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Abstract

Previous studies of organizational decision making demonstrate an abundance of positive biases directed toward highly attractive individuals. The current research, in contrast, suggests that when the person being evaluated is of the same sex as the evaluator, attractiveness hurts, rather than helps. Three experiments assessing evaluations of potential job candidates (Studies 1 and 3) and university applicants (Study 2) demonstrated positive biases toward highly attractive other-sex targets but negative biases toward highly attractive same-sex targets. This pattern was mediated by variability in participants' desire to interact with versus avoid the target individual (Studies 1 and 2) and was moderated by participants' level of self-esteem (Study 3); the derogation of attractive same-sex targets was not observed among people with high self-esteem. Findings demonstrate an important exception to the positive effects of attractiveness in organizational settings and suggest that negative responses to attractive same-sex targets stem from perceptions of self-threat.

Keywords

personnel selection, social interaction, attractiveness, human sex differences, stereotypes

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In virtually all societies and organizations people must make decisions about whom to hire, whom to promote, and whom to provide with resources. Because such decisions are often complex, they can be susceptible to biases based on peripheral characteristics of the person being evaluated (e.g., race, sex), even though such information often is outside the scope of what ought to be evaluated (S. C. Wheeler & Petty, 2001).

One of the most powerful characteristics known to bias social decision making is physical attractiveness. Many studies have examined the role attractiveness plays in social judgment and the overarching conclusion has been fairly straightforward: In almost every context, attractive people fare better than unattractive people (Eagly, Ashmore, Makhijani, & Longo, 1991; Langlois et al., 2000). For instance, good-looking persons are typically regarded as more amiable, humorous, intelligent, and socially skilled than less good-looking persons (Feingold, 1992). The biasing effects of attractiveness emerge even early in life and have been shown to enhance the evaluation of children's academic potential (Parks & Kennedy, 2007; Ritts, Patterson, & Tubbs, 1992).

Within organizational settings, there is substantial evidence that being attractive is associated with positive job-related outcomes (Hosoda, Stone-Romero, & Coats, 2003),

such as enhanced perceptions of job qualifications (Shannon & Stark, 2003; Watkins & Johnston, 2000), hiring and promotion decisions (Chiu & Babcock, 2002; Marlowe, Schneider, & Nelson, 1996), recommendations for receiving higher starting salaries (French, 2002), and evaluations of career potential (Morrow, McElroy, Stamper, & Wilson, 1990). The conclusion of this research is apparently quite clear: Being attractive is good for one's career.

Negative Responses to Attractive Same-Sex Individuals

Despite the generally positive effects of attractiveness, there are also studies indicating possible negative effects of being attractive (Anderson & Nida, 1978). Studies suggest, for

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example, that in romantic contexts, attractive same-sex individuals are subject to negative implicit evaluations (Maner, Miller, Rouby, & Gailliot, 2009). Such negative evaluations have implications for interpersonal derogation (Agthe & Spörrle, 2009; Försterling, Preikschas, & Agthe, 2007) and social avoidance (Agthe, Spörrle, & Försterling, 2008). However, although previous studies have investigated negative biases against attractive people within the context of close romantic relationships, few studies have examined whether such biases generalize to organizational settings.

The main prediction behind the current investigation was that, although organizational evaluations of other-sex individuals would reflect positive biases (consistent with most previous studies), evaluations of attractive same-sex individuals would not be subject to those positive biases and might even reflect negative biases. Negative vigilance toward attractive same-sex individuals has been shown to be both powerful and automatic (e.g., Maner et al., 2009; Maner, Gailliot, Rouby, & Miller, 2007). Consequently, implicit negative responses to highly attractive same-sex individuals might carry over into organizational settings (cf. Luxen & van de Vijver, 2006). Thus, in the current research we predicted that participants would respond in a positive way to attractive (compared to less attractive) other-sex individuals (e.g., by seeking to hire them or admit them into a university); in contrast, we expected that this effect would not generalize to same-sex individuals and, if anything, participants might respond in a negative way to highly attractive same-sex targets (e.g., by refraining from hiring them).

Mediating Effects of Desire for (or Against) Social Interaction

Our second main hypothesis was that effects of attractiveness would be mediated by people's desire to interact with the attractive individual (in the case of other-sex targets) or desire to avoid social interaction (in the case of same-sex targets). We expected that a desire to interact with attractive other-sex individuals would lead people to evaluate those individuals positively (e.g., for a scholarship or employment). Attractive people are thought to possess a variety of positive traits, and people should want to create situations that afford greater face-to-face interaction with such individuals. Consistent with this hypothesis, Lemay, Clark, and Greenberg (2010) showed that the attractiveness halo effect can be explained by the projection of interpersonal desires: People want to establish bonds with good-looking persons (e.g., as romantic partner or friend), and positive interpersonal evaluations of attractive people reflect that desire for social interaction.

There are reasons to expect, however, that such positive evaluations would fail to generalize to attractive same-sex individuals. Being around highly attractive same-sex individuals can elicit upward social comparisons, which could be psychologically painful to the self (e.g., Jones & Buckingham,

2005; Major, Testa, & Bylsma, 1991; Wood, 1989). Physical attractiveness is generally important to people's self-concepts (Brase & Guy, 2004; Thornton & Ryckman, 1991) and is a central dimension on which people compare themselves to others (L. Wheeler & Miyake, 1992). Because people typically seek to protect and enhance their self-esteem (Leary & Baumeister, 2000; Leary, Tambor, Terdal, & Downs, 1995), comparing oneself to highly attractive same-sex individuals may have detrimental effects on self-evaluation (Brown, Novick, Lord, & Richards, 1992; Gutierrez, Kenrick, & Partch, 1999; Myers & Crowther, 2009) and mood (Kenrick, Montello, Gutierrez, & Trost, 1993).

