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*Pers Soc Psychol Bull* published online 2 April 2013

DOI: 10.1177/0146167213483580

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# Are Narcissists Sexy? Zeroing in on the Effect of Narcissism on Short-Term Mate Appeal

Personality and Social Psychology Bulletin  
 XX(X) 1–13  
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 DOI: 10.1177/0146167213483580  
[pspb.sagepub.com](http://pspb.sagepub.com)  


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## Abstract

This research was aimed to provide a comprehensive test of the classic notion that narcissistic individuals are appealing as short-term romantic or sexual partners. In three studies, we tested the hypotheses that narcissism exerts a positive effect on an individual's mate appeal and that this effect is mediated by high physical attractiveness and high social boldness. We implemented a multimethod approach and used ratings of opposite sex persons (Study 1), ratings of friends (Study 2), and records of courtship outcomes in naturalistic interactions (Study 3) as indicators of mate appeal. In all cases, narcissism had a positive effect on mate appeal, which was mainly due to the agentic self-enhancement aspects of narcissism (rather than narcissists' lacking communion). As predicted, physical attractiveness and social boldness mediated the positive effect of narcissism on mate appeal. Findings further indicated that narcissism was more strongly linked to mate appeal than to friend appeal.

## Keywords

narcissism, mating, attractiveness, boldness, popularity

Received July 23, 2012; revision accepted January 27, 2013

The idea that narcissistic individuals spark romantic or sexual interest in others is more than two millennia old. According to the ancient Greek myth, Narcissus was a young man who did not only fall in love with himself but was also adored by the Nymph Echo and desired by “legions of lusty men and bevvies of girls” (Ovid, ca. 8 B.C.E./2004, Line 353). Evolutionary and social-psychological theories have recently been applied to back up this age-old notion. In their evolutionary model of narcissism, Holtzman and Strube (2011) formulated the hypothesis that the existence of narcissistic individuals in present human societies may be explained by narcissists' short-term mating success during the course of human evolution. Social-psychological models (Brunell & Campbell, 2011; Campbell, 2005) focus more on the process of mate attraction and aim to explain why many men and women may initially feel attracted to narcissists,<sup>1</sup> even though these persons are bad choices as romantic partners in the long run.

Most evidence backing up the notion that narcissists are appealing as short-term romantic or sexual partners comes from narcissists' self-reports. They claim that they find it easy to start new relationships (Bradlee & Emmons, 1992), perceive that they have alternatives to their current dating partners (Campbell & Foster, 2002; Campbell, Rudich, &

Sedikides, 2002), and allegedly had sexual intercourse with a larger number of partners than individuals lower in narcissism (Jonason, Li, Webster, & Schmitt, 2009). Yet, there are problems to self-report data (Baumeister, Vohs, & Funder, 2007), and these problems are particularly severe when narcissism is the target of investigation. Narcissists have a pronounced tendency to see themselves in an overly positive light (Paulhus & John, 1998) and brag about their qualities (Buss & Chiodo, 1991). If reactions of potential mates are the target of investigation, the primary source of evidence should be ratings of outside observers, preferably of potential mates themselves.

The current research raises the question whether narcissism is linked to more objective indicators of mate appeal. We define mate appeal as the initial appeal an individual exerts on others as a potential sexual or romantic partner.

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Unlike physical attractiveness, mate appeal is not fully determined by a person's appearance but can also be the result of social behavior. Is narcissism linked to mate appeal, assessed under naturalistic conditions? If so, which may be the mechanisms accounting for this effect? These are the questions we will address in the following sections.

## Narcissists' Social Behavior and Mating Motivation

Narcissism is a personality trait characterized by an unrealistically positive self-view, a strong self-focus, feelings of entitlement, and a lack of regard for others (Campbell & Miller, 2011). Narcissists' interpersonal orientation is characterized by high agency and low communion (Bradlee & Emmons, 1992; Campbell & Foster, 2007; Paulhus, 2001). Aiming to get ahead and increase the positivity of the self, narcissists continuously seek admiration from others (Campbell, 1999; Campbell & Campbell, 2009; Morf & Rhodewalt, 2001). At short acquaintance, they are quite successful with this strategy and manage to impress their interaction partners (Back, Schmukle, & Egloff, 2010a; Paulhus, 1998). At longer acquaintance, however, narcissists' lack of communion comes more and more into play; they are deemed disagreeable by well-acquainted peers (Dufner et al., 2012; Paulhus, 1998) and show low commitment in romantic relationships (Campbell & Foster, 2002).

As narcissists are unable or unwilling to live up to the positive first impression they leave in others, they continuously enter new social contexts (Campbell & Campbell, 2009). This pattern is also present in narcissists' mating behavior, which is characterized by a short-term mating tactic. For example, they prefer short-lived affairs over long-term relationships and are motivated to attract multiple short-term romantic partners (Egan & McCorkindale, 2007; Foster, Shriram, & Campbell, 2006; Holtzman, 2011a; Jonason et al., 2009; Reise & Wright, 1996). In the following, we will elaborate on how successful narcissists are in their pursuit of short-term mates. Specifically, we will present two mechanisms that may underlie a positive association between narcissism and mate appeal: physical attractiveness and social boldness.

### Physical Attractiveness

In Holtzman and Strube's (2011) evolutionary theory, narcissists are hypothesized to be high in short-term mate value in part because they are physically attractive—and physical attractiveness is important for obtaining short-term mates. The two authors cite meta-analytic evidence demonstrating a positive link between narcissism and physical attractiveness (Holtzman & Strube, 2010) and argue that narcissists' physical attractiveness enables them to attract short-term mates. But why should narcissists be physically attractive? Above, we have outlined that narcissists are motivated to

gain admiration from others and to attract short-term mates. An effective means to reach these goals would be to put much effort in one's appearance and thereby elevate one's physical attractiveness. In line with this possibility, research has shown that narcissists put effort into an attractive appearance by grooming and wearing fashionable clothes (Back et al., 2010a; Davis, Dionne, & Shuster, 2001; Holtzman & Strube, 2012; Vazire, Naumann, Rentfrow, & Gosling, 2008). Physical attractiveness, in turn, is a key predictor of mate appeal (Feingold, 1990). We therefore hypothesized that narcissism leads to high physical attractiveness and physical attractiveness, in turn, leads to high mate appeal.

