

**Our Versus Their Narcissist: How People View Narcissistic Persons From Their  
Ingroup and From a Competing Outgroup**

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**Abstract**

In this research we will investigate in a competitive intergroup context to what extent the perception of persons scoring high in grandiose narcissism varies depending on whether they belong to one's own group or to an opposing outgroup. To do so, we will conduct a laboratory study, in which members of newly formed groups have direct contact with another group and compete for scarce resources. We hypothesize that perceivers ascribe targets scoring high in narcissistic admiration higher status when they belong to their ingroup versus the outgroup. Similarly, we hypothesize that perceivers like targets scoring high in narcissistic rivalry better when they belong to their ingroup versus the outgroup. We will also investigate the processes that link the two narcissism dimensions to status and likability and test whether these processes differ, depending on whether evaluations are made by ingroup or outgroup members.

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The idea for this research developed during a soccer world cup years ago. The first author watched his home team Germany play against Portugal. Like many Germans, he was annoyed by Portugal's Cristiano Ronaldo's narcissistic displays of dominance and arrogance during the game. A few days later, he watched the Portuguese play against the Spanish, but this time he supported Portugal. He was surprised to notice that now, he was much less disturbed by Ronaldo's narcissistic gestures, he actually approved them and thought they might serve the team. Could it be that in the context of an intergroup competition, how people evaluate narcissistic persons differs greatly, depending on whether these narcissists belong to one's ingroup or to the opposing outgroup?

Grandiose narcissism is a personality trait characterized by egocentrism, feelings of grandiosity and entitlement, arrogance, and a lack of regard for other people (Campbell & Miller, 2011). Grandiose narcissists (i.e., persons scoring high on grandiose narcissism) often emerge as leaders in politics or corporations (Maccoby, 2000; Rosenthal, & Pittinsky, 2006). Particularly in threatening environments, dominant and narcissistic leaders are popular (i.e., liked, enjoyed, or supported by many people; Cambridge Advanced Learners Dictionary, 2008)—because such 'strong leaders' are considered capable of standing up against the threats and defending the group (Nevicka et al., 2013; see also Laustsen, & Petersen, 2017; Kakkar & Sivanathan, 2017; Padilla et al., 2007). In the current research, we will focus on one such context, where groups face a common threat from the outside, namely intergroup competition. We test the hypothesis that in this context, narcissists polarize between the in- and outgroup in the sense that the higher a person's narcissism is, the more ingroup popularity exceeds outgroup popularity.

### **Narcissists, Perceived from an Ingroup Perspective**

In the context of an intergroup competition, how are narcissistic persons viewed by members of their ingroups? When narcissists enter a group, they typically desire social influence and aim for leadership positions (Emmons, 1989; Zeigler-Hill et al., 2018). And quite often, they are successful in this endeavor. Narcissists possess attributes that are considered desirable in leaders, such as assertiveness, charm, and self-confidence (Maccoby, 2000; Rosenthal, & Pittinsky, 2006), and often they emerge as leaders in newly formed groups (Grijalva et al., 2015). Thus, in newly formed groups, narcissists are often valued by their ingroup members, and particularly so in threatening environments (Laustsen, & Petersen, 2017; Kakkar & Sivanathan, 2017; Nevicka et al., 2013; Padilla et al., 2007), because they are perceived as efficient leaders.

This effect should clearly be present in the face of a competing outgroup. An outgroup is often perceived as an external threat, particularly if it is competing over scarce resources (Esses, et al., 1998; Sherif, 1966). Past research indeed indicates that during zero-sum intergroup debates, dominant persons are particularly likely to be selected as group spokesmen (Halevy et al., 2012). It thus seems likely that under the conditions of an intergroup competition, narcissists are popular among their ingroup members.

### **Narcissists, Perceived from an Outgroup Perspective**

How are narcissists viewed by members of a competing outgroup? It seems likely that under the very same circumstances that produce a positive link between narcissism and ingroup popularity—namely intergroup competition—narcissists are viewed much more negatively by members of the opposing group. An intergroup competition is typically a zero-sum situation, in which the benefit of one group directly comes at the cost of the other group (Sherif, 1966). Thus, with their self-confident demeanor and readiness to defend their group, narcissists should be viewed as a threat, or nuisance by members of the outgroup, to the extent that they undermine the outgroup's chances of success. Indirectly supporting this possibility,

recent findings indicated that the former U.S. president Donald Trump—who arguably scores very high in narcissism (Lee, 2017)—is perceived to have a much less desirable personality profile by supporters of his political opponents than by his own supporters (Hyatt et al., 2018). Accordingly, it seems likely that under conditions of intergroup competition, narcissists are considerably less popular among the members of an opposing outgroup than among the members of their ingroup.

