

# Journal of Personality and Social Psychology

## **Narcissism and Romantic Relationships: The Differential Impact of Narcissistic Admiration and Rivalry**

Stefanie N. Wurst, Tanja M. Gerlach, Michael Dufner, John F. Rauthmann, Michael P. Grosz, Albrecht C. P. Kűfner, Jaap J. A. Denissen, and Mitja D. Back

Online First Publication, August 25, 2016. <http://dx.doi.org/10.1037/pspp0000113>

### CITATION

Wurst, S. N., Gerlach, T. M., Dufner, M., Rauthmann, J. F., Grosz, M. P., Kűfner, A. C. P., Denissen, J. J. A., & Back, M. D. (2016, August 25). Narcissism and Romantic Relationships: The Differential Impact of Narcissistic Admiration and Rivalry. *Journal of Personality and Social Psychology*. Advance online publication. <http://dx.doi.org/10.1037/pspp0000113>

# Narcissism and Romantic Relationships: The Differential Impact of Narcissistic Admiration and Rivalry

Stefanie N. Wurst  
University of Münster

Tanja M. Gerlach  
University of Göttingen and Leibniz Science Campus  
Primate Cognition

Michael Dufner  
University of Leipzig

John F. Rauthmann  
Humboldt University of Berlin

Michael P. Grosz  
University of Tübingen

Albrecht C. P. Kűfner  
University of Münster

Jaap J. A. Denissen  
Tilburg University

Mitja D. Back  
University of Münster

Narcissism is known to be related to romantic success in short-term contexts (dating, early stage relationships) but also to problems in long-term committed relationships. We propose that these diverging romantic outcomes of narcissism can be explained by differential associations with agentic versus antagonistic dimensions of grandiose narcissism: Narcissistic Admiration and Rivalry. Both dimensions serve the central narcissistic goal of gaining and maintaining a grandiose self-view, but do so by different processes: *Admiration* is characterized by the tendency to promote the positivity of one's self-view by seeking social admiration (assertive self-enhancement). *Rivalry* is characterized by the tendency to protect oneself from a negative self-view by derogating others (antagonistic self-protection). Across 7 studies (total  $N = 3,560$ ) using diverse measures and methodological approaches (self-, peer, and partner reports, as well as interpersonal perception measures in video-based studies, face-to-face laboratory encounters, and online surveys), we show that the short-term romantic appeal associated with narcissism is primarily attributable to the dimension of Admiration, whereas the long-term romantic problems associated with narcissism are primarily attributable to the dimension of Rivalry. These results highlight the utility of a 2-dimensional reconceptualization of grandiose narcissism for explaining its heterogeneous romantic outcomes. The findings further underscore the idea that different facets of personality traits might impact different aspects of romantic relationship quality, depending on the stage of the relationship. Such a more nuanced view increases the predictive validity of personality traits in social relationship research.

**Keywords:** grandiose narcissism, romantic relationships, interpersonal attraction, personality-relationship dynamics

**Supplemental materials:** <http://dx.doi.org/10.1037/pspp0000113.supp>

Stefanie N. Wurst, Department of Psychology, University of Münster; Tanja M. Gerlach, Department of Psychology, University of Göttingen, and Leibniz Science Campus Primate Cognition; Michael Dufner, Department of Psychology, University of Leipzig; John F. Rauthmann, Department of Psychology, Humboldt University of Berlin; Michael P. Grosz, LEAD Graduate School, University of Tübingen; Albrecht C. P. Kűfner, Department of Psychology, University of Münster; Jaap J. A. Denissen, Department of Psychology, Tilburg University; Mitja D. Back, Department of Psychology, University of Münster.

This research was supported by German Research Foundation (DFG) Grants BA 3731/2-1 to Mitja D. Back, and BA 3731/6-1 to Mitja D. Back, Steffen Nestler, and Boris Egloff. Michael P. Grosz is a doctoral student at the LEAD Graduate School and Research Network [GSC1028], funded by the Excellence Initiative of the German federal and state governments. Some of the results from this article were previously presented at the

annual meeting of the Society for Personality and Social Psychology in Austin (February 2014), at the European Conference on Personality in Lausanne (July 2014) and at the Congress of the German Psychological Society in Bochum (September 2014). We are grateful to Dmitrij Agroskin, Leonie Althaus, Anna Auth, Angelina Bohlender, Simon Breil, Josephine Clausen, Kyra Elias, Jasmina Eskic, Mahnas Farahati, Lea Sophie Fetkűter, Francesca Foreich, Stella Grau, Marc Grünberg, Lisa Hűke, Astrid Janich, David Kolar, Carolin Landers, Simon Lintz, Jana Mattern, Isabel Metzler, Christian Pill, Theresa Pohl, Selina Reinhard, Michael Weigand, Lisa Wierichs, and Christina Wűbkenberg for their help with data collection. We also thank Katharina Geukes, Roos Hutteman, Steffen Nestler, Marius Leckelt, and Karl-Heinz Renner for fruitful discussions on this research and helpful comments on earlier drafts of this article.

Correspondence concerning this article should be addressed to Stefanie N. Wurst, Department of Psychology, University of Münster, FliednerstraÙe 21, 48149, Münster, Germany. E-mail: stefanie.wurst@wwu.de

I thought your eyes were fixed on me, but now I know, yourself is all you wanna see.

—Ella Henderson, “Mirror Man”

In her song “Mirror Man,” British singer Ella Henderson describes a romantic relationship with a narcissistic man. Similar content can be found in lyrics, poems, and literature throughout the ages, the most well-known of them probably being the tragic love story of Narcissus and Echo. The impact of narcissism on romantic relationships is not only a popular theme in literature and music, but has garnered considerable scientific attention as well (W. K. Campbell & Miller, 2011; Furnham, Richards, & Paulhus, 2013; Grijalva et al., 2015; J. D. Miller & Campbell, 2010). In that research, *grandiose narcissism*<sup>1</sup> is defined as a personality trait characterized by an inflated and overly positive view of the self, including a strong sense of superiority, specialness, and entitlement (e.g., W. K. Campbell, Brunell, & Finkel, 2006; W. K. Campbell & Campbell, 2009; Morf & Rhodewalt, 2001). Prior research on narcissism and romantic relationships has shown that narcissism is related to romantic appeal and success in dating or short-term romantic relationships, but also to serious problems in long-term romantic relationships (for an overview, see W. K. Campbell et al., 2006). Little is known, however, about the underlying reasons for these diverging interpersonal romantic outcomes of narcissism. In the present article, we propose that two dimensions of narcissism must be distinguished in order to understand the heterogeneous romantic impacts of narcissism. We hypothesize that the diverging romantic outcomes can be explained as a consequence of differential associations with these two dimensions.

### Interpersonal Consequences of Narcissism

Narcissism is related to interpersonal strategies and behaviors that are relevant for the initiation and maintenance of social relationships. To achieve their central goal of gaining and maintaining a grandiose self-view, individuals high on narcissism seek admiration from others. This is expressed in self-assured, charming, entertaining, and assertive behaviors (e.g., Back et al., 2013; Back, Schmukle, & Egloff, 2010; W. K. Campbell & Campbell, 2009; Carlson, Vazire, & Oltmanns, 2011; Küfner, Nestler, & Back, 2013; Paulhus, 1998; R. Raskin & Terry, 1988). At the same time, to defend their own superior status, people high on narcissism tend to derogate others who threaten their grandiose self-views, resulting in socially insensitive, selfish, hostile, and aggressive behaviors (e.g., Back et al., 2013; Bushman & Baumeister, 1998; W. K. Campbell, Bush, Brunell, & Shelton, 2005; Kernis & Sun, 1994; Küfner et al., 2013; Morf & Rhodewalt, 1993; Paulhus, 1998; Twenge & Campbell, 2003). For example, individuals with high scores on narcissism have been found to blame their own failures on others, to react hypersensitively when criticized, and to exploit their social partners (e.g., W. K. Campbell, Reeder, Sedikides, & Elliot, 2000; Morf & Rhodewalt, 2001; R. Raskin & Terry, 1988; Rhodewalt & Morf, 1998; Smalley & Stake, 1996).

This pattern of interpersonal strategies and behaviors leads to a “mixed blessing” (Paulhus, 1998) with respect to relational outcomes, with divergent outcomes depending on the stage of the social relationship. W. K. Campbell and Campbell (2009) summarized this in their contextual reinforcement model: Individuals high on narcissism thrive in the early stages (referred to as *emerging zone*) of a relationship, as they can take advantage of their charm-

ing and entertaining qualities. Therefore, they tend to be liked, are usually successful at initiating new social relationships, and initially receive the social admiration they crave (e.g., Brunell & Campbell, 2011; W. K. Campbell & Campbell, 2009; Dufner et al., 2012; Friedman, Oltmanns, Gleason, & Turkheimer, 2006; Oltmanns, Friedman, Fiedler, & Turkheimer, 2004). As social relationships deepen (referred to as *enduring zone*), however, narcissism’s more antagonistic characteristics are revealed, triggering interpersonal problems (e.g., conflicts and transgressions) as well as less liking and admiration for the narcissistic social partner (e.g., W. K. Campbell & Campbell, 2009; Carlson et al., 2011; Czarna, Dufner, & Clifton, 2014; McCullough, Emmons, Kilpatrick, & Mooney, 2003; Morf & Rhodewalt, 2001; Paulhus, 1998). Probably as a consequence, individuals high on narcissism often avoid deepening their social relationships and lack a desire for intimate relationships (W. K. Campbell & Campbell, 2009).

### Narcissism and Romantic Relationships

The distinct pattern of narcissism’s effects on social relationships seems to be particularly pronounced in romantic relationships. Prior research has shown that narcissism is related to success at attracting romantic partners and to romantic appeal in short-term romantic contexts (e.g., dating, sexual affairs, or early stage romantic relationships), but is also linked to serious relationship problems in the long run (i.e., in committed long-term romantic relationships; e.g., Brunell & Campbell, 2011; W. K. Campbell et al., 2006; W. K. Campbell & Campbell, 2009; Holtzman & Strube, 2011).

In taking a closer look at the aspects that make up narcissism’s appeal in short-term romantic contexts, prior studies have found that narcissism is related to a series of romantically attractive characteristics. These include an appealing and groomed appearance (Back et al., 2010; Gangestad, Garver-Apgar, Simpson, & Cousins, 2007; Vazire, Naumann, Rentfrow, & Gosling, 2008), high confidence, a high capacity for status (W. K. Campbell et al., 2006; Paulhus, 1998; R. Raskin & Terry, 1988), high self-perceived attractiveness (Gabriel, Critelli, & Ee, 1994), as well as little fear of romantic rejection, and thus the tendency to readily and unrestrainedly approach members of the opposite sex (W. K. Campbell et al., 2006). Consequently, individuals with high scores on narcissism are perceived by the opposite sex as likable, physically and sexually attractive, and having high mate appeal (Brunell & Campbell, 2011; Dufner, Rauthmann, Czarna, & Denissen, 2013; Holtzman & Strube, 2010; Jauk et al., in press).

The higher mate appeal associated with narcissism has direct interpersonal consequences. In past studies, people high on narcissism have claimed that they are able to meet romantic partners easily and have received fewer rejections and more phone numbers from the opposite sex than people lower on narcissism (Dufner et al., 2013; Rhodewalt & Eddings, 2002). They furthermore reported having more unrestricted sociosexual orientations (i.e., a greater

<sup>1</sup> Throughout the article, the term *narcissism* refers to a continuous and normally distributed personality trait in the general population (i.e., trait narcissism; e.g., W. K. Campbell, Foster, & Finkel, 2002; R. N. Raskin & Hall, 1979). The present article examines grandiose, not vulnerable, narcissism (for details on the distinction between grandiose and vulnerable narcissism, see J. D. Miller & Maples, 2011; Pincus & Roche, 2011).

desire for casual sex) and engaging more frequently and more successfully in short-term mating (i.e., one-night stands or sexual affairs; Foster, Shriram, & Campbell, 2006; Jonason, Li, Webster, & Schmitt, 2009; Koladich & Atkinson, 2016; Reise & Wright, 1996). Individuals with higher scores on narcissism also reported a larger number of lifetime sexual as well as dating partners (Adams, Luevano, & Jonason, 2014; Jonason et al., 2009; Rhodewalt & Eddings, 2002). Together, all of these findings indicate narcissism's high romantic appeal and success in short-term acquaintance contexts.

In long-term romantic relationships, on the other hand, prior research has shown that narcissism is related to a series of problems. To begin with, narcissism was found to be associated with dispositions and characteristics that adversely influence long-term committed relationships: Besides their lack of interest in forming close relationships (W. K. Campbell, 1999; W. K. Campbell et al., 2006; W. K. Campbell & Campbell, 2009; Carroll, 1987), people scoring high on narcissism have been found to be selfish; to lack respect, tolerance, and empathy in long-term relationships (Brunell & Campbell, 2011; W. K. Campbell, Bonacci, Shelton, Exline, & Bushman, 2004; W. K. Campbell et al., 2006); and to perceive their romantic partners in a less positive light than people lower on narcissism (W. K. Campbell, Rudich, & Sedikides, 2002). Probably as a consequence, the long-term romantic relationships of individuals high on narcissism tend to be characterized by low emotional intimacy, love, and trust (Brunell & Campbell, 2011; W. K. Campbell et al., 2006); a lack of warmth and caring, even to the point of aggression (W. K. Campbell, 1999; W. K. Campbell, Foster, & Finkel, 2002; Keller et al., 2014); and a low relationship satisfaction and low relationship quality experienced by both partners (W. K. Campbell et al., 2006; W. K. Campbell & Campbell, 2009; Foster, 2008; Lamkin, Campbell, vanDellen, & Miller, 2015; Lavner, Lamkin, Miller, Campbell, & Karney, 2016). In past studies, individuals high on narcissism who were involved in long-term romantic relationships showed low levels of commitment and investment, reported a larger number of and higher attention to potential alternative partners, were susceptible to infidelity, and experienced a larger number of divorces than people lower on narcissism (Brewer, Hunt, James, & Abell, 2015; Brunell & Campbell, 2011; Buss & Shackelford, 1997; W. K. Campbell et al., 2006; W. K. Campbell & Foster, 2002; W. K. Campbell, Foster, et al., 2002; Cramer, 2011; Foster, 2008; Foster & Campbell, 2005; Foster et al., 2006). Furthermore, individuals with higher scores on narcissism reported a greater frequency of conflicts with their romantic partners (Horan, Guinn, & Banghart, 2015). After such conflicts or after transgressions by their romantic partners (e.g., being insulted or cheated on), people high on narcissism stated to react with revenge, little forgiveness, and little relationship maintaining behavior (Exline, Baumeister, Bushman, Campbell, & Finkel, 2004; Peterson & DeHart, 2014; Rasmussen & Boon, 2014), which is a dysfunctional dyadic coping style. All of this illustrates that narcissism is associated with quite substantial problems in long-term romantic relationships.

To sum up, the bulk of empirical evidence points to a high romantic appeal and success of narcissism in short-term acquaintance contexts such as dating and early stage relationships, but also indicates that narcissism evokes problems in long-term romantic contexts such as committed relationships. In his chocolate cake model, W. K. Campbell (2005) therefore compared engaging in a

romantic relationship with a narcissistic partner to eating a chocolate cake: an initial rush of excitement and positive feelings one cannot resist, followed by long-term costs and regret that outweigh the initial pleasure.

However, an essential question still needs to be answered: How can these diverging romantic effects of narcissism be explained? Most prior research has treated grandiose narcissism as a one-dimensional construct that causes both short-term gains and long-term losses in romantic relationships. Such an explanation is prominent in most theoretical accounts of grandiose narcissism (e.g., Baumeister & Vohs, 2001; W. K. Campbell et al., 2006; W. K. Campbell & Campbell, 2009). For example, in the chocolate cake model (W. K. Campbell, 2005), both the short-term delight and the long-term regret of the cake are explained by its highly caloric nature: Whereas it triggers taste receptors in the short term, it also stimulates fat production and thus leads to regret in the long term. Our position is different in that we propose that different psychological ingredients explain the short-term versus long-term romantic consequences of narcissism.

Specifically, we propose that a two-dimensional distinction of grandiose narcissism is needed to comprehensively understand the diverging romantic effects of narcissism in different stages of relationships. To this end, we introduce a recent theoretical conceptualization of grandiose narcissism—the Narcissistic Admiration and Rivalry Concept (NARC; Back et al., 2013)—to the field of romantic relationships. The NARC differentiates two dimensions of grandiose narcissism (narcissistic Admiration and narcissistic Rivalry) and thus divides the heterogeneous interpersonal strategies associated with narcissism into two subsets that might have different interpersonal outcomes. We argue that the diverging romantic effects of narcissism can be explained as a consequence of differential associations with these two dimensions.

### Narcissistic Admiration and Rivalry in Romantic Relationships

According to the NARC, two distinct but positively related trait dimensions of grandiose narcissism need to be distinguished: narcissistic Admiration and narcissistic Rivalry. Both dimensions serve narcissistic persons' central goal of gaining and maintaining a grandiose self-view but differ markedly in the social strategies used and in their interpersonal consequences. *Admiration* is characterized by the narcissistic tendency to promote the positivity of one's self-view by seeking social admiration. Individuals high on Admiration strive for uniqueness, engage in thoughts about their own grandiosity, and show self-assured, dominant, expressive, and charming behaviors (assertive self-enhancement). All of these are behaviors that tend to trigger positive social outcomes (e.g., being liked; Back et al., 2013; Lange, Crusius, & Hagemeyer, in press; Leckelt, Küfner, Nestler, & Back, 2015). *Rivalry*, by contrast, is characterized by the narcissistic tendency to protect oneself from a negative self-view by derogating others. Individuals high on Rivalry strive for supremacy by devaluing others, and they engage in selfish, socially insensitive, arrogant, hostile, and aggressive behaviors that lack interpersonal warmth, trust, and forgiveness (antagonistic self-protection). These behaviors often lead to negative social outcomes (e.g., social conflict; Back et al., 2013; Lange et al., in press; Leckelt et al., 2015).

It should be noted that, according to the NARC, grandiose narcissism is not equated with necessarily having high scores on *both* dimensions. As the dimensions of Admiration and Rivalry are positively correlated, high levels on both dimensions *can* be combined within the same individual, but this does not have to be the case (as the correlation between the dimensions is medium in size, i.e., about .30–.60; Back et al., 2013; Leckelt et al., 2016; Rogoza, Wyszynska, Maćkiewicz, & Ciecuch, 2016). Moreover, according to the NARC, the respective interpersonal consequences of each dimension occur independently of the level of the other dimension. That is, it is not necessary for *both* dimensions to be high in order for the respective interpersonal consequences to occur.