### Social Boldness

The second potential explanation for narcissists' mate appeal is social boldness. According to the extended agency model of narcissism (Campbell & Foster, 2007), narcissist's agentic characteristics, like self-enhancing cognitions and approach orientation, lead them to exhibit socially bold behavior in social interactions (i.e., displays of confidence, charm, charisma, etc.). Social boldness, in turn, evokes positive evaluations by interaction partners. Hence, the model implies that narcissists may be high in mate appeal because they are socially bold.

Past findings are consistent with the proposal that narcissism is linked to high social boldness. In new groups, narcissists behave in an expressive and self-confident fashion (Back et al., 2010a; Küfner, Nestler, & Back, 2012a) and are willing to take up leadership positions (Rosenthal & Pittinsky, 2006). Even in socially stressful situations, narcissists exhibit self-confident, expressive, and charming behavior. Back et al. (2010a), for example, requested participants to stand in front of an audience consisting of 72 unacquainted peers and introduce themselves. Even though such a situation has the potential to arouse feelings of anxiety and embarrassment in the speaker, narcissists exhibited socially bold behavior (i.e., charming facial expression, self-assured body movements) while talking to the audience.

Social boldness, in turn, is relevant to mating outcomes. Personality traits characterized by high social boldness are positively linked to mating success. For example, extraversion, which is a trait indicative of socially bold behavior (Cattell, Eber, & Tatsuoka, 1970), is predictive of attractiveness ratings by strangers at first sight (Borkenau & Liebler, 1995) and the number of lifetime sexual partners (Nettle, 2005; Wright & Reise, 1997). In males, high dominance is linked to mating success (Gangestad & Simpson, 2000), and shyness, which is indicative of a lack of boldness in social interactions, is a negative predictor of mating success in speed-dating situations (Asendorpf, Penke, & Back, 2011). Hence, we hypothesized that narcissism leads to high social boldness in interactions with potential mates, and social boldness, in turn, leads to high mate appeal.

## Overview of the Present Research

The present research was aimed to comprehensively test the association between narcissism and mate appeal. We hypothesized that narcissism has a positive effect on mate appeal. In addition, we tested two mechanisms potentially underlying this effect. First, we hypothesized that one reason for narcissists' mate appeal is high physical attractiveness. Second, we hypothesized that another reason for narcissists' mate appeal is high social boldness.

Furthermore, we aimed to test whether a potential positive effect of narcissism on mate appeal is independent of self-esteem. Grandiose narcissism is linked to high self-esteem (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004) and several theoretical positions propose that high self-esteem may itself have a number of positive social consequences (e.g., Sedikides & Skowronski, 2000; Swann, Chang-Schneider, & McClarty, 2007). According to the above outlined reasoning, however, it should be narcissists' agentic striving for self-enhancement that accounts for the positive effect on mate appeal. Therefore, we hypothesized that narcissism predicts mate appeal over and above self-esteem.

To examine whether narcissism is uniquely linked to mate appeal or evokes generalized positive impressions in others, we also tested its association to friend appeal. Some studies report a positive link between narcissism and popularity at minimal acquaintance (e.g., Back et al., 2010a; Paulhus, 1998, but see Carlson, Naumann, & Vazire, 2011; Rauthmann, 2012). From these studies, however, it is not clear whether narcissism is specifically linked to high mate appeal or whether narcissists are just popular across the board. We consider it important to distinguish between mate appeal and friend appeal and previous research has not done so. If this distinction is made, it seems likely that narcissists' physical attractiveness and social boldness primarily influence mate appeal and not so much friend appeal, which is largely dependent on communal characteristics (Hinde, 1997). Hence, we hypothesized that narcissism is more positively linked to mate appeal than to friend appeal.

We tested our hypotheses in three studies. In all studies, we refrained from using self-report to assess mate appeal, but instead used more objective indicators in a multimethod approach. Study 1 provided an initial test of the social effects of narcissism on mate appeal ratings of opposite sex individuals. To establish a firm test of causality, we experimentally varied a fictitious person's level of narcissism and examined the effects on mate appeal and friend appeal. In Study 2, we conducted an online survey involving self- and peer-report data. We tested whether narcissism affects peer-rated mate appeal and whether this effect is mediated by physical attractiveness and social boldness. Finally, in Study 3, we aimed to maximize ecological validity and tested whether narcissism is predictive of mate appeal in real-life courtship interactions. Male participants approached

unacquainted women on the street and asked them for personal contact information. We assessed the number of personal contacts received by each man and attraction ratings provided by the approached women after the interaction. Relying on external observers' ratings of participants' appearance and behavior, we conducted a final test of whether physical attractiveness and social boldness account for narcissists' mate appeal.

## Study 1

In Study 1, we implemented an experimental design to test the social effects of narcissism. We provided participants with a narcissism questionnaire that had supposedly been filled out by a person of the other sex and requested them to rate this person's mate appeal and friend appeal. We hypothesized that narcissism has a positive effect on mate appeal, but not on friend appeal. We also tested whether sex moderates the effects of narcissism.

