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Article



On the Popularity of Agentic and Communal Narcissists: The **Tit-for-Tat Hypothesis**

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Abstract

Among well-acquainted people, those high on agentic narcissism are less popular than those low on agentic narcissism. That popularity-difference figures prominently in the narcissism literature. But why are agentic narcissists less popular? We propose a novel answer—the tit-for-tat hypothesis. It states that agentic narcissists like other people less than nonnarcissists do and that others reciprocate by liking agentic narcissists less in return. We also examine whether the tit-fortat hypothesis generalizes to communal narcissism. A large round-robin study (N=474) assessed agentic and communal narcissism (Wave I) and included two round-robin waves (Waves 2-3). The round-robin waves assessed participants' liking for all round-robin group members (2,488 informant-reports). The tit-for-tat hypothesis applied to agentic narcissists. It also applied to communal narcissists, albeit in a different way. Compared with non-narcissists, communal narcissists liked other people more and—in return—those others liked communal narcissists more. Our results elaborate on and qualify the thriving literature on narcissists' popularity.

Keywords

grandiose narcissism, agentic narcissism, communal narcissism, interpersonal liking, social relations model

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Grandiose narcissists' global self-evaluations are characterized by high levels of self-importance, entitlement, and social power (Campbell & Foster, 2007; Krizan & Herlache, 2018). Grandiose narcissism comprises two forms: agentic and communal (Gebauer & Sedikides, 2018a; Gebauer, Sedikides, Verplanken, & Maio, 2012). Agentic narcissism is the traditional form, typically assessed with the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; Raskin & Terry, 1988). Agentic narcissists base their global self-evaluations (high self-importance, entitlement, and social power) on unduly inflated views of their own agency (e.g., intelligence, creativity, and scholastic aptitude) (Grijalva & Zhang, 2016; Wallace, 2011). Communal narcissism has been discovered relatively recently. Communal narcissists hold the same global self-evaluations as agentic narcissists (high self-importance, entitlement, and social power), but base those self-evaluations on unduly inflated views of their own communion (e.g., morality, prosociality, and interpersonal aptitude) (Gebauer et al., 2012; Nehrlich, Gebauer, Sedikides, & Schoel, in press).

Grandiose narcissism has become a major research topic in personality and social psychology. The interpersonal consequences of agentic narcissism have garnered particular interest (Back, Schmukle, & Egloff, 2010; Campbell, Foster, & Finkel, 2002). One prominent conclusion from that literature concerns

the long-term popularity of agentic narcissists. More precisely, among well-acquainted people, those high on agentic narcissism are liked less than those low on that trait (Campbell & Campbell, 2009; Paulhus, 1998). Critically, however, it is not entirely clear why that popularity-difference appears to exist. As reviewed below, the narcissism literature provides two different answers to this question. The present article adds a third, novel, and complementary one—the "tit-for-tat hypothesis." In brief, the tit-for-tat hypothesis postulates that (a) agentic narcissists like other people less than non-narcissists do and, consequently, that (b) those others reciprocate by liking agentic narcissists less in return. The first goal of the present research was to provide the initial test of the tit-for-tat hypothesis as a novel explanation for agentic narcissists' lowered popularity in high acquaintanceship contexts.

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The second goal of the present research was to explore the applicability of the tit-for-tat hypothesis to communal narcissists and their popularity. Research on the role of communal narcissism for interpersonal liking is missing entirely. Thus, it is unknown whether communal narcissists are less liked, more liked, or just as much liked as non-narcissists. Consequently, it is also unknown whether the tit-for-tat hypothesis is restricted to agentic narcissism or whether it also applies to communal narcissism. The present research sought to elucidate matters. An important asset of studying agentic and communal narcissism in tandem is that we can focus on the unique effects of each narcissism facet, uncontaminated by the other facet (Gebauer et al., 2012; Nehrlich et al., in press).

As described earlier, among well-acquainted people, those high on agentic narcissism are liked less than those low on that trait. Scholars often interpret this finding as evidence that agentic narcissists are outwardly *disliked* by people who know them well (Baumeister & Vohs, 2001; Bizumic & Duckitt, 2008). Alternatively, however, others may feel rather *neutral* toward agentic narcissists while liking nonnarcissists a lot. That alternative squares with evidence that people typically hold positive views of others in general (Klar & Giladi, 1997; Sears, 1983). Our data afforded an initial (and somewhat tentative) test of the dislike versus neutrality alternatives. Our third and final goal was, thus, to explore those two alternatives.

In the remainder of this Introduction, we first elaborate on the two forms of grandiose narcissism (agentic and communal). After that, we briefly review previous research and theory on agentic narcissists' popularity. Against the backdrop of that previous research, we describe the tit-for-tat hypothesis in detail and derive predictions from it concerning the unique effects of agentic and communal narcissism on narcissists' long-term popularity. The Introduction concludes with an overview of our empirical research.

Agentic and Communal Narcissism

Grandiose narcissism can be defined by a characteristic set of global self-evaluations—namely, exceptionally high levels of self-importance, entitlement, and social power (Campbell & Foster, 2007; Krizan & Herlache, 2018). Previous studies have consistently shown that grandiose narcissism, as assessed with the NPI (Raskin & Hall, 1979; Raskin & Terry, 1988), is positively related to unduly inflated self-views in the agentic domain, but unrelated to unduly inflated self-views in the communal domain (Grijalva & Zhang, 2016; Wallace, 2011). In other words, NPI-narcissists evidence an excessive self-enhancement bias in the agentic domain (e.g., unduly inflated intelligence self-views), but no excessive self-enhancement bias in the communal domain (e.g., no unduly inflated morality self-views). Based on those findings, previous theoretical perspectives embraced the

view that grandiose narcissists focus on their self-perceived excellence in the agentic domain to subjectively justify their global self-evaluations (Campbell & Foster, 2007; Paulhus & John, 1998).

However, there is an alternative view. According to that view, the NPI is not a measure of grandiose narcissism per se, but mainly captures an agentic form of grandiose narcissism ("agentic narcissism"; example item: "I am more capable than other people") at the neglect of a communal form ("communal narcissism"; example item: "I am the most caring person in my social surrounding") (Gebauer et al., 2012; Nehrlich et al., in press).

The theoretical and empirical evidence favors that alternative view (for recent summaries, see Gebauer & Sedikides, 2018a, 2018b). In brief, (a) agentic narcissism (i.e., NPI-narcissism) is positively related to, but distinct from, communal narcissism (i.e., CNI narcissism; CNI is the abbreviation for Communal Narcissism Inventory; Gebauer et al., 2012). (b) Agentic narcissism is positively related to agentic self-enhancement bias, but not communal self-enhancement bias, whereas communal narcissism is positively related to communal self-enhancement bias, but not agentic self-enhancement bias. (c) Agentic and communal narcissism are similarly related to high levels of grandiosity, entitlement, and social power. (d) Agentic and communal narcissists are psychologically healthy, at least as healthy as non-narcissists. (e) Agentic and communal narcissism are both distinct from vulnerable forms of narcissism. (f) Agentic and communal narcissism are positively related to, but distinct from, agentic and communal self-perceptions, respectively. In all, grandiose narcissism comprises agentic and communal forms. To study grandiose narcissism most comprehensively, it is, thus, vital to assess both forms (Gebauer, Nehrlich, et al., 2018; Gebauer, Sedikides, & Schrade, 2017). We do so in the present research.1

Previous Research and Theory on the Popularity of Agentic Narcissists

Paulhus (1998) conducted the pioneering research. Students met in discussion groups for seven consecutive weeks. In the final week, the discussion group members judged the agentic narcissists in their group as less agreeable and warm than they judged non-narcissists (observer judgments of warmth are almost perfectly related to interpersonal liking; Imhoff & Koch, 2017). Carlson, Vazire, and Oltmanns (2011) conceptually replicated Paulhus's results in two samples of well-acquainted students. Czarna, Dufner, and Clifton (2014) asked a group of well-acquainted students to list the group members they like most and least. The number of agentic narcissists was unproportionately high among the least popular group members (yet the number of agentic narcissists was not unproportionately low among the most popular group members).