These negative upward comparisons should be more likely to occur for same-sex targets than other-sex targets because social comparison processes are greatest when the self is categorically similar to the target of comparison (Gilbert, Giesler, & Morris, 1995; Lockwood & Kunda, 1997) and gender is a highly relevant comparison standard (Brown et al., 1992; Parks-Stamm, Heilman, & Hearn, 2008). Moreover, attractive same-sex individuals, in particular, can threaten the security of one's relationships (Maner et al., 2009). Therefore, to protect one's self-esteem and one's relationships, people may want to avoid being around highly attractive same-sex individuals and might instead seek to derogate those individuals so as to avoid having to interact with them (Schwinghammer, Stapel, & Blanton, 2006; Tesser, 1988). Thus, in sum we predicted that (a) unlike attractive other-sex individuals, attractive same-sex individuals would not enjoy positively biased organizational evaluations, and might be targeted by negative biases; (b) this pattern would be mediated by variability in people's desire for versus against face-to-face social interaction with the attractive individual.

Moderating Effects of Self-Esteem

The current investigation also focused on individual differences expected to moderate responses to attractive targets. If negative biases against attractive same-sex individuals reflect threats to the self, then those biases should be more likely to occur among people who display greater susceptibility to self-threat than among those less vulnerable to self-threat. In the current research we focused on the moderating effect of self-esteem—an individual difference known to moderate people's responses to self-threat (e.g., Park & Maner, 2009).

People with high self-esteem possess the motivation, skills, and resources needed to buffer themselves against self-threat (Brown, Dutton, & Cook, 2001; Dodgson & Wood, 1998; Leary & Baumeister, 2000). Their generally secure attachment style allows them to turn to others for support in times of need (Griffin & Bartholomew, 1994; Murray, Holmes, MacDonald, & Ellsworth, 1998) and their self-certainty enables them to feel liked and accepted, even when faced with threatening social circumstances (Baumeister,

Tice, & Hutton, 1989). When faced with upward social comparisons, people high in self-esteem tend to display an assimilation effect (Jones & Buckingham, 2005; Makkar & Strube, 1995). When faced with a physical attractiveness threat, in particular, high self-esteem people tend to respond with resilience and self-certainty (Park & Maner, 2009).

In contrast, people with low self-esteem possess less favorable self-views and lack self-concept clarity and certainty (Blaine & Crocker, 1993; Campbell, 1990). Threatening social events tend to have greater negative impact on people with low self-esteem (Campbell, Chew, & Scratchley, 1991). Low self-esteem people respond to negative social information with feelings of shame and humiliation (Brown & Dutton, 1995). As a consequence, people who lack self-esteem are more inclined than those with high self-esteem to avoid threatening social circumstances (Park & Maner, 2009; Spencer, Josephs, & Steele, 1993).

Based on this literature, we anticipated that negative biases against attractive same-sex targets—biases thought to reflect negative responses to self-threat—would be greater among individuals with low self-esteem than among individuals with high self-esteem. We expected that having high self-esteem would buffer against threats posed by attractive same-sex targets; consequently, although those lower in self-esteem might display negative responses to attractive same-sex targets, we anticipated that people high in self-esteem would not.

Overview of the Current Studies

Three experiments tested hypothesized responses to attractive (vs. less attractive) target individuals within organizational decision-making contexts. We expected to observe patterns of bias wherein other-sex attractive targets would receive positive organizational evaluations, whereas attractive same-sex targets would not benefit from their attractiveness and, if anything, would be derogated. We also assessed whether this hypothesized three-way interaction among participant sex, target sex, and target's level of attractiveness would be mediated by variability in participants' desire for (vs. against) social interaction with the target (Studies 1 and 2). Study 1 tested hypotheses by asking participants to evaluate prospective job candidates. Study 2 had participants evaluate students ostensibly applying to attend the participants' university. Study 3 again had participants evaluate prospective job candidates and extended the first two studies by testing whether the hypothesized attractiveness biases would be moderated by participants' level of self-esteem.

Study 1

Employers generally review large numbers of résumés, which provide a first opportunity for appraising applicants' qualifications and determining who will receive invitations for further assessment. Study 1 examined the role of physical

attractiveness when people evaluate job application résumés in making job selection decisions. Our main prediction was that participants would prefer attractive to less attractive other-sex targets, whereas they would favor less attractive over highly attractive same-sex candidates. Moreover, we anticipated that this pattern would be mediated by participants' desire for social interaction with the candidate.

Method

Participants and procedure. The study was conducted with 223 female and 162 male participants. Mean age of respondents was 23 years for women and 24 years for men. Participants in this and all subsequent studies consisted of Caucasian students at a German university. Respondents were instructed to first read the résumé data sheet and cover letter and then to provide dependent measures. On completion, participants were debriefed and thanked. Participants were not compensated for their participation.