### **The Processes Linking Narcissism to Popularity**

Past research in single group settings indicates that two opposing processes underlie the link between narcissism and popularity (Küfner et al., 2013). On the one side, narcissists show dominant and expressive behavior, which leads to being seen as assertive, which then increases their popularity. At the same time narcissists show arrogant and combative behavior, which leads to being seen as aggressive, which then decreases their popularity. Follow-up research by Leckelt et al. (2015) took a detailed look at the subcomponents of narcissism, as postulated by the Narcissistic Admiration and Rivalry Concept (NARC; Back et al., 2013). According to the results, the narcissism-assertiveness-popularity pathway was driven by the admiration component of grandiose narcissism, which represents a tendency toward agentic self-enhancement. The narcissism-aggressiveness-unpopularity pathway, in contrast, was driven by the rivalry component, which represents narcissists' tendency toward antagonistic self-protection. (For a comprehensive review of research findings on the NARC model, see Back, 2018.)

Whereas past research mainly focused on likability as an indicator of popularity, in the current case it seems worthwhile to separately investigate another aspect of popularity, namely status, which represents the respect, admiration, and voluntary deference an individual is afforded by others (Anderson et al., 2015). The major difference between these two constructs is that while likability mainly safeguards social inclusion, status brings about

power (Anderson et al., 2015; Cheng et al., 2013). Past research indicates that status is Data from participants who either by agentic attributes, such as assertiveness, whereas likeability is primarily affected by communal attributes, such as (low) aggressiveness (Wojciszke et al., 2009). Thus, the admiration-assertiveness pathway should lead to high status, and the rivalry-aggressiveness pathway should lead to low likeability.

But at what points in the process might effects differ for evaluations of in- and outgroup members? Two different hypotheses can be formulated in this regard (see Figure 1).

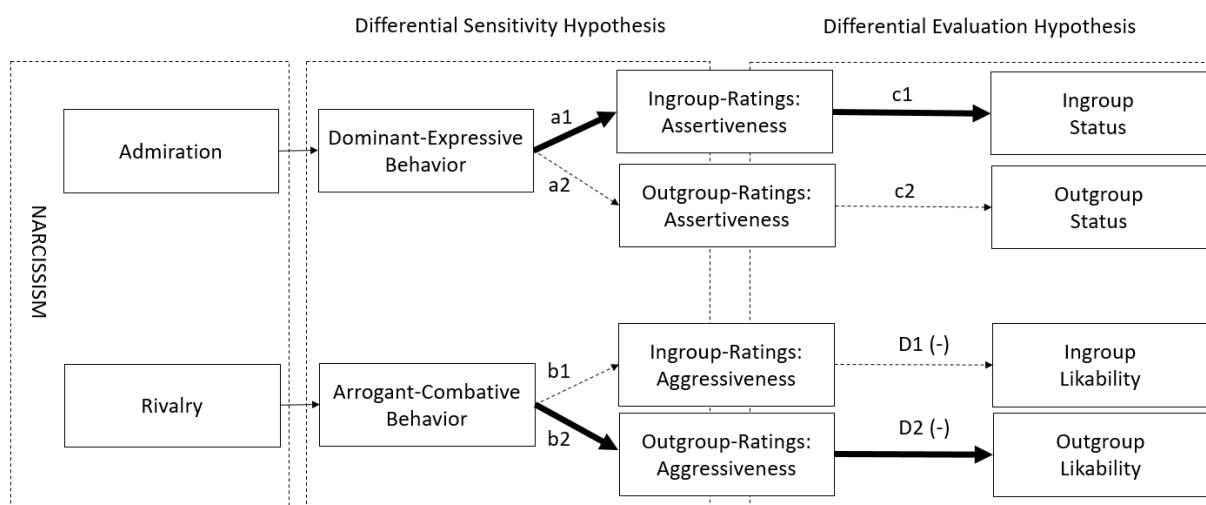


Figure 1. Potential processes underlying the links between narcissism and in- and outgroup popularity. Bold lines represent strong associations, dashed lines represent weak associations. All effects, except  $d1$  and  $d2$ , are thought to be positive in directionality.

