Behavioral Processes Underlying the Decline of Narcissists’ Popularity Over Time

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Following a dual-pathway approach to the social consequences of grandiose narcissism, we investigated the behavioral processes underlying (a) the decline of narcissists’ popularity in social groups over time and (b) how this is differentially influenced by the 2 narcissism facets admiration and rivalry. In a longitudinal laboratory study, participants (N = 311) first provided narcissism self-reports using the Narcissistic Personality Inventory and the Narcissistic Admiration and Rivalry Questionnaire, and subsequently interacted with each other in small groups in weekly sessions over the course of 3 weeks. All sessions were videotaped and trained raters coded participants’ behavior during the interactions. Within the sessions participants provided mutual ratings on assertiveness, untrustworthiness, and likability. Results showed that (a) over time narcissists become less popular and (b) this is reflected in an initially positive but decreasing effect of narcissistic admiration as well as an increasing negative effect of narcissistic rivalry. As hypothesized, these patterns of results could be explained by means of 2 diverging behavioral pathways: The negative narcissistic pathway (i.e., arrogant–aggressive behavior and being seen as untrustworthy) plays an increasing role and is triggered by narcissistic rivalry, whereas the relevance of the positive narcissistic pathway (i.e., dominant–expressive behavior and being seen as assertive) triggered by narcissistic admiration decreases over time. These findings underline the utility of a behavioral pathway approach for disentangling the complex effects of personality on social outcomes.

Keywords: narcissism, popularity, behavioral processes, relationship development, interpersonal perception

Throughout the life course, individuals repeatedly enter new social contexts (e.g., meeting people at work, at school or university, and in private life with whom they were not previously acquainted) in which they are confronted with the complex task of acquiring new social partners (e.g., friends, peers, coworkers, romantic partners). Getting to know others is a fundamental part of our daily lives and being liked by others in the early stages of the “getting-acquainted-process” is a crucial factor in the successful emergence of relationships: Positive evaluations by others facilitate the initiation of satisfying social interactions and are associated with positive interpersonal outcomes (e.g., being popular, making friends, acquiring a high status; Human, Sandstrom, Biesanz, & Dunn, 2013; Sunnafrank & Ramirez, 2004). One key individual difference variable that has long been discussed as influencing these early interpersonal dynamics is narcissism. Research on narcissism’s role in the emergence of relationships has, however, revealed an inconsistent pattern of results, ranging from positive to negative effects of narcissism on popularity (Campbell & Campbell, 2009; Küfner, Nestler, & Back, 2013).

Prior empirical work on the social consequences of narcissism has rarely looked at the underlying processes that drive narcissism’s diverging effects on social outcomes, including the behavioral and perceptual mechanisms of how narcissism influences popularity. Moreover, the temporal dynamics of these behavioral and perceptual processes have yet to be systematically investigated. That is, it is to date unclear which changes in behavior and/or impressions on others lead to changes in narcissism’s influence on popularity during the early phases of getting acquainted. In addition, it has not yet been studied whether different facets of grandiose narcissism, such as agentic and antagonistic facets, affect changes in popularity differently and, if so, how they do so.

In the present study, we systematically analyze the role of narcissism in the emergence of popularity within new social groups by applying a dual-pathway approach (Küfner et al., 2013) to a rich longitudinal dataset that includes different measures of narcissism, ratings of interpersonal perceptions, and observations...
of actual behavior gathered over a period of 3 weeks. Based on the idea that two distinct narcissistic pathways lead to either popularity (via agentic behaviors, i.e., dominant and expressive, and perceptions of assertiveness) or unpopularity (via antagonistic behaviors, i.e., arrogant and aggressive, and perceptions of untrustworthiness), we analyze how these paths are influenced by (a) becoming more acquainted and increased intimacy of social interactions, and (b) the facet of narcissism being examined.

A Dual-Pathway Approach to Narcissists’ Popularity at Short-Term Acquaintance

Early acquaintance situations are a crucial factor in the development of relationships: people are quick in forming first impressions of others (Bar, Neta, & Linz, 2006; Duckworth, Burgh, Garcia, & Chaiken, 2002), and their impressions tend to be long-lasting (Naumann et al., 2013; Summfrank & Ramirez, 2004). Following this, the positivity and smoothness of early interactions among new acquaintances determine whether individuals are trusted and/or selected as future interaction partners and friends. Popularity in social groups, thus, starts early on when people get to know each other—and are liked by others or not. Narcissism is an important trait that influences evaluations in early acquaintance situations. Research on narcissism’s effects on being liked in early acquaintance situations has found positive (Back, Schmukle, & Egloff, 2010; Carlson, Vazire, & Olimanns, 2011; Miller & Maples, 2011) as well as negative effects (Carlson, Naumann, & Vazire, 2011; Heatherton & Vohs, 2000; Rauthmann, 2012), leaving an unclear picture.

Recently, these contradictory findings have been shown to be explainable within a dual-pathway framework (Küfner et al., 2013): two different pathways can be distinguished in any given situation, relating narcissism either positively or negatively to popularity through specific behaviors. Narcissists display both agentic behaviors such as dominance, charm, self-assuredness, and humor (Back et al., 2010; Paulhus, 1998), and antagonistic behaviors such as selfishness, hostility, and arrogance (e.g., Bushman & Baumeister, 1998; Buss & Chiodo, 1991; Miller & Maples, 2011; Reidy, Foster, & Zeichner, 2010). The former behaviors are generally related to positive evaluations (Anderson & Kilduff, 2009; Back, Schmukle, & Egloff, 2011), whereas the latter ones are associated with negative evaluations (e.g., Newcomb, Bukowski, & Pattee, 1993). This model is well-suited to explain prior inconsistent findings: studies reporting positive effects of narcissism on popularity at short-term acquaintance were typically based on investigations of self-presentational situations (e.g., self-introductions; Back et al., 2010; Carlson et al., 2011; Miller et al., 2011), likely triggering the positive, agentic pathway. In contrast, studies reporting negative effects typically investigated participants in more intimate interactional situations (e.g., controversial discussion, dyadic decision-making, or intimacy-creating conversations; Heatherton & Vohs, 2000; Paulhus, 1998; Rauthmann, 2012), more easily provoking narcissistic effects via the negative, antagonistic pathway. Consequently, studies analyzing the effect of narcissism on popularity in mixed social situations mainly found null effects (with the two pathways canceling each other out; e.g., Küfner et al., 2013).

More importantly, this approach can also be applied to identifying contextual and personal factors moderating the effect of narcissism on popularity via differentially triggering the two paths. In the present research, we apply this reasoning to explain how narcissists’ popularity (a) might change over time (moderating role of acquaintance level) and (b) might be dependent on the trait facet of narcissism considered (moderating role of narcissism facets). These are two crucial points which have not yet been investigated systematically. Although Küfner and colleagues (2013) provided a novel and useful process framework for the investigation of narcissism’s diverging effects, they applied it only to cross-sectional data and it has not been applied to longitudinal designs yet. This is, however, needed in order to be able to adequately investigate the temporal dynamics and processes underlying the changing relationship between narcissism and popularity. Paulhus (1998) used a longitudinal design and compared the effects of narcissism at different time points but did not model change and did not provide the process-oriented longitudinal approach that is necessary to understand the observed change. Neither did these studies vary the interaction contexts or consider the agentic and antagonistic aspects of narcissism with their distinct nomological networks and social effects (Back et al., 2013).

