



4-1-2008

High Status Men (But Not Women) Capture the Eye of the Beholder

C. Nathan DeWall

University of Kentucky, nathan.dewall@uky.edu

Jon K. Maner

Florida State University

Follow this and additional works at: https://uknowledge.uky.edu/psychology_facpub



Part of the [Evolution Commons](#), and the [Social Psychology and Interaction Commons](#)

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Repository Citation

DeWall, C. Nathan and Maner, Jon K., "High Status Men (But Not Women) Capture the Eye of the Beholder" (2008). *Psychology Faculty Publications*. 150.

https://uknowledge.uky.edu/psychology_facpub/150

This Article is brought to you for free and open access by the Psychology at UKnowledge. It has been accepted for inclusion in Psychology Faculty Publications by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

High Status Men (But Not Women) Capture the Eye of the Beholder

Digital Object Identifier (DOI)

<https://doi.org/10.1177/147470490800600209>

Notes/Citation Information

Published in *Evolutionary Psychology*, v. 6, issue 2, p. 328-341.

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 3.0 License (<http://www.creativecommons.org/licenses/by-nc/3.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access page(<http://www.uk.sagepub.com/aboutus/openaccess.htm>).

Original Article

High Status Men (But Not Women) Capture the Eye of the Beholder

C. Nathan DeWall, Department of Psychology, University of Kentucky, Lexington, KY, USA. Email: nathan.dewall@uky.edu (Corresponding author)

Jon K. Maner, Department of Psychology, Florida State University, Tallahassee, FL, USA.

Abstract: Two studies tested the hypothesis that people attend preferentially to high status men (but not women). Participants overestimated the frequency of high status men in rapidly presented arrays (Experiment 1) and fixated their visual attention on high status men in an eye-tracking study (Experiment 2). Neither study showed any evidence of preferential attention to high status women, but there was evidence that physically attractive women captured attention. The results from both studies support evolutionary theories regarding differential prioritization of social status and physical attractiveness in men versus women. These findings illustrate how examination of early-in-the-stream social cognition can provide useful insights into the adapted mind.

Keywords: mating, attention, social status, physical attractiveness.

Introduction

Social environments can be extremely complex. As a result, people are unable to attend to all the social stimuli around them at any given time. Because attentional capacity is limited, people attend preferentially to aspects of the social environment that are closely linked to solving specific, adaptively relevant problems (Ackerman, Shapiro, Neuberg, et al., 2006; Duncan, Park, Faulkner, et al., 2007; Öhman and Mineka, 2001). People attend to snakes more quickly than to flowers; spiders capture attention more so than do mushrooms; and attention is drawn to angry faces faster than to neutral faces (Öhman, Lundqvist, and Esteves, 2001; Öhman, Flykt, and Esteves, 2001). Snakes, spiders, and angry faces share little similarity in terms of their composition, but they all pose serious threats to fundamental goals of survival and reproduction. As a result, snakes, spiders, and angry faces are processed preferentially and tend to capture people's attention.

Just as people are motivated to avoid threats, they are motivated to approach other people who may facilitate the fulfillment of reproductive and mating goals. Within the domain of mating, for example, a growing body of literature has demonstrated that

physically attractive members of the opposite sex capture attention more so than do people who are average in physical attractiveness (e.g., Maner, Kenrick, Becker, et. al, 2003; Maner, Gailliot, and DeWall, 2007). This is consistent with a large number of evolutionarily inspired studies demonstrating that physical attractiveness cues reflect reproductively positive qualities such as good genes, health, and fertility (Buss and Schmitt, 1993; Gangestad and Simpson, 2000; Gangestad and Thornhill, 1997; Haselton and Gangestad, 2006; Kenrick and Keefe, 1992; Shackelford and Larsen, 1999; Singh, 1993). People are especially attentive to physically attractive women (e.g., Maner et al., 2007), consistent with evidence that physical attractiveness tends to weigh more heavily in mating-related judgments of women than in mating-related judgments of men (e.g., Li and Kenrick, 2006).

Although several studies have documented attentional bias toward signs of physical attractiveness, few studies have investigated attentional processing of other mating-related information. The current work investigated whether attention might be captured quickly by people displaying cues to social status, a trait that is of considerable importance in the domain of human mating (e.g., Buss, 1989; Sadalla, Kenrick, and Vershure, 1987). Our overarching prediction was that attention would be quickly and powerfully captured by signs of social status and, moreover, that attention to signs of social status would depend on the sex of the target individual. Within the context of mating, social status typically is prioritized in mating-related judgments of men more than judgments of women (e.g., Li, Bailey, Kenrick, and Linsenmeier, 2002). Therefore, we hypothesized that people would preferentially attend to high status men, whereas they would be less inclined to preferentially attend to high status women. We also predicted that high status men (but not women) would capture attention among both male and female perceivers, because high status men represent strong intrasexual competitors for male perceivers and desired mating partners for female perceivers.