Design and materials. The experiment used a 2 (participant sex) \times 2 (target sex) \times 2 (attractive vs. less attractive target) between-subjects design. To manipulate the attractiveness of the candidate, we pretested a pool of more than 1,000 photographs derived from college yearbooks and freely available Internet sources. From this pool, 300 pictures were selected based on the following criteria: (a) all pictures were facial photographs, (b) the person depicted appeared to be in his or her 20s, (c) targets were of Caucasian descent,¹ (d) targets did not wear glasses, and (e) targets were not obese (to avoid specific biases associated with obesity; Finkelstein, Demuth, & Sweeney, 2007). Subsequently, the selected pictures were rated by 20 men and 20 women on a 10-point Likert-type scale ranging from 1 (*unattractive*) to 10 (*very attractive*). Targets whose ratings resulted in large standard deviations were discarded. Four target photos (one attractive man and woman; one relatively less attractive man and woman) were selected; the four targets chosen were between 7.00 and 9.00 for the two attractive candidates and between 2.00 and 4.00 for the two less attractive candidates. Standardized passport-sized black-and-white photographs were used for the study. The attractive photos depicted highly attractive individuals, but the photos were relatively formal and did not present targets as sexy or cute, in line with people's expectations about the type of photos used in German job application procedures.

The materials presented a job application profile. Participants read a cover letter and résumé ostensibly written as part of an application for the vacant position of an editor for the political and economic section of a well-known magazine in Germany. In addition to personal history and demographic data (e.g., date of birth, place of birth, common first and family names), the stimulus materials contained detailed descriptions of job-specific qualifications (e.g., computer skills), former work experience (e.g., internships), motivation, and interests of the candidate (e.g., photography). This information

Table 1. Descriptive Statistics for Dependent Variables in Study I

Sex of participant	Variable	Positive bias (toward attractive other-sex candidates)					Negative bias (toward attractive same-sex candidates)					
		Unattractive candidate		Attractive candidate		<i>d</i>	Unattractive candidate		Attractive candidate		<i>d</i>	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Male	Selection decision	5.41	2.11	6.77	3.10	0.53	6.19	2.13	5.35	2.36	-0.38	
	Desire for social interaction	5.35	1.84	6.66	1.49	0.79	6.45	1.50	5.42	1.89	-0.61	
	Average <i>d</i> for men's positive bias toward attractive other-sex candidates						0.66					
	Average <i>d</i> for men's negative bias toward attractive same-sex candidates											-0.50
Female	Selection decision	5.59	2.19	7.24	1.59	0.88	6.56	1.75	5.92	1.97	-0.34	
	Desire for social interaction	5.80	1.58	6.24	1.58	0.28	6.28	1.31	5.60	1.78	-0.43	
	Average <i>d</i> for women's positive bias toward attractive other-sex candidates						0.58					
	Average <i>d</i> for women's negative bias toward attractive same-sex candidates											-0.39
Overall	Average <i>d</i> for other-sex candidates						0.62					
	Average <i>d</i> for same-sex candidates											-0.44

Mean values, standard deviations, and Cohen's effect sizes *d* are represented for each comparison (*d* = 0.20 denotes a small, *d* = 0.50 a medium, and *d* = 0.80 a large effect according to Cohen, 1988). Higher means indicate more positive evaluations.

indicated that the candidate was fairly well qualified for the job. Only the candidate's sex and level of attractiveness varied across conditions.

Measures. To assess the extent to which participants would select the candidate for the job, they rated the likelihood on a 10-point scale from 1 (*unlikely*) to 10 (*very likely*) that they would recommend hiring the applicant if they were a member of the selection committee. After providing this rating, participants provided measures of their desire for social interaction with the candidate: Participants reported the degree to which they would like to (a) work directly with the candidate and (b) become friends with the candidate (1 = *not at all*, 10 = *very much*). The two variables were highly correlated, $r(382) = .68, p < .001$, and were averaged to create a composite measure of desire for social interaction. After providing those measures, participants rated the candidate's attractiveness (1 = *unattractive*, 10 = *very attractive*), providing a check of the attractiveness manipulation.

Results

Manipulation check. As expected, we observed (among other much smaller effects) a strong effect of the attractiveness manipulation on ratings of attractiveness, $F(1, 376) = 168.98, p < .001, \eta^2 = .29$. Participants rated the attractive candidates to be substantially more attractive ($M = 7.08, SD = 1.75$) than the less attractive ones ($M = 4.86, SD = 1.77$). The manipulation was effective for all combinations of participant sex and target sex.

Primary analyses. See Table 1 for descriptive data. We performed 2 (participant sex) × 2 (target sex) × 2 (target attractiveness: high vs. low) ANOVAs for both dependent variables (hiring preference, desire for social interaction). As predicted, we observed significant three-way interactions among participant sex, target sex, and attractiveness for selection decisions, $F(1, 376) = 25.70, p < .001, \eta^2 = .06$, and desire for social interaction, $F(1, 376) = 25.90, p < .001, \eta^2 = .06$. Further tests showed that, among both male and female participants, the sex of the target (other sex vs. same sex) interacted with the target's attractiveness ($F_s > 6.50, ps < .01$). Simple effect tests confirmed that although attractiveness significantly increased the degree to which participants wished to interact with and hire other-sex targets (both $ps < .005$), attractiveness significantly decreased the degree to which participants wished to interact with and hire same-sex targets (both $ps < .05$). Notably, the magnitude of these effects was equivalent for male and female participants (no significant interactions involving participant sex were observed). Finally, although the positive bias toward other-sex targets was somewhat greater ($d = 0.62$) than the negative bias against same-sex targets ($d = 0.44$), their strength did not differ significantly from one another.