The Moderating Role of Acquaintance Level

The level of acquaintance has been hypothesized to influence the effect narcissism has on evaluations by others. In the very early stages of acquaintance, narcissism can very well have positive effects (Back et al., 2010; Oltmanns, Friedman, Fiedler, & Turkheimer, 2004). In the long run, however, it is thought to be generally maladaptive (Campbell & Campbell, 2009; Morf & Rhodewalt, 2001). In fact, narcissistic self-enhancement has been found to be related to negative interpersonal evaluations (e.g., Anderson, Ames, & Gosling, 2008; Kwan, John, Robins, & Kuang, 2008) and an ineffective interpersonal strategy (Colvin, Block, & Funder, 1995) that comes with long-term costs (Robins & Beer, 2001), ultimately undermining the positive reputations narcissists want to acquire. Furthermore, narcissists have been found to report less commitment in ongoing romantic relationships (Campbell & Foster, 2002) and higher numbers of marriages and subsequent divorces (Cramer, 2011).

Despite these theoretical and preliminary empirical findings, there is a paucity of research directly investigating the change of other-perceptions of narcissists over time. So far, only one study (Paulhus, 1998) looked directly at differences in other-evaluation of narcissists over a given period of time. In his study, Paulhus investigated groups of previously unacquainted students who engaged in weekly 20-min group discussions over a period of 7 weeks and provided mutual ratings on various variables, such as the Big Five traits, performance, and adjustment. Ratings were recorded after the first (Week 1) and the last session (Week 7). Results indicated that narcissism was initially associated with positive evaluations (e.g., extraverted, confident, entertaining, not boring, and intelligent), but evaluations 7 weeks later, after the narcissists had engaged with their peers in the group discussions, showed less positive (e.g., entertaining, not boring, warmth) and more negative evaluations (e.g., arrogance, tendency to brag, hostility). These findings provided first evidence for narcissists’ declining popularity in social groups fairly early in the acquaintance process, although questions regarding why this change in evalu-
The Moderating Role of Narcissism Facets

The two pathways may not only be differentially addressed at varying levels of acquaintance, but also by different facets of narcissism. Although it is now often discussed that grandiose narcissism is a multifaceted construct (e.g., Brown, Budzek, & Tamborski, 2009; Tamborski, Brown, & Chowning, 2012), prior research has only rarely investigated the interpersonal effects of narcissism on the facet level. This is due to both an unclear conceptualization and a psychometrically suboptimal assessment of narcissism facets (Ackerman, Donnellan, & Robins, 2012; Rosenthal & Hooley, 2010; Rosenthal, Montoya, Ridings, Rieck, & Hooley, 2011).

A recently introduced framework capable of conceptually and empirically disentangling the subsides of grandiose narcissism is the Narcissistic Admiration and Rivalry Concept (NARC; Back et al., 2013) with its corresponding inventory, the Narcissistic Admiration and Rivalry Questionnaire (NARQ). According to the NARC, grandiose narcissism can be divided into two distinct but related dimensions, namely narcissistic admiration (assertive self-enhancement) and narcissistic rivalry (antagonistic self-protection). Both dimensions serve the overarching goal of maintaining a grandiose self, but do so using different means: admiration by means of self-promotion to gain social admiration and rivalry by means of self-defense to prevent social failure. From this, it follows that the distinction between these two interrelated dimensions is an important one, especially considering that both have their unique social consequences: Admiration (or the agentic aspects of grandiose narcissism) is theoretically related to indicators of social potency, whereas rivalry (or the antagonistic aspects of grandiose narcissism) is related to indicators of social conflict. The NARC thus provides an understanding of the motivational and behavioral dynamics as well as the social outcomes to these two facets. Based on this conceptualization, narcissistic admiration and narcissistic rivalry should differentially address the two pathways over time and are thus promising candidates for the investigation of changing popularity effects: admiration should have a positive effect on evaluations early on in the acquaintance process through agentic behaviors, whereas rivalry should be related to increasingly negative evaluations through an increasing display of antagonistic behaviors.

The moderating influence of narcissism facets can also be considered in combination with the moderating role of acquaintance level: especially at the early stages of acquaintance, the positive effects of admiration should be more pronounced than the negative effects of rivalry. As outlined above, early on in the process of getting acquainted, behaviors related to admiration (e.g., dominant and expressive self-presentation) are more likely to be shown as narcissists seek admiration from others and try to impress them. It is also more natural for self-presentational behaviors to appear in early and more superficial situations, and they are more likely to be evaluated positively at this stage. In contrast, and with respect to the effects of rivalry, it is unlikely that narcissists display antagonistic (aggressive and arrogant) behaviors in the early stages of getting acquainted as they are neither motivated nor subjectively provoked to defend themselves. And even if they were to exhibit such behaviors, it would be rather difficult for their interaction partners to detect these behavioral tendencies. The short duration of acquaintance and the less interactive and intimate character of the situation provide little opportunity to display easily perceivable antagonistic behaviors.

This pattern should, however, shift as the level of acquaintance increases. While getting to know each other, presenting oneself in an agentic way (admiration) becomes less afforded and also less desirable from the interaction partners’ perspective. More importantly, with increasing acquaintance, opportunities to observe more aversive behaviors increase because these are more likely to be displayed. Contexts usually become more intimate and provide room for more personal interactions. Actual and perceived negative feedback are common in such situations, which should specifically trigger antagonistic self-defense behaviors in people.

2 It should be emphasized that our descriptions and analyses focus on grandiose narcissism and its facets, and not on vulnerable narcissism, which is additionally crucial when investigating pathological forms of narcissism (i.e., narcissistic personality disorder: Cain, Pincus, & Ansell, 2008; Miller & Campbell, 2008; Miller et al., 2011). As a personality trait, grandiose narcissism is continuous. For the ease of exposition, we use the term ‘narcissists’ to refer to those with relatively high scores on grandiose narcissism. It is, however, important to note that the analyses and findings described in this research refer to the changing relationship of the personality trait narcissism with popularity. Thus, they reflect a variable rather than a person-centered analysis. Specifically, this means that although at times we speak about ‘narcissists’ decline/increase in popularity, our research is about the changing association between narcissism and popularity.
high in narcissistic rivalry—and ultimately lead to them becoming less popular.

The Present Study

In the present study, we go beyond previous research by zooming in on the behavioral processes underlying the development of narcissists’ (un-)popularity at short-term acquaintance. We do so by addressing several points not covered in previous research: the present study is the first of its kind to employ a multimethodological, longitudinal, and process-oriented approach to investigate the changing influence of narcissism on popularity.

Previous studies concerned with narcissism’s effects on popularity have relied on cross-sectional sampling methods (e.g., Küfner et al., 2013) or have not considered the processes involved in the changing influence of narcissism on being liked (e.g., Paulhus, 1998). In order to capture the relevant longitudinal processes, we decided to incorporate multiple complex data sources. Specifically, we relate self-descriptions (self-report questionnaires) to actual behavioral expressions (coded by up to six trained raters) and actual perceptions by interaction partners in realistic interaction settings, which in turn are related to the resulting likability ratings. The present study also systematically varied the kinds of interactions participants engaged in, thereby creating increasingly intimate contexts. Although participants also engaged in group discussions in both Küfner et al.’s (2013) and Paulhus’ (1998) studies, here we observed participants in subsequent tasks with increasing levels of intimacy and self-disclosure. Participants first introduced themselves and later engaged in tasks requiring them to work together as a team and, finally, played a game in which they discussed each other’s personalities. Finally, the theoretically proposed behavioral and perceptual processes that lead to narcissism’s differentiated effects in the social domain as well as their variation over time were tested for the first time using complex statistical models.

