

## Good Enough for an Affair. Self-Enhancement of Attractiveness, Interest in Potential Mates and Popularity as a Mate

MICHELA SCHRÖDER-ABÉ<sup>1\*,†</sup>, KATRIN RENTZSCH<sup>2,†</sup>, JENS B. ASENDORPF<sup>3</sup> and LARS PENKE<sup>4</sup>

<sup>1</sup>Department of Psychology, University of Potsdam, Germany

<sup>2</sup>Department of Psychology, University of Bamberg, Germany

<sup>3</sup>Department of Psychology, Humboldt University of Berlin, Germany

<sup>4</sup>Department of Psychology, Georg August University Göttingen, Germany

*Abstract:* Using data from the Berlin Speed Dating Study, we tested rival hypotheses concerning the effects of self-enhancement of attractiveness on dating outcomes. Three hundred eighty-two participants took part in one of the 17 speed-dating sessions. After each speed-dating interaction, participants indicated how interesting they found the respective person as a long-term and short-term partner. Using social relations analyses, we computed perceiver effects (being more or less choosy) and target effects (being rated as more or less interesting) of long-term and short-term partner ratings. Self-enhancement was operationalized as the discrepancy between self-rated attractiveness and four components of actual attractiveness (observer-rated facial and vocal attractiveness, height and body mass index). Results indicated that self-enhancers were less choosy with respect to their interest for short-term partners, which was especially true for men, but more choosy with respect to long-term partners. With regard to popularity as a mate, potential partners indicated that they found self-enhancers more interesting as short-term partners but not as long-term partners. As self-enhancement is a key component of narcissism, these results are consistent with findings that narcissists perceive many sexual affairs as an achievement, while preferring selected 'trophy' long-term partners, and narcissists have a charming appeal for short-term, but not lasting, social relationships. Copyright © 2015 European Association of Personality Psychology

Key words: self-enhancement; physical attractiveness; mating; speed dating; social relations analyses

*Just because you think you're so pretty,  
And just because your momma thinks you're hot,  
Well, just because you think you've got something  
That no other girl has got,  
You've caused me to spend all my money.  
[...]  
Well, I'm telling you,  
Baby, I'm through with you.  
[...]  
There'll come a time when you'll be lonesome  
And there'll come a time when you'll be blue.*

The song 'Just Because', which became famous through the interpretations of Elvis Presley and Frank Sinatra, is about a girl who is able to attract a mate but who is not able to hold him in the long run. Interestingly, she is described as a girl who thinks she is pretty, which may or may not be true—in other words, the girl may view herself in an overly positive way. In the current study, we investigate self-enhancement of attractiveness and its consequences in the mating context: Do people who overestimate their physical attractiveness

come across as more or less popular as a mate? And are they more or less choosy with respect to their interest in others as a potential mate?

Self-enhancement reflects the tendency to hold overly positive self-perceptions (John & Robins, 1994; Colvin, Block, & Funder, 1995; Paulhus, Harms, Bruce, & Lysy, 2003; Kurt & Paulhus, 2008; Kwan, John, Robins, & Kuang, 2008) and represents a key component of a narcissistic personality (Paulhus, 1998; Campbell, Reeder, Sedikides, & Elliot, 2000; Taylor, Lerner, Sherman, Sage, & McDowell, 2003). Much research has focused on self-enhancement with respect to traits or academic abilities (e.g. Colvin et al., 1995; Robins & Beer, 2001; Paulhus et al., 2003; Kwan, John, Kenny, Bond, & Robins, 2004; Rentzsch & Schröder-Abé, 2015). Very little research, however, has investigated self-enhancement of attractiveness, that is, overestimating one's physical attractiveness. Past research has shown that self-rated and actual physical attractiveness are only moderately correlated (Feingold, 1992). Thus, people's self-views may differ from how they are seen by others. As a general tendency, people tend to overestimate their physical attractiveness, but there are substantial individual differences in self-enhancement of attractiveness (Epley & Whitchurch, 2008).