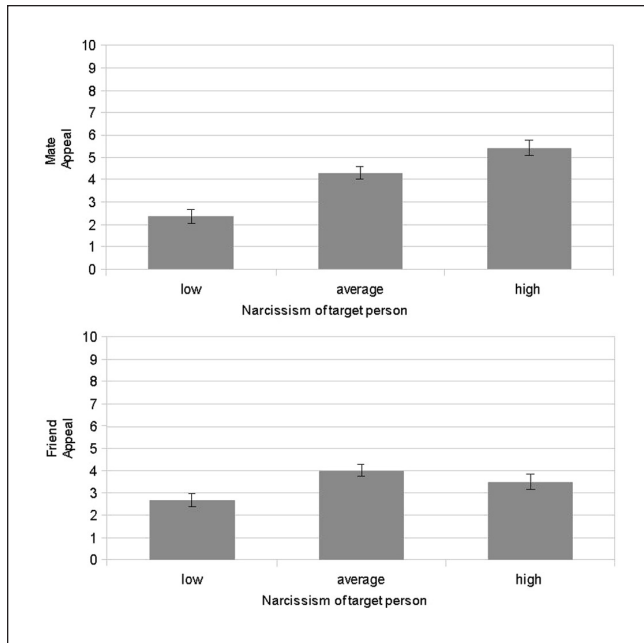
## Method

**Sample, Procedure, and Measures.** Participants were 117 psychology undergraduate students from Jagiellonian University, Cracow, Poland ( $M$  age = 26.62,  $SD$  = 6.76), who took part in the study in exchange for course credit. Aiming for an equal sex distribution, we recruited 59 female and 58 male participants. They were randomly assigned to one out of three conditions. In each condition, they received a bogus narcissism questionnaire. The experimenter told participants that the questionnaire had been filled out by a person of the other sex. For this means, we used the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; validated Polish version: Bazińska & Drat-Ruszczak, 2000). The Polish version of the NPI has a 5-point Likert-type response format (1 = *does not apply to me*, 5 = *applies to me*) and 34 items. Depending on the experimental condition, the target person's item scores were low ( $M$  = 1.62, range = 1-2), medium ( $M$  = 3, range 2-4), or high ( $M$  = 4.38, range = 4-5). Participants were then asked to judge the target person's mate appeal and friend appeal based on the information in the questionnaire. We used the following two items to assess *mate appeal*: "This person is sexy," and "He/she appeals to women/men" (1 = *fully disagree*, 10 = *fully agree*). As the two items were highly correlated,  $r = .75$ ,  $p < .001$ , we aggregated them. We used the following two items to assess *friend appeal*: "I'd like to be friends with this person" and "I like this person" (1 = *fully disagree*, 10 = *fully agree*). The two items were highly correlated,  $r = .84$ ,  $p < .001$ , and therefore, we aggregated them.

## Results and Discussion

Mate appeal and friend appeal were positively correlated,  $r = .59$ ,  $p < .001$ . We conducted a MANOVA with the target





**Figure 1.** Mate appeal and friend appeal predicted by low, average, and high narcissism.

Note: Error bars represent standard errors. Mate appeal (top panel): low ( $M = 2.34$ ,  $SD = 1.53$ ), average ( $M = 4.34$ ,  $SD = 2.26$ ), and high ( $M = 5.42$ ,  $SD = 2.19$ ) narcissism. Friend appeal (bottom panel): low ( $M = 2.63$ ,  $SD = 2.08$ ), average ( $M = 4.02$ ,  $SD = 1.86$ ), and high narcissism ( $M = 3.48$ ,  $SD = 1.79$ ).

person's level of narcissism (low, medium, high) and sex (male rater, female rater) as between-subjects independent variables and mate appeal and friend appeal as dependent variables. In addition, we conducted pairwise least significant difference tests (LSD) to compare group means individually.

There was a main effect of narcissism, Wilks's  $\lambda = .67$ ,  $F(4, 220) = 12.29$ ,  $p < .001$ ,  $\eta^2 = .18$ , and sex, Wilks's  $\lambda = .95$ ,  $F(2, 110) = 2.90$ ,  $p = .06$ ,  $\eta^2 = .05$ , but no significant interaction between the two, Wilks's  $\lambda = .96$ ,  $F(4, 220) = 1.04$ ,  $p = .39$ ,  $\eta^2 = .02$ . When we analyzed the univariate effects, we found a main effect of narcissism on mate appeal,  $F(2, 111) = 20.98$ ,  $p < .001$ ,  $\eta^2 = .27$ . In the high narcissism condition, ratings were higher than in both the medium narcissism condition ( $M$  difference = 1.08,  $p = .02$ ) and low narcissism condition ( $M$  difference = 3.08,  $p < .001$ ). Moreover, ratings in the medium narcissism condition were higher than in the low narcissism condition ( $M$  difference = 2.00,  $p < .001$ ; see Figure 1, top panel). Hence, higher levels of narcissism were predictive of higher mate appeal. There was no significant main effect for sex,  $F(1, 111) = 0.15$ ,  $p = .70$ , or interaction between narcissism and sex,  $F(2, 111) = 1.69$ ,  $p = .19$ . Thus, both males and females ascribed higher mate appeal to a narcissistic target person.

We next tested the effect of sex and narcissism on friend appeal. Again, there was a significant main effect of narcissism,  $F(2, 111) = 5.04$ ,  $p = .008$ ,  $\eta^2 = .08$ . Pairwise LSD least

indicated that average narcissism predicted higher friend appeal than low narcissism ( $M$  difference = 1.39,  $p = .001$ ). As shown in Figure 1, bottom panel, however, there was no linear relation between narcissism and friend appeal. There was also a main effect for sex,  $F(1, 111) = 4.69$ ,  $p = .03$ ,  $\eta^2 = .04$ . Males provided higher friend appeal ratings than women. The interaction between narcissism and sex was not significant,  $F(2, 111) = 0.06$ ,  $p = .94$ , indicating that the effect of narcissism on friend appeal was the same for males and females.

In summary, the findings from Study 1 indicate that narcissistic men and women are high in observer-rated mate appeal. As we have manipulated narcissism impressions, the results suggest that narcissism exerts an effect on mate appeal. In contrast, high narcissism did not predict high friend appeal. These findings indicate that even when the counterpart knows about narcissists' negative characteristics, such as feelings of entitlement or a depreciative interpersonal orientation, narcissists are still perceived as desirable romantic partners.

## Study 2

Study 1 provided first evidence that narcissism is linked to high mate appeal ratings by unacquainted observers. Yet, it was limited to individuals' ratings about an imaginary target person. In Study 2, we aimed to test the effect of narcissism on mate appeal under more realistic conditions. We predicted a positive link between narcissism and mate appeal. We further hypothesized that narcissism is more strongly linked to mate appeal than to friend appeal. An additional goal of Study 2 was to examine the mechanisms underlying the association between narcissism and mate appeal. We hypothesized that this association is mediated by high physical attractiveness and high social boldness in interactions with potential mates. Furthermore, we focused on narcissism facets. As narcissists' physical attractiveness and their social boldness are thought to originate from their agentic self-enhancement concerns (rather than their lack of communion), we expected that mainly narcissism facets indicative of agentic self-enhancement are linked to high mate appeal. To test this hypothesis, we used the NPI factor solutions suggested by Emmons (1984, 1987) and Ackerman et al. (2011), because they distinguish facets that are mainly indicative of agency (i.e., Emmons' Leadership/Authority, Self-Absorption/Self-Admiration and Superiority/Arrogance facets and Ackerman et al.'s Leadership/Authority and Grandiose Exhibitionism facets) from facets more indicative of lacking communion (i.e., the Exploitativeness/Entitlement facet of both solutions).