Leckelt, Küfner, Nestler, and Back (2015) sampled students in groups. Group members met for three consecutive weeks. They were unacquainted at their first meeting. In that meeting, agentic narcissists were more popular than nonnarcissists. However, this effect started to flip with time. At the second meeting, agentic narcissists were as popular as non-narcissists. At the third meeting, agentic narcissists were descriptively less popular than non-narcissists. Had the study continued for a few weeks, agentic narcissists would have arguably become significantly less popular than non-narcissists. Finally, Czarna, Leifeld, Śmieja, Dufner, and Salovey (2016) also sampled students in groups. Group members were unacquainted at their first meeting and well acquainted at their second meeting (3 months later). At both meetings, participants listed the group members they liked most. Overall, participants' popularity increased from the first to the second meeting, but that increase was attenuated in the case of agentic narcissists.

In all, then, among well-acquainted people, those high on agentic narcissism are evidently liked less than those low on agentic narcissism (for conceptually similar results among family members, see Hill & Roberts, 2012). Yet, it should be noted that some studies support those overall results only partly (Czarna et al., 2014; Leckelt et al., 2015) or provide somewhat indirect support (Carlson et al., 2011; Paulhus, 1998). Thus, a replication study would be valuable. In addition to testing our three research goals, the present research provides such a replication.

There are two main explanations in the literature on why people who know them well like agentic narcissists less than non-narcissists. First, agentic narcissists unduly seek admiration and, thus, constantly feel the need to tell others about their (excessively inflated) qualities in the agentic domain (Back et al., 2013; Morf & Rhodewalt, 2001). That show-off mentality annoys others in the long run and, thus, renders agentic narcissists less likable (Campbell, 1999; Wallace & Baumeister, 2002; see also Leckelt et al., 2015). Second, agentic narcissists' lack of empathy results in an antagonistic interpersonal style (Back et al., 2013; Bushman & Baumeister, 1998; Raskin, Novacek, & Hogan, 1991). That style threatens others and, thus, renders agentic narcissists less likable (Küfner, Nestler, & Back, 2013; Leckelt et al., 2015; Paulhus, 1998). Those two explanations possess a notable communality. They both portray agentic narcissists as people who may well desire popularity, but their insufferable dispositions get in the way (i.e., their need for admiration, which results in show-off behavior, and their lack of empathy, which results in antagonism). In that sense, agentic narcissists are seen as rather passive, helpless "victims" of their own dispositions. In contrast, our tit-for-tat hypothesis ascribes agentic narcissists an active, intentional role in why people who know them well like agentic narcissists less than non-narcissists.

Tit-for-Tat Hypothesis

Agentic Narcissism and the Tit-for-Tat Hypothesis

In his Metamorphoses, Ovid (8 AD/1986) tells the myth of Narcissus, the archetypical agentic narcissist, who has eyes only for himself, while showing little interest in other people. As a result of Narcissus's diminished interest in others, he incurs other people's wrath and is even cursed by the Gods. The tit-for-tat hypothesis builds on Ovid's classic myth. According to that hypothesis, agentic narcissists like other people less than non-narcissists do. As a result, those others reciprocate by also liking agentic narcissists less in return.

The tit-for-tat hypothesis is novel, but there is some relevant theory and empirical research buttressing an underlying assumption. Specifically, prior theory has postulated that agentic narcissists like other people less than non-narcissists do. For example, Paulhus (2001) argued that agentic narcissists' interpersonal relationships suffer from asymmetric "self-other liking": positive views of self but negative views of others. Relatedly, Campbell's (1999) self-orientation model posits that agentic narcissists are not interested in close interpersonal relationships. Similarly, Morf and Rhodewalt (2001) argued that agentic narcissists do not care about interpersonal relationships signified by warmth, closeness, and love.

Some empirical evidence is also in line with the theoretical assumption that agentic narcissists like others less than non-narcissists do. That evidence, however, is largely indirect and it is not entirely consistent. On one hand, agentic narcissists describe themselves as relatively disagreeable and, thus, as cold and aloof (Carlson et al., 2011; Paulhus, 2001), are relatively unaffected by social stimuli (Jordan, Giacomin, & Kopp, 2014), engage less in perspective-taking (Hepper, Hart, & Sedikides, 2014), perceive hypothetical target persons less positively when those targets were described as non-narcissistic (Wallace, Grotzinger, Howard, & Parkhill, 2015), and like the most important people in their lives less than non-narcissists do (Lamkin, Clifton, Campbell, & Miller, 2014). On the other hand, agentic narcissists describe themselves as socially extraverted and, thus, gregarious (Carlson et al., 2011; Paulhus, 2001). Agentic narcissists can also be more charming and funnier than non-narcissists (Back et al., 2010; Paulhus, 1998).

Finally, there is plenty of theory and research on why agentic narcissists' disinterest in other people should prompt those others to like agentic narcissists less in return. Among the possible explanations are reciprocity norms (e.g., there exist strong cultural norms that people reciprocate the interpersonal interest they receive from non-narcissists; Gouldner, 1960), behavioral mimicry (e.g., people automatically mimic the disinterested, interpersonal behavior of their narcissistic counterparts; Chartrand & Lakin, 2013), and emotional contagion (e.g., agentic narcissists' disinterested

interpersonal emotions transfer to the narcissists' counterparts; Parkinson & Simons, 2009).

Communal Narcissism and the Tit-for-Tat Hypothesis

It is theoretically ambiguous whether the tit-for-tat hypothesis also helps to explain communal narcissists' (un)popularity. However, indirect evidence suggests that the tit-for-tat hypothesis may indeed apply to communal narcissism, albeit in a very different way than it applies to agentic narcissism. More precisely, there is some reason to believe that communal narcissists like other people more than non-narcissists do. Specifically, communal narcissists describe themselves as particularly agreeable and, thus, as particularly considerate, trustful, and kind to others (Gebauer et al., 2012; Kwiatkowska, Jułkowski, Rogoza, Żemojtel-Piotrowska, & Fatfouta, 2019). If communal narcissists indeed like other people more than non-narcissists do, the tit-for-tat hypothesis would predict that others should reciprocate by also liking communal narcissists more in return.

If communal narcissists liked other people more than non-narcissists do, and if those others reciprocated by liking communal narcissists a lot, does this mean that communal narcissists are overall more popular than their non-narcissistic counterparts? Not necessarily. It is well possible that communal narcissists also possess negative features that cancel out any popularity benefits (Hayes, 2013; Shrout & Bolger, 2002). To illustrate, communal narcissists' relatively high liking of others may earn communal narcissists one "popularity dollar" (cf. Li, Bailey, Kenrick, & Linsenmeier, 2002), but some negative feature may cost communal narcissists one popularity dollar. For example, communal narcissists may unduly seek admiration (as agentic narcissists do; see earlier) and, thus, likely feel the constant need to tell others about their (excessively inflated) qualities in the communal domain (Gebauer et al., 2012; Nehrlich et al., in press). That show-off mentality may well annoy others in the long run and, thus, should render communal narcissists less likable. Overall, then, communal narcissists' net popularity would be zero. Thus, in addition to examining the applicability of the tit-for-tat hypothesis to communal narcissism, we explore the overall relation between communal narcissism and interpersonal liking. In so doing, we are the first to probe for communal narcissist's popularity.