Previous research has shown that self-rated and actual physical attractiveness are both of crucial importance with

\*Correspondence to: Michela Schröder-Abé, Department of Psychology, Karl-Liebknecht-Str. 24–25, 14476 Potsdam, Germany  
E-mail: michela.schroeder-abe@uni-potsdam.de

†Contributed equally to this work and therefore share first authorship.

respect to mating (e.g. Feingold, 1992; Montoya, 2008; Asendorpf, Penke, & Back, 2011; Back et al., 2011a; Eastwick, Luchies, Finkel, & Hunt, 2014; Meltzer, McNulty, Jackson, & Karney, 2014). For example, physical attractiveness can be perceived quickly (Willis & Todorov, 2006) and with high inter-rater consensus (Langlois et al., 2000), and for both sexes, average attractiveness ratings are the strongest predictor of initial attraction in speed-dating paradigms (Kurzban & Weeden, 2005; Todd, Penke, Fasolo, & Lenton, 2007; Luo & Zhang, 2009; Asendorpf et al., 2011). Human mate choice is usually mutual, and people use their self-perceived attractiveness to gauge their prospects on the mating market, thereby inferring whom they can aim for as a mate (Penke, Todd, Lenton, & Fasolo, 2007; Todd et al., 2007; Back et al., 2011a). Peoples' self-perceptions of their value on the mating market are not always accurate, and sex-specific moderators of accuracy have been identified (Back, Penke, Schmukle, & Asendorpf, 2011b). The consequences of systematically overestimating one's physical attractiveness, however, have not yet been investigated. The broader literature on interpersonal consequences of individual differences in self-enhancement yields contradictory findings (Paulhus, 1998; Robins & Beer, 2001). On the one hand, it has been shown that people who self-enhance are evaluated negatively (Colvin et al., 1995; Paulhus, 1998; Kwan et al., 2008), whereas, on the other hand, people high in self-enhancement are also perceived as socially attractive (Paulhus, 1998; Taylor et al., 2003). Accordingly, several competing hypotheses regarding the effects of self-enhancement of attractiveness on dating outcomes can be derived from the literature.

Are self-enhancers more or less choosy than others? On the one hand, research has shown that narcissistic<sup>1</sup> self-enhancers are attracted to 'trophy' partners with highly positive characteristics (Campbell, 1999), which might foster choosiness among people who self-enhance. On the other hand, self-enhancers engage in more promiscuous sexual strategies (Campbell, Foster, & Finkel, 2002; Jonason, Li, Webster, & Schmitt, 2009; Holtzman & Strube, 2011) and might perceive a large number of sexual partners as an achievement and a form of self-validation. Given that evolutionary theories propose different optimal mating strategies for men and women (Buss & Schmitt, 1993; Gangestad & Simpson, 2000) based on fundamental sex differences in minimal parental investment (Trivers, 1972), it is necessary to differentiate between a short-term and a long-term perspective and take sex differences into account. Previous research suggests that men generally desire a much larger number of short-term relationships compared with women (Buss & Schmitt, 1993; Schmitt, 2003). Similarly, men are less choosy when it comes to short-term mating partners but as choosy as women when it comes to long-term romantic partners (Clark & Hatfield, 1989; Kenrick, Groth, Trost, & Sadalla, 1993; Hald & Høgh-Olesen, 2010). Thus, self-enhancers might be less choosy than people with a more

realistic or low self-perception when choosing dating partners for short affairs, as they regard quantitative mating success as an achievement, a phenomenon that should be particularly true for men. For long-term relationships, on the other hand, self-enhancement might actually be associated with higher choosiness, as self-enhancers have a tendency to 'decorate' themselves with especially attractive partners.

Are self-enhancers more or less popular as potential mates? On the one hand, others might be attracted to self-enhancers because of their entertaining, highly enthusiastic and energetic behaviour, but on the other hand, interaction partners might be put off by bragging, hostile, competitive and irritable behaviours that self-enhancers tend to show sooner or later. Both social tendencies have been observed in narcissistic self-enhancers (Colvin et al., 1995; Paulhus, 1998; Back, Schmukle, & Egloff, 2010; Back et al., 2013; Dufner, Rauthmann, Czarna, & Denissen, 2013). Furthermore, as self-enhancers tend to be less empathic and less committed in relationships (Campbell et al., 2002), self-enhancement might lead to negative long-term outcomes. Therefore, the mate appeal of self-enhancers should depend on how successful they are in displaying themselves in an overly positively way. If potential mates are able to accurately judge self-enhancers as possessing unfavourable social personality traits, self-enhancement should be negatively correlated with being preferred. However, this might be especially true for long-term relationship interest, where the detrimental traits of narcissistic self-enhancers likely have a more significant impact. If, however, potential mates are unable to accurately foresee (or unwilling to factor in) the negative long-term prospects of relationships with narcissistic self-enhancers, their over-confident, fun and charming social tendencies might actually increase their attractiveness to potential partners. For the same reason, self-enhancers should appeal to potential mates interested in short-term affairs, as these entertaining social tendencies are not outweighed by negative long-term prospects in this context.