First, it is possible that in- and outgroup members differ in how they process narcissists' behavior during the intergroup competition. Back et al. (2018) argued that the effects of objectively assessed behaviors on peer-perceptions depend on the situational context. The more salient a specific behavior is for a peer, the stronger its effect should be. Research on social identification, in turn, has shown that the salience of a specific behavior can differ, depending on whether it is shown by an in- or an outgroup member (Xiao et al.,

2016). During an intergroup competition, identifying assertive team members is often highly important, as such members are potentially suited for taking the lead of the group. Thus, assertiveness, as indicated by dominant and expressive behavior, should be a salient attribute for ingroup members and might be particularly well detected by them. In this case, dominant and expressive behavior should be more strongly linked to perceived assertiveness when assertiveness ratings refer to ingroup members than when they refer to outgroup members (path  $a1 > a2$ ). Aggressive behavior, in contrast, should be highly salient from the outgroup's perspective. Aggressiveness, as indicated by arrogant and combative behavior, can pose a severe and direct threat to the opposing group and should therefore be particularly well detected by outgroup members. Thus, arrogant and combative behavior should be more strongly linked to aggressiveness when aggressiveness ratings refer to outgroup members than when they refer to ingroup members (path  $b1 < b2$ ). We will refer to these predictions as the *differential sensitivity hypothesis*.

Second, it is possible that the consequences of perceived behavior for popularity are different, depending on whether the behavior is shown by an in- or an outgroup member. Back et al. (2018) also suggested that the effects of perceived assertiveness and aggressiveness on popularity depend on the situational context, which in the current case is the in- versus outgroup status of the target person. If the target is from the ingroup, assertiveness brings about benefits for the group's goal and therefore targets who are perceived as assertive should be highly valued. If the target is from the outgroup, no benefits can be derived from assertiveness. The reverse is true for aggressiveness. Only if the target is from the outgroup, aggressiveness will bring about harm and should be strongly disapproved. Hence, for both perceived assertiveness and perceived aggressiveness, the links to popularity should be more positive/less negative when judgments refer to an ingroup member than when they refer to an outgroup member (path  $c1 > c2$ ; path  $d1 > d2$ ). We will refer to this prediction as the *differential evaluation hypothesis*.

### **The Current Research**

In the current research, participants will be placed into two teams that compete against each other. In such a context, narcissists should be beneficial for their ingroup and detrimental for the outgroup, which means their popularity should clearly diverge. We will test participants in actual, newly formed groups that will compete with each other in direct interactions. The research procedure allows each participant to form an evaluation of each member of his or her own team and of the opposing team. Under these circumstances, the link between admiration and status should be more positive for judgments pertaining to members of the own team than for judgments pertaining to judgments of the opposing team. Furthermore, the link between rivalry and likability should be more negative for judgments pertaining to members of the opposing team than for judgments pertaining to members of the own team. Due to the differing proposed mechanisms, both hypothesized effects remain significant, once the other narcissism dimension is controlled. We will also investigate the processes underlying the links between narcissism and in- and outgroup popularity. We will do so by testing both the differential sensitivity hypothesis and the differential evaluation hypothesis as depicted in Figure 1. Note that the two hypotheses are not mutually exclusive; in principle, both processes could be simultaneously at work.

### **Method**

A study codebook is available on the OSF project page [The data will be uploaded after data collection has been completed.]:

[https://osf.io/yktx8/?view\\_only=ba908a82b7094cab828339d4adcb7ae4](https://osf.io/yktx8/?view_only=ba908a82b7094cab828339d4adcb7ae4). Data collection has not started yet.

### **Sample and Design**



Data will be collected as part of a larger study on intra- and intergroup processes ( $N = 410$ ). An approval for the study by the ethics board of the German Psychological Society has been obtained. Participants will have to be at least 18 years old, either a current or a former university student, and fluent in German. They will be recruited via social networks, noticeboards, and flyers. In the study advertisement, they will learn that the study takes two hours in total, deals with group processes and that they will receive between € 20 and € 30 for their participation. (The actual amount of compensation will indeed depend on their group's performance, see below.)