To this end, we applied data from a large multimethodological, longitudinal data set, the Personality Interaction Lab Study (PILS; Geukes, Huttemann, Küfner, Nestler, & Back, 2015), including trait narcissism measures as well as observed social behaviors and interpersonal perceptions within various consecutive interactions. This approach provides the crucial advantage of not only looking at what changes (perceptions of peers) as an effect of narcissism but also at how these changes come about through observations of behaviors expressed in short-term acquaintance contexts.

First, we examined the influence of acquaintance level on the relationship between narcissism and popularity by applying the dual-pathway model to and across the different time points in the acquaintance process in order to detect changes in narcissism’s effects on popularity. We expected to see changes in the strength of the positive and negative pathways over time: in the beginning, stronger effects for the “positive” agentic path through agentic (dominant–expressive) behaviors should be observed, which should become weaker as the level of acquaintance increases. The “negative” path through antagonistic (arrogant–aggressive) behavior should become stronger over time.

Second, we analyzed models including different facets of narcissism, namely admiration and rivalry, with regard to their unique effects on each respective pathway. Following the NARC, admiration is the facet of narcissism that is associated with agentic (dominant–expressive) behaviors, used as a means to impress others and thereby gain admiration and initial popularity. Conversely, the second facet, rivalry, is associated with antagonistic (arrogant–aggressive) behaviors used to derogate others and defend the narcissist’s inflated ego, thereby being primarily responsible for the change in popularity. Based on this reasoning, we expected admiration to be primarily related to the “positive” and rivalry to the “negative” pathway. With regard to change over time, we expected the positive effects of admiration (via the positive pathway) to decline, and the negative effects of rivalry (via the negative pathway) to increase.

Method

Participants

The initial sample consisted of 311 college students, out of whom complete personality and demographic data were available for 297 (162 females), who had an average age of 23.81 years (SD = 3.96) and ranged from 18 to 39 years old. Behavioral and interpersonal-perception data were available for all 311 participants, with a few of the participants having some missing data points (e.g., they did not participate in one of the sessions, but took part in the other two sessions, maximum 8.04% missing). Participants were studying various subjects and mainly recruited via email lists at the Johannes Gutenberg University in Mainz, Germany. They participated in the study in exchange for research participation credit or monetary compensation. Participants were informed about the design of the study and the recordings during the laboratory session, and provided written consent for their participation in the study. The university’s institutional review board approved all procedures.

Procedure

Prior to being invited to group laboratory sessions, participants filled out a variety of personality and narcissism measures as well as standard demographic information in an online survey. At the end of the online questionnaire, participants provided information on when they had free time slots during the week. They were then matched with up to five other participants with corresponding time specifications. The first lab session as well as the following sessions took place exactly one week apart and each lasted for about one hour.

Small groups of previously unacquainted students ranging from four to six (M = 5.76) in size met on three different occasions to

3 Geukes et al. (2015) provide a detailed description of the procedure and all measures assessed in the PILS study. They do not, however, provide analyses relevant to the present paper. An overview of the setting and procedures of the PILS study as well as all measures applied can be obtained from the first author.

4 In order to assess their prior level of acquaintance, participants indicated their agreement to the statement “I know this person” using a scale ranging from 1 (totally disagree) to 6 (totally agree) regarding their fellow group members. The overall mean across the groups was 1.33 (Mdn = 1.12), showing that our attempt to investigate groups of unacquainted individuals was successful. Supplementary analyses on a subsample of groups with the minimal level of acquaintance (<2; N = 247) did not yield meaningfully different results and can be obtained from the first author.
engage in various interactive tasks. Participants were seated around a table situated in a video laboratory. At the beginning of each session and after each task, participants provided ratings of themselves and others via questionnaires on individual netbooks placed in front of them. Group interaction tasks were specifically designed to (a) provide the opportunity to engage in and display dominant–expressive as well as arrogant–aggressive behavior, and (b) represent the natural flow of the acquaintance process. Interactions ranged from superficial short and long self-presentational situations (Time Point 1; T1), to initial task-oriented interactions involving a teamwork task with the aim of finding the optimal solution to a problem (Lost on the Moon; Robins & Beer, 2001) and group discussion of a moral dilemma (discussing whether or not to torture an alleged terrorist; Time Point 2; T2), to more intimate and potentially controversial discussions triggered by another, more complex moral dilemma in which the participants had to discuss and rank the protagonists of a complex, morally ambiguous dilemma regarding the morality of their behavior, and a so-called personality game (Time Point 3; T3). The personality game involved participants receiving a box with three mildly positive (i.e., committed, friendly, sensitive) and mildly negative (i.e., reluctant, impulsive, passive) adjectives of which they were to choose the two they thought described them the best. Participants had to explain their choice. In a second step, the group of participants received one box filled with the six adjectives mentioned above and six (three positive, three negative) stronger, additional adjectives (i.e., open minded, cooperative, well-adjusted; manipulative, arrogant, narrow minded). Participants were then asked to discuss the adjective relative to each group member’s personality and had to jointly assign the two best fitting adjectives to each group member. Finally, participants had to explain why they received those particular two adjectives. An overview of the procedure can be found in Figure 1. All sessions were captured with video and audio recordings of the individual persons and the overall setting.

Measures

Narcissism. Narcissism was measured using the German version of the Narcissistic Personality Inventory (NPI; Schütz, Marcus, & Sellin, 2004) as well as the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013). The main difference between these two measures is that the NARQ further divides grandiose narcissism into the two related but distinct dimensions of narcissistic admiration (i.e., agentic self-promotion) and narcissistic rivalry (i.e., antagonistic self-defense). Both the NPI and the NARQ showed good internal consistency in our sample (NPI $\alpha = .80$, admiration $\alpha = .82$, and rivalry $\alpha = .78$).

Interpersonal perceptions. Mutual interpersonal evaluations regarding trustworthiness (later reversed as an indicator of untrustworthiness), liking, and assertiveness were collected on a 6-point Likert scale, ranging from 1, “not at all,” to 6, “extremely”, applying a round robin design. Based on these evaluations, target effects (reflecting individual differences in being seen as assertive, as untrustworthy, and being liked, i.e., popularity) were computed by social relations analyses (Back & Kenny, 2010; Kenny, 1994) using the TripleR package (version 1.2.1., Schönbrodt, Back, & Schmukle, 2012) in R (R Development Core Team, 2014). Due to multiple round robin ratings in each session (one after each interaction; see Figure 1), the target effects for assertiveness, untrustworthiness, and liking were aggregated across ratings within each session. These aggregates showed high internal consistency for being seen as assertive (T1: .94, T2: .88, T3: .95), being seen as untrustworthy (T1: .85, T2: .80, T3: .87), and popularity (T1: .90; T2: .88; T3:.92) and were used in all subsequent analyses.

Coded behaviors. Dominant and expressive as well as arrogant, aggressive, and unfriendly behaviors were assessed as indicators of agentic and antagonistic behavior, respectively, using coding schemes optimized for the specific social situations participants were observed in. Raters for T1 as well as those involved in the T2 and T3 ratings received extensive training and were blind as to the purpose of the study. More concretely, this involved three practice sessions using sample videos. These were coded by the raters independently, but after each training video, raters came together to discuss the codings and develop a shared understanding of the behavioral codings. In this way, we ensured reliable and accurate behavioral assessments. Additionally, the codings were based on rating sheets that did not only include the labels of the behaviors to code, but also explanations and examples of corresponding behaviors.