## Method

**Sample and Procedure.** We used a subsample from a large online survey that has been analyzed for different purposes

before (Dufner et al., 2012). For the current work, we analyzed data from heterosexual participants who were currently not in a romantic relationship and for whom peer ratings were available ( $N = 152$ , 75.66% female,  $M$  age = 25.63,  $SD = 6.31$ ). Most participants (77.63%) were either students or held a university degree. Each participant invited one close friend to also participate in the study. These friends provided peer ratings of mate appeal, friend appeal, physical attractiveness, and social boldness. In 82.89% of the cases, they chose a person of the same sex as a peer rater. The peer mean age was 25.89 years ( $SD = 8.12$ ), 69.74% of the peers were either students or held a university degree. Of the peers, 97.36% indicated that they had known the target persons for more than 1 year, and 65.13% indicated that they had known the target person for 5 years or more.<sup>2</sup>

**Narcissism.** We assessed narcissism with the validated German version (Schütz, Marcus, & Sellin, 2004) of the NPI (Raskin & Hall, 1979, 1981). The NPI is by far the most widely used measure of nonclinical narcissism. Participants indicated their endorsement of each of 40 items on a 2-point scale (0 = *agree*, 1 = *disagree*). Sample items are “I am more capable than other people” or “I have a natural talent for influencing people” ( $M = 17.99$ ,  $SD = 6.29$ ,  $\alpha = .80$ ). In addition to computing an overall narcissism score, we also computed scale scores for the factor solutions suggested by Emmons (1984, 1987) and Ackerman et al. (2011).

**Self-Esteem.** We assessed self-esteem with the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965—revised German adaptation by von Collani & Herzberg, 2003). The RSES comprises 10 items (1 = *strongly agree*, 4 = *strongly disagree*). Sample items are “I take a positive attitude toward myself” and “At times I think I am no good at all” (reverse scored;  $M = 3.07$ ,  $SD = 0.62$ ,  $\alpha = .90$ ).

**Mate Appeal.** We used peer-report to assess mate appeal. We asked peers to rate four items from the self-perceived mating success scale (Landolt, Lalumière, & Quinsey, 1995; German version: Penke & Asendorpf, 2008). Items were matched to the participants’ sex. The four items were as follows: “Men/women that my friend likes tend to like her/him back,” “My friend receives sexual invitations from men/women,” “Men/women feel attracted to my friend,” and “My friend does not receive many compliments from men/women” (reverse scored; 0 = *fully disagree*, 7 = *fully agree*;  $M = 4.50$ ,  $SD = 1.15$ ,  $\alpha = .78$ ).

**Friend Appeal.** We also used peer-report to assess friend appeal. We used a shortened and revised version of a scale developed by Back, Schmukle, and Egloff (2010b) that measures positive affective reactions toward a specific other person. The scale consisted of four items. Sample items are “I like my friend” and “I get along with my friend very well” (1 = *not at all*, 6 = *very much*;  $M = 5.46$ ,  $SD = 0.58$ ,  $\alpha = .85$ ).

**Physical Attractiveness.** We used four items from the Self Description Questionnaire (SDQ 1, Marsh, 1988; German version: Tanzer, 1991) to assess physical attractiveness (peer-report). Sample items are “My friend has a pretty face” or “My friend is ugly” (reverse scored;  $M = 5.76$ ,  $SD = 1.00$ ,  $\alpha = .80$ ).

**Social Boldness.** We assessed social boldness in mating situations using self- and peer-report. Based on items of the Shyness and Sociability Scales (Schüchternheits und Geselligkeitsskalen für Erwachsene [SGSE]; Asendorpf & Wilpers, 1998), we developed a four-item scale for self- and peer evaluations to assess boldness in mating situations. Items were again matched to the participants’ sex. The four items of the self-rating scale were, “I show little signs of inhibition when I approach men/women,” “I find it easy to get in contact with men/women,” “I feel inhibited when I am with men/women” (reverse scored), and “I feel shy when I am with men/women” (reverse scored; 0 = *fully disagree*, 5 = *fully agree*;  $M = 2.63$ ,  $SD = 0.92$ ,  $\alpha = .89$ ). For the peer-rating scale, the word “I” was replaced by the words “my friend” ( $M = 3.05$ ,  $SD = 0.96$ ,  $\alpha = .89$ ).

## Results and Discussion

First, we tested how narcissism is related to mate appeal, friend appeal, physical attractiveness, and social boldness. As shown in Table 1, narcissism was positively correlated with mate appeal, physical attractiveness, and social boldness.<sup>3</sup> The findings further indicated that the association between narcissism and mate appeal was marginally stronger than the one between narcissism and friend appeal,  $z = 1.91$ ,  $p = .06$ . Hence, narcissists appeared to be more appealing as mates than as friends.

We then tested whether the association between narcissism and mate appeal is moderated by sex. For this means, we regressed mate appeal on participants’ sex (dummy coded 0 = *female*, 1 = *male*), narcissism (standardized), and the interaction between sex and narcissism. Whereas mate appeal was predicted by narcissism,  $\beta = .27$ ,  $p = .002$ , and sex,  $\beta = -.16$ ,  $p = .04$ , the interaction between narcissism and sex was not a significant predictor,  $\beta = .10$ ,  $p = .26$ . Thus, there was no moderation of sex.

Furthermore, we tested whether the association between narcissism and mate appeal still holds when self-esteem is controlled for. For this means, we computed a partial correlation between narcissism and mate appeal controlling for self-esteem. The result shows that even when self-esteem is controlled, narcissism is positively linked to mate appeal,  $r = .24$ ,  $p = .004$ .

Table 1 also displays the correlations between the different NPI facets and mate and friend appeal. As can be seen from this table, the facets primarily indicative of agency were positively linked to mate appeal while no significant correlation was present for friend appeal. It can also be seen that the

**Table 1.** Study 2: Correlations Between Narcissism (Including Facets), Mate Appeal, Friend Appeal, Physical Attractiveness, and Social Boldness ( $N = 152$ ).