Prior to the group sessions, participants will complete an online questionnaire that will involve assessments of demographic and personality variables (including narcissism). Participants will be randomly assigned to a laboratory session consisting of 10 persons of the same gender (laboratory sessions will not take place if less than six persons appear). Participants register online for the group sessions. When they do so, names of the other members are visible to them. Participants are explicitly to only sign in for a group in which they do not know any person.

The laboratory sessions will be video recorded. In the beginning of the sessions, participants will briefly introduce themselves to each other and subsequently they will be randomly assigned to one out of two competing teams. Then, the two teams will compete with each other in a debate game (for a detailed description, see the study codebook). The game will consist of three rounds, in which three distinct controversial topics are discussed. In each round, each team will be instructed to defend a randomly assigned viewpoint on the topic (e.g., "in favor of the proposal" versus "against the proposal"). In the first round, participants will be presented with a moral dilemma task in which a person has betrayed his/her partner and the question is whether the person should make a confession even though this puts the relationship at risk. The second topic is whether people should be obliged to participate in

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political elections. The third topic is whether marijuana should get the same legal status as alcohol. Participants will learn that at the end of the third round, the experimenter would declare the team that made the more convincing case for their position as the winning team and that members of the winning group would receive € 30, whereas the members of the losing team would only receive € 20 Euros.

Assessments of status, likability, perceived assertiveness, and perceived aggressiveness will take place at three times during the lab session. The first assessment takes place in the beginning of the session. By that time, participants will have introduced themselves to each other briefly, but team assignment has not taken place yet. The second assessment takes place between the second and third round of the debate game. The third assessment takes place after the game after a winner has been determined. We will use the values from the second assessment as the main outcome in our models, as by this time participants will be in a competitive mindset and potential effects of the game outcome can be excluded. The values of the first assessment will be included as covariates (baseline assessments) in our models (see analytic procedure).

### **Measures**

We will only describe the measures that are relevant for the current question. A full list containing all study variables can be found in the study codebook.

#### ***Narcissism***

We will use the Narcissistic Admiration and Rivalry Questionnaire (NARQ, Back et al., 2013) to assess narcissistic admiration and narcissistic rivalry. Each subdimension will be measured with 9 items. Participants will indicate their agreement with each statement for both questionnaires on a rating scale from 1 (*not agree at all*) to 6 (*agree completely*).

#### ***Popularity***

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We will assess *status* with three items (“This person has my respect,” “This person deserves admiration,” “This person could serve as an example for others”) which are adapted from Anderson et al. (2012) and Wojciszke et al. (2009). We will measure *likability* with three items (“I like this person,” “I could imagine being friends with this person,” “I find this person likeable”), which have been successfully used in past research from our laboratory. Ratings will be made on a 6-point Likert scale (1 = *not at all* to 6 = *very much*).

### ***Dominant-Expressive and Arrogant-Combative Behavior***

We will assess codings of behavior during the debate game and peer-perceptions using the same items that have been used in the above described study by Küfner et al. (2013, Study 2) on narcissism and popularity. To obtain behavior codings, four trained coders will view the video recordings of the whole debate game and rate each participant in terms of how “dominant,” “expressive,” “arrogant,” and “combative” he or she behaved (1 = *not at all*, 6 = *very much*). As in the study by Küfner et al. (2013), “dominant” and “expressive” as well as “arrogant” and “combative” will be aggregated into two composite scores. In the study by Küfner et al. (2013), behavior was also rated by two observers, and interrater agreement for single items was high ( $\alpha \geq .70$ ) and the intercorrelations between the two components of each composite were also high ( $r_s \geq .82$ ).

### ***Peer-Perceived Assertiveness and Aggressiveness***

Participants will rate each other in terms of how “assertive” and “aggressive” they were during the debate game. Both ratings will be made on a 6-point Likert scale (1 = *not at all* to 6 = *very much*).