The instructions for T1 ratings (self-introduction) included “displays expressive behavior (shows positive emotions, talks a lot; is active, is expressive)” for expressive, “displays dominant, self-assured behavior (is confident, displays a strong presence; behaves with self-assurance, appears powerful)” for dominant, “displays arrogant, braggy behavior (is cocky, holier-than-thou; is boastful, haughty)” for arrogant, and “displays friendly behavior (makes an effort to be understood, sympathetic; is polite, considerate)” for friendly behaviors. Instructions for the T2 and T3 ratings (group interactions) included “displays expressive behavior (uses expressive gestures and facial expressions; is outgoing; shows positive emotion, is talkative)” for expressive, “displays dominant self-assured behavior (dominates the social interaction; takes the lead, exhibits dominant gestures and facial expressions, acts with confidence and certainty)” for dominant, “displays arrogant, braggy behavior (exhibits arrogant gestures and facial expressions; overemphasizes own performance/ability; acts conceitedly)” for arrogant, and “displays aggressive behavior (introduces aggression into an interaction; makes combative, unsocial commentaries; displays angry, belligerent facial expressions and gestures; reacts with annoyance and irritation)” for aggressive behaviors.

Thus, behaviors were coded on a mesolevel, situated between the counting of microexpressions (microlevel) and global label ratings (macrolevel). This mesolevel can be regarded as the most appropriate and feasible for the coding of actual behavior (Funder, 1999; Funder, Furr, & Colvin, 2000). Behaviors displayed were coded on a 6-point scale ranging from 1 (not at all) to 6 (very

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<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
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<tbody>
<tr>
<td>1st Round Robin</td>
<td>1st Round Robin</td>
<td>1st Round Robin</td>
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<tr>
<td>Rounding text aloud (e.g., Robins &amp; Beer, 2001)</td>
<td>Task</td>
<td>Monoial Dilemma interaction task</td>
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<td>2nd Round Robin</td>
<td>2nd Round Robin</td>
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<tr>
<td>Self-introduction (short)</td>
<td>Monoial Dilemma interaction task</td>
<td>Personality Game (interaction task)</td>
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<td>3rd Round Robin</td>
<td>3rd Round Robin</td>
<td>3rd Round Robin</td>
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<tr>
<td>Self-introduction (long)</td>
<td>Monoial Dilemma interaction task</td>
<td>Personality Game (interaction task)</td>
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<tr>
<td>4th Round Robin</td>
<td>5 Weeks</td>
<td>Session length</td>
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Figure 1. Session contents and illustration of procedure.
strongly), and raters were instructed to make use of the full scale range.

At T1, dominant, expressive, arrogant, and friendly (later revised to unfriendly) behaviors were rated by three trained raters. The average agreement of the judges was high, with reliabilities (Cronbach’s alpha) across time points of .71, .75, .66, and .76 for the dominant, expressive, arrogant, and friendly behaviors, respectively. Because at T1 participants only introduced themselves to the group and did not interact further with their group members, aggressive behaviors were not rated as these were unlikely to occur and be detected in a self-introduction context. Instead, unfriendly behaviors were used as an indicator of antagonistic behavior more easily observable in this particular situation. Because of substantial correlations within the first time point, ratings of dominant and expressive behaviors (mean $r = .56, p < .001$) were aggregated as well as arrogant and unfriendly behaviors (mean $r = .50, p < .001$).

Scores for expressive, dominant, arrogant, and aggressive behaviors for each individual at sessions T2 and T3 were obtained by six trained raters. Reliabilities of the ratings were very high, with mean $r$ of .93, .94, .88, and .88 (T2) and .91, .93, .87, and .86 (T3) across the two time points for the ratings of expressive, dominant, arrogant, and aggressive behaviors, respectively. Because ratings of dominant and expressive as well as arrogant and aggressive behaviors correlated very highly (all $r > .90, p < .001$) for both T2 and T3, scores were aggregated to form indicators of dominant–expressive and arrogant–aggressive behavior for each session. These aggregates were used in subsequent analyses.

**Analytical Approach**

We utilized two kinds of analyses in order to optimally investigate the predicted effects of narcissism on popularity via expressed behaviors and interpersonal perceptions. These involved single-level and multilevel latent growth models (LGMs; Little, 2009), on the one hand, to formally investigate the overall change in the relationships between narcissism, behaviors, interpersonal perceptions, and popularity, and multilevel structural equation models with random intercepts and fixed slopes (ML-SEMs; e.g., Preacher, Zyphur, & Zhang, 2010), on the other hand, to zoom into time-point-specific changes.

In a first step, we specified a conditional, univariate multilevel LGM (ML-LGM), where scores on the NPI predicted the intercept and the slope of a latent growth model that was used to model popularity scores at the three time points. In a second step, we computed bivariate correlations between narcissism and all relevant outcome variables to investigate the general associations between these variables. To account for participants’ nesting within groups, we used group mean-centered narcissism scores and target effects when computing the correlation. In a third step, the univariate ML-LGMs at the first time point were extended by including latent growth models for both the behavioral and interpersonal perception mediators. With these LGMs, it can be formally tested whether initial popularity and the mean change in popularity are predicted by narcissism and expressed through the theorized mediating processes. Narcissism was thought to predict dominant–expressive as well as arrogant–aggressive behaviors, which then cause interpersonal perceptions of being seen as assertive and being seen as untrustworthy, respectively. Initial popularity should then be positively predicted by the positive, agentic pathway, whereas the negative, antagonistic pathway should negatively predict change in popularity. To estimate the parameters of this multivariate LGM, we used group residualized narcissism scores (similar to the correlations) and group mean-centered target effects instead of the raw, multilevel structured data. This was done in order to reduce the complexity of the models by getting rid of the nested structure. This was needed to ensure robust parameter estimation in the complete multivariate LGM, which included one LGM for each of the four mediators and one for the outcome (i.e., popularity), resulting in a highly complex model.

The above analyses inform us about mean change over time, but not about the time point-specific changes in the involved processes. Therefore, we estimated time-point specific multilevel structural equations models (ML-SEM) in a fourth step to further disentangle the temporal dynamics of the narcissism–popularity relationship. In these models, the NPI was used to predict time point-specific behaviors (i.e., dominant–expressive as well as arrogant–aggressive), these behaviors were used to predict time point-specific interpersonal perceptions (assertiveness and trustworthiness) which in turn predicted time point-specific popularity. In this way, time-point-specific changes in the narcissism–popularity relationship over time can be displayed. This approach also has the ability to show why this change occurs by looking at which paths in the model change in strength. That is, it can determine whether changes are due to changes in the expression of behavior or due to this behavior being evaluated differently. Due to the nesting of participants within the small groups, group mean-added target effects and the raw scores of the narcissisms inventories were used in the ML-SEMs.

The same set of analyses (simple LGM, correlations, complete LGM, and ML-SEM) were used to investigate the influence of the admiration and rivalry facets of narcissism on popularity. Following the NARC, this was done in a way so that admiration was used as a predictor of the “positive” path through dominant–expressive behavior and perceptions of assertiveness, whereas rivalry was used as a predictor of the “negative” path through arrogant–aggressive behavior and perceptions of being untrustworthy. Additionally and in accordance with theory, admiration was thought to predict the intercept model of the positive pathway in the LGM,

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5 In this study, only the within-group results of the ML-SEMs will be reported as the between-groups results are irrelevant to the present research question. Apart from ML-SEM, which are the most suitable type of analysis for data as used in the present study, models were also run with an alternative analytical approach, namely multiple mediator models (Preacher & Hayes, 2008), where narcissism scores and interpersonal perceptions were group mean-centered and bootstrapping techniques (10,000 bootstrap samples) were used for significance testing. For the direct effects (DE), the biggest difference was $\beta = -0.05$ in the DE from rivalry at T3 in the NARQ model. For all other paths, the differences in the coefficients were not substantial with the exception of the path from untrustworthiness to popularity at T3. In the ML-SEMs, this path became stronger over time, whereas in the multiple mediator models this path shrunk from T2 to T3. Although in the multiple mediator models it was still very strongly and negatively related to popularity (NARQ model: $\beta = -0.68, p < .001$, NPI model $\beta = -0.70, p < .001$), it was substantially smaller than the paths in the ML-SEMs (NARQ model: $\beta = -0.88, p < .001$, NPI model $\beta = -0.91, p < .001$). Most important, none of the conclusions drawn in this paper change when the alternative statistical analysis is used. Detailed results can be obtained from the first author.
whereas rivalry should predict the slope model of the negative pathway.

