Reports

When the grass on the other side of the fence doesn't matter: Reciprocal romantic interest neutralizes attentional bias towards attractive alternatives

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ABSTRACT

Attention is automatically captured by pictures of physically attractive faces. Although helpful for mate detection, a chronic attentional bias towards attractive opposite-sex faces interferes with relationship initiation because it detracts from the current choice. Therefore, we hypothesized that an orienting of attention to attractive opposite-sex faces is inhibited as soon as a potential mating partner reciprocates one's romantic feelings. Results of two experiments supported this idea: In a first study, imagining that an attractive person shows signs of reciprocal romantic interest eliminated automatic attentional capture by attractive opposite-sex faces. Similar results were obtained in a second study that analyzed intra-individual change in attentional biases during a longitudinal dating study. Results provide evidence for the role of automatic regulatory processes in relationship initiation and can be incorporated into more general models of (implicit) self-regulation.

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By now there is substantial evidence suggesting an attentional bias towards attractive faces. For instance, Maner et al. (2003) found in an eye-tracking study that fixation time for attractive faces exceeds fixation time for average-looking faces. Similarly, viewing time for beautiful faces seems to be generally increased (Aharon et al., 2001; see also Kranz & Ishai, 2006). Other studies have shown that attractiveness is assessed rather rapidly, namely, within the first 20 ms of stimulus presentation (Olson & Marshuetz, 2005). Interestingly, recent research suggests that selective processing of attractive faces reflects an automatic process that is hard to suppress: In a study conducted by Sui and Liu (2009) participants had to categorize a cued target which was presented either on the left or the right side of a computer screen. Attractive or unattractive faces were displayed as irrelevant distractors at the opposite location of the target. Results revealed that attractive faces interfered more strongly with the classification task suggesting an automatic attentional bias towards attractive faces (Sui & Liu, 2009).

Interpretations of these findings typically refer to the crucial role of attractiveness in phylogenetic development (cf. Maner et al., 2003; Sui & Liu, 2009). Specifically, since attractiveness indicates a variety of desirable characteristics, like physical health, youth, genetic quality or level of fertility, an automatic attentional bias for attractive faces might be adaptive because it allows rapid detection of appropriate mating partners.

Although helpful for mate detection, we believe that a general and chronic attentional bias for attractive mating partners will interfere with the successful pursuit of romantic goals. Normally, people are motivated not only to detect potential mating partners but also in initiating serious romantic relationships (Emmons, 1999). This, however, comprises much more than spotting attractive others (Bredow et al., 2008). First, someone has to be found who indicates signs of reciprocated romantic interest, and in a second step concrete approach behavior has to be initiated (e.g., engaging in a conversation or asking for a date) in order to explore the reciprocator's (and one's own) commitment level (Knobloch, Miller, Sprecher, Wenzel, & Harvey, 2008) and to foster mutual attraction (Curtis & Miller, 1986; Snyder, Tanke, & Berscheid, 1977). It seems likely that being drawn towards attractive alternatives during the stage of relationship initiation detracts one from the current potential partner and thus could threaten the further development of this encounter. For instance, successful courting requires that one's full attention is devoted to the person of interest (Berscheid, Graziano, Monson, & Dermer, 1976; Davis, 1973). Being distracted by other attractive opposite-sex alternatives therefore reduces the likelihood that mutual attraction further develops. In addition, searching for attractive alternatives could reduce the perceived attractiveness of the person who has shown reciprocal interest by increasing the accessibility of more attractive persons that serve as a comparison standard for upward comparisons (a negative influence of attention to attractive alternatives on relationship development was shown by Miller, 1997). Maintaining a general bias towards attractive opposite-sex faces throughout the whole process of relationship initiation would imply that an individual would probably never find Mr. or Mrs. Right because there are always more handsome and attractive alternatives on the other side of the fence. Thus, we believe that as soon as a highly

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promising option has been identified on the basis of reciprocal romantic interest, an attentional re-orientation takes place that shields the auspicious yet insecure mating partner against attractive alternatives. Specifically, we hypothesize that reciprocal romantic interest eliminates the automatic attentional bias towards attractive opposite-sex faces.

Actually, selective inattention to distraction-related stimuli has been proposed to play a key role in self-regulation in more general theories on implicit action regulation like goal-shielding theory (Shah, Friedman, & Kruglanski, 2002) or counteractive control theory (Fishbach, Zhang, & Trope, 2010). Research on goal-shielding showed that subliminal priming of goal-related cues reduces the cognitive accessibility of cues related to competing goals (Shah et al., 2002). In a similar vein, in their research on counteractive self-control, Fishbach et al. (2010) observed that the activation of a focal goal leads to more negative implicit evaluations of distractive temptations. Relating these findings to the present research, one might argue that reciprocal liking activates a reciprocator-approach goal which decreases cognitive sensitivity towards and implicit evaluations of cues related to the distracting goal of mate detection (in this case attractive alternative mating partners).