### **Analytic Procedure**

The code for the planned analyses can be found on the osf page ([https://osf.io/eank8/?view\\_only=ba908a82b7094cab828339d4adcb7ae4](https://osf.io/eank8/?view_only=ba908a82b7094cab828339d4adcb7ae4)). In a round robin

study, effects can generally be analyzed at the person level or at the dyadic level (Kenny, 2019). The majority of our hypotheses refer to the dyadic level, as they postulate that the ratings a perceiver provides differ depending on the relationship the perceiver has with the target. We will first describe the analytic approach we will take to test Hypotheses I to IV (see Table 1). These hypotheses predict that perceptions of popularity (i.e., status or likability) vary as a function of (a) the team membership (i.e., whether or not the perceiver and the target belong to the same team) in combination with (b) the target's personality (i.e., admiration or rivalry). Thus, we are looking at the effect of team membership on dyadic judgments and ask whether this effect is moderated by attributes of the target.

In a preparatory step, we will estimate univariate Social Relations Models (SRMs; Kenny, 2019) for ratings of popularity (i.e., status and likeability) using the R package TripleR (Schönbrodt et al., 2012). This will allow us to determine the proportions of variance explained by perceiver, target, and relationship effects. We will use a SRM for observed variables based on the mean of the three liking items and the mean of the three status items, respectively. The models will be estimated separately for ratings at baseline and after Round 2 of the game. We will then extract the relationship effects from the four models and save them for further analyses. Through this procedure, variance in dyadic judgments of popularity that is due to differences between laboratory sessions, perceivers, and targets is removed from the data.

We will test our hypotheses using multilevel modeling. This is necessary because at the dyadic level, there will be still a source of variance that needs to be considered, namely variance that is due to dyadic reciprocity. In each dyad, two scores exist for each variable, one of them representing Perceiver A's view of Target B and the other representing Target B's view of Perceiver A. Dyadic reciprocity exists if these two scores are correlated, which is

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often the case for interpersonal evaluations (Kenny, 2019). We will control for such effects by including a random intercept for dyads.

We will then predict the relationship effect of the respective popularity indicator (status or likability) after Round 2 of the game from (a) the relationship effect of popularity at baseline, (b) team membership (same team vs. opposing team), (c) the respective narcissism dimension of the target (admiration or rivalry), and (d) the interaction effects between team membership and the narcissism dimension. Narcissism scores will be grand mean centered, and team membership will be effect-coded using a weighted coding scheme. Specifically, teammates will be coded as 0.5 and opponents as -0.4, because in laboratory sessions of ten participants the ratio of same team dyads and opposing team dyads is 20/25. As a consequence of this coding scheme, and because individual differences in popularity have been removed, the intercept of the model and the effect of the narcissism dimension will be exactly zero. Moreover, the effect of baseline popularity will represent the amount of stability in dyadic popularity, the effect of team membership will represent the difference in popularity between teammates and opponents (after controlling for differences in dyadic popularity at baseline), and the interaction effect will represent how this latter effect is moderated by target's narcissism.

To address Hypotheses III and IV, we will investigate the unique effects of the two narcissism dimensions. The respective models will be identical to the ones above, but include both admiration and rivalry as well as the interaction effects between team membership and the two narcissism dimensions as additional predictors.

Hypotheses V and VI, which postulate effects of narcissism on behavior, do not refer to the dyadic level, but describe effects at the person level. Thus, multilevel models with participants nested in laboratory session groups will be used to predict the behavior codings of

dominant-expressive and arrogant-combative behavior by admiration (Hypothesis V) and rivalry (Hypothesis VI).

Hypotheses VII to X, which again refer to the dyadic level, will be tested using the same analytic approach we described for Hypotheses I to IV. We will first extract relationship effects for the involved peer perceptions and then we will use multilevel modeling in an analogous fashion to the popularity analyses to test for interaction effects between team membership and behavioral codings (Hypotheses VII and VIII) or between team membership and relationship effects of peer perceptions (Hypotheses IX and X). Details are provided in Table 1.

Data from participants who either did not complete the online questionnaire or did not participated in the laboratory session will be excluded. Apart from that, no participants will be excluded from the analyses. The multilevel models we will run to test our hypotheses will be based on maximum likelihood estimation, taking into account all available data points. This method will provide unbiased parameter estimates if values are missing at random.