	Mate appeal (p)	Friend appeal (p)	Physical attractiveness (p)	Social boldness (s)	Social boldness (p)
Narcissism	.32**	.12	.17*	.41**	.34**
L/A <sup>a</sup>	.33**	.08	.17*	.35**	.28**
S/S <sup>a</sup>	.28**	.14	.17*	.35**	.32**
S/A <sup>a</sup>	.25**	.04	.00	.30**	.30**
E/E <sup>a</sup>	.00	.03	.13	.12	.01
L/A <sup>b</sup>	.24**	.07	.12	.29**	.24**
GE <sup>b</sup>	.33**	.11	.25**	.35**	.31**
E/E <sup>b</sup>	-.01	-.03	.18*	.07	.01
Mate appeal (p)		.11	.46**	.54**	.52**
Friend appeal (p)			.23*	.06	.10
Physical attractiveness (p)				.27**	.29**
Social boldness (s)					.48**

Note: L/A = leadership/authority; S/S = self-absorption/self-admiration; S/A = superiority/arrogance; E/E = exploitativeness/entitlement; GE = grandiose exhibitionism; (p) = peer ratings, (s) = self-ratings.

<sup>a</sup>Emmons' (1984, 1987) facets.

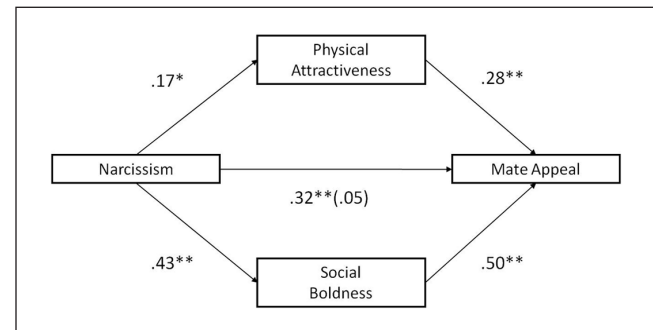
<sup>b</sup>Ackerman et al.'s (2011) facets.

\*\* $p < .01$  (two-tailed).

facets indicative of lacking communion (Exploitativeness and Entitlement) were unrelated to mate and friend appeal.

Next, we used the SPSS INDIRECT macro of Preacher and Hayes (2008) to test whether the association between narcissism and mate appeal is mediated by physical attractiveness and social boldness. This procedure allowed us to test an overall indirect effect and the unique effects of each mediator (i.e., the indirect effect via physical attractiveness controlling for social boldness and vice versa). As self- and peer-rated social boldness were positively correlated,  $r = .48$ ,  $p < .001$ , we formed a composite of the two. Bootstrapping results indicated that the 95% confidence interval (CI) of the indirect effect did not contain zero for physical attractiveness [0.01, 0.12], social boldness [0.13, 0.33], or the overall indirect effect [0.17, 0.39]. Therefore, in line with our hypotheses, physical attractiveness and social boldness were mediators of the effect of narcissism on mate appeal (Figure 2).<sup>4</sup>

In summary, Study 2 tested the association between narcissism and mate appeal ratings of individuals' close friends who have good knowledge about these individuals' everyday interactions. The findings mirror the ones of Study 1 in demonstrating that narcissism is predictive of high mate appeal. The findings further indicate that narcissists are relatively more appealing as mates than as friends. In addition, the results are in line with the hypothesis that mainly the agentic self-enhancement aspects of narcissism, rather than narcissists' lack of communion, accounts for the positive effect on mate appeal. Finally, Study 2 informs about the mechanisms underlying the positive link between narcissism and mate appeal. The results indicate that narcissists are high in mate appeal because they are physically attractive and because they exhibit social boldness in interactions with potential mates.



**Figure 2.** Physical attractiveness and social boldness mediated the association between narcissism.

Note: Standardized regression coefficients are listed.

\* $p < .05$ . \*\* $p < .01$ .

Even though the results of Study 2 uniformly support our hypotheses, it needs to be mentioned as a limitation that participants could choose their peer raters freely. We addressed this limitation in Study 3.

### Study 3

We are aware of no study that has tested whether narcissism is predictive of mating outcomes in ecologically valid situations. Study 3 was aimed to provide such a test. If narcissism is positively associated with mate appeal, narcissists should be particularly successful in attracting mates in a naturalistic setting. To put this hypothesis to a test, we assessed male participants' narcissism and then requested them to approach a number of unacquainted females on the street and ask them for personal contact information (e.g., telephone number). Whereas women tend to initiate courtship processes via more

subtle and implicit means (e.g., hinting, flirting, looking interested), it is more typical for men than for women to explicitly court potential mates (Fisher, 1992). Therefore, we focused on male participants in Study 3. We hypothesized that narcissism is a positive predictor of mate appeal, operationalized by the number of personal contacts received from the approached women and by attraction ratings provided by these women after the interactions. We hypothesized that narcissism is predictive of mate appeal.

We also focused on narcissism facets. The findings from Study 2 indicate that only narcissists' agentic self-enhancement component, and not their lack of communion, accounts for their mate appeal. In Study 3, we tested this hypothesis more directly. In addition to using a one-dimensional narcissism measure that has already been established in the literature (i.e., the Dirty Dozen Scale; Jonason & Webster, 2010), we measured narcissism with the recently developed Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2012). The NARQ is based on the idea that narcissists' overarching goal of maintaining a grandiose self can be reached by two separate social strategies: the tendency to approach social admiration by means of self-promotion and the tendency to prevent social failure by means of other-derogation. Accordingly, the NARQ distinguishes a facet indicative of the former agentic strategy (Narcissistic Admiration) from a facet indicative of the latter uncommunal strategy (Narcissistic Rivalry). Both facets show overlap with the NPI (correlations range between  $r = .61$  and  $r = .63$  for Narcissistic Admiration, and between  $r = .35$  and  $r = .36$  for Narcissistic Rivalry; Back et al., 2012). Whereas Narcissistic Admiration correlates with all of the NPI facets suggested by Ackerman et al. (2011) and Emmons (1984, 1987), Narcissistic Rivalry correlates most strongly with the Exploitativeness/Entitlement facets. We hypothesized that Narcissistic Admiration, but not Narcissistic Rivalry, is predictive of mate appeal.

We also tested the hypothesis that physical attractiveness and social boldness mediate the positive effect of narcissism on mate appeal to a stringent test. We did not rely on self- or peer ratings to assess these constructs, but used more objective, observational measures. We assessed physical attractiveness via ratings of several unacquainted observers (i.e., coders in our laboratory) and social boldness during participants' interactions with the women via ratings of research assistants. We hypothesized that the positive association between narcissism and mate appeal is mediated by high physical attractiveness and high social boldness.