Overview of the Present Research

Our research had three main goals. First, we sought to provide an initial test of the tit-for-tat hypothesis as a novel explanation for agentic narcissists' lowered popularity. Second, we sought to examine the applicability of the

tit-for-tat hypothesis to communal narcissists and their popularity. Finally (and more tentatively), we sought to test whether agentic narcissists are outwardly disliked by people who know them well (i.e., the predominant view; Baumeister & Vohs, 2001; Bizumic & Duckitt, 2008) or whether others may feel rather neutral toward agentic narcissists while liking non-narcissists a lot. In addition, our research provides a replication of agentic narcissists' long-term popularity, and our research is the first to examine communal narcissists' long-term popularity.

An important asset of jointly studying agentic and communal narcissism is that we were able to account for communal narcissism in our analyses of agentic narcissism (and vice versa). That way, we were able to assure that our agentic narcissism results are not spurious due to communal narcissism (and vice versa) (Gebauer, Nehrlich, et al., 2018; Gebauer et al., 2012). For the same approach regarding two other narcissism dimensions, see Back et al. (2013) and Leckelt et al. (2015). For the same approach regarding agency and communion more broadly, see Trapnell and Paulhus (2012) and Wiggins, Trapnell, and Phillips (1988).

We tested our predictions in a large, longitudinal roundrobin study (474 self-reports, 2,488 informant-reports; Warner, Kenny, & Stoto, 1979). The large sample size allowed us to test our predictions with very high precision (Schönbrodt & Perugini, 2013). The longitudinal nature of our study allowed us to infer some temporal ordering of effects (Hayes, 2013). Our study was conducted in a natural setting of 69 university work groups. We randomly assigned students to those work groups. Random assignment is rarely employed in round-robin studies, but it is important because it rules out a major confound of informant-report studies: homophily (cf. Leising, Erbs, & Fritz, 2010). Finally, prior to the round-robin ratings, the work-group members repeatedly met for many hours over the course of several weeks. In those meetings, the workgroup members had to work together closely on designing, setting up, conducting, and writing up a research project. Thus, our informant-reports came from workgroup members, who knew each other very well. At the same time, those informant-reports were provided in the context of a student work-group setting with unusually high ecological validity (Funder & Sneed, 1993).

Method

Participants

Four full cohorts of first-year undergraduate students in psychology were recruited from the Humboldt University of Berlin, Germany (years 2010-2013). In total, 474 students participated for course credit (age: M = 24.4 years, SD = 6.7; sex: 63.5% women, 28.3% men, 8.2% missing responses).²

Measures and Procedure

Participants were recruited in a first-year introductory psychology practical. The study consisted of three assessment waves. Depending on the cohort, Wave 1 took place either 1 or 2 weeks into the semester. At Wave 1, participants completed a battery of self-report measures, including measures of agentic and communal narcissism (online supplement S1 includes a full list of additional measures). Subsequently, participants were randomly assigned to work groups of up to 10 members, resulting in a total of 69 work groups across the four student cohorts. From that point onward, the workgroup members met weekly for several hours per week to design, set up, conduct, and write up a research project. After approximately 4 weeks of very intensive meetings, 426 participants took part in Wave 2. At Wave 2, participants engaged in a first round-robin task (Warner et al., 1979). More specifically, every participant rated each fellow workgroup member on various dimensions, including his or her liking of each work-group member (online supplement S2 includes a full list of additional dimensions). Approximately 7 weeks later, 364 participants took part in Wave 3. Wave 3 consisted of the same round-robin task as Wave 2.

Agentic narcissism. The NPI (Raskin & Terry, 1988; German adaptation by Schütz, Marcus, & Sellin, 2004) contains 40 forced-choice items (e.g., narcissistic choice: "I see myself as a good leader," non-narcissistic choice: "I am not sure if I would make a good leader"; $\alpha = .83$).

Communal narcissism. The CNI (Gebauer et al., 2012) contains 16 items (e.g., "I am the most helpful person I know," "I am extraordinarily trustworthy"). Participants responded on 7-point rating scales ($1 = absolutely \ wrong$, $7 = absolutely \ right$; $\alpha = .87$).

Liking. Following Back, Schmukle, and Egloff (2011), participants used two items to rate the degree to which they like each work-group member: "How much do you like person X?" and "As how likeable do you personally perceive person X?" ($0 = not \ at \ all$, 1 = not, 2 = hardly, 3 = somewhat, 4 = average/medium, 5 = considerably, 6 = largely, 7 = very, 8 = extremely; $\alpha = .95$ at Wave 2, $\alpha = .97$ at Wave 3).

Analytic Strategy

Social relations analyses. First, we computed scores for liking others and for being liked by others. We computed those scores separately for each round-robin wave, using social relations analyses (Kenny, 1994). Social relations analyses provide three distinct explanations for interpersonal perceptions—namely, "target effects," "perceiver effects," and "relationship effects." An example may illustrate these three explanations best. Let us assume the following interpersonal perception: Ross (the perceiver) likes Rachel (the target). A

first possible explanation for that interpersonal perception is a target effect: Everybody may like Rachel. A second possible explanation is a perceiver effect: Ross may like everybody. The final possible explanation is a relationship effect: Ross may specifically like Rachel. We used the R package TripleR (Schönbrodt, Back, & Schmukle, 2012) to compute target effects of liking (i.e., being liked by others) and perceiver effects of liking (i.e., liking others). A key asset of TripleR is that its target effects are unconfounded by perceiver and relationship effects. Similarly, TripleR's perceiver effects are unconfounded by target and relationship effects.

Clustered data modeling. Participants were clustered in work groups. To account for the clustered data structure, we employed regression models with standard errors adjusted for clustering in Mplus 7 (Muthén & Muthén, 2012). In our models, we specified maximum likelihood estimation with robust standard errors (MLR; White, 1980). We handled missing data by using full information maximum likelihood estimation (FIML; cf. Enders, 2010). Because participants were randomly assigned to their work groups, we grand-mean centered all predictor variables (Enders & Tofighi, 2007). To obtain effect sizes for the indirect effects, we estimated completely standardized indirect effects (INDcs; see Hayes, 2013). For all models, we report standardized coefficients and 95% confidence intervals (95% CIs) to gauge our effects' statistical significance.

Measurement model. We modeled agentic and communal narcissism as latent variables using three manifest parcels each (Little, Cunningham, Shahar, & Widaman, 2002). Following recommendations by Kishton and Widaman (1994), we employed their "domain representative approach" to create parcels (for a concise description of that approach, see Little et al., 2002, pp. 167-168). The parcels' alpha consistencies were acceptable (agentic narcissism: α s = .59, .66, .61; communal narcissism: α s = .71, .67, .69).

Longitudinal mediation. The tit-for-tat hypothesis is a mediation hypothesis. Testing for mediation in cross-sectional designs can have severe limits (Fiedler, Schott, & Meiser, 2011). Fortunately, our study used a longitudinal design, which allowed us to examine indirect paths from agentic and communal narcissism at *Wave 1* via liking others at *Wave 2* to being liked by others at *Wave 3*. To test for those indirect paths, we adjusted standard errors for clustering (Preacher, Zhang, & Zyphur, 2011).