Experiment 1 provided an initial test of the hypothesis that men displaying cues to social status capture attention. We presented participants with arrays of target photos in which half the targets displayed cues to high social status, whereas the other half of the targets displayed cues related to relatively low social status. After viewing each array, participants estimated the percentage of high status target photos contained within each array (see Maner et al., 2003, for similar methods). To evaluate how much particular target photos might quickly capture participants' attention, half of the participants were given a small amount of time (4 seconds) to process all of the target photos (attention limiting condition). The other half of the participants were given adequate time to attend to and process each target photo (control condition). Frequency estimates under conditions of limited attention should reflect the targets to which attention is drawn most strongly. Therefore, we expected that, compared to control participants, participants under conditions of limited attentional capacity would estimate greater proportions of high status men. In contrast, we did not expect those participants to estimate greater proportions of high status female targets.

Materials and Methods: Experiment 1

Participants. One hundred seventy-six undergraduates (116 women and 60 men) participated in exchange for course credit.

Materials and procedure. Participants arrived at a large classroom for a study concerning the relationship between personality and visual processes. After giving informed consent, participants viewed two arrays of photographs that were presented on a large video screen. Each array contained twelve targets. One array contained all male targets, and the other array contained all female targets (the order of presentation was counterbalanced). Stimuli were constructed so that the targets displayed either high or low levels of social status. Consistent with previous studies (e.g., Townsend and Levy, 1990), social status was manipulated by varying the dress of each target. A digital photo editing program was used to combine college-age faces with bodies that contained either professional attire (i.e., men and women in gender-appropriate business suits) or non-professional attire (i.e., men and women in gender-appropriate sweat suits). In each array, six targets displayed high status attire and six targets displayed low status attire. An independent group of undergraduates pre-rated the targets for their level of apparent social status and physical attractiveness. The status manipulation was equally strong for male and female targets. The mean level of social status for the high status male, high status female, low social status male, and low social status female targets were 7.77, 7.59, 3.96, and 3.77, respectively (measured with a 9-point Likert scale). Targets were normed for size, brightness, background, contrast. Male and female targets were equated on physical attractiveness.

By random assignment, half of the participants were assigned to the attention limiting condition, whereas the other half of the participants were assigned to the control condition. Participants in the attention limiting condition viewed all 12 targets simultaneously for only four seconds. Participants in the control condition, in contrast, viewed each target individually for four seconds. Thus, the design of the study was a 2 (sex of target) x 2 (presentation condition: attention limited vs. control) x 2 (sex of participant) mixed design.

After viewing each array, participants estimated the percentage of targets they had noticed within the array that were “high social status,” “socially dominant,” and “respected by others.” These three items were embedded within irrelevant distracter items (e.g., “eyes open,” “smiling”). The internal reliability of the three items was adequate ($\alpha = .62$ and $.63$ for male and female targets, respectively) and therefore scores on the three items were averaged to create measures indicating the estimated frequency of male and female targets high in social status. After providing their frequency estimates, participants were debriefed and dismissed.

Results: Experiment 1

We used mixed-design ANOVA to test whether participants' frequency estimations of high status targets differed as a function of target sex and presentation method. Results revealed significant main effects of presentation condition, $F(1, 174) = 5.88, p < .02$, and target sex, $F(1, 174) = 24.71, p < .001$. These main effects were qualified by a significant target sex by presentation method interaction, $F(1, 174) = 89.14, p < .001$ (see Figure 1). Participants estimated greater percentages of high status men when their attentional capacity was limited, compared to when they had ample time to focus their attention on each individual image, $F(1, 174) = 58.99, p < .001$. An opposite, though relatively weaker, pattern was found for estimates of high status women, such that limiting participants' attention led them to estimate lower percentages of high status women, $F(1, 174) = 9.23, p = .003$.

Although not directly related to our hypothesis, we also analyzed responses to the items "eyes open" and "smiling." For the item "eyes open," we observed only a significant main effect of target sex, $F(1, 174) = 8.92, p = .003$, such that participants estimated more male targets having open eyes compared to female targets. For the item "smiling," we observed only significant main effects of target sex, $F(1, 174) = 8.92, p = .003$, and presentation method, $F(1, 174) = 4.72, p = .03$. These main effects were qualified by a significant target sex by presentation method interaction, $F(1, 174) = 5.80, p < .02$. Compared to participants who had ample time to focus their attention on each individual image, participants estimated lower percentages of smiling men when their attentional capacity was limited, $F(1, 174) = 11.28, p = .001$. No such effect was observed for female targets, $F < 1$. We observed no significant effects associated with participant sex. Means, standard deviations, and confidence intervals are presented in Table 1.