## Method

**Sample, Design, and Procedure.** The study took place in summer 2011 in a large German city. It was advertised under the name "The Courtship Study" via several emailing lists, advertisements on social networking websites, word-of-the-mouth advertising, and flyers. Participants were 61 single heterosexual men ( $M$  age = 25.22,  $SD$  = 5.41). As an

incentive, they received monetary compensation (35 euros) and could obtain feedback about their personality traits, as well as about how they were rated by the women they had approached.

We first invited participants to an introductory meeting in which we explained the aims of the study and gave them instructions. Moreover, we obtained participants' informed consent and assessed several personality and individual differences variables. Finally, we recorded a short video of each participant (approximately 30 s long) that showed the participant from waist upward. On the video, the participant introduced himself very briefly. Data collection in the field took place 1 to 3 weeks later. We requested each man to approach 25 women he would genuinely like to get to know better. These interactions were to take place within 5 hours on the street and had the aim to gather personal contact information from each of the women. Two research assistants followed the participants (participants were informed). Altogether, there were 12 research assistants (exclusively female). For each participant, we randomly assigned a pair of research assistants. The first assistant observed the interactions, whereas the second approached each of the women to debrief her about the study and to collect ratings about the man and the interaction (69.46% of the women were willing to provide such ratings). Participants as well as the approached women consented that all data recorded of them can be used for research purposes. Ethical approval was obtained from the Institutional Review Board of the institute for psychology of the Humboldt-University in Berlin.<sup>5</sup>

**Narcissism.** We used the Dirty Dozen Scale (Jonason & Webster, 2010; German version by Küfner, Dufner, & Back, 2012b) to assess narcissism. This scale consists of four items (sample item "I tend to want others to admire me";  $M = 2.37$ ,  $SD = 0.84$ ,  $\alpha = .80$ ). In addition, we assessed narcissism using the NARQ (Back et al., 2012). We computed scale scores for the Narcissistic Admiration facet (sample items: "I am great" and "I enjoy my successes very much";  $M = 2.91$ ,  $SD = 0.78$ ,  $\alpha = .81$ ) and the Narcissistic Rivalry facet (sample items: "I want my rivals to fail" and "other people are worth nothing";  $M = 2.05$ ,  $SD = 0.83$ ,  $\alpha = .78$ ). The two facets were not significantly correlated,  $r = .11$ ,  $p = .42$ . Correlations with the Dirty Dozen narcissism score were positive for Narcissistic Admiration,  $r = .42$ ,  $p < .001$ , and Narcissistic Rivalry,  $r = .37$ ,  $p < .001$ .

**Self-Esteem.** We again used the RSES (Rosenberg, 1965—revised German adaptation by von Collani & Herzberg, 2003) to assess self-esteem ( $M = 2.39$ ,  $SD = 0.53$ ,  $\alpha = .86$ ).

**Mate Appeal.** As the first measure of mate appeal, we counted the number of personal contacts a participant received from the women during the interactions with them. Contacts included telephone numbers, email addresses, and contact information for online social networks (e.g., Facebook).



**Table 2.** Study 3: Correlations Between Narcissism, Mate Appeal, Physical Attractiveness, Social Boldness, and Attributes of the Approached Women.

	Number of contacts	Attraction (w)	Mate appeal composite	Physical attractiveness (r)	Social boldness (r)	Women's physical attractiveness (r)	Sexiness of women's clothes (r)
Dirty dozen narcissism	.29*	.40**	.41**	.28*	.30*	.20	-.12
Narcissistic admiration	.48**	.37*	.50**	.38**	.41**	.14	-.12
Narcissistic rivalry	.09	-.03	-.01	.05	-.02	-.09	-.02

Note: (w) = rated by approached women; (r) = rated by research assistants. *N* ranged from 59 to 61.

\*\**p* < .01 (two-tailed).

Because the number of approached women varied across participants ( $M = 22.87$ ;  $SD = 6.06$ ; range = 2-26), we partialled it out of the number of contacts variable. We did so by regressing the number of contacts on the number of approached women,  $\beta = .20$ ;  $p = .13$ , and saving standardized residuals. As the second measure of mate appeal, we used attraction ratings provided by the women after the conversation. For this means, women rated the extent to which they "liked the chat-up," "liked the man," and "felt attracted to the man" (1 = *not at all*, 7 = *very much*;  $M = 3.06$ ,  $SD = 0.76$ ,  $\alpha = .77$ ). We also computed a mate appeal composite score by aggregating the standardized number of contacts and attraction variables per participant (these two variables were positively correlated,  $r = .32$ ,  $p = .01$ ).

**Physical Attractiveness.** To assess physical attractiveness, we used ratings of independent observers. Eight psychology undergraduate students (three males, five females) rated participants' physical attractiveness based on the short introductory videos, which had been recorded during the introductory meeting in exchange for course credit. For this means, they rated the items "This person has an attractive face" (1 = *totally disagree*, 7 = *totally agree*;  $\alpha = .86$ ) and "This person has an attractive body" (1 = *totally disagree*, 7 = *totally agree*;  $\alpha = .86$ ). As the two items were highly correlated,  $r = .85$ ,  $p < .001$ , we aggregated them ( $M = 3.58$ ,  $SD = 0.94$ ).

**Social Boldness.** To assess social boldness, we used codings of the research assistants who observed participants' behavior during the interactions with the women. The coded behaviors were self-assuredness (0 = *shy, hesitant*, 6 = *self-assured*), charm (0 = *not charming, rude*, 6 = *charming, chivalric*), and energy (0 = *passive, weak*, 6 = *energetic, lively, dynamic*) ( $M = 3.78$ ,  $SD = 0.96$ ,  $\alpha = .79$ ).

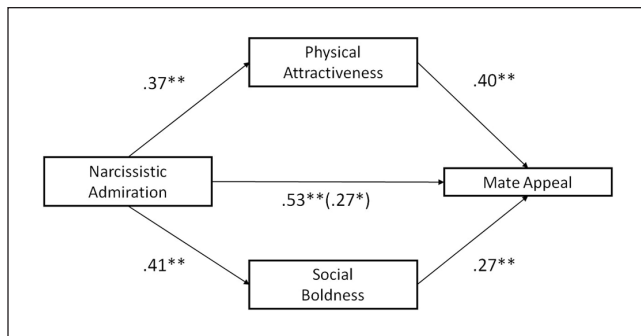
**Women's Attributes.** To control for the possibility that narcissists were selective in their choice of women, one research assistant rated each approached woman's physical attractiveness (0 = *not physically attractive at all*, 6 = *very physically attractive*,  $M = 4.5$ ,  $SD = 0.50$ ) and the sexiness of her clothes (0 = *not sexy at all*, 6 = *very sexy*,  $M = 2.74$ ,  $SD = 1.01$ ).