We propose that distinguishing between these two narcissistic dimensions might be a crucial point for explaining the diverging interpersonal outcomes of narcissism in short-term versus long-term romantic contexts, as we hypothesize that Admiration and Rivalry should show differential effects on the initiation versus the maintenance of romantic relationships (see Figure 1): During dating and relationship initiation (i.e., short-term romantic contexts), interactions between (potential) romantic partners are mostly noncommittal in nature, focusing on having a good time together and getting to know each other (Finkel et al., 2015; Knapp, 1985; Reese-Weber, 2015). In this context of initiation, it is primarily the entertaining and alluring qualities of a romantic partner that produce attraction, such as physical attractiveness, self-assuredness, charmingness, and likability (e.g., Asendorpf, Penke, & Back, 2011; Back et al., 2011; Houser, Horan, & Furler, 2007; Wood, 1982). As a consequence, the behaviors that characterize Admiration—that is, a charming and likable demeanor as well as a self-assured appearance—should lead to a high romantic appeal in short-term romantic contexts. We therefore propose that Admiration might be the driving force behind the short-term romantic appeal associated with narcissism. Preliminary evidence in support of this hypothesis comes from a study by Dufner et al. (2013), in which in real-life dating situations (i.e., a short-term romantic context), men's Admiration was associated with being perceived as more attractive by women and receiving more phone numbers.

Once a romantic relationship has reached more committed stages, the mutual interdependence between partners has grown considerably (Finkel et al., 2015; Knapp, 1985; Levinger & Snoek, 1972; Wood, 1982). In these committed stages, mutual valuation, warmth, trust, and unselfish behaviors are an essential part of the relationship. A lack of them usually becomes obvious only after a certain amount of interaction with a romantic partner and is likely to lead to romantic problems, such as reductions in relationship satisfaction and love (Altman & Taylor, 1973; W. K. Campbell, Foster, et al., 2002; Huston & Vangelisti, 1991; Levinger & Snoek, 1972). As a consequence, the behaviors that characterize Rivalry—that is, devaluation of others, revenge-orientation, lack of warmth, trust, and forgiveness, and selfish and aggressive behaviors—should lead to negative romantic outcomes in the long run when the highly interdependent nature of romantic relationships makes insensitive and aggressive social reactions most harmful. We therefore propose that Rivalry might be the driving force behind the long-term romantic problems associated with narcissism.

## The Present Research

The aim of the present research was to examine whether the diverging effects of narcissism in different stages of romantic relationships (short-term appeal vs. long-term problems) could be explained by differential effects of Admiration and Rivalry. It should be noted that the main goal of the present research was to uncover which (if any) dimensions of narcissism underlie the diverging outcomes of narcissism in the two distinct stages of a romantic relationship. We did not aim to examine the trajectory of the influence of these dimensions over time.

As explained in the previous section, we hypothesized that narcissism's short-term romantic appeal would primarily be attributable to the dimension of Admiration, whereas narcissism's long-term romantic problems would primarily be attributable to the dimension of Rivalry. We tested these hypotheses in seven studies using different methodological approaches, including self-, peer, and partner reports, as well as interpersonal perception measures in video-based studies, face-to-face laboratory encounters, and online surveys (see Table 1 for an overview).<sup>2</sup>

In all of the studies, we implemented the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013).<sup>3</sup> The NARQ is a self-report narcissism questionnaire that asks participants to indicate how much they agree with each of 18 statements about themselves on a 6-point scale ranging from 1 = *do not agree at all* to 6 = *agree completely*. Half of these items measure narcissistic Admiration (e.g., "I deserve to be seen as a great personality," "I manage to be the center of attention with my outstanding contributions," "Being a very special person gives me a lot of strength"), and the other half of the items assess narcissistic Rivalry (e.g., "I want my rivals to fail," "Most people are somehow losers," "I react annoyed if another person steals the show from me").

In addition, we obtained several romantic outcome variables that measured either key indicators of short-term romantic appeal (Studies 1–3) or crucial characteristics of long-term romantic relationship functioning (Studies 4–7). We began with a video-based study (Study 1) to investigate whether the proposed short-term benefits of narcissistic Admiration would be reflected in people's perceptions of self-introductory videos of potential romantic partners. To further examine narcissism's short-term romantic impact in a more realistic setting, we conducted two face-to-face laboratory experiments assessing cross-sex interpersonal perceptions

<sup>2</sup> As the present article contains a massive amount of diverse data collected in several labs, we could not provide open data or open material yet. We will, however, be happy to share them upon request.

<sup>3</sup> The NARQ is a straightforward tool for assessing Admiration and Rivalry, as it was constructed on the basis of the theoretically derived two-dimensional conceptualization of the NARC (Back et al., 2013). However, we also administered the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988; Schütz, Marcus, & Sellin, 2004) in about half of our samples. We reran all of our analyses using the Leadership/Authority and Entitlement/Exploitativeness subscales of the NPI (Ackerman et al., 2011) instead of Admiration and Rivalry, respectively, as these NPI scales most closely capture the Admiration and Rivalry dimensions as proposed by the NARC (Back et al., 2013). The results of these analyses largely corresponded with those found with the NARQ (see Appendix A). However, Admiration and Rivalry as measured with the NARQ consistently explained a greater portion of variance than the two NPI facets (mean adj.  $R^2$  across all outcome measures of this article: NPI, .03; NARQ, .07).

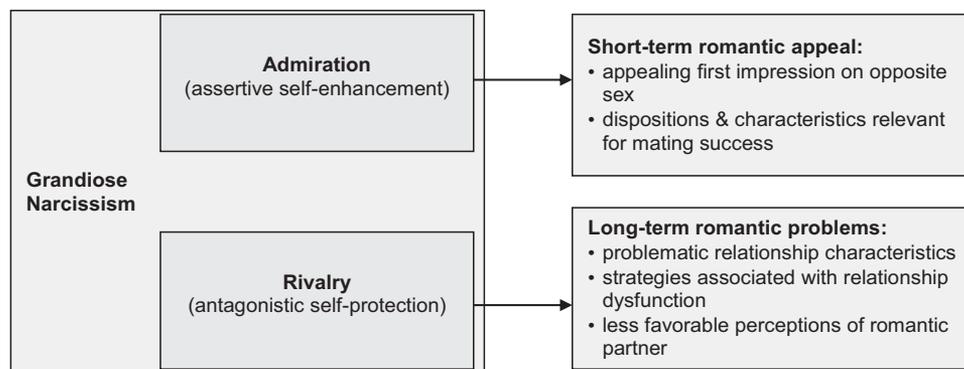


Figure 1. Summary of our hypotheses.

(Study 2). In addition, we conducted several online surveys asking for self- and peer ratings of dispositions and characteristics relevant for or indicating short-term mating success (Study 3). To study narcissism's long-term romantic impact, we assessed persons' perceptions of their long-term romantic partners, using non-dyadic (Study 4) as well as dyadic data (Study 5). In addition, we administered several online surveys assessing indicators of romantic relationship functioning, including relationship characteristics as well as strategies relevant for long-term romantic relationship success, and using self-reports (Study 6) as well as dyadic data that included both self- and partner reports (Study 7). In all studies, we expected short-term romantic appeal to be particularly related to Admiration, whereas long-term romantic problems were expected to be predominantly associated with Rivalry.

In the following, we outline our method of data analysis. We standardized all variables within samples prior to the analyses. If not stated otherwise in the description of the respective study, the analytical strategy that we applied to examine the impacts of Admiration and Rivalry on the short- and long-term romantic outcomes was as follows for all studies. First, we computed zero-order correlations between each outcome variable and narcissistic Admiration and Rivalry, respectively. Second, because Admiration and Rivalry are positively correlated trait dimensions (mean  $r$  across all samples in this paper = .32, range = .14–.55), we ran a multiple regression for each outcome variable, entering Admiration and Rivalry simultaneously as predictors to obtain the unique contributions of each dimension.<sup>4</sup> To determine the effect sizes of our results, we used standardized regression coefficients (Nestler, Grimm, & Schönbrodt, 2015), interpreting coefficients  $>.50$  as large, coefficients around .30 as medium, and coefficients  $<.15$  as small effects (cf. Cohen, 1992). Power analyses using G\*Power (Version 3.1.5; Faul, Erdfelder, Buchner, & Lang, 2009) indicated that we needed sample sizes of at least  $n = 89$  to detect a medium-sized effect with a power  $>95\%$  in our analyses. This criterion was met in almost all of our analyses. When it was not met, we explicitly address power. Third, we performed commonality analyses (Nimon, Lewis, Kane, & Haynes, 2008) to estimate the amount of unique variance explained by Admiration as well as by Rivalry in each outcome variable. The detailed results of these analyses can be found in Appendix B. Finally, the descriptive statistics and internal consistencies of Admiration and Rivalry in the different samples are

presented in Table 2. This article comes with online supplemental materials in which we present the results of additional analyses.

### Study 1: Self-Introductory Videos

This study was aimed at obtaining initial insights into whether the short-term romantic appeal associated with narcissism is primarily attributable to the dimension of narcissistic Admiration. To do so, we chose the most straightforward way to measure short-term romantic appeal: asking opposite-sex individuals to rate a person's romantic appeal in a short-term acquaintance context. Prior research has found that individuals high on narcissism are perceived by the opposite sex as likable, physically attractive, and as having a great deal of appeal as a short-term partner (Brunell & Campbell, 2011; Holtzman & Strube, 2010). To investigate whether this short-term appeal is primarily attributable to the specific dimension of Admiration, we assessed the narcissism scores (Admiration and Rivalry) of heterosexual males who were currently looking for a romantic partner and recorded short self-introductory videos of the males. These videos were rated by unacquainted female perceivers on several short-term romantic characteristics (e.g., physical attractiveness, desirability as a short-term partner). We hypothesized that the positive short-term effect of being perceived as appealing by the opposite sex would particularly be related to narcissistic Admiration (and not or to a smaller degree to narcissistic Rivalry).

### Method

**Participants.** The target persons in the videos were heterosexual males who were currently looking for a romantic partner and took part in a larger dating study conducted at the University

<sup>4</sup> We also investigated whether sex moderated any effects. However, when we entered sex, the Sex  $\times$  Admiration interaction, and the Sex  $\times$  Rivalry interaction into the regressions, no significant interactions with sex were revealed for any of our outcome measures in the regression analyses. In two separate sets of analyses, we furthermore tested for the Admiration  $\times$  Rivalry interaction effect, as well as for quadratic effects of Admiration and Rivalry on each outcome measure. Effects, however, were scarce and inconsistent in nature. They are not reported in the present article but can be found in the online supplemental materials (Tables S2 to S5).

Table 1  
Study and Method Overview

Study	Method	Outcomes	Example operationalizations
Short-term context			
1	Video study	Interpersonal perceptions (zero-acquaintance) by opposite sex	Physical attractiveness, desirability as short-term partner, likeability
2	Face-to-face laboratory encounters		
3	Online surveys	Self- & peer-reported dispositions and characteristics relevant for short-term mating success	Attractiveness as mate, approach orientation toward other sex, sociosexuality
Long-term context (all participants involved in committed romantic relationships)			
4	Online survey	Perceptions of romantic partner	Warmth, intelligence, physical attractiveness, likeability
5	(Laboratory) Survey, dyadic data		
6	Online surveys	Self-reported (& partner-reported) relationship characteristics & strategies relevant for long-term romantic relationship functioning	Relationship quality, relationship satisfaction, occurrence of conflicts & transgressions, (maladaptive) reactions to transgressions
7	Online surveys, dyadic data		

of Munich, Germany (for details, see Dufner et al., 2013, Study 3). As compensation for their participation, the target persons received feedback on their personality traits. In total, 36 target persons (age = 18–34 years,  $M = 23.97$ ,  $SD = 4.04$ ) provided videos with adequate sound and video quality for the purposes of the present study.

Videos were rated by 62 heterosexual females (age = 18–29 years,  $M = 22.74$ ,  $SD = 2.48$ ) who were currently not involved in a romantic relationship. The female perceivers were recruited in a

different city (Münster, Germany) from the male targets to minimize the chances of prior acquaintance. The female perceivers received partial course credit or monetary compensation for their participation.

**Procedure and materials.** The male targets first completed the NARQ to assess their narcissistic Admiration and Rivalry. Afterward, they were instructed to introduce themselves for 20 s while being videotaped under standardized setting and lighting conditions. Participants were free to choose what they said or did

Table 2  
Sample Overview: Sample Characteristics and Descriptive Statistics for Admiration and Rivalry

Sample	Study	Sample characteristics		Descriptives Admiration & Rivalry			
		<i>n</i> (male/female)	Age (years): <i>M/SD</i> (range)	ADM		RIV	
				<i>M/SD</i> (range)	$\alpha$	<i>M/SD</i> (range)	$\alpha$
A	1	Targets: 36 (all male) Perceivers: 62 (all female)	23.97/4.04 (18–34) 22.74/2.48 (18–29)	3.96/0.08 (2.22–5.56)	.84	3.11/0.87 (1.44–5.22)	.82
B	2, 3	68 (34/34)	24.50/3.87 (18–36)	2.97/0.79 (1.11–5.00)	.83	2.18/0.71 (1.11–3.89)	.77
C	2, 3	91 (46/45)	24.37/3.91 (20–39)	3.21/0.75 (1.44–5.00)	.80	2.32/0.72 (1.22–3.89)	.79
D	3	175 (53/122)	27.27/2.96 (22–36)	3.45/0.87 (1.33–5.44)	.85	2.34/0.80 (1.00–4.67)	.82
E	3, 6	477 (107/370)	28.49/8.90 (16–66)	3.02/1.05 (1.00–6.00)	.67	2.23/1.02 (1.00–5.67)	.65
F	3, 6	232 (77/155)	24.99/7.46 (16–57)	3.19/0.92 (1.00–5.89)	.85	2.32/0.77 (1.00–5.78)	.77
G	3, 6	214 (58/156)	27.19/8.47 (18–65)	3.15/0.82 (1.00–5.44)	.83	2.23/0.76 (1.00–4.22)	.80
H	4	133 (20/113)	25.38/7.61 (18–56)	3.16/0.72 (1.33–5.44)	.83	2.06/0.68 (1.11–4.56)	.79
I	5	184 (92/92)	25.36/6.62 (17–60)	2.68/1.15 (1.00–6.00)	.79	2.14/0.91 (1.00–5.33)	.59
J	6	620 (130/490)	28.38/9.83 (16–69)	2.93/0.92 (1.00–6.00)	.86	2.19/0.71 (1.00–4.56)	.78
K	6	227 (36/191)	36.20/11.72 (18–67)	3.14/0.77 (1.00–5.22)	.83	2.48/0.75 (1.00–4.89)	.81
L	6	233 (49/184)	27.22/9.47 (18–72)	3.08/0.90 (1.00–5.78)	.85	2.25/0.87 (1.00–5.56)	.83
M	6	136 (67/69)	26.46/6.25 (20–47)	3.05/0.87 (1.11–5.56)	.84	2.06/0.66 (1.00–4.89)	.72
N	7	190 (95/95)	24.88/7.82 (16–59)	3.16/0.87 (1.22–5.56)	.84	2.35/0.83 (1.00–5.22)	.81
O	7	544 (272/272)	24.74/6.24 (18–66)	3.29/0.75 (1.22–5.67)	.81	2.15/0.73 (1.00–4.56)	.80

*Note.* Some of the samples used in this article have been used in other publications. Sample B is a subset of the participants (cross-sex groups) in Küfner et al. (2013), Study 2. Sample C is a subset of participants (cross-sex groups) in the PILS study (Geukes et al., 2016; Leckelt et al., 2015). Sample E was used in Gerlach, Allemand, Agroskin, and Denissen (2012). Samples E and K were used in Back et al. (2013). Sample N was used in Grosz, Dufner, Back, and Denissen (2015), Study 2; the outcome measures presented in the present article were assessed as an exploratory part of the study by Grosz et al. (2015). However, none of the analyses reported here overlap with any of the previously published analyses, as we used different dependent variables and/or only analyzed the cross-sex (instead of sex-unspecified) data. The videos we used in Study 1 were also used in Dufner et al. (2013), Study 3, but with different perceivers and dependent measures. For Samples E to O, all participants were involved in a long-term committed relationship. In Samples E and I, the short version of the Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013; Leckelt et al., 2016) was administered. Sample sizes represent the number of participants that could be recruited in the given time when conducting each study. For Sample O, the original sample consisted of 306 romantic couples. We excluded 12 homosexual couples as well as an additional 22 heterosexual couples of which at least one partner had not correctly answered a control item (“If you read the questions attentively, please select ‘2’ here”). ADM = Admiration; RIV = Rivalry.

in these self-introductions. The obtained videos were cut so that they ended after the participants finished their self-introduction, resulting in video durations that ranged from 18 to 29 s ( $M = 22.81$ ,  $SD = 2.62$ ). Controlling for video duration in our analyses had no effect on any of our results.

The female perceivers watched these videos in a laboratory session. After each video, they rated the male target they had just seen on the following dating-relevant characteristics: physical attractiveness, liking (both answered on a 6-point scale ranging from 1 = *not at all* to 6 = *extremely*), desirability as a partner for women in general (*mate value*, answered on a 10-point scale ranging from 1 = *not at all* to 10 = *extremely*), as well as their personal choice regarding the male target's desirability as someone to have a date with, desirability as a short-term sexual partner for a noncommittal sexual affair or one-night stand, and desirability as a long-term romantic partner for a committed relationship (each answered dichotomously: *desirable for me* vs. *not desirable for me*). Ratings for each characteristic were averaged across perceivers (ICC [2,  $k$ ] values: physical attractiveness, .99; liking, .98; mate value, .99; desirability as a date, .97; desirability as a short-term partner, .97; desirability as a long-term partner, .91). Because of high intercorrelations, these six scales were additionally averaged to form an overall *appealing first impression* score ( $\alpha = .97$ ). All scales were standardized prior to averaging.

Female perceivers also rated the male targets on three additional characteristics that are not directly dating-relevant and therefore are not presented in this article. Results for these additional ratings can be found in the online supplemental materials (Tables S6 and S7).

## Results and Discussion

The results of the correlation and regression analyses are shown in Table 3. As expected for the short-term romantic acquaintance context of this video study, male targets' Admiration was positively related to beneficial perceptions by the female perceivers on most of the rated characteristics: Males higher on Admiration were perceived as more physically attractive. They were liked more and

Table 3  
*Effects of Admiration and Rivalry on Interpersonal Perceptions by the Opposite Sex in Self-Introductory Videos (Study 1)*

Outcome	ADM		RIV	
	<i>r</i>	$\beta$ [95% CI]	<i>r</i>	$\beta$ [95% CI]
Physical attractiveness	<b>.37</b>	<b>.39</b> [.05, .73]	.00	-.09 [-.43, .25]
Liking	<b>.36</b>	<b>.38</b> [.04, .71]	.03	-.06 [-.39, .28]
Mate value	<b>.41</b>	<b>.43</b> [.10, .76]	.04	-.06 [-.40, .27]
Desirability as				
Date	.27	.30 [-.04, .65]	-.07	-.15 [-.49, .20]
Short-term partner	<b>.33</b>	<b>.37</b> [.04, .71]	-.10	-.19 [-.52, .15]
Long-term partner	.17	.18 [-.18, .54]	.00	-.04 [-.40, .32]
Overall score: Appealing first impression	<b>.34</b>	<b>.37</b> [.02, .71]	-.02	-.10 [-.44, .24]

Note.  $n = 36$  for all analyses. Significant results ( $p < .05$ , two-tailed) are presented in boldface. ADM = Admiration; RIV = Rivalry;  $r$  = Pearson's product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on Admiration and Rivalry simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ .

were ascribed a higher mate value and desirability as a short-term partner. All effects were medium in size. Thus, males higher on Admiration left an overall more appealing first impression on the female perceivers. By contrast, no such effect was found for male targets' Rivalry. Rivalry was unrelated to female perceptions on all of the rated dating-relevant characteristics. This confirmed our expectations that Rivalry is less important in short-term romantic contexts. The present findings should be interpreted as preliminary, however, because the power to detect a medium-sized effect in the present study was only 62% because of the small sample size.

