal

domain (Sedikides, 2018). As result, communal narcissism might be seen as a superficial auto-presentation. Indeed, empirical results corroborate this claim, as whenever explicit communal self-views are strongly correlated with communal narcissism, implicit communal self-views are not (Fatfouta et al., 2017; Fatfouta & Schröder-Abé, 2018). Whenever communal narcissism is positively related to self-viewed prosociality, it is unrelated to objective prosociality as assessed by actual behaviour and other informant reports in real-life settings (Nehrlich, Gebauer, Sedikides, & Schoel, 2018), and moreover, the neuropsychological reactions do not match communal narcissists behaviour (Yang et al., 2018). Because our study was based solely on explicit self-reports, the presence of communal narcissism in the upper quadrant of the circumplex is not surprising; however, if the current study used implicit or objective assessments of communal narcissism, we would expect it to be located near the Delta-Minus/Sensation Seeking metatrait.

Our results also support the suggestion that communal subscale of the PNI, the SSSE (Pincus et al., 2009) is rather specific and may have some unique content (Wright et al., 2013) as it was located near the Gamma-Plus/Integration metatrait. Sedikides (2018) suggested that the SSSE is a communal expression of vulnerable narcissism. Whereas in our study it corresponded to the higher-order factor of PNI-G (Pincus et al., 2009), the study of Rogoza and Fatfouta (2018) provided empirical evidence that communal narcissism and SSSE are distinct constructs. Although they were similar in terms of profiles of values and personality traits, SSSE was predicted positively and communal narcissism was predicted negatively by neuroticism (Rogoza & Fatfouta, 2018). Thus, the status of vulnerable communal narcissism remains unclear, and future studies are needed as, on the one hand, SSSE represents grandiosity and was located near Gamma-Plus/Integration, while, on the other hand, it is positively associated with neuroticism, which disentangles vulnerable from grandiose narcissism (Miller, Crowe, Weiss, Maples-Keller, & Lynam, 2017).

Collective narcissism was the most problematic to interpret throughout the study as it was actually unrelated to the metatraits, had difficulties in following sinusoidal pattern of relations, and its location within the CPM was misspecified. Whereas theory attributes collective narcissism to be a specific form of vulnerable narcissism, which express itself in the investment of in-group greatness (Golec de Zavala, 2018), empirical results suggest it is a form of grandiose narcissism (Golec de Zavala et al., 2009). This might be the result of the initial development of the items comprising the Collective Narcissism Scale (Golec de Zavala et al., 2009), which were created by rephrasing items from the NPI (Raskin & Terry, 1988), a grandiose narcissism measure. This empirical limitation does not allow us to draw final conclusions about the nature of collective narcissism. Thus, at the moment, we do not have enough empirical evidence to draw an unambiguous conclusion; therefore, we encourage researchers to develop new theory-based scales designed to measure collective narcissism.

Another possible interpretation of collective narcissism is that it might not fit within the definition of narcissism (Krizan, 2018), and thus, it should be re-labelled to avoid confusion. The revised collective narcissism could potentially represent a superficial communal expression of vulnerable narcissism. Collective narcissism as well as SSSE involves helping other people in order to protect one's inflated sense of self-worth (Golec de Zavala, 2018; Pincus et al., 2009; Sedikides, 2018), which may be a theoretical argument for such a claim. Moreover, in the current study, collective narcissism was most strongly related to SSSE, which might serve as a potential empirical argument for such an interpretation. If collective narcissism turns out to be a communal expression of vulnerable narcissism, we would expect that it would appear as such only using self-reports, but we would expect no differences with vulnerable narcissism when using objective measures. These hypotheses require further studies to verify them, as the current empirical results and methods (i.e. self-reported data) do not allow for such unambiguous claims.

Summary

The current study is the first to integrate a plethora of existing models of narcissistic personality, which has been made possible using the CPM as a matrix to organize the various forms of narcissism (grandiose, vulnerable, and communal). Importantly, the CPM is not merely a platform to accommodate constructs from different domains of psychology (Strus & Cieciuch, 2017) but is a complex theoretical model that not only offers correct predictions of the relationships between those constructs but can also be used to identify gaps in our theoretical understanding of them (Strus et al., 2014).

The results reported in the current study provide an opportunity to rethink the structure of narcissism on the basis of the theoretical foundations laid by the NSM (Krizan & Herlache, 2018) and elaborated on by the CPM (Strus & Cieciuch, 2017). Reports from previous research on grandiose narcissism (Kowalski, Vernon, & Schermer, 2016; Miller, Lynam, Hyatt, & Campbell, 2017; Rogoza, Žemojtel-Piotrowska, et al., 2016) and vulnerable narcissism (Miller, Lynam, Vize, et al., 2017; Rogoza et al., 2018) have been generally supported by our results.

Moreover, the current study has revealed a dramatic difference in the amount of literature on grandiose and vulnerable versus communal (and collective) narcissism. Indeed, the finding that communal narcissism appears in the top half of the circumplex seems to be just the tip of the iceberg, indicating a vast uncharted territory awaiting exploration in the field of narcissism research and a need to research it further in order to advance narcissism theory. Thus, future research should aim to advance the understanding of the underlying motivational and behavioural dynamics of communal narcissism as well as its relation to the dimensions of the NSM (Krizan & Herlache, 2018).

The empirical findings are too weak to make a similar claim for collective narcissism; however, it may also

potentially advance our understanding of vulnerable narcissism. There are some preliminary indicators that the vulnerable core motives of collective narcissism might be fulfilled through the communal domain. However, in order to test this hypothesis, a refined theory-based measurement of collective narcissism is required. Indeed, while a revision of collective narcissism has the potential to advance narcissism theory, given the current state of knowledge (Golec de Zavala, 2018; Golec de Zavala et al., 2009), we are unable to make any substantial conclusions.

Limitations

The results of the current study are not free of limitations. First, the data were collected during a single session. Although we did not use all of the existing narcissism measures (e.g. we did not use the Five Factor Narcissism Inventory; Glover, Miller, Lynam, Crego, & Widiger, 2012), the study comprised a total of 217 items, and therefore, participants may have been fatigued. In order to minimize the influence of participant fatigue on measurement, all of the measures were presented in random order. Second, the study was conducted online using the Polish research platform Ariadna, where registered users can fill in different surveys in exchange for small rewards. Although these platforms limit generalizability to people who use the Internet, Miller, Crowe, Weiss, et al. (2017) argued that such platforms are promising in personality research. Third, our study was mono-methodological as it was solely based on self-report data. Finally, this is the first study that aimed to integrate all narcissism constructs presented in the literature. In order to increase the generalizability of these results, they should be replicated in future studies, especially with regard to collective narcissism, for which existing measurement may be flawed.

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ETHICS STATEMENT

All of the authors declare no conflict of interest. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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