## Results and Discussion

As shown in Table 2, all narcissism indicators except for the Narcissistic Rivalry were predictive of the number of contacts, attraction, physical attractiveness, and social boldness.<sup>6</sup> As also shown in Table 2, and in line with our hypothesis, only Narcissistic Admiration and not Narcissistic Rivalry was correlated with mate appeal. In fact, Narcissistic Admiration was more strongly correlated to the number of contacts,  $z = 2.46$ ,  $p < .05$ ; attraction,  $z = 2.04$ ,  $p < .05$ ; and the mate appeal composite,  $z = 3.28$ ,  $p < .01$ . Hence, mainly narcissists' inclination for agentic self-enhancement accounted for the positive link to mate appeal.

To address the major alternative explanation that narcissists may have achieved more success because they somehow approached more receptive women, we conducted a follow-up analysis. In this analysis, we tested the correlations between narcissism and the approached women's physical attractiveness and the sexiness of their clothes. As Table 2 shows, the women approached by narcissists did not differ in terms of physical attractiveness or sexiness of clothes from the women approached by less narcissistic individuals. Hence, narcissists were not less (or more) selective in their choice of women. In addition, we tested whether the association between narcissism and mate appeal still holds when we control for self-esteem. We computed partial correlations controlling for self-esteem and found that the Dirty Dozen narcissism score was still correlated to the number of contacts,  $r = .28$ ,  $p = .032$ ; attraction,  $r = .39$ ,  $p = .002$ ; and the mate appeal composite,  $r = .42$ ,  $p < .001$ . Also Narcissistic Admiration was still positively linked to the number of contacts,  $r = .49$ ,  $p < .001$ ; attraction,  $r = .32$ ,  $p = .02$ ; and the mate appeal composite,  $r = .50$ ,  $p < .001$ , when we controlled for self-esteem.

Finally, we moved on to test whether physical attractiveness and social boldness mediated the effect of Narcissistic Admiration on the mate appeal composite. We first investigated the zero-order correlations between all relevant variables. As shown in Table 2, Narcissistic Admiration was correlated to mediators and the dependent variable. In addition, both mediators were positively correlated to the outcome variable (the coefficient was  $r = .57$ ,  $p < .001$ , for physical attractiveness, and  $r = .51$ ,  $p < .001$ , for social



**Figure 3.** Physical attractiveness and social boldness mediated the association between narcissistic admiration and mate appeal.

Note: Standardized regression coefficients are listed.

\*\* $p < .01$ .

boldness and mate appeal) and also correlated with each other,  $r = .31$ ,  $p = .02$ . A mediation analysis tested the effect of Narcissistic Admiration on mate appeal (Figure 3). Bootstrapping results indicated that the 95% CI of the indirect effect did not contain zero for physical attractiveness [0.04, 0.32], social boldness [0.04, 0.28], or the overall indirect effect [0.13, 0.44]. Therefore, physical attractiveness and social boldness were significant mediators.

In summary, the results of Study 3 demonstrate that narcissism is predictive of high mate appeal under real-life conditions. To maximize validity, we objectively assessed mate appeal in actual courtship situations and relied on independent observations to assess physical attractiveness and social boldness. The higher participants' narcissism, the more personal contacts they received from unacquainted women and the more appealing they were rated by these women. As in Study 2, it was only narcissists' inclination to agentic self-enhancement, rather than their lack of communion, that was positively linked to mate appeal.

Furthermore, the results of Study 3 mirror those of Study 2 in demonstrating that high physical attractiveness and high social boldness mediate the positive effect of narcissism on mate appeal. We therefore obtained converging evidence in support of the hypothesis that narcissists' high mate appeal is due to their high physical attractiveness and their high social boldness in interactions with potential mates.

## General Discussion

The current research was designed to test the association between narcissism and mate appeal. A positive association has been proposed by several theoretical formulations. At a macro level, narcissists' mate appeal has been used to explain the persistence of narcissistic individuals in human societies throughout evolutionary history (Holtzman & Strube, 2010; Jonason et al., 2009). At a more proximate level, researchers have used narcissists' mate appeal to explain misguided romantic partner choice (Brunell & Campbell, 2011; Campbell, 2005). In the current research, we conducted three

empirical studies and varied methodology to provide a comprehensive test of the hypothesis that narcissism has a positive effect on mate appeal.

The findings provide convergent support for this hypothesis. In Study 1, we experimentally varied a fictitious person's narcissism level and demonstrated that high narcissism exerts a positive effect on mate appeal ratings in a laboratory setting. In Study 2, we demonstrated a positive association between narcissism and mate appeal rated by participants' close friends who knew them well. In Study 3, we maximized ecological validity and showed that narcissism is predictive of mate appeal under real-life and naturalistic conditions. Whereas the findings of all three studies are in line with our hypothesis, Study 3 certainly provides the most direct and compelling evidence for narcissists' mate appeal. It demonstrates that when directly put to the test, narcissists performed well at arousing romantic interest in members of the opposite sex.

Furthermore, our results indicate that narcissists' mate appeal is mainly due to agentic self-enhancement rather than lacking communion. In Study 1, all NPI facets except the ones indicative of exploitativeness and entitlement were linked to mate appeal. Similarly, in Study 3, solely the Narcissistic Admiration facet of the NARQ, and not the Rivalry facet, was correlated to high mate appeal. These findings are in line with the notion that many positive interpersonal effects of narcissism are due to its agentic aspects, and not to lacking communion (Ackerman et al., 2011; Brown, Budzek, & Tamborski, 2009; Back et al., 2012).

Our findings also demonstrate, however, that narcissists' mate appeal cannot be explained by their high self-esteem. In Studies 2 and 3, narcissism had a positive effect on mate appeal when self-esteem was controlled for. Thus, even though high self-esteem may itself have a number of social benefits (Sedikides & Skowronski, 2000; Swann et al., 2007), there seems to be a unique appeal to narcissism (see also Paulhus, 1998).