All in all, male targets' Admiration explained more unique variance than their Rivalry in all assessed cross-sex perceptions (see Table B1 in Appendix B for the detailed results of the commonality analyses). The present findings thus provide preliminary evidence that positive romantic short-term effects of male narcissism—such as an appealing first impression on female singles in self-introductory videos—might indeed be particularly associated with Admiration and thus with a specific dimension of grandiose narcissism.

## Study 2: Face-to-Face Laboratory Encounters

Study 1 provided first evidence that narcissism's short-term romantic appeal found in prior research might be attributable to Admiration. We conducted Study 2 to broaden the generalizability of these results in three ways. First, we investigated whether the effects found in Study 1 would hold when examining participants of both sexes, and thus assessed the impact of women's Admiration and Rivalry on short-term romantic outcomes as well. Second, we recruited a considerably larger number of participants than in Study 1. Third, we created a more realistic experimental setting by studying the first impressions people form in face-to-face encounters. Face-to-face encounters are the most common way people get to know romantic partners (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012) and thereby allow for a stronger test of our hypotheses than the partner-choice setting with no personal encounter used in Study 1. Thus, in Study 2, we asked previously unacquainted participants to meet in small mixed-sex groups in the laboratory. We obtained opposite-sex romantic interpersonal perceptions (attractiveness, likability) after brief self-introductions by each group member (i.e., at short-term acquaintance). On the basis of the results of Study 1, we again hypothesized that it would be narcissistic Admiration that would account for the appealing first impression on the opposite sex.

## Method

**Participants.** Study 2 consisted of two independent samples (Samples B and C; see Table 2 for a sample overview) that summed to a total of 159 participants. Of these participants, 154 (77 female; age = 18–39 years,  $M = 24.48$ ,  $SD = 3.90$ ) provided data on the measures used in the present study. Participants from both samples were students at the University of Mainz, Germany, who were recruited via student mailing lists. They received partial course credit or monetary compensation for their participation.

**Procedure.** After obtaining participants' demographics and personality measures in an online survey, participants attended a laboratory session. In mixed-sex groups of four to six unac-

acquainted participants (mean group size = 4.53; equal sex ratio in 64.71% of the groups, the remaining groups deviated by one person from an equal sex ratio), they completed several tasks to get acquainted with each other. Participants were asked to rate each other group member on various interpersonal perception items (round-robin design; Kenny, Kashy, & Cook, 2006) at several time points in this getting-acquainted process. The detailed procedure for Sample C was as follows: (a) mutual ratings at zero-acquaintance before speaking a single word to each other, (b) reading standardized short text passages aloud, (c) mutual ratings, (d) a brief self-introduction that included their name and area of study, (e) mutual ratings, (f) a more detailed self-introduction that included their personal interests and leisure time activities, and (g) mutual ratings (see Geukes, Hutteman, Nestler, Kűfner, & Back, 2016). In Sample B, the procedure consisted of only parts (d) to (g) (see Kűfner et al., 2013, Study 2).<sup>5</sup>

**Measures.** As part of the online survey, participants completed the NARQ (mean  $\alpha$  across samples: Admiration, .82; Rivalry, .79). In addition, the following outcome measures were obtained: At each rating time point in the getting-acquainted process, participants rated every other group member on *likability* (“I like this person”) and physical *attractiveness* (“This person is physically attractive”; only Sample C). All items were answered on an 11-point (Sample B) or 6-point scale (Sample C), both scales ranging from *not at all* to *extremely*. Only the cross-sex ratings were included in the analyses. For each participant, ratings were averaged across all cross-sex perceivers and then across all rating time points (mean  $\alpha$ s across samples: likability, .87; attractiveness, .96) to form a participant’s likability and attractiveness scores, respectively. In addition, these scores were standardized and then averaged to form an overall *opposite sex appeal* score (mean  $\alpha$  across samples = .68). Participants also rated each other on a third item that was not directly dating-relevant (trustworthiness). Results for this item can be found in the online supplemental materials (Tables S8 to S10).

## Results and Discussion

The results of the correlation and regression analyses are shown in Table 4.<sup>6</sup> As expected, Admiration was positively related to all interpersonal perception variables, and all effects were medium in size: Individuals higher on Admiration were perceived as more likable and physically attractive by members of the other sex, thus resulting in a higher opposite-sex appeal for participants higher on Admiration. Rivalry, on the other hand, was unrelated to interpersonal perceptions by members of the opposite sex, also confirming our expectations. Again, Admiration explained more unique variance than Rivalry in all assessed interpersonal perception variables (see Table B2 for the detailed results of the commonality analyses). This indicates that positive short-term effects of narcissism such as an appealing first impression on the opposite sex in face-to-face encounters are primarily attributable to Admiration, thus corroborating the results of Study 1.

### Study 3: Online Surveys—Short-Term Context

After finding support for our hypotheses using interpersonal perception measures in Studies 1 and 2, we shifted our focus to a different kind of important dependent measure in Study 3. In this

study, we examined dispositions and characteristics that are relevant for or that indicate short-term mating success. More specifically, we assessed exclusively the success-related dispositions and characteristics that narcissism is usually found to be positively and highly related to, such as self-perceived attractiveness as a mate, desire for casual sex (i.e., sociosexuality), and the tendency to readily and unrestrainedly approach members of the opposite sex (e.g., W. K. Campbell et al., 2006; Gabriel et al., 1994; Jonason et al., 2009). We obtained these data with several large online surveys. Again, we hypothesized that it would predominantly be Admiration that would be related to those dispositions and characteristics that are associated with short-term romantic success.

## Method

**Participants and procedure.** Study 3 consisted of six independent samples (Samples B to G; see Table 2 for a sample overview) that summed to a total of 1,257 participants. Of these participants, 1,239 (867 female; age = 16–66 years,  $M = 26.99$ ,  $SD = 7.64$ ) provided data on the measures used in the present study. All participants were German-speaking Internet users who completed an online survey. They received partial course credit, monetary compensation, or personality feedback for their participation. In Sample C, at least two people who were well-acquainted with each participant (e.g., close friends or family members) also completed an acquaintance-rating version of the self-rating survey (for three participants, no acquaintance ratings could be obtained; all other participants were rated by an average of 2.32 acquaintances,  $SD = 0.91$ , range = 2–9).

**Measures.** In addition to the NARQ (mean  $\alpha$  across samples: Admiration, .80; Rivalry, .77), participants completed the following measures. Not all measures were administered in all samples (see the online supplemental materials, Table S1, for an overview of measures in each sample).

**Attractiveness as a mate.** We assessed participants’ self-perceived attractiveness as a mate in different ways in the different samples: In Samples E and G, participants filled out a three-item version of the mate value scale by Landolt, Lalumière, and Quin-

<sup>5</sup> In both samples, the procedure included further tasks and mutual ratings at later time points in the study. We selected the time points presented in the present article because they best represent the context of short-term acquaintance. At the later time points that are not presented in this article, participants had interacted intensely and had thus gotten to know each other quite well. These later time points, therefore, reflect a context that lies somewhere in between short-term and long-term acquaintance and no longer represents pure short-term acquaintance. For the sake of completeness, we also analyzed the effects of Admiration and Rivalry on the mutual ratings at the later time points. The results indicated that the positive effect of Admiration on being liked diminished and vanished at later time points, whereas the influence of Rivalry on being liked remained nonsignificant at later time points. The effects of Admiration and Rivalry on being perceived as attractive did not change at later time points. The detailed results of these analyses can be obtained from the first author.

<sup>6</sup> The data in Study 2 have a multilevel structure (participants nested in groups). However, there was no significant variance between groups for both outcome measures ( $\text{var. between}_{\text{liking}} = 0.13$ ,  $p = .12$ ;  $\text{var. between}_{\text{attractiveness}} < .01$ ,  $p = .95$ ), and computing multilevel analyses led to similar results and identical conclusions as the multiple regression that ignored the group structure. To achieve comparability of results across studies, we therefore present the results of the regression that ignored the group structure in the present paper. The results of the multilevel analyses can be obtained from the first author.

Table 4  
*Effects of Admiration and Rivalry on Interpersonal Perceptions by the Opposite Sex in Face-to-Face Encounters (Study 2)*

Outcome	n (F)	ADM		RIV	
		<i>r</i>	$\beta$ [95% CI]	<i>r</i>	$\beta$ [95% CI]
Likeability	154 (77)	<b>.31</b>	<b>.31</b> [.16, .47]	.03	-.03 [-.19, .12]
Attractiveness <sup>a</sup>	86 (43)	<b>.32</b>	<b>.35</b> [.14, .56]	-.03	-.12 [-.33, .09]
Overall score: Opposite-sex appeal	154 (77)	<b>.33</b>	<b>.33</b> [.18, .49]	.03	-.03 [-.19, .12]

*Note.* Significant results ( $p < .05$ , two-tailed) are presented in boldface. F = female; ADM = Admiration; RIV = Rivalry;  $r$  = Pearson's product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on Admiration and Rivalry simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ .

<sup>a</sup> Power to detect a medium-sized effect was 94%, given the sample size of the attractiveness measure.

sey (1995), which measures self-perceived appeal as a mate (mean  $\alpha$  across samples = .83; e.g., "Members of the opposite sex are attracted to me"). Items were answered on a 5-point scale (1 = *disagree* to 5 = *agree*). To measure attractiveness as a mate in Samples B, C, and D, we assessed participants' estimation of their own physical attractiveness. To do so, we used the four physical attractiveness items from the German Version of the Self Description Questionnaire (Marsh, 1988; Tanzer, 1991) in Sample D ( $\alpha = .90$ ; e.g., "I am good-looking"; 7-point scales ranging from 1 = *strongly disagree* to 7 = *strongly agree*), the physical attractiveness item of the Self Attributes Questionnaire (SAQ; Pelham & Swann, 1989) in Sample B, and a modified version of the SAQ in which self-perceived attractiveness was measured with three items ("physical attractiveness—face," "physical attractiveness—body," "physical attractiveness—styling";  $\alpha = .79$ ) in Sample C. All items administered to Samples B and C were answered on a 10-point percentile ranking scale. Participants had to indicate whether they perceived themselves as belonging to the upper or lower 50%, 30%, 20%, 10%, or 5% of a normal distribution on the respective item in comparison with same-sex peers.

We opted to combine the physical attractiveness and mate value measures into a single outcome measure (*attractiveness as a mate*) because the two constructs are conceptually closely related, tend to overlap substantially (e.g., Back et al., 2011; Eastwick & Hunt, 2014; Fisher, Cox, Bennett, & Gavric, 2008), and showed almost identical patterns of results in our data. Separate results for each construct can be found in the online supplemental materials (Tables S11 to S13).

**Approach orientation toward the other sex.** To measure participants' tendency to readily and unrestrainedly approach members of the opposite sex, we used three adapted social extraversion items from the Basel Emotional State Scale (Hobi, 1985) in Sample C ( $\alpha = .84$ ). All items were answered on 5-point bipolar scales and asked for typical approach behaviors when in contact with the opposite sex ("uncommunicative—communicative," "distanced—outgoing," "seclusive—sociable"). In Samples F and G, we administered a 12-scenario version of the Rejection Sensitivity Questionnaire (Downey & Feldman, 1996), which measures the readiness to perceive and overreact to rejections in different social situations (and thus *not* to readily and unrestrainedly approach others). To measure *approach orientation toward the other sex* in Samples F and G, we averaged participants' rejection sensitivity scores on three scenarios describing dating-relevant situations

(e.g., rejection sensitivity when asking someone out on a date; mean  $\alpha$  across samples = .71; all items answered on 6-point scales) and reverse-scored the result. Separate results for the social extraversion and the rejection sensitivity measures can be found in the online supplemental materials (Tables S11 to S13).

**Sociosexuality.** To assess participants' disposition toward casual sex, we used the total score of the nine-item Revised Sociosexual Orientation Inventory (SOI-R; Penke & Asendorpf, 2008) in Sample C ( $\alpha = .88$ ; e.g., "I can imagine myself being comfortable and enjoying 'casual' sex with different partners"; all items answered on 9-point scales). To assess sociosexuality in Sample D, participants indicated the number of sexual partners they had had in their lives on a 12-point scale, ranging from *zero* to *more than 20*. Separate results for the two different measures (including the results for the three SOI-R facets) can be found in the Supplemental Online Material (Tables S11 to S13).

**Peer ratings.** In Sample C, acquaintances rated participants' attractiveness-as-a-mate self-concept ( $\alpha = .81$ ), participants' approach orientation toward the other sex ( $\alpha = .92$ ), and participants' sociosexuality ( $\alpha = .78$ ). The peer-rating measures contained the same items as the self-rating measures of Sample C described previously, except for sociosexuality, which was measured with only three items of the SOI-R (one item from each SOI-R facet) in the peer version. All peer ratings (attractiveness-as-a-mate self-concept, approach orientation toward the other sex, sociosexuality) were averaged to form a total score for *peer-rated short-term appeal*.<sup>7</sup> Prior to averaging, each peer-rating measure was standardized. Separate results for each of the three peer ratings can be found in Tables S11 to S13 of the online supplemental materials.

## Results and Discussion

The results of the correlation and regression analyses are shown in Table 5. As expected, Admiration was positively related to all dispositions and characteristics associated with short-term romantic success: People higher on Admiration perceived themselves as

<sup>7</sup> We did not compute coefficient alpha for the total score of peer ratings, as the heterogeneous characteristics rated by the peers did not measure an internally consistent construct. Coefficient alpha would therefore not provide an appropriate indication of reliability (Bollen & Lennox, 1991; Streiner, 2003).

Table 5  
*Effects of Admiration and Rivalry on Dispositions and Characteristics Associated With Short-Term Romantic Success (Study 3)*

Outcome	<i>n</i>	(F)	ADM		RIV	
			<i>r</i>	$\beta$ [95% CI]	<i>r</i>	$\beta$ [95% CI]
Attractiveness as mate	1,025	(727)	<b>.37</b>	<b>.43</b> [.37, .49]	-.07	-.20 [-.25, -.14]
Approach orientation toward other sex	519	(341)	<b>.36</b>	<b>.43</b> [.34, .51]	-.08	-.21 [-.30, -.13]
Sociosexuality	265	(166)	<b>.23</b>	<b>.22</b> [.10, .35]	.08	.02 [-.11, .14]
Peer-rated short-term appeal <sup>a</sup>	88	(43)	<b>.29</b>	<b>.33</b> [.12, .54]	-.09	-.17 [-.38, .04]
Overall score (incl. peer)	1,239	(867)	<b>.40</b>	<b>.46</b> [.40, .51]	-.06	-.20 [-.25, -.15]

*Note.* *n* for peer ratings denotes the number of participants for whom peer ratings were available. The overall score was computed by averaging across all assessed outcome measures, including the peer ratings. Prior to averaging, all outcome measures were standardized across samples. The overall score underwent the same correlation and regression analyses as the single outcome measures. Significant results ( $p < .05$ , two-tailed) are presented in boldface. F = female; ADM = Admiration; RIV = Rivalry; *r* = Pearson's product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on Admiration and Rivalry simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ .

<sup>a</sup> Power to detect a medium-sized effect was 94.9%, given the sample size of the peer-report measure.

more attractive mates (medium effect size), reported a stronger approach orientation toward members of the opposite sex (medium effect size), and revealed a higher disposition toward casual sex (small to medium effect size).

By contrast, and consistent with the findings from Studies 1 and 2, Rivalry was unrelated or less strongly related than Admiration to the short-term mating-relevant measures that we assessed (see Table 5), and the effect sizes did not exceed the small to medium range. The findings based on the peer ratings supported this general pattern: High scores on Admiration were associated with being judged more positively by one's peers on mating-related characteristics overall (medium effect size), whereas Rivalry was unrelated to peer-rated short-term appeal.

All in all, Admiration explained more unique variance than Rivalry in all short-term mating-relevant measures of Study 3, including the peer ratings (see Table B3 for the detailed results of the commonality analyses). This further supports the notion that positive romantic short-term effects of narcissism—such as dispositions and characteristics related to short-term mating success—are indeed primarily driven by Admiration, thus further substantiating the findings of Studies 1 and 2.

#### Study 4: Partner Perception

Whereas Studies 1 to 3 focused on the short-term romantic context, Study 4 took a first look at the long-term romantic outcomes of narcissism and whether they could be attributed—as proposed—to narcissistic Rivalry. As a first test of this hypothesis, we investigated a central component of long-term romantic relationships that crucially influences the quality of a romantic relationship: a person's perception of his or her romantic partner. How people perceive their romantic partners colors the way they interact with each other. Consequently, the less favorably romantic partners perceive each other, the lower is, for example, their relationship satisfaction, their love for each other, and the stability of their relationship (e.g., Busby, Holman, & Niehuis, 2009; Fletcher & Kerr, 2010; Luo & Snider, 2009; P. J. Miller, Niehuis, & Huston, 2006; Murray & Holmes, 1997; Murray, Holmes, & Griffin, 1996). Prior research has shown that higher scores on

narcissism are associated with perceiving one's long-term romantic partner in a less favorable way (W. K. Campbell, Rudich, et al., 2002). We hypothesized that the Rivalry dimension would account for these less favorable partner perceptions. This might be expected as a consequence of the generally derogatory interpersonal tendencies that are associated with Rivalry (Back et al., 2013), tendencies that we assume—as outlined in the Introduction of this article—to be especially harmful in the highly interdependent and communally oriented context of long-term romantic relationships. To investigate this, we administered an online survey that asked participants currently involved in a long-term committed relationship to rate their current romantic partners on several characteristics (e.g., warm/understanding, intelligent).

#### Method

**Participants and procedure.** Participants were 133 students from the University of Mainz, Germany (113 female; age = 18–56 years,  $M = 25.38$ ,  $SD = 7.61$ ) who took part in an online survey on interpersonal perceptions. All participants were currently involved in a committed romantic relationship. They received partial course credit or monetary compensation for participating.

**Measures.** As part of the online survey, participants completed the NARQ. In addition, participants rated their current romantic partner on 10 characteristics (warm/understanding, intelligent, physically attractive, dependable/self-disciplined, likes intellectual stimulation/deep, extraverted/enthused, even-tempered/emotionally stable, helpful, confident, successful). For control purposes, participants also rated a hypothetical average person on the same 10 characteristics. All characteristics were rated on 6-point scales ranging from 1 = *not at all* to 6 = *extremely*. Furthermore, participants stated how much they liked their current romantic partner and a hypothetical average person (on a scale from 1 to 10, with higher numbers indicating greater liking). Finally, participants indicated how long they had known their romantic partner (in months) and how well they knew their romantic partner (on a scale from 1 to 10, with higher numbers indicating a higher degree of acquaintance). Controlling for ac-

quaintance duration or degree of acquaintance had no effect on any results.