Mediation analysis. To examine whether desire for social interaction with the candidate mediated participants' hiring preferences, we performed a regression-based mediation analysis based on the procedures described by Preacher and Hayes (2008); these analyses were based on 5,000 bootstrap

samples. We also used PRODCLIN2 (cf. MacKinnon, Fritz, Williams, & Lockwood, 2007) to compute asymmetric confidence intervals around the indirect effects; this procedure has been shown to maximize statistical power while optimizing Type I error rates. The three-way interaction term (participant sex \times target sex \times attractiveness of target) served as the predictor and hiring preference served as the criterion (all main effects and two-way interaction terms were included in the model). Participants' desire for social interaction with the candidate served as the putative mediating variable.

Consistent with our expectations, participants' desire for social interaction partially mediated the effect of the three-way interaction on their hiring preferences, point estimate of indirect effect = $-.1470$, bias corrected and accelerated 95% confidence interval (BCa 95% CI) = $-.2174$ to $-.0878$; confidence interval based on PRODCLIN2 (ASYMM 95% CI) = $-.2084$ to $-.0882$; Sobel $z = -4.78$, $p < .001$. The original effect of the three-way interaction on hiring preferences ($\beta = -.25$, $p < .001$) was substantially reduced (but still significant) when the mediator was included in the model ($\beta = -.11$, $p < .05$).

Discussion

Findings from Study 1 supported the predicted attractiveness-gender bias such that positive responses were observed for attractive other-sex job candidates, whereas negative responses were observed for attractive same-sex job candidates. Moreover, as expected, this pattern was statistically mediated by variability in participants' desire for social interaction. Notably, the biasing effects of attractiveness emerged despite salient and detailed job-relevant information about the candidate. The fact that the positive bias toward attractive other-sex candidates was somewhat larger than the negative bias against attractive same-sex candidates might to some extent explain why previous research has predominantly documented positive responses to attractive individuals. Nonetheless, in the current study, negative biases toward attractive same-sex targets were observed as well.

Study 2

Study 2 was designed to extend the findings of Study 1. First, instead of a job selection context, we examined the effects of target attractiveness within the context of university admissions; participants evaluated applicants to assess their viability for admission into their university. Second, rather than using static photos to manipulate target attractiveness, we used simulated videotaped interviews in a laboratory setting.

Method

Participants and procedure. A total of 265 psychology students (108 men and 157 women) were recruited on a university

campus and selected on the basis of the same criteria as in Study 1. Mean ages were 22 years for women and 24 years for men. Participants were invited to the laboratory, where they were randomly assigned to one of four experimental conditions. The study used a 2 (sex of participant) \times 2 (sex of target) \times 2 (attractive vs. less attractive target) between-subjects design. Participants viewed a videotaped interview of a student applying for acceptance into the university. After viewing the video, participants completed dependent measures and anonymously returned the questionnaire by putting it in a sealed mailbox. Participants received course credit as compensation for their participation.

Materials. To manipulate the attractiveness and sex of the university applicant, we used mock graduate recruitment interviews in which professional actors played the roles of the applicants and the interviewer. The video presentation was 5 minutes in length and depicted a candidate who responded to questions posed by an interviewer. Four separate videotapes were constructed, one for each target, and each tape included identical interview scripts. All environmental variables (e.g., the room, the light, etc.) were held constant.

The actors who played the candidates were unaware of the study's purpose. The four actors were rated for attractiveness on a 10-point Likert-type scale ranging from 1 (*unattractive*) to 10 (*very attractive*) by 20 male and 20 female university students. Results confirmed that the attractive applicants ($M_{\text{Male}} = 5.56$, $SD_{\text{Male}} = 1.94$; $M_{\text{Female}} = 7.03$, $SD_{\text{Female}} = 1.76$) were significantly more attractive than the less attractive applicants ($M_{\text{Male}} = 3.62$, $SD_{\text{Male}} = 1.89$; $M_{\text{Female}} = 4.58$, $SD_{\text{Female}} = 1.85$; both $ps < .001$).

To ensure that the part of the interviewer was identical across conditions, the video was edited such that the segments showing the interviewer were the same in each condition; only the applicants differed across conditions. On each tape, the interviewer posed a number of questions (e.g., regarding reasons for the applicant's interest in the field, the candidate's knowledge about the course of studies, and his or her record of achievement, educational and internship experiences, job aspirations, personal assets, and extracurricular activities), which were answered by the candidate with identical wording across conditions. Moreover, the actors were trained so that their facial expressions and gestures were as similar as possible.