Figure 1. Limiting participants' attentional capacity by rapidly presenting multiple social targets simultaneously (compared to when each target was presented individually), led to greater frequency estimates of high status men, but not high status women.

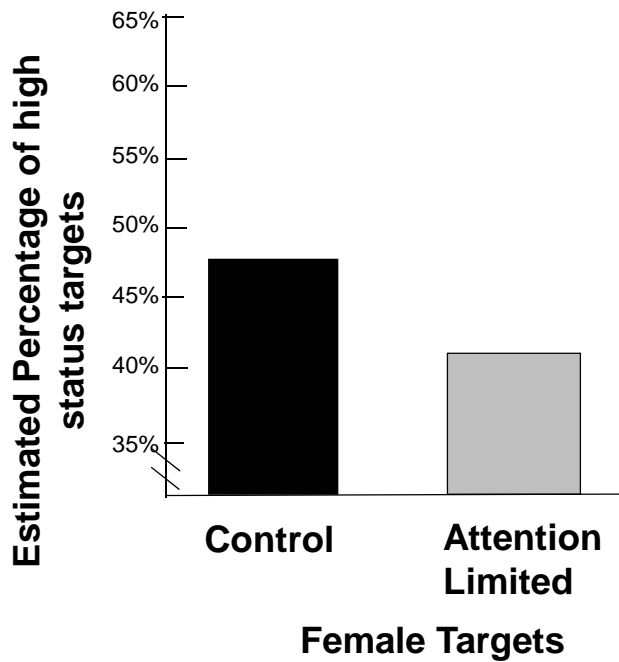
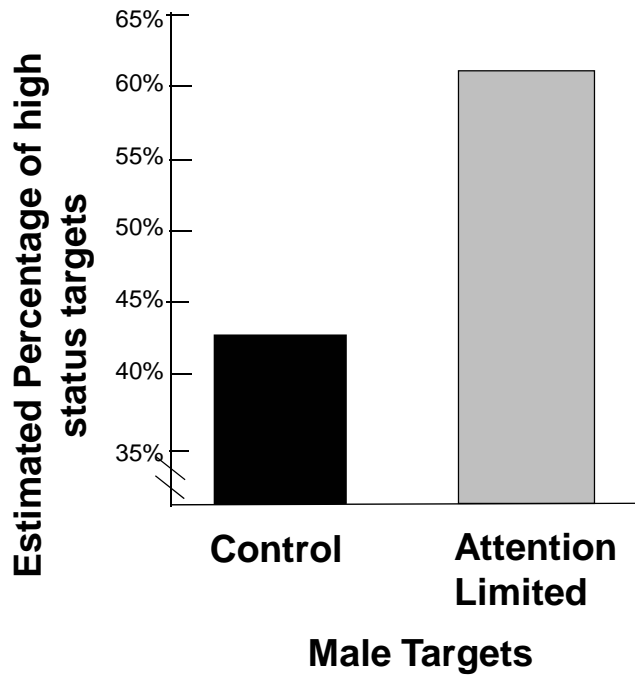


Table 1. Means (*M*), standard deviations (*SD*), and 95% confidence intervals (*CI*) for relevant dependent measures.

Measure, Presentation Condition	Male Targets	Female Targets
Social status, Attention limited	<i>M</i> = 61.67, <i>SD</i> = 15.39, <i>CI</i> = 58.38-64.96	<i>M</i> = 40.64, <i>SD</i> = 18.47, <i>CI</i> = 36.97-44.32
Social status, Control	<i>M</i> = 42.57, <i>SD</i> = 17.58, <i>CI</i> = 38.92-46.21	<i>M</i> = 49.09, <i>SD</i> = 18.19, <i>CI</i> = 45.02-53.16
Eyes open, Attention limited	<i>M</i> = 93.09, <i>SD</i> = 16.53, <i>CI</i> = 89.20-96.99	<i>M</i> = 87.23, <i>SD</i> = 23.21, <i>CI</i> = 82.26-92.20
Eyes open, Control	<i>M</i> = 93.15, <i>SD</i> = 22.53, <i>CI</i> = 88.83-97.47	<i>M</i> = 88.01, <i>SD</i> = 26.65, <i>CI</i> = 82.50-93.52
Smiling, Attention limited	<i>M</i> = 23.53, <i>SD</i> = 21.62, <i>CI</i> = 18.15-28.91	<i>M</i> = 41.63, <i>SD</i> = 26.40, <i>CI</i> = 35.76-47.50
Smiling, Control	<i>M</i> = 35.87, <i>SD</i> = 26.18, <i>CI</i> = 31.01-40.73	<i>M</i> = 42.14, <i>SD</i> = 26.47, <i>CI</i> = 36.84-47.44