**Analyses.** We aggregated the 11 different partner ratings (10 characteristics and liking) to form a general evaluation factor of partner perception. To do so, a principal component analysis was performed on the 11 items (all scaled so that higher scores indicated a more favorable perception of one's partner). The scree plot indicated a one-factor solution (explained variance = 35.91%). Therefore, the factor scores on this factor were used to form a general *Evaluation Factor of Partner Perception*, which was subsequently subjected to the same correlation, regression, and commonality analyses as conducted in the previous studies.<sup>8</sup>

In addition, we ran a second regression for the Evaluation factor controlling for perceptions of the hypothetical average person to determine whether narcissism could incrementally predict perceptions of romantic partners over and above perceptions of others in general. To do so, a second principal components analysis was performed on the 11 ratings of the hypothetical average person, again extracting one factor (explained variance = 40.87%). The factor scores on this factor were used to form a general evaluation factor of other-perception, which was controlled for in the second Evaluation factor regression.

We also performed correlation, regression, and commonality analyses, as well as the analyses controlling for average-person ratings on each of the single 11 partner ratings. The results of these analyses can be found in Tables S14 and S15 of the online supplemental materials.

## Results and Discussion

As expected, participants higher on Rivalry evaluated their romantic partners less favorably than did participants lower on Rivalry (medium effect size),  $r_{RIV} = -.28, p < .01; \beta_{RIV} = -.35, p < .01, 95\% \text{ CI } [-.52, -.18]$ . By contrast, Admiration was slightly positively related to the Evaluation factor (small to medium effect size),  $r_{ADM} = .09, p = .31; \beta_{ADM} = .21, p = .02, 95\% \text{ CI } [.04, .38]$ . However, Rivalry explained more unique variance than Admiration (see Table B4 for the detailed results of the commonality analyses). Thus, the less favorable way of perceiving one's romantic partner, that had been associated with narcissism in prior research, was indeed primarily accounted for by Rivalry.<sup>9</sup>

This pattern of results even held true when controlling for the ratings of the hypothetical average person,  $\beta_{RIV}(\text{contr.}) = -.30, p < .01, 95\% \text{ CI } [-.47, -.12]; \beta_{ADM}(\text{contr.}) = .20, p = .02, 95\% \text{ CI } [.03, .38]$ . This means that narcissism explained incremental variance in perceptions of romantic partners over and above general perceptions of others. Thus, the pattern of results we found seems to reflect not just narcissistic persons' general tendency to view others in a less favorable way (Back et al., 2013; Carlson et al., 2011; Wood, Harms, & Vazire, 2010). Instead, our results hint at a relationship-specific effect that warrants further examination.

Finally, the small positive effect of Admiration on the Evaluation factor indicates that participants higher on Admiration perceived their romantic partner more favorably than did participants lower on Admiration. Although no conclusions can be drawn on the basis of this single finding, it is worth mentioning here because it might suggest a potential small adaptive effect of narcissistic Admiration in long-term romantic relationships.

On the whole, however, the negative effect of Rivalry dominated the results. The clear association between unfavorable partner perceptions and Rivalry thus provides preliminary evidence that (at least some) problematic long-term romantic outcomes of narcissism can be attributed to a specific dimension of narcissism as well—but to a different one than narcissism's short-term romantic appeal.

## Study 5: Partner Perception—Dyadic Data

Study 4 provided first evidence that the less favorable perceptions of one's romantic partner associated with narcissism in prior research might be attributed to Rivalry. We conducted Study 5 to extend these results in two ways. First, we collected interpersonal perception data from both partners in committed romantic couples. This allowed us to examine not only actor effects (i.e., the influence of Admiration and Rivalry on the way one perceives one's romantic partner, as in Study 4) but also partner effects (i.e., the influence of Admiration and Rivalry on the way one is perceived by one's romantic partner; see Figure 2), while simultaneously being able to control for mutual dependencies between partners (Kenny et al., 2006). As a second extension to Study 4, we systematically differentiated between positive characteristics that participants rated their romantic partner on (e.g., cordial, intelligent) and negative characteristics that participants rated their romantic partner on (e.g., arrogant, mean) in order to explore whether the valence of the rated characteristics had any influence. We expected the dimension of Rivalry to account for less favorable perceptions of one's romantic partner (actor effects), as well as for being perceived less favorably by one's romantic partner (partner effects).

## Method

**Participants and procedure.** Participants were 92 heterosexual romantic couples (females' age = 17–50 years,  $M = 24.35, SD = 5.98$ ; males' age = 17–60 years,  $M = 26.38, SD = 7.10$ ) who had been in a long-term committed relationship for at least one year. All participants filled out a survey form as part of a larger laboratory study on romantic relationships conducted at the University of Leipzig, Germany. They received monetary compensation or partial course credit for their participation.

**Measures.** As part of the survey form, participants completed the short version of the NARQ (Back et al., 2013; Leckelt et al., 2016), which assesses Admiration and Rivalry with three items

<sup>8</sup> We used factor scores to compute the overall Evaluation factor rather than averaging across the 11 partner-rating items. We did so in order to obtain an indicator of the evaluative tendency underlying the partner ratings (see Wood, Harms, & Vazire, 2010). Results in all analyses were completely correspondent when computing the overall evaluation score by averaging across the partner ratings.

<sup>9</sup> We also computed perceiver effects on the romantic interpersonal perception measures in the short-term context of Studies 1 and 2 (i.e., the influence of Admiration and Rivalry on perceiving others when seeing them in videos [Study 1], or in face-to-face encounters [Study 2]). However, we found no (perceiver) effects of either dimension of narcissism in this short-term context. In short-term contexts, narcissism thus did not seem to influence romantic evaluations of others. The detailed results can be obtained from the first author.

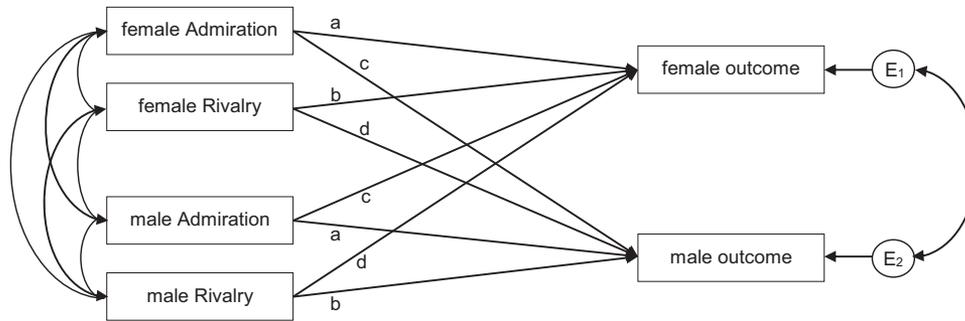


Figure 2. Path diagram of the adapted Actor-Partner Interdependence Model that we computed for each outcome measure in Studies 5 and 7. All male path coefficients were constrained to be equal to the corresponding female path coefficients, which is indicated by identical letters for the corresponding paths. Letters *a* and *b* denote actor effects of Admiration and Rivalry, and letters *c* and *d* denote partner effects of Admiration and Rivalry, respectively.

each. In addition, participants rated their current romantic partner on seven positive characteristics (cordial, intelligent, beautiful, honest, mirthful, likable, popular) as well as on five negative characteristics (arrogant, mean, malicious, ugly, cowardly). All characteristics were rated on 6-point scales ranging from 1 = *not at all* to 6 = *extremely*.

We aggregated the ratings on the seven positive characteristics to form a general positivity factor of partner perception. To do so, a principal component analysis was performed on the seven items (all scaled so that higher scores indicated a more favorable perception of one's partner). The scree plot indicated a one-factor solution (explained variance = 32.86%). Therefore, the factor scores on this factor were used to form a general *Positivity Factor of Partner Perception*. A second principal components analysis was performed on the ratings on the five negative characteristics, again extracting one factor (explained variance = 35.21%). The factor scores on this factor were then used to form a general *Negativity Factor of Partner Perception*, with higher values indicating less favorable (i.e., more negative) partner perceptions.

**Analyses.** Because of the dyadic nature of the data, we ran an adapted Actor-Partner Interdependence Model (APIM; Kenny et al., 2006) for each of the two factors. In these APIMs, each participant's outcome (i.e., his or her perception of his or her partner) was simultaneously predicted by (a) the participant's Admiration and Rivalry scores, and by (b) his or her partner's Admiration and Rivalry scores (see Figure 2). We tested for sex differences by constraining the male paths to be equal to the corresponding female paths (see Figure 2) and compared this model to an unrestricted model in which all paths were estimated freely. Constraining the paths did not worsen the model fit for either of the two factors, indicating no sex differences in the effects. We therefore report the results of the model in which male and female paths were constrained to be equal. We standardized all measures across male and female participants prior to analyses (Kenny et al., 2006; Nestler et al., 2015).<sup>10</sup> We also ran the same APIM analysis on each of the single 12 partner characteristics. The results of these analyses can be found in Table S16 in the online supplemental materials.

## Results and Discussion

The results of the APIM analyses for the two factors are presented in Table 6.<sup>11</sup> As expected, Rivalry was associated with the evaluative tendency of partner perceptions: Rivalry was related to perceiving one's romantic partner less favorably on negative characteristics (but not on positive characteristics), and the effect was small to medium in size. This corroborates the results of Study 4 that individuals high on Rivalry perceive their romantic partner in a less favorable way. Differentiating between positive and negative partner characteristics, the present study also allowed insight into the nature of these less favorable partner perceptions: The present results suggest that Rivalry might primarily influence the way one perceives one's partner on negative characteristics (i.e., arrogant, mean) rather than on positive characteristics (i.e., cordial, intelligent). However, as to our knowledge, the present study is the first to systematically differentiate between positive and negative partner perception characteristics, and as we found an effect using mainly positive partner characteristics in Study 4, no decisive conclusions can be drawn in this regard yet.

Extending Study 4, the dyadic nature of the present data allowed us to also investigate partner effects of Rivalry (see Table 6): Rivalry was associated with being perceived less favorably on positive characteristics (but possibly not on negative characteristics) by one's partner, and again, the effect was small to medium in size. This indicates that Rivalry also influences the way one is perceived by one's romantic partner in a detrimental way. In

<sup>10</sup> We did not compute commonality analyses for the APIMs, as we are not aware of a method that can deal with the different proportions of explained variance in the male versus the female outcome measure that exist in an APIM.

<sup>11</sup> Please note that we report *B*s instead of standardized  $\beta$ s, because—as a consequence of the different variances of the male and the female variables in an APIM—the standardization of the *B*s would have resulted in different values for the male and the female paths, although the respective paths were constrained to be equal (Kenny et al., 2006; Nestler et al., 2015). As we standardized our variables prior to the analyses, however, the reported *B*s were very close to the standardized  $\beta$ s (mean difference across all APIMs in this article (including Study 7): 0.01, *SD* = 0.01, range = 0.00–0.04).

Table 6  
*Actor and Partner Effects (Unstandardized Path Coefficients and 95% Confidence Intervals) of Admiration and Rivalry on Romantic Partner Perception (Study 5)*

Outcome	Actor effects (perceiving one's partner)		Partner effects (being perceived by one's partner)		Model fit	
	ADM (a)	RIV (b)	ADM (c)	RIV (d)	CFI	RMSEA
Positivity factor	.07 [-.10, .23]	-.04 [-.21, .12]	.13 [-.04, .30]	<b>-.24</b> [-.41, -.07]	1.00	.00
Negativity factor	.10 [-.07, .26]	<b>.22</b> [.05, .38]	.00 [-.16, .16]	.16 [-.01, .32]	1.00	.00

*Note.*  $n = 92$  romantic couples for all analyses. The lowercase letters in parentheses indicate the label of the respective Actor–Partner Interdependence Model (APIM) path in Figure 2. The reported values are unstandardized path coefficients (see Footnote 11). Significant results ( $p < .05$ , two-tailed) are presented in boldface. ADM = Admiration; RIV = Rivalry; CFI = comparative fit index; RMSEA = root mean square error of approximation.

contrast to the actor effects, the present results furthermore suggest that when regarding partner effects, Rivalry might mainly influence the way one is perceived on positive characteristics—but again, this specific conclusion must remain preliminary until replicated by future research.

Admiration, by contrast, showed no relation to either the way individuals perceived their romantic partner or the way individuals were perceived by their romantic partner, thus not reproducing the small positive influence of Admiration on partner perceptions found in Study 4.

To sum up, Rivalry but not Admiration was associated with perceiving one's partner less favorably as well as with being perceived less favorably by one's romantic partner. This corroborated and extended the results of Study 4 by using dyadic data. Study 5 thus provided further support for our notion that the less favorable partner perceptions associated with narcissism in long-term committed romantic relationships are particularly attributable to the specific dimension of Rivalry.

### Study 6: Long-Term Romantic Relationship Properties

Studies 4 and 5 produced first evidence that at least some problematic long-term romantic outcomes of narcissism (i.e., less positive partner perceptions) can be attributed to Rivalry. We conducted Study 6 to examine whether Rivalry might also account for the variety of additional negative long-term romantic outcomes that have been associated with narcissism in prior research. To do so, we extended our investigations to the indicators of relationship functioning on which narcissism is typically found to have detrimental effects. These detrimental effects include problematic relationship characteristics, such as low perceived relationship quality and satisfaction, as well as a large number of conflicts and transgressions (e.g., Brunell & Campbell, 2011; W. K. Campbell et al., 2006; Foster, 2008; Horan et al., 2015). Narcissism's detrimental effects also encompass strategies associated with long-term romantic relationship dysfunction, such as low commitment and resentful rather than benevolent or conciliatory reactions to transgressions committed by one's romantic partner (e.g., Foster et al., 2006; Neumann & Bierhoff, 2004; Peterson & DeHart, 2014). We assessed these indicators of relationship functioning with several large online surveys that were administered to participants currently involved in a committed romantic relationship. Again, we hypothesized that it would be the dimension of Rivalry that would

account for narcissism's detrimental effects on these indicators of long-term romantic relationship functioning.

### Method

**Participants and procedure.** Study 6 consisted of seven independent samples (see Table 2 for a sample overview) that summed to a total of 2,139 participants (1,615 female; age = 16–72 years,  $M = 28.49$ ,  $SD = 9.68$ ) who all provided data on the measures used in the present study. The data were obtained via online surveys. All participants were German Internet users who were currently involved in a committed romantic relationship. For their participation, they received partial course credit, monetary compensation, or personality feedback.

**Measures.** In addition to the NARQ (mean  $\alpha$  across samples: Admiration, .82; Rivalry, .77), participants completed the following measures. Not all measures were administered in all samples (see the online supplemental materials, Table S1, for an overview of measures in each sample).

**Perceived relationship properties.** Participants completed the seven items of the Relationship Assessment Scale (RAS; Hendrick, 1988) and a set of 10 additional items measuring central characteristics of their current romantic relationship. All items were answered on 5-point scales. One of these items, *relationship satisfaction* (“In general, how satisfied are you with your relationship?”), was treated as a single-item measure. Across 14 of the remaining items, we computed the following two aggregates on the basis of theoretical considerations<sup>12</sup>: *relationship quality* (seven items; e.g., “How good is your relationship compared with most?”) and *commitment* (seven items; e.g., “How much are you focused on the long-term future of your relationship?”). The remaining two items measuring relationship conflict (“How often do you argue or have conflicting interests?” and “How many problems are there in your relationship?”) were used in the computation of an *occurrence of conflicts/transgressions* measure. To assess the frequency

<sup>12</sup> We refrained from computing the RAS score as proposed by Hendrick (1988) to cover a wider array of relationship characteristics with our aggregates. Because we did not administer all items in all samples, however, it was not possible to aggregate items by factor analysis or to present reliability values for our aggregates. The results for all single items as well as for the RAS score can be found in the online supplemental materials (Tables S17 to S19).

of transgressions for this measure, participants reported the occurrence (*yes vs. no*) of different kinds of transgressions by their romantic partner in the past 4 weeks (24 items; e.g., “My partner took advantage of my trust”; Gerlach & Denissen, 2009). We computed a *transgression occurrence* score by averaging across the 24 items (mean  $\alpha$  across samples = .77) and then aggregated this score with the two conflict items described above to obtain the *occurrence of conflicts/transgressions* score. The three measures were standardized prior to aggregation. Results for the unaggregated measures can be found in the online supplemental materials (Tables S17 to S19).

**Reactions to transgressions.** We measured participants’ tendency to show *conciliatory reactions* after transgressions committed by their romantic partner (mean  $\alpha$  across samples = .68) using three items from the Relationship Forgiveness Scale—Dispositional (Fincham & Beach, 2002) that asked for benevolent feelings after partner transgressions (e.g., “I just accept my partner’s humanness, flaws, and failures”), and five items by Gerlach (2016) that asked for conciliatory behavior after partner transgressions (e.g., “I actively approach him/her to recreate closeness”). Furthermore, we assessed participants’ tendency to show *dysfunctional reactions* to their partners’ transgressions (mean  $\alpha$  across samples = .81) using the remaining three items from the Relationship Forgiveness Scale—Dispositional that asked for resentful feelings after partner transgressions (e.g., “I want to see my partner hurt and miserable”), and seven items by Gerlach that asked for retaliatory and aggressive behaviors after partner transgressions (e.g., “I behave aggressively toward him/her”). All items were answered on 6-point scales. Results presented separately for each assessment instrument can be found in the online supplemental materials (Tables S17 to S19).

## Results and Discussion

The results of the correlation and regression analyses are shown in Table 7. As expected, Rivalry was associated with problematic relationship characteristics as well as with strategies that pose risks to long-term romantic relationship success. Participants higher on

Rivalry were less satisfied with their relationships and perceived their relationships to be of lower quality than participants lower on Rivalry. Furthermore, participants higher on Rivalry reported more conflicts/transgressions and a lower commitment to their relationships. In addition, Rivalry was related to maladaptive reactions to transgressions in participants’ romantic relationships: Higher scores on Rivalry were associated with reacting less conciliatorily as well as more dysfunctionally after transgressions committed by one’s partner. All effects were small in size, with exception of the effect on dysfunctional reactions after transgressions, which was medium in size.

In total, Rivalry explained more unique variance than Admiration in all of the long-term romantic outcomes that we obtained (see Table B5 for the detailed results of the commonality analyses). This indicates that negative long-term effects of narcissism on romantic relationships, such as relationship problems, and strategies that pose risks to relationship success are indeed particularly related to Rivalry. The present results thus further substantiate the findings from Studies 4 and 5.