Instead, our results show that narcissists' mate appeal can be explained by their physical attractiveness and social boldness. The mediating role of physical attractiveness supports Holtzman and Strube's (2011) evolutionary theory of narcissism, which proposes that narcissists' physical attractiveness enables them to successfully pursue a short-term mating tactic. The mediating role of social boldness stands in line with the extended agency model of narcissism (Campbell & Foster, 2007), which implies that narcissists' mate appeal may rather be due to their social behavior. The important role of social boldness may also explain why some studies, in which observers rated still photographs of participants (and, hence, boldness was hardly perceivable), failed to find a link between narcissism and interpersonal attraction (e.g., Bleske-Rechek, Remiker, & Baker, 2008).

The present research is also consistent with earlier findings demonstrating that socially bold behavior accounts for the positive effect of narcissism on popularity at minimal

acquaintance (Back et al., 2010a; Küfner et al., 2012a). Yet, our results extend these earlier findings. They show that narcissists are not liked in general but rated as higher in mate appeal than in friend appeal. This domain specificity of the social effects of narcissism has theoretical and practical implications. On a theoretical level, it is convergent with the hypothesis that narcissism may have evolved as a specific means to attract short-term sexual partners and not interaction partners in general (Holtzman & Strube, 2011; Jonason et al., 2009). On a practical level, it implies that a differentiated assessment of mate appeal and friend appeal is necessary to capture the social dynamics of narcissism adequately.

### Limitations and Future Directions

The current studies are not without limitations. Study 1 tested the effects of narcissism in a contrived setting; in Study 2, we could not rule out the possibility that narcissists bragged about their mate appeal to their friends who provided the peer-reports, and in Study 3, we used an exclusively male sample (and therefore the findings cannot be generalized to females). Furthermore, it is possible that the attraction measure of Study 3 captured not exclusively mate appeal but also likeability. Future research would certainly do well to use crystal clear operationalizations of mate appeal and to rule out any alternative explanations. Nevertheless, one should note that our findings are highly consistent across all three studies utilizing different methodologies and designs. Therefore, it seems unlikely that shortcomings of the individual studies systematically biased the results.

Moreover, we were not able to directly test the causality underlying the association between narcissism and physical attractiveness. We have argued that due to their need for admiration and their desire for short-term mates, narcissists may put much effort in their physical appearance and thereby increase their attractiveness. However, it could also be that narcissists' physical attractiveness is a (partial) cause of narcissism (Holtzman & Strube, 2010, 2011). If this was true, narcissism would also be linked to objective indicators of physical attractiveness that are more difficult to alter, like for example, facial symmetry or body proportions. In fact, there is recent evidence indicating that narcissism has a physical signature that is perceivable in individual's neutral faces, above and beyond any effects of hairstyle or make-up (Holtzman, 2011b). Therefore, we encourage researchers to further investigate whether narcissism may also be a consequence of physical attractiveness.

Finally, when interpreting the current research, one should keep in mind that it focused on the effect of narcissism on mate appeal in short acquaintances. It does not inform about narcissists' appeal in long-term relationships. Narcissism is related to relationship problems, such as low relationship commitment, a game-playing love style, low empathic concern, and infidelity (see Brunell & Campbell, 2011, for a

review). Therefore, we would expect narcissists to be less appealing to their long-term romantic partners than to unacquainted individuals (see also Campbell, 2005). This prediction could be tested by future research.

In summary, the present findings suggest that there is a truth in the ancient Greek myth: At least in the short-run, individuals like Narcissus tend to be desired not only by themselves, but indeed also by "legions of lusty men and bebies of girls" (Ovid, ca. 8 B.C.E./2004, Line 353).

### Acknowledgment

We thank Albrecht Küfner and Jochen Gebauer for helpful comments of an earlier version of this manuscript.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### Notes

1. We are using the term "narcissists" to refer to individuals who score (relatively) highly on trait narcissism. We are not using the term as a clinical label.
2. To rule out the possibility that narcissists systematically selected peer raters who knew them little (and therefore possibly judged them positively), we tested the association between narcissism and duration of acquaintance. The two were not significantly correlated,  $r = .02$ ,  $p = .80$ .
3. A correlation between narcissism and friend appeal based on a partly overlapping sample has been reported elsewhere (Dufner et al., 2012). In this other article, the correlation coefficient was almost identical in size ( $r = .11$ ) but statistically significant at the .05 level, due to the much larger sample size. One should note that the other article focused on the association between intellectual self-enhancement and psychological adjustment, whereas the current analyses focus on the effect of narcissism on mate appeal.
4. To test the robustness of these findings, we also ran two alternative mediational models. In the first one, we used self-reported social boldness (instead of the social boldness composite) as a mediator next to physical attractiveness. In this case, we again detected a significant effect via physical attractiveness [.01, .13] and via social boldness [.10, .27]. In the second model, we used peer-reported social boldness as a mediator next to physical attractiveness. Also in this model, the indirect effects via physical attractiveness [.02, .12] and social boldness [.07, .22] were significant.
5. Research assistants were extensively informed about the content of the study before it started and could quit working in the project if they felt uncomfortable. We also provided participants with extensive information about the study before it started, and all signed an informed consent form detailing the nature, scope, benefits, and potential risks of the study. Furthermore, we explicitly told participants that they could



about the study at any time and that we would not use their data if requested. If participants were dissatisfied about the overall outcome of their interactions, the research assistants invited them to talk about their experience for as long as they wanted and assisted them. To ensure that the approaches were a sign of real interest, carried out in a courteous manner, we explicitly instructed participants to approach only women they *genuinely* wanted to know better. The research assistants (who were exclusively female) were ready to interrupt any interaction immediately if a man behaved in any inappropriate way. Finally, we gave all women the opportunity to dissent to having their data used.

6. As the number of contacts variable was skewed ( $M = 1.9$ ,  $SD = 3.09$ ,  $\min = 0$ ,  $\max = 14$ ,  $\text{skew} = 2.21$ , 31 participants did not receive any contact information), we also tested the current associations using an alternative strategy devoid of distribution assumptions. We did so by creating a binary dummy variable. Participants who received zero contacts had a score of 0 on this variable. Participants who had received at least one contact had a score of 1. We then used binary logistic regression to test this variable's associations with narcissism. Based on these analyses, we obtained no significant results for the Dirty Dozen Narcissism Scale,  $\beta = .12$ ,  $p = .35$ , and Narcissistic Rivalry,  $\beta = .03$ ,  $p = .82$ , but again detected a positive association for Narcissistic Admiration,  $\beta = .42$ ,  $p < .001$ .

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