To disguise the hypothesis, participants were told that the study was designed to explore whether students' evaluations of peers' qualifications and academic potential would differ from assessments made by faculty. After viewing the videotape, participants indicated the extent to which they would recommend acceptance if they were a student member of the selection committee (1 = *unlikely* to 10 = *very likely*). To assess their desire for social interaction with the applicant, participants rated both the degree to which they would want to work with and become friends with the applicant; the two items correlated highly, $r(263) = .77$, $p < .001$, and were

Table 2. Descriptive Statistics for Dependent Variables in Study 2

Sex of respondent	Variable	Positive bias (toward attractive other-sex candidates)					Negative bias (toward attractive same-sex candidates)					
		Unattractive candidate		Attractive candidate		<i>d</i>	Unattractive candidate		Attractive candidate		<i>d</i>	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Male	Selection decision	4.54	2.25	7.77	1.38	1.79	6.96	1.99	6.12	2.41	-0.39	
	Desire for social interaction	4.17	1.84	7.30	1.57	1.87	5.58	1.85	4.37	2.46	-0.57	
	Average <i>d</i> for men's positive bias toward attractive other-sex candidates						1.83					
	Average <i>d</i> for men's negative bias toward attractive same-sex candidates											-0.48
Female	Selection decision	5.94	2.08	7.73	1.26	1.06	7.22	1.93	6.52	1.88	-0.37	
	Desire for social interaction	4.08	1.80	6.26	1.50	1.34	5.34	1.91	4.91	1.92	-0.23	
	Average <i>d</i> for women's positive bias toward attractive other-sex candidates						1.20					
	Average <i>d</i> for women's negative bias toward attractive same-sex candidates											-0.29
Overall	Average <i>d</i> for other-sex candidates						1.49					
	Average <i>d</i> for same-sex candidates											-0.36

Mean values, standard deviations, and Cohen's effect sizes *d* are represented for each comparison (*d* = 0.20 denotes a small, *d* = 0.50 a medium, and *d* = 0.80 a large effect according to Cohen, 1988). Higher means indicate more positive evaluations.

averaged to form an index of desire for social interaction. To provide a check on the attractiveness manipulation, participants rated the applicant's level of attractiveness (1 = *unattractive*, 10 = *very attractive*).

Results

Manipulation check. A 2 (participant sex) × 2 (applicant sex) × 2 (level of target attractiveness) ANOVA yielded (among other much smaller effects) a strong main effect for attractiveness, $F(1, 257) = 118.67, p < .001, \eta^2 = .29$. Participants rated the attractive applicants to be substantially more attractive ($M = 6.43, SD = 2.00$) than the less attractive applicants ($M = 3.75, SD = 2.05$). This effect was significant for all combinations of participant sex and applicant sex.

Primary analyses. See Table 2 for descriptive data. Two 2 (participant sex) × 2 (target sex) × 2 (level of target attractiveness) ANOVAs for the two dependent variables (admission decision, desire for social interaction) indicated a main effect of attractiveness for admission decisions, $F(1, 257) = 13.04, p < .001, \eta^2 = .04$, and desire for social interaction, $F(1, 257) = 15.22, p < .001, \eta^2 = .05$, such that highly attractive targets were evaluated more positively than less attractive targets.

More important, however, is that we observed significant three-way interactions among participant sex × target sex × target attractiveness; this interaction was observed for both admission decisions, $F(1, 257) = 46.63, p < .001, \eta^2 = .15$, and desire for social interaction, $F(1, 257) = 54.75, p < .001, \eta^2 = .16$. Further tests showed that, among both male and

female participants, the sex of the target (other sex vs. same sex) interacted with the target's attractiveness ($F_s > 17.50, ps < .001$). Simple effect tests confirmed that although attractiveness significantly increased the degree to which participants wished to interact with and offer admission to other-sex targets (both $ps < .001$), attractiveness significantly decreased the degree to which participants wished to interact with and offer admission to same-sex targets (both $ps < .05$). Notably, the magnitude of these effects was equivalent for male and female participants (no significant interactions involving participant sex were observed). Finally, the positive attractiveness bias toward other-sex targets was significantly stronger ($d = 1.49$) than the negative attractiveness bias against same-sex targets ($d = 0.36$); this was the case for both dependent variables (both $ps < .001$). Thus, although participants both advantaged attractive other-sex targets and derogated attractive same-sex targets, the former effect was relatively stronger than the latter.

Mediation analysis. To examine whether desire for social interaction with the applicant mediated participants' acceptance decisions, we performed a mediation analysis using the same approach as in Study 1. The three-way interaction term (participant sex × target sex × attractiveness of target) served as the predictor and acceptance preferences served as the criterion. Participants' desire for social interaction with the candidate served as the putative mediating variable. Consistent with our expectations, analyses based on 5,000 bootstrap resamples confirmed a significant indirect effect for desire for social interaction (point estimate of indirect effect = $-.4014$,

BCa 95% CI = $-.5704$ to $-.2728$; ASYMM 95% CI = $-.5538$ to $-.2688$). The three-way interaction ($\beta = -.38$, $p < .001$) was substantially reduced when the mediator was included ($\beta = -.19$, $p < .01$; Sobel $z = -5.26$, $p < .001$).

Discussion

As in Study 1, participants in Study 2 displayed very different patterns of attractiveness bias toward other-sex and same-sex university applicants: Better looking other-sex candidates were favored over less attractive candidates, whereas attractive same-sex applicants were disadvantaged relative to less attractive targets. Consistent with the findings of Study 1, participants' desire for social interaction was again found to mediate admission decisions. It is worth noting that, similar to in Study 1, the positive bias toward attractive other-sex targets was relatively larger than the negative bias against attractive same-sex targets.