Interestingly, narcissistic Admiration was associated with positive long-term romantic outcomes again. Although these associations were very small in size, they emerged quite consistently across four of our six outcome measures. Higher Admiration was related to higher perceived relationship satisfaction and relationship quality, as well as to reporting fewer conflicts/transgressions in one’s relationship and to showing more conciliatory reactions after a partner’s transgression. It should be noted that all of these positive long-term romantic outcomes associated with Admiration encompass either positive thinking about one’s relationship (e.g., high relationship satisfaction and perceived relationship quality) or positive coping behaviors (e.g., conciliatory reactions after transgressions by one’s partner). These results are in line with findings by Foster and Campbell (2005) that individuals high on narcissism (compared with individuals low on narcissism) sometimes engage less in negative thoughts about their romantic relationships and therefore might sometimes be buffered from negative relation-

Table 7  
*Effects of Admiration and Rivalry on Indicators of Long-Term Romantic Relationship Functioning (Study 6)*

Outcome	n (F)	ADM		RIV	
		r	$\beta$ [95% CI]	r	$\beta$ [95% CI]
Relationship satisfaction	2,001 (1,545)	<b>.08</b>	<b>.12</b> [.07, .17]	<b>-.08</b>	<b>-.12</b> [-.17, -.07]
Relationship quality	1,382 (1,056)	<b>.06</b>	<b>.10</b> [.05, .16]	<b>-.09</b>	<b>-.12</b> [-.17, -.06]
Commitment	1,286 (970)	.00	.03 [-.03, .08]	<b>-.07</b>	<b>-.08</b> [-.14, -.02]
Conflicts/transgressions	2,002 (1,546)	-.02	<b>-.06</b> [-.10, -.01]	<b>.11</b>	<b>.13</b> [.08, .18]
Reactions to transgressions					
Conciliatory	1,506 (1,114)	<b>.07</b>	<b>.11</b> [.06, .17]	<b>-.09</b>	<b>-.13</b> [-.18, -.08]
Dysfunctional	1,506 (1,114)	<b>.11</b>	.00 [-.05, .05]	<b>.32</b>	<b>.32</b> [.27, .37]
Overall score: Long-term problems	2,139 (1,615)	<b>-.05</b>	<b>-.11</b> [-.15, -.06]	<b>.15</b>	<b>.19</b> [.14, .23]

*Note.* The overall score was computed by averaging across all assessed outcome measures. Prior to averaging, all outcome measures were standardized across samples, and relationship satisfaction, relationship quality, commitment, and conciliatory reactions were reverse scored. The overall score underwent the same correlation and regression analyses as the single outcome measures. Significant results ( $p < .05$  two-tailed) are presented in boldface. F = female; ADM = Admiration; RIV = Rivalry;  $r$  = Pearson’s product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on Admiration and Rivalry simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ .

ship outcomes. Together, these findings might again indicate a potential small beneficial influence of Admiration in long-term romantic relationships.

All in all, however, the negative effects of Rivalry dominated our results. Study 6 thus yielded corroborating evidence that the kind of long-term romantic problems that have been associated with narcissism in past research can primarily be attributed to the specific dimension of narcissistic Rivalry.

### Study 7: Long-Term Romantic Relationship Properties—Dyadic Data

To extend the results of the previous study beyond actor effects, we conducted Study 7. In this study, we collected data from both members of committed romantic couples, which again allowed us to examine partner effects (i.e., the influence of one's partner's Admiration and Rivalry on relationship functioning) in addition to actor effects (i.e., the influence of one's own Admiration and Rivalry on relationship functioning). Both partners of long-term committed romantic couples filled out an online survey and provided information about indicators of their relationship functioning. The indicators assessed in the present study were selected to match the relationship characteristics and strategies assessed in Study 6. Again, we hypothesized that it would predominantly be Rivalry that would be related to deficiencies in long-term romantic relationship functioning—both in actor effects (i.e., impact of one's own Rivalry) as well as in partner effects (i.e., impact of one's partner's Rivalry).

### Method

**Participants and procedure.** Study 7 consisted of two independent samples (Samples N and O; see Table 2 for a sample overview) that summed to a total of 367 committed heterosexual romantic couples (females' age = 16–66 years,  $M = 23.74$ ,  $SD = 6.21$ ; males' age = 17–65 years,  $M = 25.82$ ,  $SD = 6.96$ ). The data from both samples were obtained via online surveys administered by German universities. The online survey in Sample O used the free survey framework *formr* ([www.formr.org](http://www.formr.org); Arslan & Tata, 2016). Participants were recruited via e-mail distribution lists, online social networks, snowball sampling, and lectures. Participants and their partners filled out the survey independently of each other (in Sample O, participants were even explicitly instructed not to talk to their romantic partners about their answers in the survey until both partners had completed the survey). In both samples, participants received partial course credit or personality feedback for their participation, and, in Sample O, participants could additionally take part in a lottery for a tablet PC or alternatively an event voucher (worth 300 €, i.e., about 330\$).

**Measures.** In addition to the NARQ (mean  $\alpha$  across samples: Admiration, .82; Rivalry, .81), participants completed the following measures. Not all measures were administered in both samples, and we used slightly different assessment instruments to assess the same outcome measures in the two samples. Results separated by assessment instrument as well as single-item results can be found in the online supplemental materials (Table S20).

**Relationship satisfaction.** In Sample N, we assessed participants' satisfaction with their romantic relationship with three items ("In total, how satisfied are you with your romantic relationship?";

"How emotionally satisfied are you in your romantic relationship?"; "How sexually satisfied are you in your romantic relationship?";  $\alpha = .83$ ). All items were answered on 6-point scales ranging from 1 = *very dissatisfied* to 6 = *very satisfied*. In Sample O, we used the relationship satisfaction item from the RAS ("In general, how satisfied are you with your relationship?"; Hendrick, 1988; see Study 6), which was answered on a 7-point scale ranging from 1 = *not satisfied at all* to 7 = *very satisfied*.

**Relationship quality.** To measure relationship quality in Sample N, participants completed five items by Denissen and Penke (2008) that asked about different aspects of relationship quality ( $\alpha = .81$ ; e.g., "How close do you feel to your partner?"). All items were answered on 6-point scales. To measure relationship quality in Sample O, participants answered a four-item version of the relationship quality scale used in Study 6 ( $\alpha = .64$ ; e.g., "How much do you love your partner?").

**Commitment.** In Sample O, we administered a four-item version of the commitment scale used in Study 6 ( $\alpha = .63$ ; e.g., "How much are you focused on the long-term future of your relationship?").

**Faithfulness.** In Sample N, we assessed participants' faithfulness to their romantic partner with two items ("How hard is it for you to remain emotionally faithful to your romantic partner?" and "How hard is it for you to remain sexually faithful to your romantic partner?";  $\alpha = .68$ ). Both items were answered on 6-point scales ranging from 1 = *very hard* to 6 = *not hard at all*.

**Conflicts/transgressions.** To measure conflicts/transgressions in Sample N, participants were given a list of 10 conflict-prone topics (e.g., "financial resources," "long-term life plans and life shaping") and were asked to indicate the number of conflicts, disharmonies, or arguments during the past 30 days that they had had with their romantic partner on each of the 10 topics ( $\alpha = .74$ ; see Burk, Denissen, Van Doorn, Branje, & Laursen, 2009, for another study using this measure). In Sample O, we assessed conflicts/transgressions with the same aggregated score as in Study 6 ( $\alpha = .78$ ), which was composed of the two items measuring relationship conflict and the transgression occurrence score from the items of Gerlach and Denissen (2009). However, the transgression occurrence score in the present sample ( $\alpha = .73$ ) was measured with a 14-item version of the transgression scale used in Study 6.

**Reactions to transgressions—partner reports.** In Sample O, we asked participants to indicate how their partner typically reacts to transgressions committed by the participant. We measured the partner's tendency to show *conciliatory reactions* with two items by Gerlach (2016;  $\alpha = .67$ ; "My partner signals me quickly that she/he forgives me" and "My partner does something especially nice or conciliatory so that we can make up with each other quickly"). Furthermore, we assessed the partner's tendency to show *dysfunctional reactions* to the participant's transgression, again using two items by Gerlach ( $\alpha = .53$ ; "My partner does something to get back at me" and "My partner yells at me, insults me, or behaves aggressively toward me"). All items were answered on 6-point scales ranging from 1 = *do not agree at all* to 6 = *agree completely*. In addition to these partner reports, we also assessed self-reported reactions to partner transgressions. Details and results for these self-report measures can be found in the online supplemental materials (Table S20).

Table 8

Actor and Partner Effects (Unstandardized Path Coefficients and 95% Confidence Intervals) of Admiration and Rivalry on Indicators of Long-Term Romantic Relationship Functioning—Dyadic Data (Study 7)

Outcome	n	Actor effects (influence of one's own narcissism)		Partner effects (influence of partner's narcissism)		Model fit	
		ADM (a)	RIV (b)	ADM (c)	RIV (d)	CFI	RMSEA
Relationship satisfaction	367	.06 [−.01, .14]	<b>−.09</b> [−.17, −.02]	.01 [−.07, .08]	<b>−.09</b> [−.16, −.01]	.97	.04
Relationship quality	367	<b>.10</b> [.03, .18]	<b>−.16</b> [−.24, −.09]	.04 [−.04, .11]	<b>−.12</b> [−.19, −.04]	1.00	.01
Commitment <sup>a</sup>	272	.04 [−.05, .12]	<b>−.11</b> [−.20, −.03]	.01 [−.08, .10]	<b>−.12</b> [−.21, −.03]	.86	.07
Faithfulness	95	<b>−.16</b> [−.28, −.03]	<b>−.17</b> [−.30, −.04]	.00 [−.13, .13]	−.09 [−.22, .04]	1.00	.00
Conflicts/transgressions	367	−.04 [−.12, .03]	<b>.20</b> [.13, .27]	−.06 [−.13, .01]	<b>.16</b> [.09, .23]	1.00	.00
Partner's reactions to transgressions							
Conciliatory	272	<b>.09</b> [.00, .18]	−.05 [−.14, .05]	.03 [−.06, .12]	−.08 [−.18, .01]	1.00	.00
Dysfunctional	272	−.07 [−.16, .02]	<b>.10</b> [.01, .19]	−.06 [−.14, .03]	<b>.16</b> [.07, .25]	1.00	.00
Overall Score: Long-term problems	367	<b>−.07</b> [−.15, −.00]	<b>.18</b> [.11, .25]	−.04 [−.11, .03]	<b>.17</b> [.09, .24]	1.00	.00

Note. *n* denotes the number of romantic couples for each analysis. The lowercase letters in parentheses indicate the label of the corresponding Actor–Partner Interdependence Model (APIM) path in Figure 2. The reported values are unstandardized path coefficients (see Footnote 11). The overall score was computed by averaging across all assessed outcome measures. Prior to averaging, all outcome measures were standardized across samples, and relationship satisfaction, relationship quality, commitment, faithfulness, and conciliatory reactions were reverse scored. The overall score underwent the same APIM analysis as the single outcome measures. Significant results ( $p < .05$ , two-tailed) are presented in boldface. ADM = Admiration; RIV = Rivalry; CFI = comparative fit index; RMSEA = root mean square error of approximation.

<sup>a</sup> Unconstraining the two partner effect paths of Rivalry (i.e., the paths labeled “d” in Figure 2) resulted in a significantly better model fit (CFI = 1.00, RMSEA = .00), indicating sex differences in the Rivalry partner effect: The higher a woman was on Rivalry, the lower her partner's commitment,  $B_{RIV,partner,female} = -.25, p < .01, 95\% \text{ CI } [-.38, -.13]$ , whereas no such influence was present for the men's Rivalry on the women's commitment,  $B_{RIV,partner,male} = -.02, p = .75, 95\% \text{ CI } [-.13, .09]$  (remaining path coefficients of the model:  $B_{ADM,actor} = .03, p = .43, 95\% \text{ CI } [-.05, .12]$ ;  $B_{ADM,partner} = .02, p = .68, 95\% \text{ CI } [-.07, .11]$ ;  $B_{RIV,actor} = -.11, p = .02, 95\% \text{ CI } [-.20, -.02]$ ). However, this was the only moderating effect of sex that emerged across all analyses conducted in the present article, and prior research usually did not find sex differences in the impact of narcissism on romantic relationships (W. K. Campbell et al., 2006). We therefore refrained from interpreting this effect.

**Analyses.** Because of the dyadic nature of the data, we computed APIM analyses. The method of analysis was exactly the same as in Study 5 (see Figure 2). Constraining the paths of the male and the female partner to be equal, however, resulted in an unsatisfactory model fit for one outcome measure (i.e., *commitment*). For the *commitment* variable, we therefore also report the results of the model that did allow for sex differences (see Table 8).

## Results and Discussion

Results of the APIM analyses are presented in Table 8. As hypothesized, Rivalry was related to deficiencies in long-term romantic relationship functioning. Regarding actor effects, higher scores on Rivalry were associated with being less satisfied with one's relationship, perceiving one's relationship to be of lower quality, being less faithful and less committed to one's partner, reporting more conflicts/transgressions in one's relationship, and perceiving one's partner as reacting more dysfunctionally after transgressions, all effects being small or small to medium in size. Only one of our outcome measures, the conciliatory reactions to transgressions that one perceived in one's partner, was not influenced by a person's Rivalry score. The present results thus further backup the findings from Study 6.

An almost identical pattern of results emerged for the partner effects. Higher Rivalry scores of one's romantic partner were associated with being less satisfied in one's relationship, perceiving one's relationship to be of lower quality, being less committed to one's partner, and reporting more conflicts/transgressions in one's relationship—all effects being again small or small to medium in size. Furthermore, partners higher on Ri-

valry reacted more dysfunctionally after transgressions according to their partners' reports (small to medium effect size). Thus, the detrimental effects of Rivalry on behavior after transgressions emerged not only in self-reports (see Study 6) but also in partner reports. Only two of our outcome measures were not influenced by the partner's Rivalry score (i.e., a person's faithfulness and a person's report of her/his partner's conciliatory reactions to transgressions).

Taken together, the present findings indicate that not only one's own Rivalry but also one's partner's Rivalry influence perceived relationship functioning. What is more, across both actor and partner effects, Rivalry showed larger (absolute) path coefficients than Admiration on 13 out of 14 paths. This indicates that negative long-term effects of narcissism on romantic relationship functioning are primarily attributable to Rivalry, thus further corroborating the results of Study 6.

Admiration, by contrast, showed only three associations with long-term romantic outcomes. Participants higher on Admiration reported less faithfulness to their romantic partners (small to medium effect size), but perceived their relationship to be of higher quality (small effect size) and perceived their partner to react more conciliatorily after transgressions (small effect size) than participants lower on Admiration. Thus, although the present findings for Admiration were not as consistent as the findings in Study 6, they nonetheless again hint at a (small) positive impact of Admiration on long-term romantic relationship outcomes. Interestingly, this positive impact of Admiration emerged only in the actor effects (i.e., positive influence of one's own Admiration on perceptions of one's relationship and one's partner's behaviors) but not in the partner effects (i.e., no influence of one's partner's

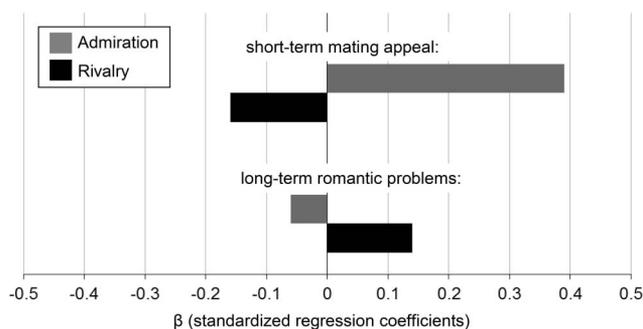
Admiration on one's own relationship perceptions). This may indicate that a possible positive impact of Admiration might indeed reflect positive thinking about one's relationship rather than an actually better relationship.

To sum up, the negative effects of Rivalry dominated our results. This corroborated and extended the results of Study 6 by using dyadic data as well as partner reports. Study 7 thus yielded further fortifying evidence that narcissism's long-term romantic problems that have been identified in past research can primarily be attributed to the specific dimension of narcissistic Rivalry.

### General Discussion

Prior research on narcissism and romantic relationships has revealed a rich variety of romantic outcomes associated with grandiose narcissism, including various indicators of both short-term romantic appeal and long-term romantic problems. In this article, we proposed that these diverging romantic impacts of narcissism might be the consequence of two distinct narcissism dimensions that dominate differentially in different relationship stages: Admiration and Rivalry (Back et al., 2013). We hypothesized that narcissism's short-term romantic appeal would be driven by the Admiration dimension, whereas narcissism's long-term romantic problems would be driven by the Rivalry dimension. Results across seven studies (total  $N = 3,560$ ) using different methodological approaches (i.e., online surveys, video ratings, face-to-face laboratory encounters, dyadic assessments of both partners in committed long-term romantic relationships) and diverse measures (i.e., cross-sex interpersonal perceptions at zero-acquaintance and in committed relationships; self-, peer, and partner reports of dispositions, strategies, and characteristics relevant for or indicating short-term mating success as well as long-term romantic problems) corroborated our hypotheses.

We demonstrated that the high mate appeal associated with narcissism in short-term romantic contexts (e.g., dating, sexual affairs, or early stage romantic relationships) is predominantly linked to the agentic Admiration dimension, which encompasses narcissism's charming, self-assured, and entertaining qualities (Back et al., 2013). The association between Admiration and short-term romantic appeal was present in self-reported characteristics and dispositions relevant to mating success (e.g., high self-perceived attractiveness as a mate, high approach orientation toward the other sex; Study 3). Providing further evidence for the cross-methodological robustness of this pattern, the association between Admiration and short-term mating success also emerged in peer ratings of a person's short-term appeal (Study 3) and in cross-sex first impressions (after viewing short self-introductory videos, Study 1; as well as after face-to-face encounters, Study 2). In total, all but two effects of Admiration on short-term romantic outcomes in Studies 1 to 3 were significant, and with one exception, the effects were all medium in size. Most important, Admiration explained more unique variance than Rivalry in each short-term romantic outcome measure of Studies 1 to 3. Thus, taken together, our hypothesis that the short-term romantic appeal associated with narcissism would be primarily attributable to the dimension of Admiration was supported by a methodologically diverse set of studies. The meta-analyzed overall effect of Admiration across all short-term romantic outcomes assessed in our studies is depicted in Figure 3.



*Figure 3.* Meta-analyzed cross-study effects of Admiration and Rivalry on short-term mating appeal and long-term romantic problems, using fixed effects inverse variance weighing (Lipsey & Wilson, 2001). Cross-study short-term appeal was computed by meta-analyzing across the standardized regression coefficients of all outcome measures assessed in Studies 1 to 3 (short-term context). Cross-study long-term problems was computed by meta-analyzing across the standardized regression coefficients of all outcome measures assessed in Studies 4 to 7 (long-term context). To include the results of the Actor–Partner Interdependence Model analyses from Studies 5 and 7, all path coefficients were standardized and then averaged across sex before they were entered into the meta-analysis (see also Footnote 11). When necessary, outcome measures were reverse-scored prior to meta-analyzing. Overall scores were not included in the computation to ensure independence of data points within studies. We could not compute significance tests of the meta-analyzed effects, as some of our data were not independent across studies (see Table 2).

In addition, we showed that problems associated with narcissism in long-term romantic contexts (e.g., committed relationships) are linked to a different dimension of narcissism: the antagonistic Rivalry dimension, that is, narcissism's derogating, exploitative, and insensitive characteristics (Back et al., 2013). Rivalry was the driving force behind strategies that pose risks to romantic relationship success (e.g., dysfunctional coping after transgressions; Studies 6 and 7), behind problematic characteristics in existing long-term romantic relationships (e.g., low perceived relationship quality of both partners, high occurrence of conflicts/transgressions; Studies 6 and 7), as well as behind less favorable perceptions of one's romantic partner (Studies 4 and 5) and less favorable impressions on one's romantic partner (Study 5).

In total, 20 of possible 25 effects of Rivalry on the long-term romantic outcomes of Studies 4 to 7 were significant. What is more, Rivalry explained more unique variance than Admiration across all long-term romantic outcomes in Studies 4 and 6. In Studies 5 and 7, in which we could not compute the proportion of explained variance (see Footnote 10), 16 of 18 path coefficients were (in absolute values) larger for Rivalry than for Admiration. Thus, our hypothesis that narcissism's long-term romantic problems would primarily be attributable to the dimension of Rivalry was supported by a diverse set of different long-term romantic outcomes and across different methodological approaches, including both self- and partner reports as well as dyadic assessments of both partners in committed long-term romantic relationships. It should be noted, however, that—with two exceptions—all effects of Rivalry were small or small to medium in size. The meta-analyzed overall effect of Rivalry across all long-term romantic outcomes assessed in our studies is depicted in Figure 3.