We examined the tit-for-tat hypothesis within a single statistical model. In that "tit-for-tat model," we (a) defined agentic and communal narcissism at Wave 1 (i.e., the latent variables) as simultaneous predictors, (b) specified liking others at Wave 2 (i.e., the perceiver effect of liking) as the mediator, and (c) treated being liked by others at Wave 3 (i.e., the target effect of liking) as the criterion. Figure 1 depicts the tit-for-tat model. With our single model approach, we were in the fortunate position to control for one form of grandiose

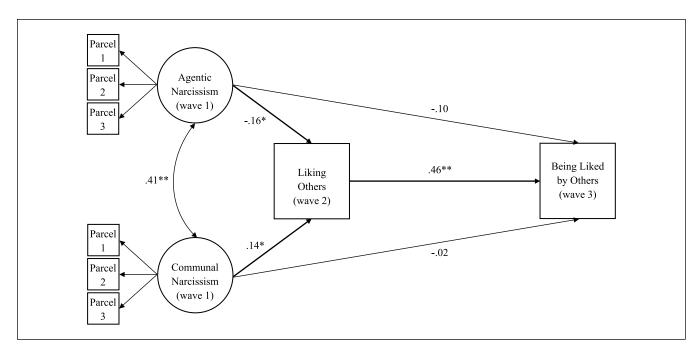


Figure 1. Graphical depiction of the tit-for-tat model. Note. Bold arrows indicate significant indirect paths, and regression coefficients are standardized (β s). *p < .05. **p < .01.

narcissism in our analysis of the other form. That way, we can be confident that our agentic narcissism results are not spurious due to communal narcissism (and vice versa).

Model comparison. We compared the tit-for-tat hypothesis (narcissism at Wave $1 \rightarrow$ liking others at Wave $2 \rightarrow$ being liked by others at Wave 3) against an alternative mediation hypothesis (narcissism at Wave $1 \rightarrow$ being liked by others at Wave $2 \rightarrow$ liking others at Wave 3). To do so, we compared the Akaike information criterion (AIC; Akaike, 1973) of the two models. Differences in AIC can be used to approximate Bayes factors (BF_{approx} = exp[$-0.5 \times \Delta$ AIC]; Burnham, Anderson, & Huyvaert, 2011, p. 26). BFs are likelihood ratios, describing the relative empirical plausibility of one model compared with its alternative. For example, a $BF_{approx.} = 100$ in favor of the tit-for-tat hypothesis would indicate that this hypothesis is 100 times more likely than the alternative model. According to Jeffreys's (1961) widely used labels, BFs \geq 100 provide "extreme" evidence for the focal model over its alternative model.

Descriptive statistics and zero-order correlations. Table 1 includes the means and standard deviations of all variables analyzed in this article, and Table 2 includes their zero-order correlations.

Results

Goal 1: Agentic Narcissists' Popularity and the Tit-for-Tat Hypothesis

We predicted that the tit-for-tat model (Figure 1) reveals a unique indirect effect from agentic narcissism (Wave 1)

Table I. Descriptive Statistics of Manifest Variables.

	М	SD
Agentic narcissism (Parcel I, Wave I)	0.36	0.18
Agentic narcissism (Parcel 2, Wave 1)	0.38	0.21
Agentic narcissism (Parcel 3, Wave 1)	0.46	0.19
Communal narcissism (Parcel I, Wave I)	3.79	0.91
Communal narcissism (Parcel 2, Wave 1)	3.76	0.99
Communal narcissism (Parcel 3, Wave I)	3.92	0.98
Liking others (Wave 2)	4.81	0.93
Being liked by others (Wave 2)	4.81	0.95
Liking others (Wave 3)	5.06	1.05
Being liked by others (Wave 3)	5.06	0.94

Table 2. Estimated Zero-Order Correlations (Latent).

	١.	2.	3.	4.	5.
I. Agentic narcissism (Wave I)	_				
2. Communal narcissism (Wave I)	.41*	—			
3. Liking others (Wave 2)	11^{\dagger}	.07	—		
4. Being liked by others (Wave 2)	17*	04	.55*	_	
5. Liking others (Wave 3)	10	.07	.76*	.44*	_
6. Being liked by others (Wave 3)	14*	04	.48*	.78*	.58*

 $^{^{\}dagger}p < .10. *p < .05.$

via liking others less (Wave 2) to being liked less by others (Wave 3). In line with our prediction, that indirect effect was significant: IND = -0.47, SE = 0.21, 95% CI = [-0.88, -0.06], INDcs = -.08. Evidently, the tit-for-tat

hypothesis offers a plausible explanation for why people who know them well like agentic narcissists less than non-narcissists.

Goal 2: Communal Narcissists' Popularity and the Tit-for-Tat Hypothesis

We examined whether the tit-for-tat model (Figure 1) reveals a unique indirect effect from communal narcissism (Wave 1) via liking others more (Wave 2) to being liked more by others (Wave 3). Indeed, that indirect effect was also significant: IND = 0.07, SE = 0.03, 95% CI = [0.01, 0.14], INDcs = .06. Evidently, the tit-for-tat hypothesis also applies to communal narcissists' long-term popularity. Hence, the tit-for-tat hypothesis appears useful to understand the interpersonal consequences of grandiose narcissism in general (i.e., agentic *and* communal narcissism).

Agentic and Communal Narcissists' Popularity

We predicted and found unique indirect effects of agentic and communal narcissism on popularity, via narcissists' own liking for others. However, as explained in the Introduction, those findings do not necessarily mean that agentic (communal) narcissists are overall less (more) popular than nonnarcissists in our sample. In statistical terms, the presence of indirect effects does not necessitate the presence of total effects (Hayes, 2013; Shrout & Bolger, 2002). Therefore, it was important to examine explicitly those total effects. To do so, we reduced the tit-for-tat model. The resultant "totaleffects model" included agentic and communal narcissism at Wave 1 as simultaneous predictors of being liked by others at Wave 3 (no mediator included). The total-effects model revealed a negative unique relation between agentic narcissism and being liked by others: $\beta = -0.19$, z = -2.44, 95% CI = [-.34, -.04]. This finding replicates prior research (Czarna et al., 2014; Paulhus, 1998). Nonetheless, the finding is far from redundant, given that prior research was not always consistent (Czarna et al., 2014; Leckelt et al., 2015) and at times indirect (Carlson et al., 2011; Paulhus, 1998).

Next, we inspected the total-effects model's results for communal narcissism. The model revealed no unique relation between communal narcissism and being liked by others: $\beta = 0.02$, z = 0.23, 95% CI = [-0.13, 0.16]. The point estimate was very close to zero, and the large sample size suggests that this estimate is precise (Schönbrodt & Perugini, 2013). Thus, in all likelihood, communal narcissists are neither more nor less popular than their non-narcissistic counterparts. It is worth considering this finding in the context of the significant indirect effect described in the "Goal 2" section (communal narcissism \rightarrow more liking for others \rightarrow being liked more by others). In concert, those two findings suggest that communal narcissists also possess some additional features that reduce communal narcissists' popularity.

The Introduction has already speculated about one such feature (annoying show-off mentality in the communal domain), and we will elaborate on that feature in the "Discussion" section.

Goal 3: Outward Dislike Versus Neutrality Toward Agentic Narcissists

Our final goal was to test whether well-acquainted others outwardly dislike agentic narcissists (predominant view) or whether well-acquainted others feel rather neutral toward agentic narcissists. The total-effects model (see previous section) was well suited to explore that question. Specifically, we used the total-effects model to calculate the predicted values (PVs) of being liked by others for very low agentic narcissists (M + 2SD) and for very high agentic narcissists (M + 2SD)2SD) (Nezlek, 2007). We then evaluated where those PVs were located on the response scale of being liked by others (for conceptually identical tests in another research domain, see Baumeister, 1993; Riketta & Ziegler, 2007). As a reminder, that response scale had 9 points and each point was verbally anchored: $0 = not \ at \ all$, 1 = not, 2 = hardly, 3 = notsomewhat, 4 = average/medium, 5 = considerably, 6 =largely, 7 = very, and 8 = extremely.

The PV for very low agentic narcissists was 5.41. Absolutely speaking, non-narcissists were at least "considerably" liked by their fellow work-group members. The PV for very high agentic narcissists was 4.69. This result suggests that even very high agentic narcissists were *not* outwardly disliked by their work-group members. If anything, work-group members appeared to feel rather neutral toward agentic narcissists.