We tested these competing hypotheses against each other using data from the Berlin Speed Dating Study (Asendorpf et al., 2011). Speed dating is an ecologically valid design to study initial attraction among potential mates, where the physical attractiveness of interaction partners plays an important role (Back et al., 2011a). By building the discrepancy between attractiveness self-ratings and observed, as well as objectively measured, physical attractiveness components, we investigated the short-term and long-term mating choosiness and attractiveness of overly positive self-perceptions with respect to one's physical attractiveness.

## METHOD

### Participants

One hundred ninety men and 192 women with an average age of 32.8 years [standard deviation (*SD*) = 7.4] participated in the Berlin Speed Dating Study (Asendorpf et al., 2011; see Supporting Information 1 for a more detailed description of

<sup>1</sup>So far, there has been scant research on mating outcomes of self-enhancement. Self-enhancement is an important characteristic of narcissism. We therefore also draw on the narcissism literature to derive our hypotheses.

the study). Participants were recruited via articles and interviews in various regional and national media, where they were offered the opportunity to participate in a speed-dating session for scientific purposes. In addition, personal feedback on selected results was offered as an incentive, but there were no monetary reimbursements. Participants were singles with the sole motivation being the chance to find a real-life partner. One woman was excluded because of missing data. According to power analysis, a sample size of 400 participants was intended but could not be obtained because of pragmatic reasons.

### Measures and procedure

Before beginning the speed-dating sessions, participants rated themselves on three items measuring physical attractiveness (attractive, appealing and well built;  $\alpha_{\square} = .76$ ,  $\alpha_{\circlearrowleft} = .80$ ) using a 5-point scale. Second, standardized facial photographs of the participants were taken, and participants' weight and height were measured in order to compute the body mass index (BMI). Third, standardized voice recordings were obtained, with participants counting aloud from 1 to 10. Finally, subjects took part in one of the 17 speed-dating sessions with 17–27 participants of about the same age (8–14 of each sex). Each speed-dating interaction lasted 3 minutes, and men rotated until they had dated every female participant. After each interaction, participants recorded on a scorecard how interesting they found their date as a long-term and as a short-term partner on 5-point Likert-type scales (1 = *not at all interesting* to 5 = *very interesting*). The total number of interactions (dyads) was 2160. On average, each participant was rated by 11.24 interaction partners ( $SD = 1.50$ ). Independent raters later judged the attractiveness of each facial photograph on a scale from 1 (*not attractive at all*) to 7 (*very attractive*). Each picture was rated by 15 heterosexual raters of the opposite sex and of the same age group. Ratings were aggregated across raters (inter-rater reliabilities:  $\alpha = .88$ –.91). Vocal samples were rated for attractiveness on the same scale used for facial attractiveness. Male samples were rated by 28 heterosexual female undergraduates ( $\alpha = .92$ ) and female samples by 22 heterosexual male undergraduates ( $\alpha = .90$ ). For details, see Supporting Information 1.

### DATA ANALYSIS

Descriptive statistics of all variables are displayed in Table 1. First, we computed a criterion discrepancy index of self-enhancement (Paulhus & John, 1998). We regressed self-rated attractiveness on observer-rated facial and vocal attractiveness, height, BMI and BMI<sup>2</sup> using multilevel random coefficient modelling (Raudenbush & Bryk, 2002) with maximum likelihood estimation with the program HLM7 (Raudenbush, Bryk, & Congdon, 2011). Unit of the subordinate level were individuals ( $n = 381$ )<sup>2</sup>; unit of the superordinate level were dating groups separated into

<sup>2</sup>One participant did not provide data on self-rated physical attractiveness.