In all cases, we used Mplus Version 7 to estimate the model parameters (Muthén & Muthén, 2012). The significance of the indirect effects (IE) in the ML-SEMs was estimated using a nonparametric percentile bootstrapping approach that considered the nested structure of the data (see Goldstein, 2011). Therefore, 1,000 bootstrap samples of group members with replacement from each and every group were drawn. For each sample, the model parameters were estimated and the distributions of the estimates were used to compute 95% confidence intervals (CIs). Bootstrap samples were determined in R and the R package MplusAutomation (Version 0.6-2; Hallequist & Wiley, 2013) was used to call Mplus to estimate the parameters in each bootstrap sample.

Results

An overview of the intercorrelations, descriptive statistics, and reliabilities of the measures used in this study can be found in Table 1. Based on these data, the research questions regarding the moderating role of acquaintance and the moderating role of the narcissism facets will be addressed.

Moderation by Acquaintance Level

To answer the basic question of whether narcissism is linked to initial popularity as well as the decline in popularity, we specified a ML-LGM where scores on the NPI were used to predict the intercept and slope of a latent growth model of the popularity scores measured at the three time points. Results are presented in Table 2. Consistent with our hypotheses, NPI scores indeed significantly predicted both the intercept ($\beta = .18, p = .045$) and the slope ($\beta = -.23, p < .01$) of popularity change.

This pattern of change can be further specified by looking at the correlations in Table 1: Initially, narcissism was positively correlated with popularity at T1 ($r = .19, p < .01$), but at T2 this association had already diminished to a near zero correlation ($r = .02, p = .76$) and changed to a slightly negative association (although not significant) at T3 ($r = -.03, p = .66$). This pattern of correlations shows that the longer participants interacted with one another, the less popular narcissists became.

Next, the LGMs were extended by including the behavioral and interpersonal perception-based mediators. Results of the intercept part of the model (see Table 2) indicated that NPI scores were significantly related to expressions of dominant–expressive behavior ($\beta = .34, p < .001$). This behavior predicted perceptions of being seen as assertive ($\beta = .69, p < .001$), and in turn, were positively related to initial popularity ($\beta = .33, p < .001$). Thus, the expected positive effect of narcissism on popularity at the beginning of acquaintance was indeed based on expressed dominant–expressive behavior and perceptions of being seen as assertive. Also, as expected, this was not true for the expression of arrogant–aggressive behavior, as these were not significantly predicted by the NPI scores ($\beta = -.03, p = .62$).

Results for the slope part of the model, representing the change in the initial positive relationship between narcissism and popularity, showed that the NPI scores significantly predicted changes in the expression of arrogant–aggressive behavior ($\beta = .32, p < .001$). These behaviors positively predicted changes in the interpersonal perceptions of being seen as untrustworthy ($\beta = .30, p < .001$), which then led to decreasing popularity ($\beta = -.94, p < .001$). This confirms the hypothesis that the negative effect of narcissism on popularity unfolds over time and does so through expressions of arrogant–aggressive behavior that change interaction partners’ perceptions. As expected, this effect was present for arrogant–aggressive but not dominant–expressive behavior ($\beta = .11, p = .12$).

In order to investigate in a detailed way what caused the change in popularity indicated by the results of the LGM analyses, we specified ML-SEMs for each of the time points separately (see Figure 2). For all three time points, the changing relationship between narcissism and popularity was mediated by the two behavioral pathways (T1: “positive” IE $\beta = .03, p < .01$; “negative” IE $\beta = -.00, p = .82$; direct effect (DE) $\beta = .05, p = .06$; T2: “positive” IE $\beta = .03, p < .01$; “negative” IE $\beta = -.05, p < .01$; DE $\beta = .02, p = .50$; T3: “positive” IE $\beta = .03, p < .01$; “negative” IE $\beta = -.07, p < .01$; DE $\beta = .05, p = .27$). More specifically, at T1 the narcissism-popularity link was only explained by the “positive” IE through dominant–expressive behavior and judgments of assertiveness, whereas at T2 and T3 both IEs explained this relationship. As Time Point 2 was the time point in the acquaintance process closest to Küfner et al.’s (2013) study, our findings of both pathways mediating the relationship between narcissism and popularity represents a replication and confirmation of their dual-pathway approach.

Regarding the specific single paths of the “positive” pathway, across time points, narcissism was similarly related to displays of dominant–expressive behaviors and these behaviors, in turn, led to interpersonal perceptions of being an assertive person. Over time, however, being seen as an assertive person became less related to ratings of participants’ popularity (T1: $\beta = .30, p < .001$; T2: $\beta = .17, p < .001$; T3: $\beta = .16, p < .01$). The increasing role of the “negative” pathway was due to an increase in the expression of arrogant–aggressive behaviors by narcissists, particularly from T1 to T2 (T1: $\beta = .02, p = .81$; T2: $\beta = -.32, p < .001$) as well as to an increasing negative evaluation of being seen as untrustworthy (T1: $\beta = -.75, p < .001$; T2: $\beta = -.80, p < .001$; T3: $\beta = -.91, p < .001$). Hence, narcissism led to decreasing popularity due to (a) an increase in arrogant–aggressive behaviors (T1 to T2) and (b) the fact that the personality impressions they evoked were evaluated less positively (assertiveness) and more negatively (untrustworthy) over time.

Moderation by Narcissism Facets

To answer the final research question of whether the two pathways are differently triggered by narcissistic admiration and rivalry we, again, specified ML-LGMs where scores on the narcissism facets admiration and rivalry were used to predict the intercept and slope instead of the NPI scores. Results (see Table 2) were consistent with our hypotheses: admiration did positively predict the intercept ($\beta = .19, p < .01$) but not the slope ($\beta = -.08, p = .25$) of popularity. Rivalry, on the other hand, negatively predicted the slope ($\beta = -.19, p = .02$) of popularity, while nearly significantly predicting the intercept ($\beta = -.14, p = .054$). These findings were given more detail by the bivariate correlations, which showed that the predicted pattern of correlations...
Table 1