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**Table 1***Overview of all Hypotheses and Respective Models That Will be Used to Test Them*

Hypothesis	Prediction	Predictors	Outcome
I	The link between admiration and status is more positive for judgments pertaining to teammates than for judgments pertaining to judgments of opponents.	a) Baseline relationship effect status b) Team membership (0.5 = teammate, -0.4 = opponent) c) Admiration d) Team membership * Admiration	Relationship effect status
II	The link between rivalry and likability is more negative for judgments pertaining to teammates than for judgments pertaining to judgments of opponents.	a) Baseline relationship effect likability b) Team membership (0.5 = teammate, -0.4 = opponent) c) Rivalry d) Team membership * Rivalry	Relationship effect likability
III	Also when rivalry is controlled, the link admiration and status is more positive for judgments pertaining to teammates than for judgments pertaining to judgments of opponents.	a) Baseline relationship effect status b) Team membership (0.5 = teammate, -0.4 = opponent) c) Admiration d) Rivalry e) Team membership * Admiration f) Team membership * Rivalry	Relationship effect status

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IV	Also when admiration is controlled, the link between rivalry and likability is more negative for judgments pertaining to teammates than for judgments pertaining to judgments of opponents.	<ul style="list-style-type: none"> <li>a) Baseline relationship effect likability</li> <li>b) Team membership (0.5 = teammate, -0.4 = opponent)</li> <li>c) Admiration</li> <li>d) Rivalry</li> <li>e) Team membership * Admiration</li> <li>f) Team membership * Rivalry</li> </ul>	Relationship effect likability
V	The link between admiration and dominant-expressive behavior is positive.	<ul style="list-style-type: none"> <li>a) Admiration</li> <li>b) Rivalry</li> </ul>	Dominant-expressive behavior
VI	The link between rivalry and arrogant-combative behavior is positive.	<ul style="list-style-type: none"> <li>a) Admiration</li> <li>b) Rivalry</li> </ul>	Arrogant-combative behavior
VII	The link between dominant-expressive behavior and perceived assertiveness is more positive for judgments pertaining to teammates than for judgments pertaining to opponents.	<ul style="list-style-type: none"> <li>a) Baseline relationship effect assertiveness</li> <li>b) Team membership (0.5 = teammate, -0.4 = opponent)</li> <li>c) Dominant-expressive behavior</li> <li>d) Team membership * Dominant-expressive behavior</li> </ul>	Relationship effect assertiveness
VIII	The link between arrogant-combative behavior and perceived aggressiveness is less positive for judgments pertaining to teammates than for judgments pertaining to opponents.	<ul style="list-style-type: none"> <li>a) Baseline relationship effect aggressiveness</li> <li>b) Team membership (0.5 = teammate, -0.4 = opponent)</li> <li>c) Arrogant-combative behavior</li> <li>d) Team membership * Arrogant-combative behavior</li> </ul>	Relationship effect aggressiveness



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IX	The link between perceived assertiveness and status is more positive for judgments pertaining to teammates than for judgments pertaining to opponents.	<ul style="list-style-type: none"> <li>a) Baseline relationship effect status</li> <li>b) Team membership (0.5 = teammate, -0.4 = opponent)</li> <li>c) Relationship effect assertiveness</li> <li>d) Team membership * Relationship effect assertiveness</li> </ul>	Relationship effect status
X	The link between perceived aggressiveness and likability is less negative for judgments pertaining to teammates than for judgments pertaining to opponents.	<ul style="list-style-type: none"> <li>a) Baseline relationship effect likability</li> <li>b) Team membership (0.5 = teammate, -0.4 = opponent)</li> <li>c) Relationship effect aggressiveness</li> <li>d) Team membership * Relationship effect aggressiveness</li> </ul>	Relationship effect likability

### Power Calculation

As described above, data will be collected as part of a larger study. Aiming for a sample size that is sufficiently large for testing different research questions with high power, while at the same time considering the available resources, we arrived at a targeted  $N$  of 41 laboratory sessions each including 10 participants (corresponding to two teams with five members each). Aiming for a conservative estimate, these calculations took into account that, out of the 10 participants per session, approximately 10% might drop out prior to or during the sessions. With regard to the current hypotheses, we therefore calculated the required effect size that can be detected with a power of 80% assuming this particular sample size. The hypotheses are located at different levels, and thus the effective sample size differs between hypotheses: While Hypotheses V to VI refer to the level of persons ( $N = 410$ , minus dropouts), the remaining hypotheses refer to the dyadic level. In particular, the interaction effects between team membership and target's personality (Hypotheses I to IV), target's behavior (Hypotheses VII and VIII), or dyadic peer perceptions (Hypotheses IX and X) represent within-dyad effects located at the level of single perceptions ( $N = 3690$ , minus dropouts). Therefore, we conducted two separate sensitivity power analyses. For Hypotheses V to VI, we assumed that the Level II variance (i.e., variance stemming from the fact that participants are tested in different laboratory session groups) in the involved variables approximates zero. Under this assumption, GPower 3.1 (Faul et al., 2009) suggests that an effect of  $r = .15$  can be detected with 80% power ( $\alpha = .05$ , two-tailed) in a sample of  $N = 410 - 10\% \text{ dropouts} = 369$ .