Table 1. Descriptive statistics

	<i>M</i>	<i>SD</i>
Self-rated attractiveness	3.37	0.62
Facial attractiveness	2.83	0.89
Vocal attractiveness	3.59	0.92
Height in cm	175.05	9.65
Weight in kg	72.86	13.11
Body mass index	23.68	3.21
Short-term partner interest	1.87	1.16
Long-term partner interest	2.03	1.12
Self-enhancement of attractiveness	0.00	0.52
Perceiver effect short-term partner interest (low choosiness short term)	1.88	0.67
Perceiver effect long-term partner interest (low choosiness long term)	2.03	0.61
Target effect short-term partner interest (high popularity short term)	1.88	0.66
Target effect long-term partner interest (high popularity long term)	2.03	0.60

*Note:* *SD*, standard deviation.  $N = 381$ – $382$  due to missing data in self-rated attractiveness; sex was contrast coded with  $-1 =$  female,  $1 =$  male;  $N = 4320$  for short-term partner interest and long-term partner interest due to the dyadic structure of the speed-dating ratings.

male and female subgroups ( $n = 34$ ) in order to account for differences in actual attractiveness ratings (i.e. aggregated observer ratings of facial and vocal attractiveness, height and BMI) within the corresponding sex group. Predictors at level 1 were group-mean centred; for the analysis, we considered a random-slopes-and-intercept model. Residual variance in self-rated attractiveness was reduced by 20.8% when including predictors of actual attractiveness. Residuals from the analysis were extracted as a criterion discrepancy index of self-enhancement. High scores indicate that participants overestimate their attractiveness relative to the criterion of actual attractiveness (i.e. observer ratings, height and BMI).<sup>3</sup>

Second, we computed scores for choosiness and for popularity as a mate, both regarding short-term and long-term relationships. We ran social relations analyses for the ratings on long-term and short-term partner interest that the participants provided during the speed dates (see Asendorpf *et al.*, 2011, for details). Social relations analyses (Kenny, 1994) take into account that interpersonal perceptions reflect the different effects of the perceiver, the target and the relationship between them. For example, if Ben is interested in Ann, then this perception reflects characteristics of the perceiver (e.g. Ben being not choosy with respect to potential mates—high perceiver effect), but also characteristics of the target (e.g. Ann being very popular as a potential mate—high target effect), and characteristics of the relationship between the two (e.g. Ben being especially interested in Ann—high relationship effect). Perceiver effects (being choosy) and target effects (popularity as a mate) on long-term and short-term partner interest ratings were computed with the software

<sup>3</sup>Self-enhancement of attractiveness was related to self-esteem ( $r = .35$ ) and to self-perceived mate value ( $r = .57$ ). The medium-sized correlation with self-esteem fits previous research on self-enhancement (e.g. Kwan *et al.*, 2004; Paulhus, 1998; Paulhus *et al.*, 2003). The correlation with self-perceived mate value also highlights the validity of our self-enhancement index.

BLOCKO (Kenny, 1998), controlling for the confounding influences of the perceivers, the targets and the relationships. High perceiver effects reflect the rating of many options as very interesting. Thus, high choosiness is reflected by low perceiver effects. High popularity is reflected by high target effects. Seventeen speed-dating groups were entered into the analyses. Social relations analyses based on a full-block design (Kenny, Kashy, & Cook, 1998) indicated that short-term and long-term partner interests, each for women and for men, contained significant portions of perceiver variance and target variance ( $ps < .001$ , respectively), which confirms the necessity of the current data analytic strategy (Table 2).

Finally, because of the nested structure of the dataset, we conducted multilevel analyses for testing our hypotheses. We used multilevel random coefficient modelling (Raudenbush & Bryk, 2002) and maximum likelihood estimation with the software Mplus 7 (Muthén & Muthén, 2012). We computed four models in which we regressed speed-dating outcomes (i.e. long-term and short-term choosiness and long-term and short-term popularity) on our index of self-enhancement of attractiveness, controlling for the participant's sex and the size and average age of the speed-dating group. Individuals were modelled on level 1 ( $n=381$ )<sup>2</sup> nested in speed-dating groups ( $n=17$ ) on level 2. As we were interested in the specific effects of self-enhancement on short-term and long-term variables, which were significantly related, we controlled for the short-term variable when analysing the long-term variable as outcome, and vice versa (see Supporting Information 2 for intercorrelations). Predictors at level 1 were group-mean centred; sex was contrast coded ( $-1$  for men and  $1$  for women). For all analyses, we considered random-slopes-and-intercept models; when a random effect revealed no meaningful variance, we treated the variable as fixed in that model.