Discussion: Experiment 1

The results from Experiment 1 provided initial evidence that limited attentional capacity caused people to estimate relatively higher percentages of high status men. No such effect occurred for high status women. The implication is that limitations on attentional capacity caused participants to base their frequency estimates on targets that captured their attention most strongly—high status men. Reduced estimates of high status women under conditions of limited attentional capacity suggest that cues to high social status on women may not represent information that is relevant for reproductive and mating goals. When participants were given ample time to attend to each target, there were no differences in the estimated frequency of high status men and high status women. High status men captured the attention of both male and female observers. This is consistent with evidence that high status men can serve as both potent intrasexual competitors (for other men), and as desirable mating partners (for women) (e.g., Gutierrez, Kenrick, and Partch, 1999; Kenrick, Neuberg, Zierk, and Krones, 1994).

Results also showed that participants estimated lower percentages of smiling men when their attentional capacity was limited compared to when they had sufficient time to attend to each image. Although this finding was unexpected, it complements the finding of relatively greater estimates of high status men under conditions of limited attentional capacity. Recent evidence suggests that the more males show smiles, the less they are judged as socially dominant (Luevano, 2007). Lower estimates of smiling men under conditions of limited attention suggest that the presence of a smile on a man is not information that is especially relevant to reproductive and mating goals.

A potential limitation of Experiment 1 was the use of an indirect method to assess attentional biases. Although estimating frequencies under conditions of limited attention relate to attentional bias (e.g., Maner et al., 2003), other work has shown that factors other

than attention can influence frequency estimations people make when their attentional capacity is limited (e.g., salience of targets in memory; Garcia-Marques, Hamilton, and Maddox, 2002). Therefore, we conducted an additional study to test whether the results of Experiment 1 would extend to a more direct assessment of attention.

Experiment 2 sought to extend the findings of Experiment 1 in three ways. First, we used a more direct measure of visual attention than the frequency estimation method used in Experiment 1. Specifically, we recorded participants' eye movements while they viewed arrays of high status and low status male and female targets. Based on the findings of Experiment 1, we expected that participants would attend preferentially to signs of high status in men, but not women.

Second, in addition to manipulating target social status, we also manipulated target physical attractiveness. Half of the targets were of average attractiveness, whereas the other half of the targets were highly physically attractive. Consistent with previous evidence that physical attractiveness is prioritized over status in mating-related judgments of women, we expected that perceivers would attend preferentially to physically attractive women, rather than high status women. Previous research also suggests that women prefer attractive to average-looking men, especially as short-term sexual partners (Li and Kenrick, 2006). Both men and women have also been shown to attend preferentially to attractive men under certain circumstances (Maner, Gailliot, Rouby, and Miller, 2007). Thus, there is some reason to expect that perceivers might also preferentially attend to highly attractive men.

The third modification to Experiment 2 was the inclusion of individual difference variables that could be used to predict how much particular social targets captured perceivers' attention. We measured three mating-related individual difference variables: sociosexual orientation, romantic relationship status, and interest in alternative partners. People with an unrestricted sociosexual orientation tend to require relatively little emotional closeness and commitment before engaging in sexual intercourse, whereas people with a restricted sociosexual orientation are generally require emotional closeness and commitment prior to engaging in sexual intercourse (Simpson and Gangestad, 1991). Hence an unrestricted sociosexual orientation is associated with a mating strategy of having multiple, short-term partners. A restricted sociosexual orientation, in contrast, reflects a mating strategy oriented toward committed, long-term relationships. Unrestricted individuals tend to prioritize the physical attractiveness of their partners more than do restricted individuals (Simpson and Gangestad, 1991). Therefore, we predicted that, compared to restricted participants, unrestricted participants would attend more to physically attractive members of the opposite sex.

We anticipated that, among participants currently involved in a romantic relationship, interest in alternative partners would predict greater attention to desirable members of the opposite sex. When pursuing extra-pair romantic encounters, men tend to value physical attractiveness, whereas women tend to value both physical attractiveness and social status (Scheib, 2001; Symons, 1979). Therefore, we predicted that female participants interested in alternatives would attend to both physically attractive men and high status men. We expected that male participants who were interested in alternatives would show greater attention to physically attractive women, but not to high status women.