For the remaining hypotheses, we conducted a simulation study as recommended for multilevel models (Gelman & Hill, 2007). The code can be found on the osf project page ([https://osf.io/eank8/?view\\_only=c1121b6d811a4c3b80626dd8d20d6f8d](https://osf.io/eank8/?view_only=c1121b6d811a4c3b80626dd8d20d6f8d)). In line with the simulation for the larger study, we considered 41 laboratory sessions each including 10

participants, and assumed a dropout rate of 10%. For Hypothesis 1 (see Table 1), information about most required parameters could be obtained from previous research findings. Given that all remaining hypotheses are very similar, in the sense that they require a test of whether group membership moderates the association between two relationship effects, the result of the power analysis for Hypothesis 1 can be used to roughly gauge the power for the remaining hypotheses. Note that the information on the required parameters partly stems from studies that did not distinguish between status and likability (but rather used undifferentiated popularity scores). For simplicity, we omitted the relationship effects of popularity at baseline as a covariate in the simulation.

The target multilevel model should therefore predict relationship effects of popularity (i.e., status) from team membership, target's level of narcissism (i.e., admiration), as well as their two-way interaction, with perceptions (Level 1) being nested in dyads (Level 2). In this case, the most influential parameters that have to be selected for the power analysis are the relative relationship variance (which determines the standard deviation of the dependent variable) and the amount of dyadic reciprocity (which determines its relative random intercept variance). Based on previous results (Kenny, 2019), we assumed that 51% of the variance in dyadic popularity ratings is due to relationship variance, and that the correlation between relationship effects is  $r = .28$ .<sup>1</sup> For the prediction of popularity at the dyadic level, we assumed that, on average, teammates received  $\beta = 0.30$  more points than opponents (when standardized by the relationship variance of popularity that is the dependent variable in the

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<sup>1</sup> Although not crucial for the result of the power analysis, we had to add several further assumptions to the simulation. In particular, based on previous results, we assumed that 31% of the variance in dyadic popularity ratings is due to perceivers, and 18% is due to targets. Moreover, we assumed that the correlation between perceiver and target effects is  $r = .02$  (Kenny, 2019). Differences between laboratory sessions were assumed to approximate zero. As previous research indicates that the correlation between admiration and with the general positivity of perceiver effects is  $r = -.08$  (Rau et al., 2020), we incorporated this estimate into our simulation. Moreover, we assumed that the correlation between admiration and target effects of popularity is slightly positive,  $r = .15$  (Leckelt et al., 2015).

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multilevel model). For the hypothesized target interaction effect, we specified different effect sizes between  $\beta = 0.05$  and  $\beta = 0.20$  and estimated the respective power using 1,000 simulated data sets. Results suggested that we can detect a target interaction effect of  $\beta = 0.13$  with 81% power ( $\alpha = .05$ , two-tailed). This effect represents a scenario in which the standardized difference in popularity between teammates and opponents increases by  $d = 0.13$  for each standard deviation of increase in target's level of narcissism.

## **Results**

### References

- Anderson, C., Brion, S., Moore, D. A., & Kennedy, J. A. (2012). A status-enhancement account of overconfidence. *Journal of Personality and Social Psychology, 103*, 718-735.
- Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin, 141*s, 574–601.
- Back, M. D. (2018). The Narcissistic Admiration and Rivalry Concept. In A. D. Hermann, A. B. Brunell, & J. D. Foster (Eds.), *Handbook of Trait Narcissism* (pp. 57–67). Cham: Springer International Publishing.
- Back, M. D., Küfner, A. C., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology, 105*, 1013-1037.
- Cambridge Advanced Learners Dictionary (3<sup>rd</sup> ed.). (2008). Cambridge, UK: Cambridge University Press.
- Campbell, W. K., & Miller, J. D. (2011). *The handbook of narcissism and narcissistic personality disorders: Theoretical approaches, empirical findings and treatments*. Hoboken, New Jersey: Wiley & Sons.
- Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the top: Evidence that dominance and prestige are distinct yet viable avenues to social rank and influence. *Journal of Personality and Social Psychology, 104*, 103–125.
- Emmons, R. A. (1989). Exploring the relations between motives and traits: The case of narcissism. In: D. M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 32-44). New York: Springer-Verlag.