For the sake of completeness, we also computed the PVs of being liked by others for very low communal narcissists (M+2SD) and very high communal narcissists (M+2SD). As the regression slope was virtually flat, the PV for very high communal narcissists, PV=5.08, was close to the PV for very low communal narcissists, PV=5.01. This result suggests that, in an absolute sense, communal narcissists were "considerably" liked by their fellow workgroup members.³

The Tit-for-Tat Hypothesis Versus an Alternative Mediation Hypothesis

We compared the tit-for-tat hypothesis against an alternative mediation hypothesis. That alternative was largely identical to the tit-for-tat hypothesis. The two differences were (a) that being liked by others did not serve as the Wave 3 criterion, but as the Wave 2 mediator and (b) that liking others did not serve as the Wave 2 mediator, but as the Wave 3 criterion. The fit of the alternative model, AIC = 3,485.15, was worse than the fit of the tit-for-tat model, AIC = 3,385.98. In fact, the BF_{approx} favored the tit-for-tat model over the alternative

model by factor 3.43×10^{21} —highly persuasive evidence for the tit-for-tat hypothesis over its alternative (cf. Jeffreys, 1961).^{4,5}

Discussion

Grandiose narcissism garners major research attention in personality and social psychology. The interpersonal consequences of agentic narcissism are particularly focal (Back et al., 2010; Campbell et al., 2002). One prominent conclusion in that field concerns the long-term popularity of agentic narcissists. More precisely, among well-acquainted people, those high on agentic narcissism are liked less than those low on agentic narcissism (Campbell & Campbell, 2009; Paulhus, 1998). It is not entirely clear, however, why that effect occurs. Our first goal was to propose and test a novel answer to this why-question—namely, the tit-for-tat hypothesis. That hypothesis stipulates that agentic narcissists like other people less than non-narcissist do and that those others reciprocate by liking agentic narcissists less in return. The tit-fortat hypothesis builds on Ovid's (8 AD/1986) classic myth of Narcissus. That archetypical agentic narcissist had only eyes for himself, showed little interest in others, and received "pay back" for it. Our evidence supported the tit-for-tat hypothesis. In particular, our longitudinal round-robin study found a unique indirect effect of agentic narcissism on being liked less by others through agentic narcissists' lesser liking of others. That evidence is credible for at least five reasons.

First, the hypothesis is intuitive, as it is rooted in Ovid's classic description of agentic narcissism's prototype. Second, we have much reason to believe that our results are valid, as they come from a large round-robin study (474 self-reports, 2,488 informant-reports). Third, our study design controlled for a perennial confound of informant-reports—that is, homophily—as we randomly assigned participants to their work groups. Fourth, our study was highly ecologically valid, as we sampled work-group members who worked together on a real project (the work-group members met weekly for several hours to design, set up, conduct, and write up a research project). Finally, it is rare that round-robin studies include a longitudinal element, but ours did and longitudinal analyses were in line with the temporal chain of events proposed by the tit-for-tat hypothesis. In fact, Bayesian analyses provided strong evidence for the proposed temporal chain over an alternative temporal chain.

Our second goal was to examine whether the tit-for-tat hypothesis is restricted to agentic narcissists' popularity or whether the tit-for-tat hypothesis also helps to explain communal narcissists' popularity. Put differently, we sought to explore the scope of the tit-for-tat hypothesis. In our data, the tit-for-tat hypothesis also played a role for communal narcissists' popularity. More precisely, we found a unique indirect effect of communal narcissism on being liked more by others through communal narcissists' enhanced liking of others. Thus, our evidence supported the broad applicability of the

tit-for-tat hypothesis as a novel explanation of grandiose narcissists' popularity in general.

Our final goal was to examine whether well-acquainted others outwardly dislike agentic narcissists or whether wellacquainted others merely feel neutral toward them, while liking non-narcissists a lot. Specifically, we were able to inspect the absolute level to which others (dis)like agentic narcissists. We found that even very high agentic narcissists (M +2SD) were not outwardly disliked by other people—the absolute level of liking was still somewhat above the scale midpoint (4.61 on a 0-8 rating scale with the following scale labels: 4 = average/medium, 5 = considerably). Thus, these results appear more consistent with the neutrality explanation. Of course, absolute levels need to be interpreted with caution. That being said, the interpretation of absolute values is also far from being meaningless (Baumeister, 1993; Riketta & Ziegler, 2007). In fact, we consider our results rather telling for two reasons. First, each point of our rating scale was clearly labeled. Second, our study was conducted in Germany and the German language is an explicit one; anonymously stating that you like someone to an "average/ medium-to-considerable" degree simply means just that. Put differently, we do not believe that any of our German participants chose such a response to indicate outward dislike for an agentic narcissist.

In addition to testing for our three focal goals, the present research is also the first that tested for communal narcissists' overall popularity. More precisely, we explored whether communal narcissists were liked less than nonnarcissists, more than non-narcissists, or just as much. Popularity levels were virtually identical for people high and low in communal narcissism. That finding possesses considerable credibility because our sample size was large. The finding is noteworthy for two reasons. First, research on the popularity of grandiose narcissists has long been central to the narcissism literature. However, grandiose narcissism has traditionally been equated with agentic narcissism, without paying attention to communal narcissism. By consequence, research on communal narcissists' popularity has been missing altogether. The present research helps to close that gap.

Second, although we found no total effect of communal narcissism on being liked by others, we did find an indirect effect through communal narcissists' higher liking of others. The absence of total effects despite the presence of indirect effects is common, and there are multiple explanations for such a result pattern. One explanation is that the total effect's statistical power is too low to turn significant (Shrout & Bolger, 2002). In our case, however, this statistical explanation is highly unlikely because our sample size was large enough to detect reliably even very small effects (474 self-reports, 2,488 informant-reports). Hence, a much more likely explanation is a substantive one. As described in the Introduction, a nonsignificant total effect can result from multiple indirect effects that oppose each other (Hayes,

2013; Shrout & Bolger, 2002). In other words, our result pattern (total effect: no, indirect effect: yes) suggests the presence of additional indirect effects that help explain communal narcissists' popularity. The "Limitations and Future Directions" section follows, including a proposal for one such indirect effect.

Limitations and Future Directions

The present research concerned grandiose narcissism and interpersonal liking among well-acquainted others in a work-group context. This is important to keep in mind to prevent overgeneralization of our findings. For example, it is unlikely that the tit-for-tat hypothesis also applies to situations in which others have just met an agentic narcissist (i.e., short-term acquaintance; Back et al., 2010; Paulhus, 1998). In such situations, the agentic narcissist has much less opportunity to show his lesser liking for others. Consequently, others have little reason to reciprocate. In line with this reasoning, the negative association between agentic narcissism and being liked by others tends to be reversed at short-term acquaintance (Back et al., 2010; Paulhus, 1998).

The context of the present study also raises questions about the generalizability of our communal narcissism results to other contexts. For example, it is entirely unknown to date whether communal narcissists are liked more, less, or as much as non-narcissists (a) at short-term acquaintance, (b) in friendships outside a work-group context, and (c) in romantic relationships. Future research may want to explore those questions.