Materials and Methods: Experiment 2

Participants. Fifty-two undergraduates (34 women, 18 men) participated in this study in exchange for partial course credit. Data from six participants were excluded because, due to equipment malfunction, the majority of their data were unusable. This left a final sample of 46 undergraduates (29 women and 17 men). Of these 46 participants, 24 (15 women and 9 men) were currently committed to a romantic relationship.

Materials and procedure. Participants arrived at the laboratory individually for a study concerning the relationship between personality and color perception. After giving informed consent, participants completed the Sociosexual Orientation Inventory (SOI; Simpson and Gangestad, 1991), a measure of relationship status and, for participants who indicated they were currently involved in a romantic relationship, the Relationship Alternatives Scale (RAS; Rusbult, Martz, and Agnew, 1998). The SOI assesses how much emotional closeness people desire before having sexual intercourse (e.g., “Sex without love is okay”). People who require little emotional closeness before sexual intercourse are referred to as being sexually unrestricted (high SOI), whereas people who require emotional closeness before sexual intercourse are referred to as sexually restricted (low SOI). The RAS scale measures how positively people perceive alternatives to their current romantic relationship (e.g., “My needs for intimacy, companionship, etc. could easily be fulfilled in an alternative relationship”). High RAS scores indicate high levels of interest in alternatives to one’s current romantic partner.

After completing the SOI and RAS scales, participants were told that they would complete a task that measured how well the human eye processes visual information. The experimenter fit the participant with an eyetracker, which they were told was a device that measured how the retina processed color stimuli. A room divider separated the participant from the experimenter, though the participant was able to hear directions from the experimenter through the divider. The experimenter instructed the participant to “look naturally at the screen” throughout the experiment.

Participants first completed a short calibration procedure and then viewed filler stimuli consisting of colored fruit and household objects. Including the filler stimuli bolstered the strength of the cover story and allowed the experimenter to check the accuracy of the eye calibration. Participants then viewed the first stimulus array (male or female, the order of which was counterbalanced) for four seconds. To ensure that participants’ attention was focused on the center of the screen when the stimulus array appeared, a fixation cross appeared in the center of the computer screen before the onset of the stimulus array. After viewing the first stimulus array, participants viewed another fixation cross and then viewed the second stimulus array for 4 seconds.

As in Experiment 1, all targets were pre-tested for their levels of physical attractiveness and social status. Male and female faces were matched in terms of their physical attractiveness and social status. Using a 9-point scale, attractive targets had a mean rating of attractiveness as 7.63 ($SD = 1.23$), whereas average-looking targets had a mean rating of attractiveness as 5.17 ($SD = 1.36$). Mean ratings of social status were 7.69 ($SD = 1.25$) for the high status targets and 3.94 ($SD = 1.38$) for the low status targets (measured with a 9-point scale). Target photos were situated in a roughly circular array for

presentation on a 21" computer monitor. Each array contained eight target photos: two photos depicting high attractive-high social status targets, two photos depicting high attractive-low social status targets, two photos depicting average attractive-high social status targets, and two photos depicting average attractive-low social status targets. Targets were randomly situated in the array with the constraint that no two targets of the same type were placed next to one another. Male and female faces with equivalent social status and physical attractiveness ratings were situated in the same position within their respective arrays.

To measure eye movements, we used an Applied Science Laboratory series 5000 eyetracker. This model of eyetracker samples eye saccades at 60 Hz (i.e., 60 samples per second) and is accurate to within 1-2 degrees visual angle (approximately half an inch of monitor space). The eyetracker sat atop a small lightweight headband placed on the participant's head and was equipped with a magnetic head tracker, which allowed for natural head movement throughout stimulus presentation. After viewing the stimuli, participants were debriefed and dismissed.

The proportion of time spent fixating on each target was recorded, which provided a measure of attention directed toward each target face. Fixations were recorded whenever participants attended to a given target photograph for at least 10 milliseconds. Summary measures were created by calculating the proportion of total fixation time spent attending to a particular type of target, (e.g., the proportion of total fixation time spent attending to high status male targets), averaged within each of the two arrays.

Results: Experiment 2

We used mixed-model ANOVA to assess the effects of the manipulations on attention. Target sex and target attribute (social status versus physical attractiveness) were within-subject factors, whereas participant sex was a between-subjects factor. Results revealed significant main effects for target sex, $F(1, 44) = 9.42, p = .004$, target social status versus physical attractiveness, $F(1, 44) = 12.71, p = .001$, and participant sex, $F(1, 44) = 8.63, p = .005$. As predicted, there was a significant target sex by target social status versus physical attractiveness interaction, $F(1, 44) = 10.09, p = .003$. Participant sex did not interact with either target sex, $F < 1$, or target attribute, $F(1, 44) = 3.09, p = .09$, and the three-way interaction between participant sex, target sex, and target social dominance versus physical attractiveness was not significant, $F < 1$. To examine the specific effects of target social status and physical attractiveness on attention, we conducted additional analyses that examined and compared attention to male and female targets.