Descriptive Statistics and Correlations of the Measures Used

|          | M    | SD   | NPI | NPI Admiration | NPI Rivalry | T1 pop. | T2 pop. | T3 pop. | T1 D-E | T2 D-E | T3 D-E | T1 A-A | T2 A-A | T3 A-A | T1 assertive | T2 assertive | T3 assertive | T1 untrustworthy | T2 untrustworthy | T3 untrustworthy |
|----------|------|------|-----|----------------|-------------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|---------------|---------------|---------------|------------------|------------------|-----------------|
| NPI      | 14.3 | 6.03 | .80 | .62            | .32         | .19     | .02     | .02     | .22    | .24    | .26    | .30    | .32    | .27    | .30    | .32            | .27           | .01           | .12              | .17              |                 |
| Admiration| 3.17 | .78  | .82 | .29            | .15         | .06     | .01     | .17     | .14    | .19    | .04    | .13    | .15    | .22    | .22    | .25             | .27           | .02           | .03              | .08              |                 |
| Rivalry  | 2.33 | .74  | .78 | -.12           | -.14        | -.26    | .00     | .06     | .06    | .12    | .14    | .00    | -.04   | -.03   | .12    | .13             | .17           |               | .10              |                 |                 |
| T1 pop.  | 4.19 | .55  | .90 | .54            | .30         | .09     | .23     | -.31    | -.05   | .04    | .49    | .38    | .31    | -.66   | -.52   | -.43             |               | .03           |                 |                 |                 |
| T2 pop.  | 4.30 | .53  | .88 | .76            | .20         | .03     | .11     | -.23    | -.16   | -.07   | .40    | .37    | .31    | -.51   | -.76   | -.71             |               |               | .04              |                 |                 |
| T3 pop.  | 4.46 | .62  | .92 | .14            | -.02        | -.05    | -.22    | -.22    | -.17   | .32    | .27    | .28    | -.41   | -.60   | -.74             |               |               |                 |                 |                 |
| T1 D-E   | 2.95 | .77  | .64 | .45            | .45         | -.09    | .31     | .31     | .48    | .42    | .40    | .11    | .06    | .04    |                 |               |               |                 |                 |                 |
| T2 D-E   | 3.07 | 1.08 | .87 | .83            | .09         | .77     | .65     | .44     | .67    | .68    | -.03   | -.03   | .04    |                 |                 |               |                 |                 |                 |
| T3 D-E   | 3.03 | .98  | .88 | .08            | .67         | .76     | .50     | .62     | .68    | -.03   | -.03   | .04    |                 |                 |               |                 |                 |                 |
| T1 A-A   | 2.99 | .70  | .67 | .25            | .27         | .01     | .01     | .05     | -.27   | -.20   | -.23   | .28    | .13    | .22    | .28             |               |               |                 |                 |                 |
| T2 A-A   | 2.14 | .91  | .89 | .84            | .32         | .47     | .50     | .13     | .22    | .16    | .27    |                 |               |               |                 |                 |                 |
| T3 A-A   | 2.27 | .86  | .81 | .40            | .46         | .50     | .13     | .22    | .16    | .27    |                 |               |               |                 |                 |                 |
| T1 assertive | 3.85 | .68  | .94 | .77            | .69         | -.14    | -.14   | -.12   | .95    | -.05   | -.14   | .53    | .59    | .80    | .80             |               |               |                 |                 |                 |
| T2 assertive | 3.89 | .68  | .90 | .86            | -.09        | -.21    | -.16   | .85    | .59    | .80    |                 |               |               |                 |                 |                 |
| T3 assertive | 3.96 | .82  | .95 | -.05           | -.14        | -.15   | .87    | .87    | .87    | .87    |                 |               |               |                 |                 |                 |
| T1 untrustworthy | 4.18 | .47  | .85 | .59            | .53         |                 |       |       |       |       |       |       |       |                 |               |                 |                 |                 |                 |
| T2 untrustworthy | 4.16 | .48  | .80 | .80            | .80         |                 |       |       |       |       |       |       |       |                 |               |                 |                 |                 |                 |
| T3 untrustworthy | 4.24 | .51  | .87 |                 |             |                 |       |       |       |       |       |       |       |                 |               |                 |                 |                 |                 |

Note. Means and standard deviations were calculated on raw scores, whereas correlations were calculated on group mean-centered scores in order to control for participants nesting in groups. All correlations in boldface are significant at the p < .05 level. NPI = Narcissistic Personality Inventory; T1 = Time 1; T2 = Time 2; T3 = Time 3; pop. = popularity; D-E = dominant–expressive; A-A = arrogant–aggressive; assertive = being seen as assertive; untrustworthy = being seen as untrustworthy.
emerged with admiration’s positive association with popularity diminishing from T1 (r = .15, p = .02) through T2 (r = .06, p = .32) to being close to zero at T3 (r = .01, p = .88) and rivalry’s negative association with popularity increasing from T1 (r = -.12, p = .047) through T2 (r = -.14, p = .02) to a moderate negative correlation at T3 (r = -.26, p < .001).

The simple LGMs were expanded to include the behavioral and interpersonal perception mediators similar to the models for the NPI. The only difference being that, as indicated by the results of the simple LGMs, admiration was thought to predict the intercept, but not the slope part of the model and rivalry to predict the slope but not the intercept part. Results (see Table 2) showed, consistent with our hypotheses, that for the intercept part of the model, admiration did predict dominant–expressive behavior (β = .28, p < .001), and these behavioral expressions then predicted perceptions of being seen as assertive (β = .73, p < .001), which in turn predicted initial popularity (β = .33, p < .001). Admiration did not predict arrogant–aggressive behavior (β = .08, p = .13), thereby confirming that initially, admiration leads to popularity uniquely through the positive pathway.

Similarly, results indicated that rivalry positively predicted changes in the expression of arrogant–aggressive behavior (β = .12, p = .03), which led to increasing perceptions of being untrustworthy (β = .28, p < .001), which ultimately lowered narcissists’ popularity (β = -.93, p < .001). Conversely, rivalry did not predict the change in dominant–expressive behavior (β = .06, p = .41), thereby confirming our hypotheses that rivalry causes narcissists’ declining popularity uniquely through the negative pathway.

To reveal the underlying mechanism of this change in the pathways, ML-SEMs were rerun with admiration and rivalry facets replacing the NPI (see Figure 3). Based on the NARC, admiration was used to predict the “positive” whereas rivalry was used for prediction of the “negative” pathway. Results indicated that at T1 the narcissism-popularity relationship was partly mediated through the “positive” path (IE = .02, p = .02, DE = .09, p < .01), but not through the “negative” path (IE = -.01, p = .46, DE = -.06, p = .063). This was likely due to the fact that at T1 narcissistic rivalry was not related to the display of arrogant–aggressive behavior (β = .05, p = .45). With increasing acquaintance level, the indirect effects changed in the predicted direction: the “positive” IE became smaller (T1: IE = .02, p = .02; T2: IE = .01, p = .22; T3: IE = .01, p = .11), while the “negative” IE increased in magnitude (T1: IE = -.01, p = .46; T2: IE = -.01, p = .04; T3: IE = -.03, p = .01). Further inspection of the path coefficients revealed that the changes in the narcissism-popularity relationship were again due to an increased display of arrogant–aggressive behaviors, especially from T1 to T2 (T1: β = .05, p = .45; T2: β = .10, p < .01), and these behaviors being evaluated more negatively later in the acquaintance process, thus leading to the perception of being more untrustworthy at T3 (β = .24, p < .001) compared with at T2 (β = .10, p < .001) as well as being seen as assertive having a weaker influence on popularity judgments at T3 (β = .15, p < .01) compared with T1 (β = .29, p < .001). Additionally, these judgments of being seen as untrustworthy were evaluated more negatively over time (T1: β = -.74, p < .001; T2: β = -.80, p < .001; T3: β = -.88, p < .001). The rather small differences of the IE between the time points seem to be due to the fact that at T1 the direct path from admiration to popularity (DE = .09, p < .01) and at T3 the direct path from rivalry to popularity (DE = -.15, p < .01) remained significant. This indicates that there are aspects unique to admiration and rivalry that are relevant to the time-sensitive dynamics but were not captured by the assessed behav-