Study 3

In Study 3, we extended findings of the first two studies by examining the moderating effect of self-esteem. We again expected to observe different responses to attractive other-sex versus same-sex targets. However, we expected that high self-esteem would serve as a buffer against threats posed by attractive same-sex individuals. That is, we expected high self-esteem to moderate the pattern of bias, such that it would be observed only among those with low and average levels of self-esteem, but not among those with high self-esteem.

Method

Participants and procedure. The study was conducted with 63 female and 64 male students who were approached on campus. Their mean ages were 20 years (women) and 21 years (men). Participants were instructed to read materials describing the occupational success of a target person; the target varied in sex and level of attractiveness. Participants were instructed to evaluate the person as a potential job candidate and then to complete a questionnaire providing dependent measures. On completion, participants were debriefed and thanked. Participants were not compensated for their participation.

Design and materials. The experiment used a 2 (participant sex) \times 2 (target sex) \times 2 (attractive vs. less attractive target) between-subjects design. Standardized passport-sized black-and-white photographs were used for the study. To increase the generalizability of the findings, we used new target photos selected from the initial picture pool (see Study 1 for details). An independent group of 28 participants provided pretest ratings of target attractiveness using a 10-point Likert-type scale ranging from 1 (*unattractive*) to 10 (*very attractive*). Highly attractive female targets ($M = 8.11$, $SD = 1.40$)

were rated as substantially better looking than less attractive female targets ($M = 3.00$, $SD = 1.70$), $t(27) = 12.18$, $p < .001$, and highly attractive male targets ($M = 8.07$, $SD = 1.18$) were rated as considerably better looking than less attractive male targets ($M = 3.89$, $SD = 1.91$), $t(27) = 8.86$, $p < .001$.

The questionnaire described the early career success of a person working in the field of creative design. In addition to being presented with some biographical information, the participants were also informed that the target person was currently working as a creative director of an advertising company. Participants were asked to evaluate the target as a potential job candidate. This information was identical across conditions; the only thing that varied across conditions was the candidate's sex and level of attractiveness.

Measures. A critical aspect of evaluating job candidates is assessing the extent to which their previous accomplishments can be attributed to positive job-relevant characteristics (e.g., ability). Therefore, participants were asked to indicate on four items ranging from 0 (*not at all*) to 6 (*to a very large extent*) the extent to which the target's career successes were a function of the person's (a) ability, (b) intelligence, (c) talent, and (d) skills ($\alpha = .80$). Participants then rated the candidate's attractiveness with four items (attractive, handsome, physically attractive, beautiful) ranging from 0 (*not at all*) to 6 (*to a very large extent*), which provided a check of the attractiveness manipulation ($\alpha = .93$). At the end of the questionnaire, participants completed the Rosenberg Self-Esteem Scale (Rosenberg, 1965; $\alpha = .79$), a widely used measure of self-esteem; higher scores indicate higher self-esteem.

Results

Manipulation check. As expected, we observed (among other much smaller effects) a strong effect of the attractiveness manipulation on ratings of attractiveness, $F(1, 119) = 121.84$, $p < .001$, $\eta^2 = .50$. Participants rated the attractive candidates to be substantially more attractive ($M = 4.31$, $SD = 0.90$) than the unattractive ones ($M = 2.48$, $SD = 1.01$). The manipulation was effective for all combinations of participant sex and target sex.

Primary analyses. See Table 3 for descriptive data. We performed a 2 (participant sex) \times 2 (target sex) \times 2 (target attractiveness: high vs. low) ANOVA on target evaluations. As predicted, we observed a significant three-way interaction among participant sex, target sex, and attractiveness for target evaluations, $F(1, 119) = 4.75$, $p < .05$, $\eta^2 = .04$. Although the pattern was similar to that observed in Studies 1 and 2, the constituent two-way interactions were relatively weaker than in the previous studies. The two way interaction between target sex and attractiveness was marginally significant for male participants, $F(1, 60) = 2.63$, $p = .06$, and only approached significance among female participants, $F(1, 60) = 1.39$, *ns*. For other-sex targets, high levels of attractiveness significantly increased the degree to which participants positively evaluated the target ($p < .05$). No

Table 3. Descriptive Statistics for Target Evaluations in Study 3

Sex of respondent	Positive bias (toward attractive other-sex targets)					Negative bias (toward attractive same-sex targets)				
	Unattractive target		Attractive target		<i>d</i>	Unattractive target		Attractive target		<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Male	3.52	0.91	4.26	0.61	1.01	3.69	0.80	3.64	0.98	-0.05
Female	3.78	0.83	3.98	0.73	0.27	4.12	0.90	3.82	0.88	-0.34
Overall										
Average <i>d</i> for other-sex targets					0.64					
Average <i>d</i> for same-sex targets										-0.20

Mean values, standard deviations, and Cohen's effect sizes *d* are represented for each comparison (*d* = 0.20 denotes a small, *d* = 0.50 a medium, and *d* = 0.80 a large effect according to Cohen, 1988). Higher means indicate more positive evaluations.

significant effect of attractiveness was observed for same-sex targets, although the trend was in the opposite direction from that of other-sex targets ($p > .20$) and differed significantly ($p < .05$) from the effect for other-sex targets. No significant interactions involving participant sex were observed. The positive bias toward other-sex targets was somewhat stronger ($d = 0.64$) than the negative bias against same-sex targets ($d = 0.20$).