## RESULTS

Results indicate that compared with people with more modest self-views, self-enhancers were significantly less choosy with respect to their interest for short-term partners ( $b=0.08$ ,  $p=.042$ ) but more choosy with respect to long-term partners ( $b=-0.12$ ,  $p=.011$ ). To illustrate the size of these effects, predicted values for individuals high in self-enhancement (1 *SD* above the mean) and for individuals low in self-enhancement (1 *SD* below the mean) were computed. These analyses showed that individuals high in self-enhancement rated potential partners by 0.12 *SDs* more

attractive for short-term relationships than individuals low in self-enhancement. Furthermore, individuals with high tendencies to self-enhance were by 0.20 *SDs* more choosy with respect to long-term relationships than individuals low in self-enhancement. With regard to popularity as a mate, we found that self-enhancers were more popular as short-term partners ( $b=0.09$ ,  $p=.011$ ) but not as long-term partners ( $b=-0.05$ ,  $p=.097$ ). Individuals with high tendencies to self-enhance were rated by 0.15 *SDs* more popular for short-term relationships than individuals with low tendencies to self-enhance. High self-enhancers were rated by 0.10 *SDs* less popular for long-term relationships than individuals low in self-enhancement. Coefficients from multilevel analyses and 95% confidence intervals (CIs) are displayed in Figure 1.<sup>4</sup>

In line with well-documented sex differences in mating strategies, we found that men were less choosy with regard to short-term partner interest than women ( $b=0.21$ ,  $p<.001$ , 95% CI [0.13, 0.29]), but no sex differences with regard to long-term partner interest were found ( $b=-0.01$ ,  $p=.797$ , 95% CI [ $-0.08$ , 0.06]). In addition, potential partners were less interested in men than in women with respect to short-term relationships ( $b=-0.17$ ,  $p<.001$ , 95% CI [ $-0.24$ ,  $-0.10$ ]) but more interested in men with respect to long-term relationships ( $b=0.09$ ,  $p=.008$ , 95% CI [0.02, 0.15]).

Predicting short-term partner interest, we found a significant interaction effect of self-enhancement with sex ( $b=0.06$ ,  $SE=0.03$ ,  $p=.027$ , 95% CI [0.01, 0.11]), indicating that particularly male self-enhancers were less choosy ( $b=0.14$ ) than female self-enhancers ( $b=0.02$ ). Interactions between self-enhancement and sex predicting long-term partner interest ( $b=-0.03$ ,  $SE=0.04$ ,  $p=.535$ ), popularity as short-term partners ( $b=0.04$ ,  $SE=0.03$ ,  $p=.181$ ) and popularity as long-term partners ( $b=0.00$ ,  $SE=0.03$ ,  $p=.989$ ) were not significant.

## DISCUSSION

Self-enhancement is a hallmark of narcissism, a personality trait that has been linked to both positive and negative social outcomes (Back et al., 2010, 2013). Based on data from the Berlin Speed Dating Study, we investigated self-enhancement of attractiveness and its interpersonal consequences in the mating context. Compared with people with more modest attractiveness self-views, we found that attractiveness self-enhancers were less choosy when rating short-term interest and more choosy when rating long-term interest in speed dates. Our findings suggest that self-enhancers are especially likely to seek many affairs but less likely to consider someone an acceptable long-term partner. Thus, apparent contradictions in past results that suggested both promiscuity (Campbell et al., 2002; Jonason et al., 2009) and choosiness (Campbell, 1999) in self-enhancers can be resolved by taking the relationship time perspective (short term

Table 2. Relative variance partitioning for short-term and long-term partner interest

	Perceiver variance		Target variance	
	Male (%)	Female (%)	Male (%)	Female (%)
Short-term partner interest	22	18	19	20
Long-term partner interest	23	18	18	22

<sup>4</sup>Running additional analyses revealed no support for a quadratic relationship between self-enhancement and speed-dating outcomes.

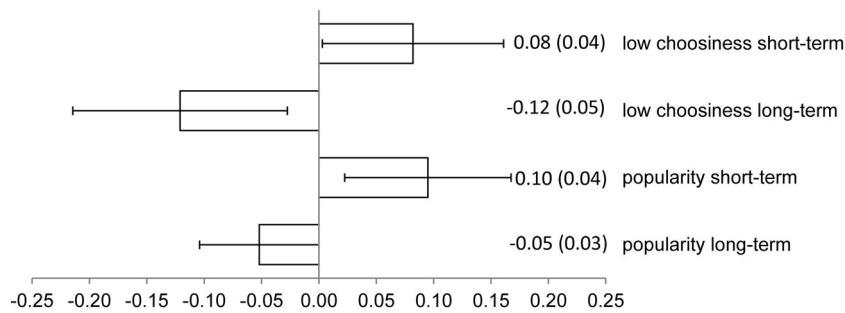


Figure 1. Unstandardized regression coefficients from multilevel analyses on the relation between self-enhancement of attractiveness and speed-dating outcomes. Error bars represent 95% confidence intervals; standard errors are shown in parentheses.

versus long term) into account. Furthermore, we found that particularly male self-enhancers were less choosy when it came to short-term mates. This finding is in line with evolutionary perspectives based on parental investment theory that predict higher reproductive benefits of short-term mating for men (Trivers, 1972; Buss & Schmitt, 1993; Gangestad & Simpson, 2000).