<table>
<thead>
<tr>
<th>Model and narcissism measure</th>
<th>Path</th>
<th>Slope</th>
<th>Intercept</th>
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<td>Model 1</td>
<td></td>
<td></td>
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<tr>
<td>NPI</td>
<td>NPI</td>
<td>-.23**</td>
<td>.18*</td>
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<tr>
<td>NARQ</td>
<td>Admiration</td>
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<td></td>
<td>Rivalry</td>
<td>-.19*</td>
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<td>Model 2</td>
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<td>NPI</td>
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<td>.11</td>
<td>.34***</td>
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<tr>
<td></td>
<td>Dominant–expressive behavior</td>
<td>.75***</td>
<td>.69***</td>
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<td></td>
<td>Being seen as assertive</td>
<td>-.07</td>
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<td>NPI</td>
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<td>Arrogant–aggressive behavior</td>
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<td>Being seen as untrustworthy</td>
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<td>Being seen as untrustworthy</td>
<td>-.93***</td>
<td>-.81***</td>
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</table>

Note. Results are presented as standardized coefficients. ML-LGM = univariate multilevel latent growth model; NPI = Narcissistic Personality Inventory; NARQ = Narcissistic Admiration and Rivalry Questionnaire. *p < .10. **p < .05. ***p < .01.
ioral mediators, highlighting the need for additional (behavioral) mediators.

Again, and similar to the model not including the narcissism facets, the diminishing popularity of narcissism was due to an increase in arrogant–aggressive behavior—which in turn caused narcissists to appear more untrustworthy—and these interpersonal judgments being evaluated less positively (being seen as assertive) and more negatively (being seen as untrustworthy).

**Discussion**

The present research aimed at revealing the process dynamics underlying the change of narcissism’s relationship to popularity at short-term acquaintance. Based on data from a rich longitudinal behavioral data set and complex statistical models, we were able to (a) uncover the behavioral processes through which narcissists’ popularity vanishes with increasing acquaintance and (b) determine the distinct behavioral processes through which the admiration and rivalry facets of narcissism differentially affect narcissists’ developing (un-)popularity.

We were able to show the change in these relationships and the underlying process dynamics by involving crucial factors not considered in previous research. On a methodological level, we tried to make optimal use of the advantages of a multisource assessment of the relevant variables, including process variables. We did this by relating self-reported personality to observed behaviors in realistic interaction settings, which were systematically varied over time and modeled after the development of acquaintance, and perceptions of actual interaction partners. Thereby, we directly addressed limitations of previous research, which did not investigate the temporal dynamics (Küfner et al., 2013) or did not apply a process-oriented, multimethodological approach to the investigation of narcissists’ declining popularity (Paulhus, 1998). Another crucial novelty is the systematic variation of interaction contexts and the explicit modeling of change by employing modern statistical approaches, which allowed us to combine these sources of data in complex, process-oriented models.

These unique methodological features enabled us to gain important new insights on a theoretical level. First, in line with a longitudinal dual-pathway approach to grandiose narcissism, we revealed the social behaviors and interpersonal perceptions underlying the initially effective positive narcissistic pathway (i.e., dominant–expressive behavior and being seen as assertive) as well as those underlying the increasingly important negative narcissistic pathway (i.e., arrogant–aggressive behavior and being seen as untrustworthy). Second, the conceptual distinction between agentic and antagonistic aspects of grandiose narcissism, which are

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**Figure 2.** Path model representation of dominant–expressive and arrogant–aggressive (arrogant-unfriendly at Time 1; T1) behaviors mediating the relationship between participants’ narcissism and popularity through being seen as assertive and untrustworthy by interaction partners. Paths between the two behavioral and the two judgment-based mediators are not displayed for clarity’s sake. Upper coefficients are based on data from T1, middle coefficient on data from Time 2 (T2), and lower coefficients on data from Time 3 (T3). The two behavioral mediators as well as the two interpersonal perception-based mediators were allowed to covary (T1: \( r = -.09, \text{ns} \), T2: \( r = .77^{**} \), T3: \( r = .76^{***} \), and T1: \( r = -.14 \), T2: \( r = -.21^{***} \), T3: \( r = -.15 \), respectively). Square brackets contain 95% confidence intervals of the standardized path coefficients. IE = indirect effects; DE = direct effects; NPI = Narcissistic Personality Inventory. \( * p < .05 \), \( ** p < .01 \), \( *** p < .001 \).
integrated in a process-oriented framework (NARC), enabled us to go beyond previous approaches and uncover how the different aspects of narcissism, although related to one another, can have markedly diverging consequences over time. Although narcissistic admiration is responsible for initial popularity via an immediate effect on the expression of dominant–expressive behaviors, narcissistic rivalry is responsible for the decline in popularity over time via an increasing effect on the expression of antagonistic behaviors.

**Narcissists’ Popularity Declines Over Time**

With regard to the temporal dynamics of the narcissism-popularity relationship, the results of the present study demonstrated detailed empirical and behavioral evidence for the long-proposed negative trajectory of interpersonal evaluations of narcissists over time. Over a period of 3 weeks, we were able to show that the association of narcissism with popularity among peers became more and more negative. The use of a wide range of relevant data allowed us to reveal the underlying mechanism responsible for this change in popularity: in addition to self-reports of personality, participants provided judgments of their interaction partners, whom they experienced in a variety of relevant social interaction contexts ranging from self-introduction to discussion of controversial and intimate topics. Moreover, uninvolved trained raters provided codings of participants’ actual behaviors.

The decrease in narcissists’ popularity over time was due to a decrease in the more positive (i.e., assertive self-enhancement) and an increased display of the interpersonally more antagonistic behaviors associated with narcissism (i.e., antagonistic self-protection): Although in the beginning of short-term acquaintance, narcissism had a positive effect on popularity through the display of dominant and expressive behaviors, this effect decreased week after week as this behavior contributed less and less to the positive judgments of peers. Additionally, the antagonistic and aggressive behaviors of narcissists led to increasingly negative evaluations by interaction partners and, after a period of 3 weeks and several interaction contexts, narcissists were regarded as untrustworthy by their peers and were in turn less popular.

These findings are in line with theoretical propositions that narcissism is adaptive in the very early stages of acquaintance where there is little to no interaction between persons (Back et al., 2010; Campbell & Campbell, 2009). In these contexts, we were able to show that coded agentic behaviors led to positive evaluations by peers but that the positive effects of these behaviors diminished over time. Also, the display of antagonistic behaviors only led to more negative evaluations over the course of the 3 weeks. It seems as if people need to be given a chance to pick up narcissists’ antagonistic behaviors in different contexts and over a longer period of time in order for the negative effect of narcissism on popularity to unfold. This is in line with Campbell and Campbell’s (2009) suggestion that narcissism is beneficial in early stages of acquaintance (the ‘emerging zone’), but as the level of acquaintance increases (the ‘enduring zone’), narcissism becomes detrimental.
These findings show that narcissists’ developing unpopularity emerges from both the target’s and perceiver’s side. Specifically, narcissistic targets increasingly display certain behaviors (i.e., arrogant-aggressive behavior) that are evaluated negatively, and at the same time, perceivers evaluate the personality impressions related to these behaviors as less positive (i.e., being seen as assertive) and more negative (i.e., being seen as untrustworthy), respectively, over time.