Moderating effects of self-esteem. To evaluate moderating effects of self-esteem, we included self-esteem scores in the regression model and assessed whether the observed three-way interaction among participant sex, target sex, and level of attractiveness was moderated by self-esteem. Indeed, it was: We observed a significant four-way interaction, $\beta = .20$, $p < .05$. As recommended by Aiken and West (1991), follow-up analyses examined the strength of the attractiveness-gender bias (the three-way interaction) at low levels of self-esteem (1 *SD* below the mean), moderate levels of self-esteem (at the mean of self-esteem), and at high levels of self-esteem (1 *SD* above the mean). As expected, and consistent with the previous studies, the attractiveness-gender bias was observed strongly among participants with low self-esteem, $\beta = -.39$, $p < .005$. The pattern was also observed (although to a somewhat lesser degree) among participants with moderate (mean) levels of self-esteem, $\beta = -.19$, $p = .05$. In contrast, among participants high in self-esteem, the three-way interaction was eliminated, $\beta = .01$, *ns*.

Meta-analysis. The similar design of the three studies allowed us to meta-analyze their results. We examined across studies the statistical significance and size of the observed effects, weighting each study by its *df* (Rosenthal & Rosnow, 1991). Across the three studies, the test of the two-way interaction between target sex and target attractiveness was significant for both female participants, $z = 5.97$, $p < .001$, $r = .28$, and male participants, $z = 5.06$, $p < .001$, $r = .31$. Moreover, across the three studies the positive impact of target attractiveness for other-sex targets was significant, $z = 6.39$, $p < .001$, $r = .41$, as was the negative impact of target attractiveness for same-sex targets, $z = 3.23$, $p < .001$,

$r = .16$. The size of the positive bias toward attractive other-sex targets was relatively larger than the size of the negative bias against attractive same-sex targets, $z = 2.24$, $p < .05$.

Discussion

Consistent with the previous two studies, participants in Study 3 were biased toward positively evaluating highly attractive (compared with less attractive) other-sex job candidates. Although participants were not significantly biased against attractive same-sex job candidates (as they were in the previous two studies), the data trended in that direction; it is clear at least that positive evaluations of other-sex targets did not generalize to evaluations of same-sex targets. A meta-analysis of the three studies confirmed the presence of positive biases toward attractive members of the other sex but negative biases against attractive members of participants' own sex.

This study extended the previous studies by demonstrating the moderating effects of participants' self-esteem. Although attractiveness differentially affected evaluations of other- versus same-sex job candidates among individuals with low and moderate self-esteem, this pattern was eliminated among individuals with high self-esteem. This is consistent with evidence suggesting that high self-esteem helps buffer people against the presence of social threats and upward social comparisons.

General Discussion

The preference for physically attractive individuals is a well-documented bias in social psychology. It extends beyond the realm of personal relationships and has implications for organizational decision making and the selection of employees, students, and colleagues. The current research is some of the first to demonstrate that although positive biases are directed toward attractive members of the other sex, negative social biases may be directed toward attractive members

of one's own sex. In none of the current studies were same-sex targets advantaged by being attractive, and in two of the three studies they were significantly disadvantaged. Participants were less likely to recommend highly attractive same-sex individuals (compared to average-looking individuals) for a job and for admission into a university. This research thus demonstrates an important exception to the often-cited "what is beautiful is good" attractiveness stereotype (Eagly et al., 1991).

Two pieces of evidence from the current studies suggest that participants' responses were driven primarily by a desire to avoid perceived self-threats posed by attractive same-sex targets. First, analyses indicated that different responses to attractive other-sex versus same-sex targets were mediated by variability in participants' desire for versus against face-to-face social interaction (cf. Luxen & van de Vijver, 2006). That is, whereas participants displayed a strong desire to be with attractive members of the other sex, they displayed a desire to avoid interacting with attractive members of the same sex. This desire for social avoidance is consistent with the hypothesis that attractive same-sex targets are perceived as a threat.

Second, responses in the current research were moderated by participants' level of self-esteem (Study 3). The differentiated responses to attractive same-sex versus other-sex participants were observed only among those with low to moderate levels of self-esteem. This pattern was eliminated among participants high in self-esteem. People high in self-esteem are relatively less vulnerable to the presence of possible self-threats, and their high self-esteem buffers them against the negative consequences of upward social comparison (e.g., Jones & Buckingham, 2005). Thus, whereas low self-esteem people may be motivated to avoid the threatening presence of highly attractive same-sex individuals, high self-esteem people appear less concerned about the possible threats those individuals pose. Hence, the current findings are consistent with the hypothesis that negative responses to attractive same-sex individuals in an organizational setting are driven by people's desire to avoid perceived self-threats (cf. Agthe, Spörrle, & Maner, 2010).

The current findings are consistent with models of social comparison and self-esteem. Tesser's (1988) self-evaluation maintenance model, for example, posits that one way to protect the self in response to threatening social comparisons is to derogate the source of the threat (Salovey, 1991; Schwinghammer et al., 2006). Defensive responses are particularly likely when the dimension of social comparison is important to one's self definition, and attractiveness tends to be a trait that people readily incorporate into one's self-concept (e.g., Crocker, Luthanen, Cooper, & Bouvrette, 2003; also see Gutierrez et al., 1999). The current findings are also consistent with the "beauty is beastly effect" (Heilman & Saruwatari, 1979) and research on complementary stereotypes (Jost & Kay, 2005; Kay & Jost, 2003), in that the devaluation of upward comparison targets might alleviate

social threat. For instance, believing that attractive same-sex targets are less competent might psychologically buffer against any thoughts about one's own relative lack of attractiveness.