Do high social status men and women capture attention in only four seconds? As predicted, high status male (but not female) targets captured participants' attention. During the 4 second presentation of the array, participants spent over half the time ($M = 58.19\%$, $SD = 18.39\%$) attending to high status male targets, $F(1, 45) = 9.11, p = .004$, which is more than what one could expect by chance given the equal number of high status and low status targets. In contrast, participants spent less than half the time ($M = 41.75\%$, $SD = 16.28\%$) attending to high status female targets, $F(1, 45) = 11.81, p = .001$. We also directly compared the proportion of time spent attending to high status male targets versus

high status female targets. Compared to high status female targets, participants spent longer attending to high status male targets, $F(1, 45) = 30.94, p < .001$. Thus, high status men captured attention even when they were visible for only a brief period of time, whereas images of high status women did not capture attention.

Do physically attractive men and women capture attention in only four seconds? We conducted parallel analyses to examine how much physically attractive male and female targets captured participants' attention. Participants spent more than half the time attending to physically attractive male targets ($M = 58.79\%, SD = 17.43\%$), $F(1, 45) = 11.71, p < .001$. In addition, participants attended to physically attractive female targets more than half the time ($M = 58.85\%, SD = 17.40\%$), $F(1, 45) = 11.91, p < .001$. There was no difference between attention to attractive men versus attractive women, $F < 1$. Thus, both physically attractive male and female targets captured participants' attention.

Sociosexual Orientation and Interest in Alternatives

We used multiple regression to examine whether individual differences in sociosexual orientation and interest in relationship alternatives were associated with attention to high status and physically attractive male and female targets. For sociosexual orientation, the only significant effect that emerged was a positive association between SOI scores and attention to attractive members of the opposite sex, $\beta = .37, t = 2.54, p < .02$. This effect did not depend on participant sex, $p > .77$, and remained significant even after controlling for whether participants reported current involvement in a romantic relationship, $\beta = .37, t = 2.45, p = .02, \text{partial } r = .37$. This finding meshes well with previous work showing that unrestricted individuals are especially drawn to physically attractive mates, and are especially attentive to physically attractive individuals at basic stages of interpersonal perception (e.g., Maner et al., 2003).

Interest in alternatives to one's current romantic relationship partner also was associated with attentional bias in a theoretically meaningful way. For female participants, interest in alternatives was positively associated with attention to high status male targets, $\beta = .52, t = 2.88, p < .01$. This effect remained significant after controlling for participants' sociosexual orientation, $\beta = .52, t = 2.88, p < .01, \text{partial } r = .52$. Among male participants, we found no significant association between interest in alternatives and attention to high status female targets, $t < 1$. Contrary to our predications, interest in alternative partners was not associated with attention to physically attractive targets.

Discussion: Experiment 2

The results of Experiment 2 provided further evidence that high status men (but not women) capture attention. In just the first few seconds of stimulus presentation, observers attended selectively to high status men. Consistent with Experiment 1, we saw no evidence of preferential attention to high status women. An unrestricted sociosexual orientation was positively associated with attention to attractive members of the opposite sex, which confirmed prior findings linking a short-term mating strategy to attention to attractive members of the opposite sex (Maner et al., 2003). As predicted, among female participants currently involved in a romantic relationship, interest in alternatives to their current

relationship partner was positively associated with attention to high status men. Among male participants involved in a romantic relationship, there was no evidence that interest in alternatives was associated with attention to high status women. Contrary to our expectations, interest in alternatives was not associated with greater attention to attractive members of the opposite sex for either male or female participants.

General Discussion

Examination of basic social perceptual processes provides important insights into adaptive constraints on the human mind. Indeed, people are confronted with myriad stimuli and therefore attend primarily to social information that will help them address fundamental adaptive challenges. Whereas physical attractiveness is valued in women to a relatively greater extent than to men (e.g., Li et al., 2002), social status is valued in men to a relatively greater extent than to women (e.g., Sadalla et al., 1987). Several previous investigations have demonstrated attentional bias to physically attractive women (e.g., Maner et al., 2003), but little work has examined potential attentional bias to high status men. If social status is valued in men more so than women, then high status men (but not women) are expected to capture attention.

Results from two experiments provided consistent evidence that perceivers vigilantly attended to men displaying cues to high social status. In Experiment 1, limiting participants' attentional capacity caused them to estimate a higher percentage of high status men within an array of photos. Experiment 2 provided similar evidence using an eye-tracking method. In contrast, we found no evidence that high status women captured attention. Taken together, these findings suggest that high status men (but not women) capture attention, particularly under conditions of limited attentional capacity.