As described in the previous section, our communal narcissism results (indirect effect without total effect) suggest that communal narcissists possess some features that reduce their popularity. One candidate feature is communal narcissists' unduly inflated view of their own communion (Gebauer et al., 2012; Nehrlich et al., in press). That excessive self-enhancement bias in the communal domain likely comes with an annoying show-off mentality (cf. Campbell, 1999; Wallace & Baumeister, 2002), which should curb other people's enthusiasm for communal narcissists. Future research should assess whether other people indeed perceive communal narcissists as insufferable self-enhancers in the communal domain and whether that perception mediates the relation between communal narcissism and popularity.⁶

The tit-for-tat hypothesis provides a novel explanation for agentic narcissists' curbed popularity. Future research should compare the explanatory power of this novel hypothesis against complementary hypotheses. Such complementary hypotheses may include (a) lack of empathy and, thus, antagonism (Back et al., 2013; Morf & Rhodewalt, 2001); (b) lack of self-insight and, thus, bragging (Palmer, Ramsey, Morey, & Gentzler, 2016; Van Damme, Deschrijver, Van Geert, & Hoorens, 2017); (c) hubristic pride and, thus, insulting body language (van Osch, Zeelenberg, Breugelmans, & Brandt,

2018); and (d) shameless self-promotion and, thus, envy in others (Rentzsch & Gross, 2015; Rentzsch, Schröder-Abé, & Schütz, 2015; Rentzsch, Schütz, & Schröder-Abé, 2011).

Finally, a perennial limitation of research on narcissism and interpersonal liking is the lack of experimental evidence. Our research is no exception in this regard. Having said that, we made use of a longitudinal research design and, thus, made a decisive step toward causal testing.

Conclusion

Grandiose narcissism has become a major field of research in personality and social psychology, and the interpersonal consequences of agentic narcissism have received particular scholarly attention. A centerpiece conclusion is that agentic narcissists tend to be liked less than non-narcissists in high acquaintanceship contexts. However, it has not been fully understood why agentic narcissists are liked less. Consequently, our first goal was to offer a novel answer to that question. We did so by proposing the tit-fortat hypothesis. Building on Ovid's (8 AD/1986) classic myth of Narcissus, the tit-for-tat hypothesis states that agentic narcissists like other people less, which others reciprocate by liking agentic narcissists less in return. A large, ecologically valid, and longitudinal round-robin study supported the tit-for-tat hypothesis as a novel explanation for why agentic narcissists are liked less. Our second goal was to examine whether the tit-for-tat hypothesis only plays an explanatory role for agentic narcissists' popularity or whether this hypothesis also plays an explanatory role for communal narcissists' popularity. Our evidence supported the latter possibility. More precisely, communal narcissists liked other people more, which—in turn—increased communal narcissists' popularity. Our final goal was to examine whether others outwardly dislike agentic narcissists in an absolute sense. Contrary to this frequent assumption, our data were much more consistent with an alternative view-namely, that well-acquainted others feel rather neutral toward agentic narcissists while liking non-narcissists a lot. In all, we sought to contribute to the literature on grandiose narcissism and interpersonal liking on three counts, and we hope that our findings will provide further impetus to this important literature.

Authors' Note

Both authors contributed equally to the present research.

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Notes

- 1. Grandiose narcissism is by far the most widely researched form of narcissism in personality and social psychology (Cain, Pincus, & Ansell, 2008). However, there also exist several vulnerable forms of narcissism, such as hypersensitive narcissism, pathological narcissism, and narcissistic personality disorder. Krizan and Herlache (2018) have recently proposed an integrative model of narcissism that parsimoniously describes grandiose and vulnerable forms of narcissism as situated on opposite poles of a narcissism spectrum. According to this Narcissism Spectrum Model, grandiose and vulnerable narcissists can be characterized by a mix of unique and shared features. Hubris and exhibitionism are unique features of grandiose narcissists, whereas defensiveness and resentment are unique features of vulnerable narcissists. Self-importance and entitlement, by contrast, are shared features of grandiose and vulnerable narcissists. The distinction between agentic and communal narcissists can be understood as a subdivision of grandiose narcissism, as it is conceptualized by Krizan and Herlache (2018).
- Three articles partly relied on the same dataset (Dufner, Leising, & Gebauer, 2016; Gebauer, Sedikides, Verplanken, & Maio, 2012; Nehrlich, Gebauer, Sedikides, & Schoel, in press). None of those articles examined the relation between grandiose narcissism and liking others/being liked by others.
- 3. We also examined whether agentic narcissists outwardly disliked their work-group members or whether they felt rather neutral toward them. Adapting the procedure described in the "Goal 3" section (Nezlek, 2007), we found that very low agentic narcissists liked rather than disliked their fellow work-group members, PV = 5.12. Moreover, very high agentic narcissists did not outwardly dislike their fellow work-group members, PV = 4.50. If anything—and much more in line with Ovid's portrait of Narcissus—agentic narcissists felt rather neutral, or indifferent, toward their work-group members. In contrast, the results for communal narcissism looked different. Very low communal narcissists felt relatively neutral toward their work-group members, PV = 4.59, whereas very high communal narcissists liked rather than disliked their fellow work-group members, PV = 5.09.
- 4. We ran an additional cross-lagged mediation model, which included liking of others at Waves 2 and 3 and also being liked by others at Waves 2 and 3. The results revealed that all single paths in that model were significant (i.e., agentic narcissism at Wave $1 \rightarrow$ liking others at Wave 2, $\beta = -0.16$, z = -2.50, 95% confidence interval [CI] = [-0.29, -0.04]; communal narcissism at Wave $1 \rightarrow$ liking others at Wave 2, $\beta = 0.14$, z = 2.33, 95% CI = [0.02, 0.25]; liking others at Wave $2 \rightarrow$ being liked at Wave 3, $\beta = 0.07$, z = 1.98, 95% CI = [0.001, 0.15]). At

- the same time, the path running from being liked at Wave $2 \rightarrow$ liking others at Wave 3 was not significant: $\beta = 0.03, z = 0.61$, 95% CI = [-0.06, 0.12]. This pattern of results once more supports the tit-for-tat hypothesis while providing no support for its alternative. In line with those results, the unique indirect effects proposed by the tit-for-tat hypothesis (agentic narcissism: IND = -0.08, 95% CI = [-0.18, 0.03]; communal narcissism: IND = 0.01, 95% CI = [-0.005, 0.03]) were descriptively—albeit not statistically—larger than the indirect effects proposed by its alternative (agentic narcissism: IND = -0.04, 95% CI = [-0.16, [0.09]; communal narcissism: IND = 0.001, 95% CI = [-0.005], 0.01]). The lack of statistical significance in this one additional set of analyses is unsurprising. This is so because the full crosslagged model described in this footnote constitutes an overly conservative test of our hypotheses. Specifically, there was very little rank-order change between Waves 2 and 3 (liking of others: r = .74,95% CI = [.69, .80]; being liked by others: r = .74, 95% CI = [.67, .80]). Thus, there was very little a priori chance to find significant cross-lagged effects. Against the backdrop of that insufficient rank-order change, it is impressive that even the full cross-lagged results described here provide reasonably strong support for the tit-for-tat hypothesis over its alternative.
- 5. Following previous research (Gebauer, Sedikides, & Schrade, 2017; Gebauer et al., 2012), the main text operationalized agentic narcissism via all 40 Narcissistic Personality Inventory (NPI) items. Arguably, though, four of those items may not be appropriate indicators of agentic narcissism. Specifically, the NPI's four-item Entitlement/Exploitativeness subscale (Ackerman et al., 2011) may be best understood as a facet of maladaptive/ vulnerable rather than adaptive/grandiose narcissism (e.g., the nomological network of the Entitlement/Exploitativeness subscale fits the network of maladaptive/vulnerable narcissism much better than the network of adaptive/grandiose narcissism). Thus, we repeated all our analyses while operationalizing agentic narcissism via the 36 NPI-items that do not belong to the Entitlement/Exploitativeness subscale. With one minor exception, all results remained conceptually identical to our main text results (i.e., no changes in the significance levels of any result). The one exception occurred in our total-effects model. In that model, the path from agentic narcissism (Wave 1) to being liked (Wave 3) became minimally weaker and—as a result—marginally significant: $\beta = -.15$, p = .078. Note, however, that the zero-order correlations between agentic narcissism (Wave 1) and being liked (Waves 2-3) remained significant, r = -.14, p = .019 (for being liked at Wave 2) and r = -.11, p = .018 (for being liked at Wave 3). Our agentic narcissism results are, thus, not driven by the NPI's Entitlement/Exploitativeness facet.
- 6. As reported in online supplement S2, the present study includes self- and informant-reports of communion/prosociality. On that basis, Nehrlich et al. (in press) computed a communal/prosocial self-enhancement score for each participant (latent difference score method; McArdle, 2009). We saved those scores and tested for a unique, indirect effect from communal narcissism (Wave 1) via higher communal/prosocial self-enhancement (Wave 2) to being liked less by others (Wave 3). Indeed, that indirect effect was significant: IND = −0.07, SE = 0.04, 95% CI = [−0.14, −0.01], INDcs = −.06. Thus, the total effect of communal narcissism on being liked by others may be (close to) zero, because communal narcissists like others a lot (earning them a "popularity dollar"), but communal narcissists are perceived by others