Figure 3 also indicates that in our set of studies, Rivalry was not only associated with problems in the long-term romantic context, but showed a negative overall effect of similar size on short-term romantic success as well. Although this effect was by far smaller than the clearly dominating positive effect of Admiration in the short-term romantic context, it might indicate that Rivalry may already have a small negative impact on short-term romantic appeal. Such a possible negative short-term effect of Rivalry might not have become significant in most of our short-term romantic outcomes of Studies 1 to 3, as sample sizes in these studies were not huge enough to have the power to reliably detect small effects. Future research is needed to corroborate and examine this potential negative short-term effect of Rivalry more thoroughly.

### Implications for the Understanding of Grandiose Narcissism

The present article is the first to show that the seemingly contradictory romantic effects of narcissism in different relationship stages (i.e., short-term appeal vs. long-term problems) might be explained by the diverging effects of different dimensions of narcissism. These dimensions seem to dominate differentially in different relationship stages and are associated with divergent interpersonal strategies and behaviors. Differentiating between these dimensions thus allows for a more sophisticated explanation of the complex heterogeneous romantic consequences of narcissism. The present results hence call for a two-dimensional approach when examining grandiose narcissism rather than treating it as a one-dimensional construct as most prior theoretical conceptualizations have done.

To illustrate this point, recall W. K. Campbell's (2005) chocolate cake model, which compares engaging in a romantic relationship with a narcissist to eating a chocolate cake. This model suggests that the short-term delight and the long-term regret associated with engaging in a romantic relationship with a partner high on narcissism can be explained by the same mechanism (i.e., the highly caloric nature of the chocolate cake). According to our results, however, this does not seem to be the case. Rather, the short-term romantic successes and long-term romantic problems associated with narcissism seem to be explained by two different psychological ingredients (i.e., two different dimensions of grandiose narcissism). An alternative way to metaphorically picture narcissism's influence on romantic relationships might therefore be to compare these relationships with smoking a cigarette: a short-term rush of pleasure attributable to one ingredient (i.e., nicotine) and long-term costs associated with a different ingredient (i.e., the health-damaging tar). Moreover, just as tar does not have to be combined with nicotine to have negative long-term health consequences, and nicotine does not have to be combined with tar to provide a short-term rush, high values on Rivalry do not have to be combined with high values on Admiration to lead to long-term relationship problems, and high values on Admiration do not have to be combined with high values on Rivalry to lead to short-term mating success. In fact, in the same way that nicotine and tar do not *have* to be combined when smoking (e.g., in e-cigarettes) but often *are* combined (as regular cigarettes contain both), high values on Admiration and high values on Rivalry do not *have* to be combined within the same individual but nonetheless often *are*.

This two-dimensional perspective suggested by our findings might help to advance and refine theoretical conceptualizations of grandiose narcissism. For example, W. K. Campbell and Campbell's (2009) contextual reinforcement model explains successes and problems associated with narcissism in (romantic and nonromantic) close relationships as a function of relationship stage (i.e., initial success vs. long-term problems). Our results indicate that the reason for this relationship-stage effect might lie in the existence of two different dimensions of narcissism that dominate differentially in the two relationship phases: narcissistic Admiration in the initiating phase, and narcissistic Rivalry in the later more committed phase. Hence, integrating these two dimensions of grandiose narcissism into this and other existing theoretical models of grandiose narcissism might lead to a more profound understanding of the processes associated with the development of close relationships.

The distinction between narcissistic Admiration and Rivalry might even be useful for explaining adaptive aspects of narcissism in long-term romantic relationships (e.g., Finkel, Campbell, Bufardi, Kumashiro, & Rusbult, 2009; Foster & Campbell, 2005). Although our findings were not fully consistent across studies and need to be replicated before any decisive conclusions can be drawn, they nonetheless might hint at a possible positive influence of Admiration on long-term romantic outcomes that encompass positive thinking about one's relationship (e.g., higher perceived relationship quality; Studies 6 and 7). It might therefore be possible that high degrees of narcissistic Admiration may act as a protective factor in long-term romantic relationships, although the effect was small in our studies. Future research should investigate this possibility more comprehensively.

To sum up, the present findings as well as their theoretical implications underline the utility of a two-dimensional reconceptualization of narcissism. Such a reconceptualization might be a useful tool for understanding and explaining narcissism's complex role in the development and maintenance of close relationships. What is more, these implications might not be restricted to only the personality trait of narcissism. Similar patterns might apply to other "dark traits," such as Machiavellianism and psychopathy as well. These traits were also found to have both adaptive and maladaptive interpersonal consequences depending on the context (Furnham et al., 2013; Glenn, Kurzban, & Raine, 2011; Penke, Denissen, & Miller, 2007): Individuals high on Machiavellianism, for example, manipulate and deceive others to achieve their personal goals. Because of this manipulating and deceiving, Machiavellianism can be related to job success (e.g., by extracting desired outcomes from clients or coworkers) or mating success (e.g., by lying about one's romantic interest)—at least in the short run (Brewer & Abell, 2015a; Furnham et al., 2013; Jonason et al., 2009; O'Boyle, Forsyth, Banks, & McDaniel, 2012; Zettler & Solga, 2013). In the long run, however, Machiavellianism is associated with problems in romantic relationships and with coworkers (Brewer & Abell, 2015b; Dussault, Hojjat, & Boone, 2013; O'Boyle et al., 2012; Zettler & Solga, 2013). A similar pattern has been found for psychopathy. Although individuals high on psychopathy are known for the negative consequences they subject others to (e.g., crime, violence, aggression, and other antisocial behaviors; Baughman, Dearing, Giammarco, & Vernon, 2012; Furnham et al., 2013; Hare & Neumann, 2009), there are contexts in which psychopathy is linked to interpersonal successes in the

short run (e.g., obtaining mates; Glenn et al., 2011; Jonason et al., 2009). It is possible that the explanation for these diverging social outcomes of Machiavellianism and psychopathy in short-term versus long-term acquaintance contexts is similar to the one we have proposed for narcissism. Perhaps in all these dark traits, different facets have to be distinguished in order to comprehensively account for the diverging interpersonal outcomes (for an example of what this might look like for the trait of psychopathy, see Benning, Patrick, Hicks, Blonigen, & Krueger, 2003; Patrick, Edens, Poythress, Lilienfeld, & Benning, 2006).

### Implications for the Understanding of Romantic Relationship Development

The results of our set of studies showed that distinct characteristics of narcissism play a role in the initial versus the later stages of romantic relationships. These findings suggest that the romantic partner characteristics that are important for romantic success may change across the phases of a romantic relationship: While initiating a romantic relationship, more agentic characteristics seem to play a crucial role (e.g., assertiveness, charmingness, entertaining qualities). Once the relationship becomes more settled, however, more communal character traits seem to increase in importance for romantic success (e.g., low selfishness, a propensity to forgive, sensitivity, supporting and caring qualities), because a lack of them (i.e., in individuals high on Rivalry) provokes serious romantic problems in the long run. The results of the present studies also indicate that there might be partner characteristics that are important for initiating romantic relationships *and* for the long-term success of romantic relationships (i.e., particular aspects of Admiration that seem to have an impact in both relationship stages).

Such a potential change in the importance of partner characteristics during the course of a romantic relationship poses interesting questions about relationship development and partner choice: Besides the narcissistic dimensions investigated in the present article, are there other partner characteristics that change in importance over the course of a romantic relationship? And if so, what are the partner characteristics that become increasingly important over the course of a romantic relationship, and which characteristics decrease in importance? Such knowledge might be of high practical relevance. For example, individuals who initially choose their romantic partners primarily on the basis of partner characteristics that become important in the long run (e.g., warmth, caring, and support) might develop more successful (i.e., longer lasting and more satisfying) romantic relationships.

### Limitations and Future Directions

There are limitations to the work presented in this article. Although we used a variety of different methodological approaches in the present article, it would be desirable in future studies to also obtain objective measures of long-term romantic outcomes such as counts of dysfunctional or derogatory behaviors in couples' videotaped problem discussions. We would expect these objective long-term measures to show the same pattern of results as found in the present article.

Furthermore, we encourage future researchers to pick up on our findings and further refine the knowledge about the narcissistic lover. For example, it would be interesting to examine whether the

findings of the present article could be replicated in clinical samples. In doing so, it might also be interesting to more directly compare the two-dimensional NARC approach (which describes grandiose narcissism) with approaches that also include vulnerable narcissism (e.g., Lamkin et al., 2015; J. D. Miller et al., 2011; Pincus & Roche, 2011), and to dimensional approaches of personality disorders that conceptualize personality disorders as specific combinations of dimensionally more extreme versions of the traits of normal personality (e.g., American Psychiatric Association, 2013; Glover, Miller, Lynam, Crego, & Widiger, 2012; J. D. Miller, 2012; J. D. Miller, Gentile, Wilson, & Campbell, 2013; Trull & Widiger, 2013; Widiger, Livesley, & Clark, 2009; Widiger, Lynam, Miller, & Oltmanns, 2012). This would allow for a more comprehensive understanding of the relation between different theoretical approaches to narcissism. It would also allow insights into whether more extreme, clinically relevant values of Admiration and/or of Rivalry show the same pattern of relations with romantic outcome variables as the present article demonstrated in the general population.

Considering the general, nonclinical population, it would also be interesting for future research to investigate narcissism's short-term appeal in contexts that allow for a highly fine-grained analysis of the processes that make narcissistic persons romantically appealing. This might include speed-dating contexts, online dating studies, or smartphone-based experience sampling procedures in narcissists' everyday lives.

Future research should also assess longitudinal data on the influence of the two narcissistic dimensions in the development and maintenance of romantic relationships, as this will allow a series of further crucial questions to be answered (see also Lavner et al., 2016): What happens at the transition from short-term (i.e., dating or early stage relationships) to the committed long-term romantic context? How do the impacts of Admiration and Rivalry change over the course of a developing romantic relationship? Do the positive effects of Admiration wear out over time, or do the negative effects of Rivalry increase over time, or both? What triggers these changes and when exactly do the negative effects of Rivalry start to dominate? Are there individuals high on either dimension of narcissism who are able to remain in satisfactory romantic relationships, and what distinguishes these relationships from other less successful long-term relationships involving a person high on narcissism? The processes between initial attraction and long-term commitment in romantic relationships are generally rarely studied, and hence little is known about them (L. Campbell & Stanton, 2014). Investigating these processes might therefore not only help to advance knowledge about narcissism's impact on romantic relationships but also contribute to answering unresolved questions in romantic relationship research (e.g., whether there are changes in the importance of other partner characteristics over the course of a romantic relationship). Thus, it seems to be a particularly promising avenue for future research to longitudinally track romantic relationships as they develop, and to examine these dynamic changes, their underlying processes, and their consequences in more detail.

### Conclusion

The present article offers an explanation for the seemingly contradictory impacts of grandiose narcissism on romantic rela-

tionships at short-term versus long-term acquaintance. We provided evidence that the diverging romantic correlates of narcissism can be explained by distinct effects of two dimensions of narcissism (i.e., Admiration and Rivalry), which dominate differentially in different relationship stages. Future research might take up this two-dimensional reconceptualization of narcissism to more comprehensively investigate and understand the processes involved in narcissists' romantic relationships.

## References

- Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment, 18*, 67–87. <http://dx.doi.org/10.1177/1073191110382845>
- Adams, H. M., Luevano, V. X., & Jonason, P. K. (2014). Risky business: Willingness to be caught in an extra-pair relationship, relationship experience, and the Dark Triad. *Personality and Individual Differences, 66*, 204–207. <http://dx.doi.org/10.1016/j.paid.2014.01.008>
- Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart & Winston.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: Author.
- Arslan, R. C., & Tata, C. S. (2016). formr.org survey software. <http://dx.doi.org/10.5281/zenodo.32986>
- Asendorpf, J. B., Penke, L., & Back, M. D. (2011). From dating to mating and relating: Predictors of initial and long-term outcomes of speed-dating in a community sample. *European Journal of Personality, 25*, 16–30. <http://dx.doi.org/10.1002/per.768>
- Back, M. D., Kufner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology, 105*, 1013–1037. <http://dx.doi.org/10.1037/a0034431>
- Back, M. D., Penke, L., Schmukle, S. C., Sachse, K., Borkenau, P., & Asendorpf, J. B. (2011). Why mate choices are not as reciprocal as we assume: The role of personality, flirting and physical attractiveness. *European Journal of Personality, 25*, 120–132. <http://dx.doi.org/10.1002/per.806>
- Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism-popularity link at zero acquaintance. *Journal of Personality and Social Psychology, 98*, 132–145. <http://dx.doi.org/10.1037/a0016338>
- Baughman, H. M., Dearing, S., Giammarco, E., & Vernon, P. A. (2012). Relationships between bullying behaviours and the dark triad: A study with adults. *Personality and Individual Differences, 52*, 571–575. <http://dx.doi.org/10.1016/j.paid.2011.11.020>
- Baumeister, R. F., & Vohs, K. D. (2001). Narcissism as addiction to esteem. *Psychological Inquiry, 12*, 206–210.
- Benning, S. D., Patrick, C. J., Hicks, B. M., Blonigen, D. M., & Krueger, R. F. (2003). Factor structure of the psychopathic personality inventory: Validity and implications for clinical assessment. *Psychological Assessment, 15*, 340–350.
- Bollen, K., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin, 110*, 305–314. <http://dx.doi.org/10.1037/0033-2909.110.2.305>
- Brewer, G., & Abell, L. (2015a). Machiavellianism and sexual behavior: Motivations, deception and infidelity. *Personality and Individual Differences, 74*, 186–191. <http://dx.doi.org/10.1016/j.paid.2014.10.028>
- Brewer, G., & Abell, L. (2015b). Machiavellianism in long-term relationships: Competition, mate retention and sexual coercion. *Scandinavian Journal of Psychology, 56*, 357–362. <http://dx.doi.org/10.1111/sjop.12200>
- Brewer, G., Hunt, D., James, G., & Abell, L. (2015). Dark triad traits, infidelity and romantic revenge. *Personality and Individual Differences, 83*, 122–127. <http://dx.doi.org/10.1016/j.paid.2015.04.007>
- Brunell, A. B., & Campbell, W. K. (2011). Narcissism and romantic relationships: Understanding the paradox. In W. K. Campbell & J. D. Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 344–350). Hoboken, NJ: Wiley <http://dx.doi.org/10.1002/9781118093108.ch30>
- Burk, W. J., Denissen, J., Van Doorn, M. D., Branje, S. J. T., & Laursen, B. (2009). The vicissitudes of conflict measurement: Stability and reliability in the frequency of disagreements. *European Psychologist, 14*, 153–159. <http://dx.doi.org/10.1027/1016-9040.14.2.153>
- Busby, D. M., Holman, T. B., & Niehuis, S. (2009). The association between partner enhancement and self-enhancement and relationship quality outcomes. *Journal of Marriage and Family, 71*, 449–464. <http://dx.doi.org/10.1111/j.1741-3737.2009.00612.x>
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*, 219–229. <http://dx.doi.org/10.1037/0022-3514.75.1.219>
- Buss, D. M., & Shackelford, T. K. (1997). Susceptibility to infidelity in the first year of marriage. *Journal of Research in Personality, 31*, 193–221. <http://dx.doi.org/10.1006/jrpe.1997.2175>
- Campbell, L., & Stanton, S. E. (2014). The predictive validity of ideal partner preferences in relationship formation: What we know, what we don't know, and why it matters. *Social and Personality Psychology Compass, 8*, 485–494. <http://dx.doi.org/10.1111/spc3.12126>
- Campbell, W. K. (1999). Narcissism and romantic attraction. *Journal of Personality and Social Psychology, 77*, 1254–1270. <http://dx.doi.org/10.1037/0022-3514.77.6.1254>
- Campbell, W. K. (2005). *When you love a man who loves himself: How to deal with a one-way relationship*. Chicago, IL: Sourcebooks Casablanca.
- Campbell, W. K., Bonacci, A. M., Shelton, J., Exline, J. J., & Bushman, B. J. (2004). Psychological entitlement: Interpersonal consequences and validation of a self-report measure. *Journal of Personality Assessment, 83*, 29–45. [http://dx.doi.org/10.1207/s15327752jpa8301\\_04](http://dx.doi.org/10.1207/s15327752jpa8301_04)
- Campbell, W. K., Brunell, A. B., & Finkel, E. J. (2006). Narcissism, interpersonal self-regulation, and romantic relationships: An agency model approach. In K. D. Vohs & E. J. Finkel (Eds.), *Self and relationships: Connecting intrapersonal and interpersonal processes* (pp. 57–83). New York, NY: Guilford Press.
- Campbell, W. K., Bush, C. P., Brunell, A. B., & Shelton, J. (2005). Understanding the social costs of narcissism: The case of the tragedy of the commons. *Personality and Social Psychology Bulletin, 31*, 1358–1368. <http://dx.doi.org/10.1177/0146167205274855>
- Campbell, W. K., & Campbell, S. M. (2009). On the self-regulatory dynamics created by the particular benefits and costs of narcissism: A contextual reinforcement model and examination of leadership. *Self and Identity, 8*, 214–232. <http://dx.doi.org/10.1080/15298860802505129>
- Campbell, W. K., & Foster, C. A. (2002). Narcissism and commitment in romantic relationships: An investment model analysis. *Personality and Social Psychology Bulletin, 28*, 484–495. <http://dx.doi.org/10.1177/0146167202287006>
- Campbell, W. K., Foster, C. A., & Finkel, E. J. (2002). Does self-love lead to love for others? A story of narcissistic game playing. *Journal of Personality and Social Psychology, 83*, 340–354. <http://dx.doi.org/10.1037/0022-3514.83.2.340>
- Campbell, W. K., & Miller, J. D. (2011). *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments*. Hoboken, NJ: Wiley <http://dx.doi.org/10.1002/9781118093108>
- Campbell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of*