Although attention was not captured by high status women, it was captured by women who were physically attractive. This is consistent with a large body of literature suggesting that attractive women are preferred as mating partners (by men) and serve as potent intrasexual rivals (for other women). These findings are also consistent with several previous studies suggesting that both men and women attend preferentially to signs of attractiveness in women (e.g., Maner et al., 2007).

We also observed some evidence that male physical attractiveness captured attention. Evidence for preferential processing of male attractiveness has varied somewhat across studies (see Maner, DeWall, and Gailliot, 2008; Maner et al., 2007; Maner et al., 2003, 2007). Thus, whereas attention to female attractiveness seems to be consistent across situational contexts and levels of perceptual processing, attention to male attractiveness appears to be more flexible, and may depend on the peculiarities of the situation, the stimuli, and the particular cognitive process under investigation.

Limitations and future directions

The results of both studies provided consistent evidence that high status men capture attention. One potential limitation of the current studies pertains to our exclusive reliance on static stimuli. The attentional biases we documented presumably take place within dynamic, complex social settings (e.g., bars, office buildings, professional

conferences). Because these settings involve many stimuli that compete for attention, we would expect that high status men would capture attention at least as much as, if not more than, what we found using static photographs on a computer screen. A second limitation is that we did not manipulate the age of the target stimuli. Since all of our participants were college undergraduates, we used stimuli that depicted college-age men and women who varied in their attire and (in Experiment 2) their physical attractiveness. Previous research suggests potential age differences in mating preferences (e.g., Kenrick and Keefe, 1992), and so future research may explore whether high status men capture attention regardless of whether they differ in age from perceivers.

A second limitation involves the fact that we did not explore the full range of cues that might signal a person's level of social status. Although some cues to social status are consistent across cultures, others may vary across cultural contexts. We also hasten to add that prior work has shown that people can obtain social status through exerting dominance over others or by exhibiting cues to prestige, such as having desirable skills, knowledge, or resources (Henrich and Gil-White, 2001). Professional dress may create perceptions of status, dominance, prestige, or some combination of these three constructs. Future research would benefit from examining the manner in which individuals preferentially process a range of characteristics that might serve to denote a person's level of social status, dominance, and prestige.

A third potential limitation is that the size and location of the target photos in Experiment 1 differed between the limited attention and control conditions. Hence the observed effects in that study may have been attributable to limited attentional capacity, different size of the target stimuli, different location of the target stimuli, or some combination of these three factors. Evidence from a recent investigation contradicts this possibility, however (Maner et al., 2008). In one study in that investigation, participants viewed arrays of photographs that were identical to the arrays to which participants in the attention limited condition in Experiment 1 were exposed. Some participants viewed the arrays for 40 seconds, whereas others viewed the arrays for 4 seconds. Hence the size and location of the target photos in each array were identical. The results were the same as those from Experiment 1: participants estimated greater percentages of high status male targets under conditions of limited attentional capacity compared to when they had ample time to view the images. Thus, the results of Experiment 1 likely were due to limited attentional capacity instead of the differential size and location of the target photos.

Concluding remarks

Evolutionary theories assume, but rarely test, the existence of adaptively relevant cognitive mechanisms that involve early-stage social perception. The current investigation helps fill this gap in the literature by testing whether perceivers attend preferentially to reproductively relevant individuals in the social environment at an early stage of perceptual processing. Results from two studies showed that high status men, but not high status women, capture attention. This work builds on an important base of knowledge pertaining to sex differences in human mating preferences. Indeed, examination of basic, early-stage perceptual processes provides a powerful and unique window onto the adapted human mind.