as insufferable self-enhancers in the communal domain (costing them a "popularity dollar"). Note that Nehrlich et al.'s (in press) communal self-enhancement index has two shortcomings in the context of the present research. First, the indirect effect (i.e., communal narcissism → higher communal/prosocial selfenhancement → being liked less by others) hinges, in part, on a negative relation between communal/prosocial self-enhancement and being liked less by others. In the present study, however, that negative relation may be a mere artifact, because the informant-reports of communion/prosociality and the likability ratings came from the same informants (for details on why this is problematic, see Dufner, Gebauer, Sedikides, & Denissen, 2018). Second, communal/prosocial self-enhancement is merely a proxy for the theoretically relevant mediator—namely, others subjective perception of communal narcissists as communal self-enhancers. Thus, the analysis in this footnote is tentative and calls for firmer evidence.

Supplemental Material

Supplemental material is available online with this article.

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, 67-87.
- Akaike, H. (1973). Information theory and an extension of the maximum likelihood principle. In B. N. Petrov & F. Csaki (Eds.), Proceedings of the 2nd International Symposium on Information Theory (pp. 267-281). Budapest, Hungary: Akadémiai Kiadó.
- Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, 105, 1013-1037.
- Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism-popularity link at zero acquaintance. *Journal of Personality and Social Psychology*, 98, 132-145.
- Back, M. D., Schmukle, S. C., & Egloff, B. (2011). A closer look at first sight: Social relations lens model analysis of personality and interpersonal attraction at zero acquaintance. *European Journal of Personality*, 25, 225-238.
- Baumeister, R. F. (1993). Understanding the inner nature of low self-esteem: Uncertain, fragile, protective, and conflicted. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 201-218). New York, NY: Plenum Press.
- Baumeister, R. F., & Vohs, K. D. (2001). Narcissism as addiction to esteem. *Psychological Inquiry*, 12, 206-210.
- Bizumic, B., & Duckitt, J. (2008). "My group is not worthy of me": Narcissism and ethnocentrism. *Political Psychology*, 29, 437-453.
- Burnham, K. P., Anderson, D. R., & Huyvaert, K. P. (2011). AIC model selection and multimodel inference in behavioral ecology: Some background, observations, and comparisons. *Behavioral Ecology and Sociobiology*, 65, 23-35.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggres-

- sion: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, 75, 219-229.
- Cain, N. M., Pincus, A. L., & Ansell, E. B. (2008). Narcissism at the crossroads: Phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. *Clinical Psychology Review*, 28, 638-656.
- Campbell, W. K. (1999). Narcissism and romantic attraction. Journal of Personality and Social Psychology, 77, 1254-1270
- Campbell, W. K., & Campbell, S. M. (2009). On the self-regulatory dynamics created by the particular benefits and costs of narcissism: A contextual reinforcement model and examination of leadership. Self and Identity, 8, 214-232.
- Campbell, W. K., Foster, C. A., & Finkel, E. J. (2002). Does self-love lead to love for others? A story of narcissistic game playing. *Journal of Personality and Social Psychology*, 83, 340-354.
- Campbell, W. K., & Foster, J. D. (2007). The narcissistic self: Background, an extended agency model, and ongoing controversies. In C. Sedikides & S. J. Spencer (Eds.), *The self* (pp. 115-138). New York, NY: Psychology Press.
- Carlson, E. N., Vazire, S., & Oltmanns, T. F. (2011). You probably think this paper's about you: Narcissists' perceptions of their personality and reputation. *Journal of Personality and Social Psychology*, 101, 185-201
- Chartrand, T. L., & Lakin, J. L. (2013). The antecedents and consequences of human behavioral mimicry. *Annual Review of Psychology*, 64, 285-308.
- Czarna, A. Z., Dufner, M., & Clifton, A. D. (2014). The effects of vulnerable and grandiose narcissism on liking-based and disliking-based centrality in social networks. *Journal of Research* in Personality, 50, 42-45.
- 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, 1588-1599.
- Dufner, M., Gebauer, J. E., Sedikides, C., & Denissen, J. J. A. (2018).
 Self-enhancement and psychological adjustment: A meta-analytic review. *Personality and Social Psychology Review*.
 Advance online publication. doi:10.1177/1088868318756467
- Dufner, M., Leising, D., & Gebauer, J. E. (2016). Which basic rules underlie social judgments? Agency follows a zero-sum principle and communion follows a non-zero-sum principle. *Personality and Social Psychology Bulletin*, 42, 677-687.
- Enders, C. K. (2010). Applied missing data analysis. New York, NY: Guilford Press.
- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, *12*, 121-138.
- Fiedler, K., Schott, M., & Meiser, T. (2011). What mediation analysis can (not) do. *Journal of Experimental Social Psychology*, 47, 1231-1236.
- Funder, D. C., & Sneed, C. D. (1993). Behavioral manifestations of personality: An ecological approach to judgmental accuracy. *Journal of Personality and Social Psychology*, 64, 479-490.
- Gebauer, J. E., Nehrlich, A. D., Stahlberg, D., Sedikides, C., Hackenschmidt, A., Schick, D., . . . Mander, J. (2018). Mindbody practices and the self: Yoga and meditation do not quiet