Why have previous studies on attractiveness stereotypes generally failed to report evidence for a bias against attractive same-sex targets? A review of the literature provides three possible explanations: (a) previous studies have not always attended to possible differences between perceptions of same-sex versus other-sex targets (e.g., Nicklin & Roch, 2008; Riniolo, Johnson, Sherman, & Misso, 2006), (b) some previous studies have used targets (e.g., children) who are unlikely to elicit perceptions of competition or threat in the participant (Langlois, Ritter, Casey, & Sawin, 1995), and (c) many studies have only compared *relatively* attractive to relatively less attractive targets and have not examined responses to targets who are particularly *high* in attractiveness (e.g., Jawahar & Mattsson, 2005)—targets for whom negative responses by same-sex persons should be most pronounced. One further explanation is suggested by the current findings: In each study, the positive bias toward attractive other-sex targets was relatively larger in magnitude than the negative bias against attractive same-sex targets. This could have had the consequence of obscuring negative responses to same-sex targets in previous studies.

Implications for Organizational Decision Making

Although negative responses to highly attractive same-sex individuals are well documented in the close relationships literature, the current research is some of the first to demonstrate that such responses extend to organizational judgment and decision making. As such, these findings have implications for potential biases in the way organizations hire or accept people, make decisions about salaries and promotions, and so on.

Organizational decision makers often are faced with difficult choices among candidates who possess similar qualifications, and even small preferential biases based on appearance might end up having a critical impact. Recent trends in personnel selection (such as web-based recruitment or early stage prescreening of candidates) can increase the already large numbers of selection decisions being made; this could further contribute to "information overload" and potentially increase people's reliance on peripheral characteristics such as physical appearance (Lievens, van Dam, & Anderson, 2002), as opposed to more germane job-related traits such as competence and experience.

Biased organizational decisions may have a strong economic impact not only on society but also on individuals, especially with regard to career and educational opportunities. Although previous researchers have thoroughly considered the consequences of giving advantages to highly attractive individuals, potential disadvantages experienced

by attractive individuals also warrant attention. For example, to the extent that an attractive candidate might be passed over for a job or a salary increase by a boss who feels threatened by the candidate's appearance, efforts should be made to compensate for such biases.

In several countries (e.g., Austria, Denmark, Germany, Slovakia, Switzerland), it is standard practice to include a picture with one's résumé when applying for a job. This might make one's physical appearance especially salient, which could lead to either positive or negative consequences, depending on the genders of the evaluator and the person being evaluated. One recommendation, therefore, would be to discourage the use of gender and attractiveness information (in form of pictures) during the application process. Even though this does not preclude the influence of bias on subsequent interpersonal processes (e.g., face-to-face selection interviews, employee evaluations, or promotion decisions), at least at this early stage of organizational entry, biases based on appearance or gender could be reduced.

In addition, having job applicants evaluated by both same-sex and other-sex assessors could lessen the impact of appearance-based biases. Moreover, people might be unaware of the factors that bias their decisions, and people generally tend to believe that their own judgments are not susceptible to prejudice (Ehrlinger, Gilovich, & Ross, 2005). Therefore, it may be important to inform them of their propensity for bias, as awareness of biases can counter some of their effects.

It is interesting to note that no gender differences were observed in the current studies. Some previous studies imply that attractiveness might influence judgments of women more than it does men (e.g., Li & Kenrick, 2006). Nevertheless, the current findings are consistent with other evidence suggesting that attractiveness is valued in both men and women (Maner et al., 2003; Maner et al., 2007) and, therefore, highly attractive same-sex people can be threatening to individuals of both sexes.

Limitations and Future Directions

Limitations of the current findings provide useful avenues for future research. For example, although we have provided some evidence for moderating effects of individual differences (i.e., self-esteem), we have fallen short of investigating the full range of individual differences likely to affect the way people respond to others' appearance. People vary in terms of the importance they place on physical appearance (e.g., Crocker et al., 2003), and we suspect that attractiveness-based biases may be most prominent among people who place relatively high importance on appearance and incorporate it into their self-concept. This hypothesis could be fruitfully explored in future studies.

Future research would also benefit from examining additional moderating variables pertaining to the targets of people's judgments. To provide strong tests of our hypotheses, we used university-aged targets. Future research should

consider the extent to which findings would generalize to contexts in which evaluators are much older or younger than the targets (and thus might be less inclined to perceive attractive people as providing social opportunities or threats). In addition, research might profitably explore the extent to which these findings hold in organizational contexts involving strong gender roles; gender roles might lead to gender-based biases, in addition to or instead of attractiveness biases.

Because the current studies used samples of university participants, future research would benefit from investigating the role of appearance-based biases within extant organizational settings. It will be important to evaluate the extent to which people in positions of power display the types of biases observed in the current research. Moreover, future studies might profitably explore ways in which attractiveness-related biases could translate into effects on large-scale organizational decisions including political elections, job-related outcomes, or educational opportunities. The current research provides a valuable springboard from which to undertake such investigations.

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Note

1. Because findings indicate that race can influence interpersonal evaluations (Prewett-Livingston, Feild, Veres, & Lewis, 1996), we kept race constant between participants and targets.

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