Self-enhancers were also more popular as short-term partners, which might be due to their charming and extraverted behaviour (Back *et al.*, 2010). This finding is consistent with recent theory on the evolutionary advantages of self-enhancement for displaying confidence (von Hippel & Trivers, 2011), especially in situations with high levels of uncertainty where there is much to be gained but little to be lost (Johnson & Fowler, 2011). However, these benefits do not seem to hold for long-term popularity. Past research with longitudinal data (e.g. Paulhus, 1998) has shown that self-enhancers are perceived increasingly negatively over time. The current results suggest that potential partners might be well aware of potential difficulties in long-term relationships with self-enhancers upon first encounter.

The current study has strengths and limitations that deserve mention. An important strength is that we used a large sample from the general population with participants whose sole motivation for taking part in the study was to find a real-life mating partner. Also, we did not merely rely on self-reports of self-enhancement but quantified self-enhancement from a comparison of self-reported attractiveness against multiple indicators of actual attractiveness, including consensual ratings across the visual and vocal modality, and objectively measured height and BMI. Furthermore, the setup for the study was a real speed-dating session, which meets the requirements for a realistic mating context, at least when it comes to initial attraction. Of course, if initial interest exists, the mate choice process is not finalized after 3 minutes, and self-enhancement of attractiveness might lose some of its initial appeal over time. We actually followed the current sample over 1 year. As reported in Asendorpf *et al.* (2011), the mating interests analysed here translated into a considerable number of mutual choices and subsequent contacts and dates but too few sexual encounters and romantic relationships to allow for an analysis of the more long-term consequences of self-enhancement on mating outcomes. After all, a single speed-dating session with around a dozen potential partners provides only a small snapshot of the mate searches of singles. Moreover, while the preferences and

appearances of the studied individuals might be representative of their general mate choice behaviour, it is a mistake to assume that these observed speed dates will regularly convert into actual short-term and long-term relationships.

Because our results are correlational in nature, the effects can be interpreted in different causal directions. As we were particularly interested in self-enhancement, we interpreted our findings in terms of the tendency to self-enhance. However, the current findings can also be interpreted, for example, in such a way that low self-enhancement of attractiveness—or rather a tendency to underestimate one's physical attractiveness—is connected to less popularity with respect to short-term relationships. Future research could test more complex nonlinear relationships and, for example, examine whether the relations with mating outcomes are particularly relevant for people who tend to self-enhance or for people who tend to underestimate their physical attractiveness.

Our study investigated self-enhancement in only one specific domain, physical attractiveness. Past research (Kurzban & Weeden, 2005; Todd *et al.*, 2007; Luo & Zhang, 2009), including the same sample that we analysed here (Asendorpf *et al.*, 2011; Back *et al.*, 2011a), strongly suggests that physical attractiveness is the most important determinant of mate choices on initial encounters. However, people are also able to make rapid, reasonably accurate judgments about other traits preferred in mate choice on first encounters, such as trustworthiness, agreeableness and intelligence (e.g. Borkenau, Mauer, Riemann, Spinath, & Angleitner, 2004; Willis & Todorov, 2006). Thus, future studies should investigate whether our results hold when considering other facets of self-enhancement, such as intellectual ability or communal orientations. In the current data, we did have self-ratings of these traits but no valid criteria for actual trait levels. Therefore, we chose to focus solely on self-enhancement of attractiveness.

In summary, our study investigated outcomes of overestimating one's physical attractiveness in the mating context. Our results show that short-term and long-term perspectives need to be differentiated and that self-enhancers might be particularly interested in and desirable for an affair.

## ACKNOWLEDGEMENT

This study was supported by a grant of the German Research Foundation to J. B. Asendorpf (As 59/15-3).

## SUPPORTING INFORMATION

Supporting information may be found in the online version of this article at the publisher's web-site.