- the ego but instead boost self-enhancement. *Psychological Science*, 29, 1299-1308.
- Gebauer, J. E., & Sedikides, C. (2018a). Agency and communion in grandiose narcissism. In A. E. Abele & B. Wojciszke (Eds.), Agency and communion in social psychology (pp. 90-102). London, England: Routledge.
- Gebauer, J. E., & Sedikides, C. (2018b). Communal narcissism: Theoretical and empirical support. In A. D. Hermann, A. Brunell, & J. Foster (Eds.), *The Handbook of trait narcissism: Key advances, research methods, and controversies* (pp. 69-78). New York, NY: Springer.
- Gebauer, J. E., Sedikides, C., & Schrade, A. (2017). Christian selfenhancement. *Journal of Personality and Social Psychology*, 113, 786-809.
- Gebauer, J. E., Sedikides, C., Verplanken, B., & Maio, G. R. (2012). Communal narcissism. *Journal of Personality and Social Psychology*, 103, 854-878.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. American Sociological Review, 25, 161-178.
- Grijalva, E., & Zhang, L. (2016). Narcissism and self-insight: A review and meta-analysis of narcissists' self-enhancement tendencies. Personality and Social Psychology Bulletin, 42, 3-24.
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. New York, NY: Guilford Press.
- Hepper, E. G., Hart, C. M., & Sedikides, C. (2014). Moving narcissus: Can narcissists be empathic? *Personality and Social Psychology Bulletin*, 40, 1079-1091.
- Hill, P. L., & Roberts, B. W. (2012). Narcissism, well-being, and observer-rated personality across the lifespan. Social Psychological & Personality Science, 3, 216-223.
- Imhoff, R., & Koch, A. (2017). How orthogonal are the Big Two of social perception? On the curvilinear relation between agency and communion. *Perspectives on Psychological Science*, 12, 122-137.
- Jeffreys, H. (1961). *Theory of probability* (3rd ed.). Oxford, UK: Oxford University Press.
- Jordan, C. H., Giacomin, M., & Kopp, L. (2014). Let go of your (inflated) ego: Caring more about others reduces narcissistic tendencies. Social & Personality Psychology Compass, 8, 511-523.
- Kenny, D. A. (1994). Interpersonal perception: A social relations analysis. New York, NY: Guilford Press.
- Kishton, J. M., & Widaman, K. F. (1994). Unidimensional versus domain representative parceling of questionnaire items: Am empirical example. *Educational and Psychological Measurement*, 54, 754-765.
- Klar, Y., & Giladi, E. E. (1997). No one in my group can be below the group's average: A robust positivity bias in favor of anonymous peers. *Journal of Personality and Social Psychology*, 73, 885-901.
- Krizan, Z., & Herlache, A. D. (2018). The Narcissism Spectrum Model: A synthetic view of narcissistic personality. *Personality and Social Psychology Review*, 22, 3-21.
- Küfner, A. C. P., Nestler, S., & Back, M. D. (2013). The two pathways to being an (un-)popular narcissist. *Journal of Personality*, 81(2), 184–195. doi: 10.1111/j.1467-6494.2012.00795.x
- Kwiatkowska, M. M., Jułkowski, T., Rogoza, R., Żemojtel-Piotrowska, M., & Fatfouta, R. (2019). Narcissism and trust: Differential impact of agentic, antagonistic, and communal

- narcissism. Personality and Individual Differences, 137, 139-143.
- Lamkin, J., Clifton, A., Campbell, W. K., & Miller, J. D. (2014).
 An examination of the perceptions of social network characteristics associated with grandiose and vulnerable narcissism.
 Personality Disorders: Theory, Research, and Treatment, 5, 137-145.
- 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, 856-871.
- Leising, D., Erbs, J., & Fritz, U. (2010). The letter of recommendation effect in informant ratings of personality. *Journal of Personality and Social Psychology*, 98, 668-682.
- Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeier, J. A. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology*, 82, 947-955.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151-173.
- McArdle, J. J. (2009). Latent variable modeling of differences and changes with longitudinal data. *Annual Review of Psychology*, 60, 577-605.
- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, 12, 177-196.
- Muthén, L. K., & Muthén, B. O. (2012). *Mplus user's guide* (7th ed.). Los Angeles, CA: Author.
- Nehrlich, A. D., Gebauer, J. E., Sedikides, C., & Schoel, C. (in press). Agentic narcissism, communal narcissism, and prosociality. *Journal of Personality and Social Psychology*. doi:10.1037/pspp0000190
- Nezlek, J. B. (2007). A multilevel framework for understanding relationships among traits, states, situations and behaviours. *European Journal of Personality*, 21, 789-810.
- Ovid. (1986). Metamorphoses (A. D. Melville, Trans.). Oxford, UK: Oxford University Press. (Original work published 8 AD)
- Palmer, C. A., Ramsey, M. A., Morey, J. N., & Gentzler, A. L. (2016). How do people share their positive events? Individual differences in capitalizing, bragging, and mass-sharing. *Journal of Individual Differences*, 37, 250-259.
- Parkinson, B., & Simons, G. (2009). Affecting others: Social appraisal and emotion contagion in everyday decision making. Personality and Social Psychology Bulletin, 35, 1071-1084.
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 74, 1197-1208.
- Paulhus, D. L. (2001). Normal narcissism: Two minimalist accounts. *Psychological Inquiry*, 12, 228-230.
- Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, 66, 1025-1060.
- Preacher, K. J., Zhang, Z., & Zyphur, M. J. (2011). Alternative methods for assessing mediation in multilevel data: The advantages of multilevel SEM. Structural Equation Modeling, 18, 161-182.
- Raskin, R. N., & Hall, C. S. (1979). A narcissistic personality inventory. *Psychological Reports*, 45, 590.

Raskin, R. N., Novacek, J., & Hogan, R. (1991). Narcissism, self-esteem, and defensive self-enhancement. *Journal of Personality*, 59, 19-38.

- Raskin, R. N., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54, 890-902.
- Rentzsch, K., & Gross, J. J. (2015). Who turns green with envy? Conceptual and empirical perspectives on dispositional envy. *European Journal of Personality*, 29, 530-547.
- Rentzsch, K., Schröder-Abé, M., & Schütz, A. (2015). Envy mediates the relation between low academic self-esteem and hostile tendencies. *Journal of Research in Personality*, 58, 143-153.
- Rentzsch, K., Schütz, A., & Schröder-Abé, M. (2011). Being labeled nerd: Factors that influence the social acceptance of high-achieving students. *Journal of Experimental Education*, 79, 143-168.
- Riketta, M., & Ziegler, R. (2007). Self-ambivalence and reactions to success versus failure. *European Journal of Social Psychology*, 37, 547-560.
- Schönbrodt, F. D., Back, M. D., & Schmukle, S. C. (2012). TripleR: An R package for social relations analyses based on round-robin designs. *Behavior Research Methods*, 44, 455-470.
- Schönbrodt, F. D., & Perugini, M. (2013). At what sample size do correlations stabilize? *Journal of Research in Personality*, 47, 609-612.
- Schütz, A., Marcus, B., & Sellin, I. (2004). Die Messung von Narzissmus als Persönlichkeitskonstrukt: Psychometrische Eigenschaften einer Lang- und einer Kurzform des Deutschen NPI (Narcissistic Personality Inventory) [Measuring narcissism as a personality construct: Psychometric properties of a long and a short version of the German Narcissistic Personality Inventory]. Diagnostica, 50, 202-218.
- Sears, D. O. (1983). The person-positivity bias. *Journal of Personality and Social Psychology*, 44, 233-250.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422-445.

- Trapnell, P. D., & Paulhus, D. L. (2012). Agentic and communal values: Their scope and measurement. *Journal of Personality* Assessment, 94, 39-52.
- Van Damme, C., Deschrijver, E., Van Geert, E., & Hoorens, V. (2017). When praising yourself insults others: Self-superiority claims provoke aggression. *Personality and Social Psychology Bulletin*, 43, 1008-1019.
- van Osch, Y., Zeelenberg, M., Breugelmans, S. M., & Brandt, M. J. (2018). Show or hide pride? Selective inhibition of pride expressions as a function of relevance of achievement domain. *Emotion*. Advance online publication. doi:10.1037/emo0000437
- Wallace, H. M. (2011). Narcissistic self-enhancement. In W. K. Campbell & J. D. Miller (Eds.), The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments (pp. 309-318). Hoboken, NJ: Wiley.
- Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls with perceived opportunity for glory. *Journal of Personality and Social Psychology*, 82, 819-834.
- Wallace, H. M., Grotzinger, A., Howard, T. J., & Parkhill, N. (2015). When people evaluate others, the level of others' narcissism matters less to evaluators who are narcissistic. Social Psychological & Personality Science, 6, 805-813.
- Warner, R. M., Kenny, D. A., & Stoto, M. (1979). A new round robin analysis of variance for social interaction data. *Journal of Personality and Social Psychology*, 37, 1742-1757.
- White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48, 817-838.
- Wiggins, J. S., Trapnell, P., & Phillips, N. (1988). Psychometric and geometric characteristics of the Revised Interpersonal Adjective Scales (IAS–R). *Multivariate Behavioral Research*, 23, 517-530.