Received 20 February 2008; Revision submitted 17 May 2008; Accepted 20 May 2008

References

- Ackerman, J.M., Shapiro, J.R., Neuberg, S.L., Kenrick, D.T., Becker, D.V., Griskevicius, V., Maner, J.K., and Schaller, M. (2006). They all look the same to me (unless they're angry): From out-group homogeneity to out-group heterogeneity. *Psychological Science*, *17*, 836-840.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, *12*, 1-49.
- Buss, D. M., and Schmitt, D. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 204-232.
- Duncan, L. A., Park, J. H., Faulkner, J., Schaller, M., Neuberg, S. L., and Kenrick, D. T. (2007). Adaptive allocation of attention: Effects of sex and sociosexuality on visual attention to attractive opposite-sex faces. *Evolution and Human Behavior*, *28*, 359-364.
- Gangestad, S. W., and Simpson, J. A. (2000). On the evolutionary psychology of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences*, *23*, 573-587.
- Gangestad, S. W. and Thornhill, R. (1997). The evolutionary psychology of extrapair sex: The role of fluctuating asymmetry. *Evolution and Human Behavior*, *18*, 69-88.
- Garcia-Marques, L., Hamilton, D. L., and Maddox, K. B. (2002). Exhaustive and heuristic retrieval processes in person cognition: Further tests of the TRAP model. *Journal of Personality and Social Psychology*, *82*, 193-207.
- Gutierrez, S. E., Kenrick, D. T., and Partch, J. J. (1999). Beauty, dominance, and the mating game: Contrast effects in self-assessment reflect gender differences in mate selection. *Personality and Social Psychology Bulletin*, *25*, 1126-1134.
- Haselton, M. G., and Gangestad, S. W. (2006). Conditional expression of women's desires and men's mate guarding across the ovulatory cycle. *Hormones and Behavior*, *49*, 509-518.
- Henrick, J., and Gil-White, F. J. (2001). The evolution of prestige: Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, *22*, 165-196.
- Kenrick, D. T., and Keefe, R. C. (1992). Age preferences in mates reflect sex differences in reproductive strategies. *Behavioral and Brain Sciences*, *15*, 75-133.
- Kenrick, D. T., Neuberg, S. L., Zierk, K. L., and Krones, J. M. (1994). Evolution and social cognition: Contrast effects as a function of sex, dominance, and physical attractiveness. *Personality and Social Psychology Bulletin*, *20*, 210-217.
- Li, N.P., Bailey, J. M., Kenrick, D.T., and Linsenmeier, J.A. (2002). The necessities and luxuries of mate preferences: Testing the trade-offs. *Journal of Personality and Social Psychology*, *82*, 947-955.
- Li, N. P., and Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social*

- Psychology*, 90, 468-489.
- Luevano, V. X. (2007). Do impressions of health, dominance, and warmth explain why masculine faces of preferred more in a short-term mate? *Evolutionary Psychology*, 5, 15-27.
- Maner, J. K., DeWall, C. N., and Gailliot, M. T. (2008). Selective attention to signs of success: Social dominance and early stage interpersonal perception. *Personality and Social Psychology Bulletin*, 34, 488-501
- Maner, J. K., Gailliot, M. T., and DeWall, C. N. (2007). Adaptive attentional attunement: Evidence for mating-related perceptual bias. *Evolution and Human Behavior*, 28, 28-36.
- Maner, J. K., Gailliot, M. T., Rouby, D. A., and Miller, S. L. (2007). Can't take my eyes off you: Attentional adhesion to mates and rivals. *Journal of Personality and Social Psychology*, 93, 389-401.
- Maner, J. K., Kenrick, D. T., Becker, D. V., Delton, A. W., Hofer, B., Wilbur, C., and Neuberg, S. (2003). Sexually selective cognition: Beauty captures the mind of the beholder. *Journal of Personality and Social Psychology*, 85, 1107-1120.
- Öhman, A., Flykt, A., and Esteves, F. (2001). Emotion drives attention: Detecting the snake in the grass. *Journal of Experimental Psychology: General*, 130, 466-478
- Öhman, A., Lundqvist, D., and Esteves, F. (2001). The face in the crowd effect: An anger superiority effect with schematic stimuli. *Journal of Personality and Social Psychology*, 80, 381-396.
- Öhman, A., and Mineka, S. (2001). Fears, phobias, and preparedness: Toward an evolved module of fear and fear learning. *Psychological Review*, 108, 483-522.
- Rusbult, C. E., Martz, J. M., and Agnew, C. R. (1998). Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, 5, 357-391.
- Sadalla, E. K., Kenrick, D. T., and Vershure, B. (1987). Dominance and heterosexual attraction. *Journal of Personality and Social Psychology*, 52, 730-738.
- Scheib, J. E. (2001). Context-specific mate choice criteria: Women's trade-offs in the contexts of long-term and extra-pair mateships. *Personal Relationships*, 8, 371-389.
- Shackelford, T. K., and Larsen, R. J. (1999). Facial attractiveness and physical health. *Evolution and Human Behavior*, 20, 71-76.
- Simpson, J. A., and Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60, 870-883.
- Singh, D. (1993). Adaptive significance of female physical attractiveness: Role of waist-to-hip ratio. *Journal of Personality and Social Psychology*, 65, 293-307.
- Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford.
- Townsend, J. M., and Levy, G. D. (1990). Effects of potential partner's costume and physical attractiveness on sexuality and partner selection: Sex differences in reported preferences in university students. *Journal of Psychology*, 124, 371-376.