Recent findings from social and cognitive neuroscience are also in line with the idea that reciprocal liking causes inattention to attractive alternatives. Specifically, it has been found that it is not the valence of a given stimulus *per se* but rather its current motivational and behavioral relevance that determines automatic spatial orienting, as reflected in indicators of attentional capture and modulations of EEG recordings (Brosch, Sander, Pourtois, & Scherer, 2008; Brosch, Sander, & Scherer, 2007; Ferguson & Bargh, 2004; Rothermund, 2003; Schupp et al., 2004, 2007; Wentura, Rothermund, & Bak, 2000). Given that attractive mating partners are highly relevant for individuals searching for an appropriate romantic partner but become less relevant for those whose romantic interest in a specific person is already reciprocated, the relevance account of automatic spatial orienting predicts attention allocation to attractive mating partners in the former but not (or at least less) in the latter.

More direct evidence for functional adjustments of automatic attention orienting during the pursuit of romantic goals comes from studies that examined influences of relationship status on automatic attention orienting to attractive opposite-sex faces (Maner, Gailliot, & Miller, 2009; see also Maner, Rouby, & Gonzaga, 2008). In these studies, participants currently involved in a romantic relationship and singles were primed with mating relevant or neutral words. Automatic attention orienting to attractive opposite-sex faces was assessed with a visual cueing task. Results revealed that whereas mating primes increased attention orienting to physically attractive opposite-sex faces in single participants, no such effect was found for committed participants. Apparently, committed participants who pursue the goal of maintaining their relationship are immune against the effects of mating primes suggesting that automatic attention orienting can indeed be regulated in concordance with current relationship goals. Similarly, Hofmann, Friese, and Gschwendner (2009) showed that erotic pictures elicited lower automatic approach tendencies among men who were currently engaged in a romantic relationship than in single men (see also Karremans & Verwijmeren, 2008).

These studies provide first evidence for a relationship shielding mechanism via inattention to attractive alternatives. However it was not tested whether such shielding processes already play a role in initial phases of relationship formation when a stable and secure relationship has yet to be developed and only first signs of reciprocal interest are present. As argued above, we believe that especially during this initial phase of relationship formation, inattention to attractive others poses a crucial demand for self-regulation. Avoiding information regarding alternatives sets the stage for an undisturbed exploration of one's own as well as the partner's commitment level, and allows for further development of mutual attraction. In addition,

it might also help to maintain and increase the positive valence of the reciprocator by avoiding unfavorable comparisons between the admirer and attractive others (Miller, 1997).

We conducted two experiments in order to test directly whether mutual romantic interest leads to a re-orientation in automatic attentional biases. Specifically, we hypothesized that as soon as reciprocal romantic interest is detected in a potential mating partner, attentional biases towards attractive opposite-sex faces should become neutralized. In Experiment 1, we used a mindset priming to manipulate reciprocal romantic interest: Half of the participants (all heterosexual and uncommitted) were instructed to imagine that someone they find attractive indicates signs of reciprocal romantic interest. Contrarily, participants in the control group had to imagine someone they find attractive without being instructed to focus on signs of reciprocal interest (simple liking condition). An automatic attentional bias towards attractive opposite-sex partners was assessed with an adapted version of the visual cueing paradigm used by Maner et al. (2009). The strength of attentional biases towards attractive alternative mating partners was computed as the difference in automatic attentional capture to attractive compared to average-looking opposite-sex faces (Sui & Liu, 2009). Experiment 2 tested our hypothesis in a more natural setting: In a dating context, information regarding reciprocal romantic interest was manipulated through feedback on mutual interest in a date between two participants of the study. To assess processes of attentional re-orientation, we measured automatic attentional biases towards attractive opposite-sex faces prior to and after the feedback on reciprocal interest.

Experiment 1: Imagining reciprocal liking

Method

Participants and design

Eighteen female and 12 male students of the University of Jena with an average age of $M = 22.2$ years ($SD = 4.8$) agreed to participate in our study for a payment of €1 (approximately $1.25) and a chocolate bar. All participants were heterosexual and not involved in a romantic relationship at the time of the study.

The study used a 2 (Mindset Condition: reciprocal interest vs. simple liking) × 2 (Opposite-Sex Face Attractiveness: average-looking vs. attractive) design with repeated measures on the attractiveness factor.

Procedure and materials

On arrival, participants were seated individually at separate places and were asked to answer some demographic questions. Afterwards, participants were randomly assigned to one of two priming conditions: In the reciprocal interest condition participants read the following instruction:

Please think of a person you would like to be closer to and with whom you could imagine having a romantic relationship. This person might come from your closer environment. It is, however, also possible to think of a person you know only by sight. Please imagine further that this person comes up to you, and friendly asks whether you would like to go out with him/her.

Participants in the simple liking group were also instructed to think about a person they would like to be closer to (i.e. the first three sentences of the instructions for the reciprocal liking and the simple liking group were identical). Thereby, we wanted to rule out that simply thinking about a liked person reduces attention for attractive alternatives. The last sentence of the instruction excluded thoughts about reciprocal romantic interest. Specifically, participants in the