- Research in Personality*, 34, 329–347. <http://dx.doi.org/10.1006/jrpe.2000.2282>
- Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin*, 28, 358–368. <http://dx.doi.org/10.1177/0146167202286007>
- Carlson, E. N., Vazire, S., & Oltmanns, T. F. (2011). You probably think this paper's about you: Narcissists' perceptions of their personality and reputation. *Journal of Personality and Social Psychology*, 101, 185–201. <http://dx.doi.org/10.1037/a0023781>
- Carroll, L. (1987). A study of narcissism, affiliation, intimacy, and power motives among students in business administration. *Psychological Reports*, 61, 355–358. <http://dx.doi.org/10.2466/pr0.1987.61.2.355>
- Clark, M. S., Lemay, E. P., Jr., Graham, S. M., Pataki, S. P., & Finkel, E. J. (2010). Ways of giving benefits in marriage: Norm use, relationship satisfaction, and attachment-related variability. *Psychological Science*, 21, 944–951. <http://dx.doi.org/10.1177/0956797610373882>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155–159. <http://dx.doi.org/10.1037/0033-2909.112.1.155>
- Cramer, P. (2011). Narcissism through the ages: What happens when narcissists grow older? *Journal of Research in Personality*, 45, 479–492. <http://dx.doi.org/10.1016/j.jrp.2011.06.003>
- Czarna, A. Z., Dufner, M., & Clifton, A. D. (2014). The effects of vulnerable and grandiose narcissism on liking-based and disliking-based centrality in social networks. *Journal of Research in Personality*, 50, 42–45. <http://dx.doi.org/10.1016/j.jrp.2014.02.004>
- Denissen, J. J. A., & Penke, L. (2008). Neuroticism predicts reactions to cues of social inclusion. *European Journal of Personality*, 22, 497–517. <http://dx.doi.org/10.1002/per.682>
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70, 1327–1343. <http://dx.doi.org/10.1037/0022-3514.70.6.1327>
- Dufner, M., Denissen, J. J. A., van Zalk, M., Matthes, B., Meeus, W. H., van Aken, M. A., & Sedikides, C. (2012). Positive intelligence illusions: On the relation between intellectual self-enhancement and psychological adjustment. *Journal of Personality*, 80, 537–572. <http://dx.doi.org/10.1111/j.1467-6494.2011.00742.x>
- Dufner, M., Rauthmann, J. F., Czarna, A. Z., & Denissen, J. J. A. (2013). Are narcissists sexy? Zeroing in on the effect of narcissism on short-term mate appeal. *Personality and Social Psychology Bulletin*, 39, 870–882. <http://dx.doi.org/10.1177/0146167213483580>
- Dussault, M., Hojjat, M., & Boone, R. T. (2013). Machiavellianism and dating: Deception and intimacy. *Social Behavior and Personality*, 41, 283–294. <http://dx.doi.org/10.2224/sbp.2013.41.2.283>
- Eastwick, P. W., & Hunt, L. L. (2014). Relational mate value: Consensus and uniqueness in romantic evaluations. *Journal of Personality and Social Psychology*, 106, 728–751. <http://dx.doi.org/10.1037/a0035884>
- Exline, J. J., Baumeister, R. F., Bushman, B. J., Campbell, W. K., & Finkel, E. J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology*, 87, 894–912. <http://dx.doi.org/10.1037/0022-3514.87.6.894>
- 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. <http://dx.doi.org/10.3758/BRM.41.4.1149>
- Fincham, F. D., & Beach, S. R. H. (2002). Forgiveness in marriage: Implications for psychological aggression and constructive communication. *Personal Relationships*, 9, 239–251. <http://dx.doi.org/10.1111/1475-6811.00016>
- Finkel, E. J., Campbell, W. K., Buffardi, L. E., Kumashiro, M., & Rusbult, C. E. (2009). The metamorphosis of Narcissus: Communal activation promotes relationship commitment among narcissists. *Personality and Social Psychology Bulletin*, 35, 1271–1284. <http://dx.doi.org/10.1177/0146167209340904>
- Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online dating: A critical analysis from the perspective of psychological science. *Psychological Science in the Public Interest*, 13, 3–66. <http://dx.doi.org/10.1177/1529100612436522>
- Finkel, E. J., Norton, M. I., Reis, H. T., Ariely, D., Capriariello, P. A., Eastwick, P. W., . . . Maniaci, M. R. (2015). When does familiarity promote versus undermine interpersonal attraction? A proposed integrative model from erstwhile adversaries. *Perspectives on Psychological Science*, 10, 3–19. <http://dx.doi.org/10.1177/1745691614561682>
- Fisher, M., Cox, A., Bennett, S., & Gavric, D. (2008). Components of self-perceived mate value. *Journal of Social, Evolutionary, and Cultural Psychology*, 2, 156–168. <http://dx.doi.org/10.1037/h0099347>
- Fletcher, G. J., & Kerr, P. S. (2010). Through the eyes of love: Reality and illusion in intimate relationships. *Psychological Bulletin*, 136, 627–658. <http://dx.doi.org/10.1037/a0019792>
- Foster, J. D. (2008). Incorporating personality into the investment model: Probing commitment processes across individual differences in narcissism. *Journal of Social and Personal Relationships*, 25, 211–223. <http://dx.doi.org/10.1177/0265407507087956>
- Foster, J. D., & Campbell, W. K. (2005). Narcissism and resistance to doubts about romantic partners. *Journal of Research in Personality*, 39, 550–557. <http://dx.doi.org/10.1016/j.jrp.2004.11.001>
- Foster, J. D., Shriram, I., & Campbell, W. K. (2006). Theoretical models of narcissism, sexuality, and relationship commitment. *Journal of Social and Personal Relationships*, 23, 367–386. <http://dx.doi.org/10.1177/0265407506064204>
- Friedman, J. W., Oltmanns, T. F., Gleason, M. J., & Turkheimer, E. (2006). Mixed impressions: Reactions of strangers to people with pathological personality traits. *Journal of Research in Personality*, 40, 395–410. <http://dx.doi.org/10.1016/j.jrp.2005.01.005>
- Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The dark triad of personality: A 10 year review. *Social and Personality Psychology Compass*, 7, 199–216. <http://dx.doi.org/10.1111/spc3.12018>
- Gabriel, M. T., Critelli, J. W., & Ee, J. S. (1994). Narcissistic illusions in self-evaluations of intelligence and attractiveness. *Journal of Personality*, 62, 143–155. <http://dx.doi.org/10.1111/j.1467-6494.1994.tb00798.x>
- Gangestad, S. W., Garver-Apgar, C. E., Simpson, J. A., & Cousins, A. J. (2007). Changes in women's mate preferences across the ovulatory cycle. *Journal of Personality and Social Psychology*, 92, 151–163. <http://dx.doi.org/10.1037/0022-3514.92.1.151>
- Gerlach, T. M. (2016). *Negotiating forgiveness in close relationships*. Manuscript in preparation.
- Gerlach, T. M., Allemand, M., Agroskin, D., & Denissen, J. J. A. (2012). Justice sensitivity and forgiveness in close interpersonal relationships: The mediating role of mistrustful, legitimizing, and pro-relationship cognitions. *Journal of Personality*, 80, 1373–1413. <http://dx.doi.org/10.1111/j.1467-6494.2012.00762.x>
- Gerlach, T. M., & Denissen, J. J. A. (2009, October). *Not the same for everyone: Narcissism and the perception of partner transgressions in couple relationships*. Poster presented at the LIFE Fall Academy, Ann Arbor, MI.
- Gerlitz, J.-Y., & Schupp, J. (2005). *Zur Erhebung der Big-Five-basierten Persönlichkeitsmerkmale im SOEP. Dokumentation der Instrumentenentwicklung BFI-S auf Basis des SOEP-Pretests 2005* [About the assessment of the Big Five personality traits in the SOEP: Documenting the development of the BFI-S based on the SOEP pretest in 2005]. Retrieved from [http://www.diw.de/documents/publikationen/73/diw\\_01.c.43490.de/rm4.pdf](http://www.diw.de/documents/publikationen/73/diw_01.c.43490.de/rm4.pdf)
- Geukes, K., Hutteman, R., Nestler, S., Küfner, A. C. P., & Back, M. D. (2016). *Explaining the longitudinal interplay of personality and social relationships in the laboratory and in the field: The PILS and CON-NECT study*. Manuscript in preparation.

- Glenn, A. L., Kurzban, R., & Raine, A. (2011). Evolutionary theory and psychopathy. *Aggression and Violent Behavior, 16*, 371–380. <http://dx.doi.org/10.1016/j.avb.2011.03.009>
- Glover, N., Miller, J. D., Lynam, D. R., Crego, C., & Widiger, T. A. (2012). The Five-Factor Narcissism Inventory: A five-factor measure of narcissistic personality traits. *Journal of Personality Assessment, 94*, 500–512. <http://dx.doi.org/10.1080/00223891.2012.670680>
- Grijalva, E., Newman, D. A., Tay, L., Donnellan, M. B., Harms, P. D., Robins, R. W., & Yan, T. (2015). Gender differences in narcissism: A meta-analytic review. *Psychological Bulletin, 141*, 261–310. <http://dx.doi.org/10.1037/a0038231>
- Grosz, M. P., Dufner, M., Back, M. D., & Denissen, J. J. A. (2015). Who is open to a narcissistic romantic partner: The roles of sensation seeking, trait anxiety, and similarity. *Journal of Research in Personality, 58*, 84–95. <http://dx.doi.org/10.1016/j.jrp.2015.05.007>
- Hare, R. D., & Neumann, C. S. (2009). Psychopathy: Assessment and forensic implications. *Canadian Journal of Psychiatry, 54*, 791–802.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family, 50*, 93–98. <http://dx.doi.org/10.2307/352430>
- Hobi, V. (1985). *Basler Befindlichkeits-Skala. Ein Self-Rating zur Verlaufsmessung der Befindlichkeit* [Basel Emotional State Scale: A self-rating instrument to assess emotional state trajectories]. Weinheim, Germany: Beltz.
- Holtzman, N. S., & Strube, M. J. (2010). Narcissism and attractiveness. *Journal of Research in Personality, 44*, 133–136. <http://dx.doi.org/10.1016/j.jrp.2009.10.004>
- Holtzman, N. S., & Strube, M. J. (2011). The intertwined evolution of narcissism and short-term mating: An emerging hypothesis. In W. K. Campbell & J. D. Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 210–220). Hoboken, NJ: Wiley <http://dx.doi.org/10.1002/9781118093108.ch19>
- Horan, S. M., Guinn, T. D., & Banghart, S. (2015). Understanding relationships among the dark triad personality profile and romantic partners' conflict communication. *Communication Quarterly, 63*, 156–170. <http://dx.doi.org/10.1080/01463373.2015.1012220>
- Houser, M. L., Horan, S. M., & Furler, L. A. (2007). Predicting relational outcomes: An investigation of thin slice judgments in speed dating. *Human Communication, 10*, 69–81.
- Huston, T. L., & Vangelisti, A. L. (1991). Socioemotional behavior and satisfaction in marital relationships: A longitudinal study. *Journal of Personality and Social Psychology, 61*, 721–733. <http://dx.doi.org/10.1037/0022-3514.61.5.721>
- Jauk, E., Neubauer, A. C., Mairunteregger, T., Pemp, S., Sieber, K. P., & Rauthmann, J. F. (in press). How alluring are dark personalities? The dark triad and attractiveness in speed dating. *European Journal of Personality, 30*, 125–138. <http://dx.doi.org/10.1002/per.2040>
- Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The dark triad: Facilitating a short-term mating strategy in men. *European Journal of Personality, 23*, 5–18. <http://dx.doi.org/10.1002/per.698>
- Kardum, I., Hudek-Knezevic, J., Schmitt, D. P., & Grundler, P. (2015). Personality and mate poaching experiences. *Personality and Individual Differences, 75*, 7–12. <http://dx.doi.org/10.1016/j.paid.2014.10.048> (Corrigendum published 2015, *Personality and Individual Differences, 78*, p. 103. <http://dx.doi.org/10.1016/j.paid.2015.01.039>)
- Keller, P. S., Blincoe, S., Gilbert, L. R., DeWall, C. N., Haak, E. A., & Widiger, T. (2014). Narcissism in romantic relationships: A dyadic perspective. *Journal of Social and Clinical Psychology, 33*, 25–50. <http://dx.doi.org/10.1521/jscp.2014.33.1.25>
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York, NY: Guilford Press.
- Kernis, M. H., & Sun, C. (1994). Narcissism and reactions to interpersonal feedback. *Journal of Research in Personality, 28*, 4–13. <http://dx.doi.org/10.1006/jrpe.1994.1002>
- Knapp, M. L. (1985). Stages of coming together and coming apart. In *Interpersonal communication and human relationships* (4th ed., pp. 27–58). Boston, MA: Allyn & Bacon.
- Koladich, S. J., & Atkinson, B. E. (2016). The dark triad and relationship preferences: A replication and extension. *Personality and Individual Differences, 94*, 253–255. <http://dx.doi.org/10.1016/j.paid.2016.01.023>
- Küfner, A. C. P., Nestler, S., & Back, M. D. (2013). The two pathways to being an (un-)popular narcissist. *Journal of Personality, 81*, 184–195. <http://dx.doi.org/10.1111/j.1467-6494.2012.00795.x>
- Lamkin, J., Campbell, W. K., vanDellen, M. R., & Miller, J. D. (2015). An exploration of the correlates of grandiose and vulnerable narcissism in romantic relationships: Homophily, partner characteristics, and dyadic adjustment. *Personality and Individual Differences, 79*, 166–171. <http://dx.doi.org/10.1016/j.paid.2015.01.029>
- Landolt, M. A., Lalumière, M. L., & Quinsey, V. L. (1995). Sex differences in intra-sex variations in human mating tactics: An evolutionary approach. *Ethology & Sociobiology, 16*, 3–23. [http://dx.doi.org/10.1016/0162-3095\(94\)00012-V](http://dx.doi.org/10.1016/0162-3095(94)00012-V)
- Lange, J., Crusius, J., & Hagemeyer, B. (in press). The evil queen's dilemma: Linking narcissistic admiration and rivalry to benign and malicious envy. *European Journal of Personality, 30*, 168–188. <http://dx.doi.org/10.1002/per.2047>
- Lavner, J. A., Lamkin, J., Miller, J. D., Campbell, W. K., & Karney, B. R. (2016). Narcissism and newlywed marriage: Partner characteristics and marital trajectories. *Personality Disorders: Theory, Research, and Treatment, 7*, 169–179. <http://dx.doi.org/10.1037/per0000137>
- Leckelt, M., Küfner, A. C. P., Nestler, S., & Back, M. D. (2015). Behavioral processes underlying the decline of narcissists' popularity over time. *Journal of Personality and Social Psychology, 109*, 856–871. <http://dx.doi.org/10.1037/pspp0000057>
- Leckelt, M., Wetzel, E., Gerlach, T., Ackerman, R., Miller, J. D., Chopik, W. J., . . . Back, M. D. (2016). *Validation of the Narcissistic Admiration and Rivalry Questionnaire short scale (NARQ-S) in convenience and representative samples*. Manuscript in preparation.
- Levinger, G., & Snoek, J. D. (1972). *Attraction in relationship: A new look at interpersonal attraction*. Morristown, NJ: General Learning.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.
- Luo, S., & Snider, A. G. (2009). Accuracy and biases in newlyweds' perceptions of each other: Not mutually exclusive but mutually beneficial. *Psychological Science, 20*, 1332–1339. <http://dx.doi.org/10.1111/j.1467-9280.2009.02449.x>
- Marsh, H. (1988). *Self Description Questionnaire: A theoretical and empirical basis for the measurement of multiple dimensions of preadolescent self-concept: A test manual and a research monograph*. San Antonio, TX: The Psychological Corporation.
- McCullough, M. E., Emmons, R. A., Kilpatrick, S. D., & Mooney, C. N. (2003). Narcissists as "victims": The role of narcissism in the perception of transgressions. *Personality and Social Psychology Bulletin, 29*, 885–893. <http://dx.doi.org/10.1177/0146167203029007007>
- Miller, J. D. (2012). Five-factor model personality disorder prototypes: A review of their development, validity, and comparison to alternative approaches. *Journal of Personality, 80*, 1565–1591. <http://dx.doi.org/10.1111/j.1467-6494.2012.00773.x>
- Miller, J. D., & Campbell, W. K. (2010). The case for using research on trait narcissism as a building block for understanding narcissistic personality disorder. *Personality Disorders: Theory, Research, and Treatment, 1*, 180–191. <http://dx.doi.org/10.1037/a0018229>
- Miller, J. D., Gentile, B., Wilson, L., & Campbell, W. K. (2013). Grandiose and vulnerable narcissism and the *DSM-5* pathological personality trait