## REFERENCES

- 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. doi:10.1002/per.768.
- Back, M. D., Küfner, A. C., 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. doi:10.1037/a0034431.
- Back, M. D., Penke, L., Schmukle, S. C., Sachse, K., Borkenau, P., & Asendorpf, J. B. (2011a). 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. doi:10.1002/per.806.
- Back, M. D., Penke, L., Schmukle, S. C., & Asendorpf, J. B. (2011b). Knowing your own mate value: Sex-specific personality effects on the accuracy of expected mate choices. *Psychological Science, 22*, 984–989. doi:10.1177/0956797611414725.
- 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. doi:10.1037/a0016338.
- Borkenau, P., Mauer, N., Riemann, R., Spinath, F. M., & Angleitner, A. (2004). Thin slices of behavior as cues of personality and intelligence. *Journal of Personality and Social Psychology, 86*, 599–614. doi:10.1037/0022-3514.86.4.599.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review, 100*, 204–232. doi:10.1037/0033-295X.100.2.204.
- Campbell, W. (1999). Narcissism and romantic attraction. *Journal of Personality and Social Psychology, 77*, 1254–1270. doi:10.1037/0022-3514.77.6.1254.
- Campbell, W., 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. doi:10.1037/0022-3514.83.2.340.
- Campbell, W., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality, 34*, 329–347. doi:10.1006/jrpe.2000.2282.
- Clark, R. D., & Hatfield, E. (1989). Gender differences in receptivity to sexual offers. *Journal of Psychology & Human Sexuality, 2*, 39–55. doi:10.1300/J056v02n01\_04.
- Colvin, C. R., Block, J., & Funder, D. C. (1995). Overly positive self-evaluations and personality: Negative implications for mental health. *Journal of Personality and Social Psychology, 68*, 1152–1162. doi:10.1037/0022-3514.68.6.1152.
- 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, 7*, 870–882. doi:10.1177/0146167213483580.
- Eastwick, P. W., Luchies, L. B., Finkel, E. J., & Hunt, L. L. (2014). The predictive validity of ideal partner preferences: A review and meta-analysis. *Psychological Bulletin, 140*, 623–665. doi:10.1037/a0032432.
- Epley, N., & Whitchurch, E. (2008). Mirror, mirror on the wall: Enhancement in self-recognition. *Personality and Social Psychology Bulletin, 34*, 1159–1170. doi:10.1177/0146167208318601.
- Feingold, A. (1992). Good-looking people are not what we think. *Psychological Bulletin, 111*, 304–341. doi:10.1037/0033-2909.111.2.304.
- Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences, 23*, 573–644. doi:10.1017/S0140525X0000337X.
- Hald, G. M., & Høgh-Olesen, H. (2010). Receptivity to sexual invitations from strangers of the opposite gender. *Evolution and Human Behavior, 31*, 453–458. doi:10.1016/j.evolhumbehav.2010.07.004.
- 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.
- John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perception: Individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology, 66*, 206–219. doi:10.1037/0022-3514.66.1.206.
- Johnson, D. D. P., & Fowler, J. H. (2011). The evolution of overconfidence. *Nature, 477*, 317–320. doi:10.1038/nature10384.
- 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. doi:10.1002/per.698.
- Kenny, D. A. (1994). *Interpersonal perception: A social relations analysis*. New York, NY: Guilford Press.
- Kenny, D. A. (1998). *BLOCKO version VI*. University of Connecticut.
- Kenny, D. A. (1998). *BLOCKO version VI [Computer software]*. Storrs, CT: University of Connecticut. Retrieved from <http://www.davidakenny.net/srm/srmp.htm>
- Kenrick, D. T., Groth, G. E., Trost, M. R., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives on relationships: Effects of gender, self-appraisal, and involvement level on mate selection criteria. *Journal of Personality and Social Psychology, 64*, 951–969. doi:10.1037/0022-3514.64.6.951.
- Kurt, A., & Paulhus, D. L. (2008). Moderators of the adaptiveness of self-enhancement: Operationalization, motivational domain, adjustment facet, and evaluator. *Journal of Research in Personality, 42*, 839–853. doi:10.1016/j.jrp.2007.11.005.
- Kurzban, R., & Weeden, J. (2005). HurryDate: Mate preferences in action. *Evolution and Human Behavior, 26*, 227–244. doi:10.1016/j.evolhumbehav.2004.08.012.
- Kwan, V. S. Y., John, O. P., Kenny, D. A., Bond, M. H., & Robins, R. W. (2004). Reconceptualizing individual differences in self-enhancement bias: An interpersonal approach. *Psychological Review, 111*, 94–110. doi:10.1037/0033-295X.111.1.94.
- Kwan, V. S. Y., John, O. P., Robins, R. W., & Kuang, L. L. (2008). Conceptualizing and assessing self-enhancement bias: A componential approach. *Journal of Personality and Social Psychology, 94*, 1062–1077. doi:10.1037/0022-3514.94.6.1062.
- Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin, 126*, 390–423. doi:10.1037/0033-2909.126.3.390.
- Luo, S., & Zhang, G. (2009). What leads to romantic attraction: Similarity, reciprocity, security, or beauty? Evidence from a speed-dating study. *Journal of Personality, 77*, 933–964. doi:10.1111/j.1467-6494.2009.00570.x.
- Meltzer, A. L., McNulty, J. K., Jackson, G. L., & Karney, B. R. (2014). Sex differences in the implications of partner physical attractiveness for the trajectory of marital satisfaction. *Journal of Personality and Social Psychology, 106*, 418–428. doi:10.1037/a0034424.
- Montoya, R. (2008). I'm hot, so I'd say you're not: The influence of objective physical attractiveness on mate selection. *Personality and Social Psychology Bulletin, 34*, 1315–1331. doi:10.1177/0146167208320387.
- Muthén, L. K., & Muthén, B. O. (2012). *Mplus user's guide* (Seventh ed.). Los Angeles, CA: Muthén & Muthén.
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of*