Facets of Narcissism and Popularity

Apart from unraveling the temporal dynamics of the relationship between narcissism and popularity, the role of different narcissism facets and the mechanisms underlying these differentiated effects could also be revealed. Results further underline and explain the differential influence of admiration and rivalry on the two (“positive” vs. “negative”) narcissistic pathways to popularity. Admiration and rivalry are expressed via distinct behaviors (agentive vs. antagonistic) that, in turn, lead to specific interpersonal impressions (e.g., being seen as assertive vs. being seen as untrustworthy), which are differentially related to popularity. Increasing acquaintance comes along with changes in afforded behavioral expressions and their evaluation: agentic behaviors are less afforded and the corresponding personality impressions less embraced, whereas displays of antagonistic behaviors become more probable and, at the same time, the corresponding personality impressions are valued more negatively. As a result, the positive effect of admiration slightly decreases, whereas the negative effect of rivalry on popularity increases over time.

Implications for Understanding Narcissism

The present findings underline the utility of a two-dimensional and process-oriented approach to grandiose narcissism as outlined in the NARC (Back et al., 2013). First, our results highlight the utility of a two-dimensional conceptualization of grandiose narcissism that incorporates both the agentic, self-enhancing as well as the antagonistic, other-dragging aspects of narcissism. These two facets of grandiose narcissism can be reliably measured and have distinct and often diverging effects on a wide array of intra- and interpersonal outcomes (e.g., Back, Schmukle, & Egloff, 2011; Rauthmann et al., 2014; Sherman, Nave, & Funder, 2010).

Interpersonal perception processes determine whether observable behavioral differences between individuals translate into more or less positive social outcomes. Again, this is affected by the situational context, meaning that no single behavior that ‘works’ in one social context necessarily ‘works’ in any given context. Behaviors must be adjusted to the behavioral expectations existing in the current situational context and failure to do so can result in unpopularity or diminishing popularity in social groups. Similarly, the level of acquaintance can influence whether a certain behavior
is beneficial for gaining popularity. In the models investigated here, there was a relatively small change in the display of social behaviors, but more importantly, how these behavioral differences were perceived changed over time (assertiveness perceptions less positive and antagonistic perceptions more negative over time). As mentioned above, this is likely due to a more intimate level of acquaintance and hence different expressions of social behaviors as well as different social expectations. Importantly, we assume that it is the increasingly intimate level of interactions that goes hand in hand with the natural flow of acquaintance that is crucial, rather than elapsing time of acquaintance per se. Specifically, if one were to artificially hold constant the context of interaction (e.g., only self-introductions in the lab), narcissists would have fewer opportunities to show their range of agentic and antagonistic behaviors over time and we would expect less change—although acquaintance is increasing. This reasoning is further backed up by research on the accuracy of personality judgments which show that accuracy increases with an increasing amount of novel behavioral cues but not with time of acquaintance per se (Biesanz, West, & Millevoi, 2007; Carney, Colvin, & Hall, 2007; Kenny, 1994). It will be nevertheless interesting to try to disentangle acquaintance and interaction context in future research.

In addition, it could also very well be the case that the sheer consistency with which a behavior is displayed changes how it is perceived: if the same person tries to be dominant every time we meet her, it seems comprehensible that in the long run these behaviors annoy interaction partners. Specifically, in the beginning, this person might be seen as a type of leader but after trying to act out the leader role in every interaction, the tendency to dominate situations might become detrimental to their popularity as interaction partners feel subdued by the dominant person. As for behavioral expression processes, these contextual influences on interpersonal perception processes will affect developing social consequences of all kinds of personality traits. Agreeableness, for instance, is more appreciated by peers in the long run (Selfhout et al., 2010).

Limitations and Future Directions

The present research assessed a variety of relevant data sources, including personality reports, observed behaviors and interpersonal perceptions over a period of 3 weeks during different social situations. Several improvements can be applied in future research, thereby allowing for a closer look at behavioral dynamics and social consequences. First, the behavioral mediators used in the present study are by no means exhaustive and it is likely that including more and/or different behavioral and interpersonal perceptual mediators will help to provide an even more fine-grained picture of the narcissism-popularity link. Extensions might, for instance, include more specific behaviors such as condescendence/denigration and grandiloquent speech from the arrogance domain, and also judgments of a person’s general level of adjustment or hostility. This could also address the issue of the small effect sizes regarding the complete mediational models. Although small indirect effects are to be expected when combining multiple sources of data in a complex model, additional relevant behaviors and interpersonal perception will help to capture additional variance and thus help to paint an even more informative picture.

Second, future research might add other kinds of social contexts to obtain a broader range of context-specific evaluations of the behaviors discussed in the present study as well as to identify behaviors that trigger the two pathways only in these specific contexts. As a case in point, experimental manipulations involving, for example, ego threat may be used to create settings in which narcissists are likely to express more antagonistic behaviors. This might be a way to resolve a possible problem associated with student samples. That is, in addition to the fact that self-introduction settings provide little room for display of antagonistic behaviors, the aggressive and antagonistic behaviors might also not be displayed initially, because previously unacquainted students might be more chary in the expression of such behaviors given that they are likely interested in making friends in a group setting like this.

Third, intrapersonal mechanisms relevant to the narcissism-popularity link should also be considered. In the present research, we focused on a detailed investigation of the expression of individuals’ behaviors and how their interaction partners perceive these. Future work should also investigate the way narcissists perceive the social situation they enter and how they react to and attribute feedback by their peers, thereby shedding light on the more intrapersonal dynamics of narcissism. Such investigations of the intrapersonal precursors and consequences of narcissists’ social interactions might also help us understand how aspects of grandiose narcissism might relate and merge into more clinically relevant variants of narcissism, that is, vulnerable narcissism (e.g., emotional vulnerability caused by the persistent perception of negative feedback due to the negative social consequences of rivalry expressions; Dickinson & Pincus, 2003; Miller & Campbell, 2008; Miller et al., 2011).

Fourth, field studies might further substantiate the present findings. The present study used a laboratory design that allowed for both a certain degree of control in the administration of standardized social tasks and the free expression of various social behaviors during relevant interactions. It can, however, still be argued that participants (and narcissists in particular) may be more self-aware and pay more attention to how they behave and interact with others in the laboratory, consciously attempting to be seen in a favorable way (e.g., because of a perceived opportunity to impress others; Leary & Kowalski, 1990; Wallace & Baumeister, 2002). The observation of participants embedded in everyday life interactions seems a fruitful approach to gain even more representative samples of displayed behaviors in realistic social interactions. In addition, this would also allow for an exploration of how narcissists select and shape the social situations they experience.

Fifth, the longitudinal fine-grained-process approach presented here might also have important practical implications. Any intervention aiming at changing the individual, social, or societal consequences related to narcissism needs to address the processes driving these effects. Process knowledge of the kind presented here is thus key not only to understanding grandiose narcissism theoretically but also for developing tailored and efficient interventions.

Conclusions

In the present research, we investigated behavioral processes underlying the narcissism-popularity link and how they are influ-
enced by acquaintance level and different narcissism facets. In line with a dual-pathway approach to the social consequences of narcissism, narcissism exhibited diverging effects on popularity through two distinct behavioral pathways (an agentic and an antagonistic pathway). These pathways were differentially affected by the process of becoming acquainted and by the respective narcissism facet examined: whereas admiration triggered the positive narcissistic pathway, fostering popularity especially in the early stages of the acquaintance process, rivalry increasingly triggered the negative narcissistic pathway, explaining narcissists’ declining popularity over time.

We contend that a behavioral dual-pathway approach allows for a differentiated analysis of narcissists’ popularity over time, which can guide future research on the effects of narcissism in social contexts. Additionally, the approach of isolating specific behavioral pathways can be adopted to better understand the developing effects of personality traits on social outcomes in general (e.g., Back, 2015; Back & Vazire, 2015), including a wide array of traits (e.g., agency/communion, Big Five, attachment styles) and relationship contexts (e.g., romantic relationships, friendship, work relations).

References
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