- model. *Journal of Personality Assessment*, 95, 284–290. <http://dx.doi.org/10.1080/00223891.2012.685907>
- Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Keith Campbell, W. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality*, 79, 1013–1042. <http://dx.doi.org/10.1111/j.1467-6494.2010.00711.x>
- Miller, J. D., & Maples, J. (2011). Trait personality models of narcissistic personality disorder, grandiose narcissism, and vulnerable narcissism. In W. K. Campbell & J. D. Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 71–88). Hoboken, NJ: Wiley <http://dx.doi.org/10.1002/9781118093108.ch7>
- Miller, P. J., Niehuis, S., & Huston, T. L. (2006). Positive illusions in marital relationships: A 13-year longitudinal study. *Personality and Social Psychology Bulletin*, 32, 1579–1594. <http://dx.doi.org/10.1177/0146167206292691>
- Morf, C. C., & Rhodewalt, F. (1993). Narcissism and self-evaluation maintenance: Explorations in object relations. *Personality and Social Psychology Bulletin*, 19, 668–676. <http://dx.doi.org/10.1177/0146167293196001>
- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, 12, 177–196. [http://dx.doi.org/10.1207/S15327965PLI1204\\_1](http://dx.doi.org/10.1207/S15327965PLI1204_1)
- Murray, S. L., & Holmes, J. G. (1997). A leap of faith? Positive illusions in romantic relationships. *Personality and Social Psychology Bulletin*, 23, 586–604. <http://dx.doi.org/10.1177/0146167297236003>
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of Personality and Social Psychology*, 71, 1155–1180. <http://dx.doi.org/10.1037/0022-3514.71.6.1155>
- Nestler, S., Grimm, K. J., & Schönbrodt, F. D. (2015). The social consequences and mechanisms of personality: How to analyse longitudinal data from individual, dyadic, round-robin and network designs. *European Journal of Personality*, 29, 272–295. <http://dx.doi.org/10.1002/per.1997>
- Neumann, E., & Bierhoff, H. W. (2004). Ichbezogenheit versus Liebe in Paarbeziehungen: Narzissmus im Zusammenhang mit Bindung und Liebesstilen [Egotism versus love in romantic relationships: Narcissism related to attachment and love styles]. *Zeitschrift für Sozialpsychologie*, 35, 33–44. <http://dx.doi.org/10.1024/0044-3514.35.1.33>
- Nimon, K., Lewis, M., Kane, R., & Haynes, R. M. (2008). An R package to compute commonality coefficients in the multiple regression case: An introduction to the package and a practical example. *Behavior Research Methods*, 40, 457–466. <http://dx.doi.org/10.3758/BRM.40.2.457>
- O’Boyle, E. H., Forsyth, D. R., Banks, G. C., & McDaniel, M. A. (2012). A meta-analysis of the dark triad and work behavior: A social exchange perspective. *Journal of Applied Psychology*, 97, 557–579. <http://dx.doi.org/10.1037/a0025679>
- Oltmanns, T. F., Friedman, J. W., Fiedler, E. R., & Turkheimer, E. (2004). Perceptions of people with personality disorders based on thin slices of behavior. *Journal of Research in Personality*, 38, 216–229. [http://dx.doi.org/10.1016/S0092-6566\(03\)00066-7](http://dx.doi.org/10.1016/S0092-6566(03)00066-7)
- Patrick, C. J., Edens, J. F., Poythress, N. G., Lilienfeld, S. O., & Benning, S. D. (2006). Construct validity of the Psychopathic Personality Inventory two-factor model with offenders. *Psychological Assessment*, 18, 204–208. <http://dx.doi.org/10.1037/1040-3590.18.2.204>
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 74, 1197–1208. <http://dx.doi.org/10.1037/0022-3514.74.5.1197>
- Pelham, B. W., & Swann, W. B., Jr. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*, 57, 672–680. <http://dx.doi.org/10.1037/0022-3514.57.4.672>
- Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology*, 95, 1113–1135. <http://dx.doi.org/10.1037/0022-3514.95.5.1113>
- Penke, L., Denissen, J. J. A., & Miller, G. F. (2007). The evolutionary genetics of personality. *European Journal of Personality*, 21, 549–587. <http://dx.doi.org/10.1002/per.629>
- Peterson, J. L., & DeHart, T. (2014). In defense of self-love: An observational study on narcissists’ negative behavior during romantic relationship conflict. *Self and Identity*, 13, 477–490. <http://dx.doi.org/10.1080/15298868.2013.868368>
- Pincus, A. L., & Roche, M. J. (2011). Narcissistic grandiosity and narcissistic vulnerability. In W. K. Campbell & J. D. Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 31–40). Hoboken, NJ: Wiley.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54, 890–902. <http://dx.doi.org/10.1037/0022-3514.54.5.890>
- Raskin, R. N., & Hall, C. S. (1979). A Narcissistic Personality Inventory. *Psychological Reports*, 45, 590. <http://dx.doi.org/10.2466/pr0.1979.45.2.590>
- Rasmussen, K. R., & Boon, S. D. (2014). Romantic revenge and the dark triad: A model of impellance and inhibition. *Personality and Individual Differences*, 56, 51–56. <http://dx.doi.org/10.1016/j.paid.2013.08.018>
- Reese-Weber, M. (2015). Intimacy, communication, and aggressive behaviors: Variations by phases of romantic relationship development. *Personal Relationships*, 22, 204–215. <http://dx.doi.org/10.1111/pere.12074>
- Reise, S. P., & Wright, T. M. (1996). Personality traits, Cluster B personality disorders, and sociosexuality. *Journal of Research in Personality*, 30, 128–136. <http://dx.doi.org/10.1006/jrpe.1996.0009>
- Rhodewalt, F., & Eddings, S. K. (2002). Narcissus reflects: Memory distortion in response to ego-relevant feedback among high- and low-narcissistic men. *Journal of Research in Personality*, 36, 97–116. <http://dx.doi.org/10.1006/jrpe.2002.2342>
- Rhodewalt, F., & Morf, C. C. (1998). On self-aggrandizement and anger: A temporal analysis of narcissism and affective reactions to success and failure. *Journal of Personality and Social Psychology*, 74, 672–685. <http://dx.doi.org/10.1037/0022-3514.74.3.672>
- Rogoza, R., Wyszynska, P., Maćkiewicz, M., & Ciecuch, J. (2016). Differentiation of the two narcissistic faces in their relations to personality traits and basic values. *Personality and Individual Differences*, 95, 85–88. <http://dx.doi.org/10.1016/j.paid.2016.02.038>
- Schmitt, D. P., Alcalay, L., Allik, J., Angleitner, A., Ault, L., Austers, I., . . . International Sexuality Description Project. (2004). Patterns and universals of mate poaching across 53 nations: The effects of sex, culture, and personality on romantically attracting another person’s partner. *Journal of Personality and Social Psychology*, 86, 560–584. <http://dx.doi.org/10.1037/0022-3514.86.4.560>
- Schmitt, D. P., & Buss, D. M. (2001). Human mate poaching: Tactics and temptations for infiltrating existing mateships. *Journal of Personality and Social Psychology*, 80, 894–917. <http://dx.doi.org/10.1037/0022-3514.80.6.894>
- Schütz, A., Marcus, B., & Sellin, I. (2004). Die Messung von Narzissmus als Persönlichkeitskonstrukt: Psychometrische Eigenschaften einer Lang- und einer Kurzform des Deutschen NPI (Narcissistic Personality Inventory) [Measuring narcissism as a personality construct: Psychometric properties of a long and a short version of the German Narcissistic Personality Inventory]. *Diagnostica*, 50, 202–218.
- Smalley, R. L., & Stake, J. E. (1996). Evaluating sources of ego-threatening feedback: Self-esteem and narcissism effects. *Journal of Research in Personality*, 30, 483–495. <http://dx.doi.org/10.1006/jrpe.1996.0035>

- Streiner, D. L. (2003). Being inconsistent about consistency: When coefficient alpha does and doesn't matter. *Journal of Personality Assessment, 80*, 217–222. [http://dx.doi.org/10.1207/S15327752JPA8003\\_01](http://dx.doi.org/10.1207/S15327752JPA8003_01)
- Tanzer, N. K. (1991). *Eine deutsche Form des Self-Description-Questionnaire I (SDQ I) von Marsh* [A German version of the Self-Description-Questionnaire I (SDQ I) by Marsh] [Unpublished test]. Department of Psychology, Karl-Franzens University, Graz, Austria.
- Trull, T. J., & Widiger, T. A. (2013). Dimensional models of personality: The five-factor model and the DSM-5. *Dialogues in Clinical Neuroscience, 15*, 135–146.
- Twenge, J. M., & Campbell, W. K. (2003). "Isn't it fun to get the respect that we're going to deserve?" Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin, 29*, 261–272. <http://dx.doi.org/10.1177/0146167202239051>
- Vazire, S., Naumann, L. P., Rentfrow, P. J., & Gosling, S. D. (2008). Portrait of a narcissist: Manifestations of narcissism in physical appearance. *Journal of Research in Personality, 42*, 1439–1447. <http://dx.doi.org/10.1016/j.jrp.2008.06.007>
- Widiger, T. A., Livesley, W. J., & Clark, L. A. (2009). An integrative dimensional classification of personality disorder. *Psychological Assessment, 21*, 243–255. <http://dx.doi.org/10.1037/a0016606>
- Widiger, T. A., Lynam, D. R., Miller, J. D., & Oltmanns, T. F. (2012). Measures to assess maladaptive variants of the five-factor model. *Journal of Personality Assessment, 94*, 450–455. <http://dx.doi.org/10.1080/00223891.2012.677887>
- Wood, D., Harms, P., & Vazire, S. (2010). Perceiver effects as projective tests: What your perceptions of others say about you. *Journal of Personality and Social Psychology, 99*, 174–190. <http://dx.doi.org/10.1037/a0019390>
- Wood, J. T. (1982). Communication and relational culture: Bases for the study of human relationships. *Communication Quarterly, 30*, 75–84. <http://dx.doi.org/10.1080/01463378209369432>
- Zettler, I., & Solga, M. (2013). Not enough of a "dark" trait? Linking Machiavellianism to job performance. *European Journal of Personality, 27*, 545–554. <http://dx.doi.org/10.1002/per.1912>

## Appendix A

### Results When Using the NPI (L/A and E/E Facet)

Table A1

*Descriptive Statistics and Internal Consistencies for L/A and E/E Facet of the Narcissistic Personality Inventory (NPI) in Each Sample*

Sample	Study	L/A				E/E			
		<i>M</i>	<i>SD</i>	Range	$\alpha$	<i>M</i>	<i>SD</i>	Range	$\alpha$
A	1	—							
B	2, 3	3.63	2.48	0–10	.71	1.31	1.08	0–4	.37
C	2, 3	4.04	2.59	0–9	.73	1.30	1.14	0–4	.45
D	3	4.39	2.73	0–11	.77	1.43	1.17	0–4	.45
E	3, 6	3.84	2.56	0–11	.74	1.23	1.13	0–4	.46
F	3, 6	—							
G	3, 6	4.22	2.40	0–11	.69	1.14	1.04	0–4	.40
H	4	—							
I	5	—							
J	6	3.76	2.49	0–11	.73	1.20	1.09	0–4	.42
K	6	—							
L	6	—							
M	6	—							
N	7	—							
O	7	—							

*Note.* Dashes indicate samples in which the NPI facets could not be computed, as no NPI or the short version of the NPI (Schütz et al., 2004; Samples H, I, and K) was administered. L/A = Leadership/Authority; E/E = Entitlement/Exploitativeness (both according to Ackerman et al., 2011).

(Appendices continue)

Table A2  
Effects of L/A and E/E on Interpersonal Perceptions by the Opposite Sex in Face-to-Face Encounters (Study 2)

Outcome	n	F	L/A		E/E		Adj. R <sup>2</sup> NPI	Adj. R <sup>2</sup> NARQ
			r	β [95% CI]	r	β [95% CI]		
Likeability	154	77	<b>.23</b>	<b>.23</b> [.06, .39]	.08	.02 [-.14, .19]	.04	.08
Attractiveness	86	43	.21	<b>.22</b> [.00, .44]	.01	-.05 [-.27, .17]	.02	.10
Overall score: Opposite-sex appeal	154	77	<b>.23</b>	<b>.23</b> [.07, .39]	.07	.01 [-.15, .17]	.04	.10

Note. Significant results ( $p < .05$ , two-tailed) are presented in boldface. F = female; L/A = Leadership/Authority; E/E = Entitlement/Exploitativeness;  $r$  = Pearson's product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on L/A and E/E simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ ; NPI = Narcissistic Personality Inventory; NARQ = Narcissistic Admission and Rivalry Questionnaire; Adj. R<sup>2</sup> NPI = adjusted explained variance by the NPI facets in the regression model; Adj. R<sup>2</sup> NARQ = adjusted explained variance by the NARQ dimensions in the corresponding regression model with Admission and Rivalry (for comparison).

Table A3  
Effects of L/A and E/E on Dispositions and Characteristics Associated With Short-Term Romantic Success (Study 3)

Outcome	n	F	L/A		E/E		Adj. R <sup>2</sup> NPI	Adj. R <sup>2</sup> NARQ
			r	β [95% CI]	r	β [95% CI]		
Attractiveness as mate	1,020	723	<b>.27</b>	<b>.29</b> [.23, .35]	.04	-.06 [-.13, .00]	.07	.17
Approach orientation toward other sex	305	201	<b>.18</b>	<b>.21</b> [.10, .33]	-.04	-.10 [-.22, .01]	.04	.12
Sociosexuality	263	165	<b>.14</b>	.12 [-.01, .25]	.10	.06 [-.06, .19]	.02	.05
Peer-rated short-term appeal	88	43	<b>.21</b>	<b>.23</b> [.01, .45]	-.01	-.07 [-.29, .15]	.03	.09
Overall score (incl. peer)	1,020	723	<b>.27</b>	<b>.30</b> [.23, .36]	.04	<b>-.07</b> [-.13, -.01]	.08	.18

Note.  $n$  for peer ratings denotes the number of participants for whom peer ratings were available. The overall score was computed by averaging across all assessed outcome measures, including the peer ratings. Prior to averaging, all outcome measures were standardized across samples. The overall score underwent the same correlation and regression analyses as the single outcome measures. Significant results ( $p < .05$ , two-tailed) are presented in boldface. F = female; L/A = Leadership/Authority; E/E = Entitlement/Exploitativeness;  $r$  = Pearson's product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on L/A and E/E simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ ; NPI = Narcissistic Personality Inventory; NARQ = Narcissistic Admission and Rivalry Questionnaire; Adj. R<sup>2</sup> NPI = adjusted explained variance by the NPI facets in the regression model; Adj. R<sup>2</sup> NARQ = adjusted explained variance by the NARQ dimensions in the corresponding regression model with Admission and Rivalry (for comparison).

Table A4  
Effects of L/A and E/E on Indicators of Long-Term Romantic Relationship Functioning (Study 6)

Outcome	n	F	L/A		E/E		Adj. R <sup>2</sup> NPI	Adj. R <sup>2</sup> NARQ
			r	β [95% CI]	r	β [95% CI]		
Relationship satisfaction	1,264	987	.04	<b>.09</b> [.03, .15]	<b>-.10</b>	<b>-.14</b> [-.20, -.08]	.02	.03
Relationship quality	688	523	.03	.07 [-.01, .15]	<b>-.09</b>	<b>-.12</b> [-.20, -.04]	.01	.02
Commitment	688	523	-.04	-.01 [-.09, .07]	-.07	-.06 [-.14, .02]	.00	.01
Conflicts/transgressions	1,265	988	-.01	-.05 [-.11, .01]	<b>.09</b>	<b>.10</b> [.05, .16]	.01	.01
Reactions to transgressions								
Conciliatory	688	523	-.06	-.01 [-.09, .07]	<b>-.13</b>	<b>-.13</b> [-.21, -.05]	.01	.03
Dysfunctional	688	523	.04	-.06 [-.14, .02]	<b>.24</b>	<b>.26</b> [.18, .34]	.06	.16
Overall score: Long-term problems	1,265	988	-.02	<b>-.07</b> [-.13, -.02]	<b>.13</b>	<b>.16</b> [.10, .22]	.02	.03

Note. The overall score was computed by averaging across all assessed outcome measures. Prior to averaging, all outcome measures were standardized across samples, and relationship satisfaction, relationship quality, commitment, and conciliatory reactions were reverse scored. The overall score underwent the same correlation and regression analyses as the single outcome measures. Significant results ( $p < .05$ , two-tailed) are presented in boldface. F = female; L/A = Leadership/Authority; E/E = Entitlement/Exploitativeness;  $r$  = Pearson's product-moment correlation (zero-order correlation);  $\beta$  = standardized regression coefficient from regressing romantic outcomes on L/A and E/E simultaneously (unique regression weights); CI = confidence interval for the  $\beta$ ; NPI = Narcissistic Personality Inventory; NARQ = Narcissistic Admission and Rivalry Questionnaire; Adj. R<sup>2</sup> NPI = adjusted explained variance by the NPI facets in the regression model; Adj. R<sup>2</sup> NARQ = adjusted explained variance by the NARQ dimensions in the corresponding regression model with Admission and Rivalry (for comparison).

(Appendices continue)

## Appendix B

## Results of the Commonality Analyses by Study

Table B1

*Study 1: Explained Variance Unique to Admiration, Unique to Rivalry, and Common to Admiration and Rivalry in Interpersonal Perceptions by the Opposite Sex in Self-Introductory Videos*

Outcome	$R^2$	% of $R^2$	Unique ADM		Unique RIV		Common ADM RIV	
			Expl. variance	% of $R^2$	Expl. variance	% of $R^2$	Expl. variance	% of $R^2$
Physical attractiveness	.1429	100	.1429	100.00	.0075	5.28	-.0075	-5.28
Liking	.1342	100	.1331	99.18	.0029	2.13	-.0018	-1.31
Mate value	.1753	100	.1740	99.26	.0040	2.25	-.0026	-1.51
Desirability as								
Date	.0927	100	.0871	93.95	.0202	21.77	-.0146	-15.73
Short-term partner	.1424	100	.1326	93.14	.0329	23.15	-.0232	-16.29
Long-term partner	.0318	100	.0318	99.96	.0015	4.61	-.0015	-4.57
Overall score: Appealing first impression	.1262	100	.1259	99.76	.0101	7.98	-.0098	-7.74

*Note.* A negative value in the common variance indicates a suppression effect in the respective regression model. ADM = Admiration; RIV = Rivalry;  $R^2$  = total explained variance when regressing romantic outcomes on Admiration and Rivalry simultaneously; Expl. variance = explained variance.

Table B2

*Study 2: Explained Variance Unique to Admiration, Unique to Rivalry, and Common to Admiration and Rivalry in Interpersonal Perceptions by the Opposite Sex in Face-to-Face Encounters*

Outcome	$R^2$	% of $R^2$	Unique ADM		Unique RIV		Common ADM RIV	
			Expl. variance	% of $R^2$	Expl. variance	% of $R^2$	Expl. variance	% of $R^2$
Likeability	.0960	100	.0950	98.99	.0009	0.96	.0000	0.04
Attractiveness	.1171	100	.1160	99.05	.0132	11.27	-.0121	-10.31
Overall score: Opposite-sex appeal	.1071	100	.1062	99.08	.0011	1.05	-.0001	-0.13

*Note.* A negative value in the common variance indicates a suppression effect in the respective regression model. ADM = Admiration; RIV = Rivalry;  $R^2$  = total explained variance when regressing romantic outcomes on Admiration and Rivalry simultaneously; Expl. variance = explained variance.

Table B3

*Study 3: Explained Variance Unique to Admiration, Unique to Rivalry, and Common to Admiration and Rivalry in Dispositions and Characteristics Associated With Short-Term Romantic Success*

Outcome	$R^2$	% of $R^2$	Unique ADM		Unique RIV		Common ADM RIV	
			Expl. variance	% of $R^2$	Expl. variance	% of $R^2$	Expl. variance	% of $R^2$
Attractiveness as mate	.1756	100	.1700	96.84	.0356	20.25	-.0300	-17.09
Approach orient. toward other sex	.1712	100	.1646	96.14	.0408	23.85	-.0342	-19.99
Sociosexuality	.0529	100	.0457	86.49	.0003	0.58	.0068	12.93
Peer-rated short-term appeal	.1125	100	.1036	92.05	.0269	23.92	-.0180	-15.96
Overall score (incl. peer)	.1933	100	.1897	98.12	.0365	18.90	-.0329	-17.02

*Note.* A negative value in the common variance indicates a suppression effect in the respective regression model. ADM = Admiration; RIV = Rivalry;  $R^2$  = total explained variance when regressing romantic outcomes on Admiration and Rivalry simultaneously; Expl. variance = explained variance.

(Appendices continue)

Table B4

Study 4: Explained Variance Unique to Admiration, Unique to Rivalry, and Common to Admiration and Rivalry in Perceptions of One's Romantic Partner

Outcome	$R^2$	% of $R^2$	Unique ADM		Unique RIV		Common ADM RIV	
			Expl. variance	% of $R^2$	Expl. variance	% of $R^2$	Expl. variance	% of $R^2$
Evaluation factor	.1151	100	.0388	33.68	.1074	93.25	-.0310	-26.94

Note. A negative value in the common variance indicates a suppression effect in the respective regression model. ADM = Admiration; RIV = Rivalry;  $R^2$  = total explained variance when regressing romantic outcomes on Admiration and Rivalry simultaneously; Expl. variance = explained variance.

Table B5

Study 6: Explained Variance Unique to Admiration, Unique to Rivalry, and Common to Admiration and Rivalry in Indicators of Long-Term Romantic Relationship Functioning

Outcome	$R^2$	% of $R^2$	Unique ADM		Unique RIV		Common ADM RIV	
			Expl. variance	% of $R^2$	Expl. variance	% of $R^2$	Expl. variance	% of $R^2$
Relationship satisfaction	.0197	100	.0130	65.69	.0130	66.12	-.0063	-31.80
Relationship quality	.0163	100	.0091	55.65	.0124	76.04	-.0052	-31.68
Commitment	.0058	100	.0007	11.31	.0058	99.95	-.0007	-11.25
Conflicts/transgressions	.0153	100	.0030	19.88	.0150	98.10	-.0027	-17.97
Reactions to transgressions								
Conciliatory	.0198	100	.0116	58.53	.0146	74.08	-.0064	-32.60
Dysfunctional	.1021	100	.0000	0.00	.0908	88.89	.0113	11.11
Overall score: Long-term problems	.0339	100	.0104	30.60	.0317	93.54	-.0082	-24.14

Note. A negative value in the common variance indicates a suppression effect in the respective regression model. ADM = Admiration; RIV = Rivalry;  $R^2$  = total explained variance when regressing romantic outcomes on Admiration and Rivalry simultaneously; Expl. variance = explained variance.

Received June 24, 2015  
Revision received July 8, 2016  
Accepted July 11, 2016 ■