- Esses, V. M., Jackson, L. M., & Armstrong, T. L. (1998). Intergroup competition and attitudes toward immigrants and immigration: An instrumental model of group conflict. *Journal of Social Issues, 54*, 699-724.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G\* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.
- Gelman, A., & Hill, J. (2007). *Data analysis using regression and multilevel hierarchical models* (Vol. 1). New York, NY, USA: Cambridge University Press.
- Grijalva, E., Harms, P. D., Newman, D. A., Gaddis, B. H., & Fraley, R. C. (2015). Narcissism and leadership: A meta-analytic review of linear and nonlinear relationships. *Personnel Psychology, 68*, 1-47.
- Halevy, N., Chou, E. Y., Cohen, T. R., & Livingston, R. W. (2012). Status conferral in intergroup social dilemmas: behavioral antecedents and consequences of prestige and dominance. *Journal of Personality and Social Psychology, 102*, 351.
- Hyatt, C., Campbell, W. K., Lynam, D. R., Miller, J. D., Donnellan, B., & Visser, B. (2018). Dr. Jekyll or Mr. Hyde? President Donald Trump's personality profile as perceived from different political viewpoints. *Collabra: Psychology, 4*.
- Kakkar, H., & Sivanathan, N. (2017). When the appeal of a dominant leader is greater than a prestige leader. *Proceedings of the National Academy of Sciences, 114*, 6734-6739.
- Kenny, D. A. (2019). *Interpersonal Perception, Second Edition: The Foundation of Social Relationships*. Guilford Publications.
- Küfner, A. C., Nestler, S., & Back, M. D. (2013). The two pathways to being an (un-) popular narcissist. *Journal of Personality, 81*, 184-195.

- Laustsen, L., & Petersen, M. B. (2017). Perceived conflict and leader dominance: Individual and contextual factors behind preferences for dominant leaders. *Political Psychology*, 38, 1083-1101.
- Leckelt, M., Küfner, A. C., 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.
- Lee, B. X. (2017). *The dangerous case of Donald Trump: 27 psychiatrists and mental health experts assess a president*. New York, NY: Thomas Dunne Books.
- Maccoby, M. (2000). Narcissistic leaders. *Harvard Business Review*, 78, 69-77.
- Nevicka, B., De Hoogh, A. H., Van Vianen, A. E., & Ten Velden, F. S. (2013). Uncertainty enhances the preference for narcissistic leaders. *European Journal of Social Psychology*, 43, 370-380.
- Padilla, A., Hogan, R., & Kaiser, R. B. (2007). The toxic triangle: Destructive leaders, susceptible followers, and conducive environments. *The Leadership Quarterly*, 18, 176-194.
- Rau, R., Nestler, W., Dufner, M., & Nestler, S. (2020). Seeing the best or worst in others: A measure of generalized other-perceptions. *Assessment*, 1-18.
- Rosenthal, S. A., & Pittinsky, T. L. (2006). Narcissistic leadership. *The Leadership Quarterly*, 17, 617-633.
- 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.
- Sherif, M. (1966). *Group conflict and cooperation: Their social psychology*. London: Routledge and Kegan Paul.

Wojciszke, B., Abele, A. E., & Baryla, W. (2009). Two dimensions of interpersonal attitudes:

Liking depends on communion, respect depends on agency. *European Journal of Social Psychology*, *39*, 973-990.

Xiao, Y. J., Coppin, G., & Van Bavel, J. J. (2016). Perceiving the world through group-

colored glasses: A perceptual model of intergroup relations. *Psychological Inquiry*, *27*, 255-274.

Zeigler-Hill, V., Vrabel, J. K., McCabe, G. A., Cosby, C. A., Traeder, C. K., Hobbs, K. A.,

Southard, A. C. (2018). Narcissism and the pursuit of status. *Journal of Personality*, *87*, 310–327