- Personality and Social Psychology*, 74, 1197–1208. doi:10.1037/0022-3514.74.5.1197.
- Paulhus, D. L., Harms, P., Bruce, M., & Lysy, D. C. (2003). The over-claiming technique: Measuring self-enhancement independent of ability. *Journal of Personality and Social Psychology*, 84, 890–904. doi:10.1037/0022-3514.84.4.890.
- Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, 66, 1025–1060. doi:10.1111/1467-6494.00041.
- Penke, L., Todd, P. M., Lenton, A., & Fasolo, B. (2007). How self-assessments can guide human mating decisions. In G. Geher, & G. F. Miller (Eds.), *Mating intelligence: Sex, relationships, and the mind's reproductive system* (pp. 37–75). Mahwah, NJ: Lawrence Erlbaum.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Raudenbush, S. W., Bryk, A. S., & Congdon, R. (2011). *HLM7*. Chicago, IL: Scientific Software.
- Rentzsch, K., & Schröder-Abé, M. (2015). Self-enhancement 2.0: An integrated approach to measuring dyadic self-enhancement at two levels. *Social Psychological and Personality Science*, 6, 251–258. doi:10.1177/1948550614558634.
- Robins, R. W., & Beer, J. S. (2001). Positive illusions about the self: Short-term benefits and long-term costs. *Journal of Personality and Social Psychology*, 80, 340–352. doi:10.1037/0022-3514.80.2.340.
- Schmitt, D. P. (2003). Universal sex differences in the desire for sexual variety: Tests from 52 nations, 6 continents, and 13 islands. *Journal of Personality and Social Psychology*, 85, 85–104. doi:10.1037/0022-3514.85.1.85.
- Taylor, S. E., Lerner, J. S., Sherman, D. K., Sage, R. M., & McDowell, N. K. (2003). Portrait of the self-enhancer: Well adjusted and well liked or maladjusted and friendless? *Journal of Personality and Social Psychology*, 84, 165–176. doi:10.1037/0022-3514.84.1.165.
- Todd, P. M., Penke, L., Fasolo, B., & Lenton, A. P. (2007). Different cognitive processes underlie human mate choices and mate preferences. *Proceedings of the National Academy of Sciences USA*, 104, 15011–15016. doi:10.1073/pnas.0705290104.
- Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man* (pp. 136–179). Chicago: Aldine-Atherton.
- von Hippel, W., & Trivers, R. (2011). The evolution and psychology of self-deception. *Behavioral and Brain Sciences*, 34, 1–16. doi:10.1017/S0140525X10001354.
- Willis, J., & Todorov, A. (2006). First impressions making up your mind after a 100-ms exposure to a face. *Psychological Science*, 17, 592–598. doi:10.1111/j.1467-9280.2006.01750.x.