General Article

Psychological Science
2015, Vol. 26(11) 1655–1663

DOI: 10.1177/0956797615603705
pss.sagepub.com

Is She Angry? (Sexually Desirable) Women "See" Anger on Female Faces

Jaimie Arona Krems, Steven L. Neuberg, Gabrielle Filip-Crawford, and Douglas T. Kenrick
Department of Psychology, Arizona State University

Abstract

Intrasexual conflict may pose unique challenges for women. Whereas men's aggression tends to be physical and direct, women's tends to be relational and indirect, particularly when directed toward other women. Moreover, women's expressions of anger are often suppressed, perhaps particularly when other women are the targets. Thus, women may face difficulty anticipating anger and anger-based aggression from other women. How might women manage this challenge? The functional projection of emotion may facilitate useful behavior; for instance, "seeing" anger on people believed to pose threats to physical safety may help perceivers preempt or avoid physical harm. Given the threats that women face, we predicted that (a) women are biased to "see" anger on neutral female (but not male) faces and that (b) women who are likely targets of intrasexual aggression (i.e., sexually desirable or available women) show an exaggerated bias. We report three studies that support these hypotheses and, more broadly, illustrate the value of a functional approach to social cognition.

Keywords

social cognition, evolutionary psychology, emotion, aggression, sex differences

Received 10/15/14; Revision accepted 8/7/15

Empirical work on the difficulties of intrasexual relationships has tended to focus on men, but female sociality may present unique challenges requiring unique tools for resolution. Men's anger-based intrasexual aggression tends to be physical and direct, whereas women's tends to be relational and indirect, especially when aimed toward other women. Additionally, whereas men are likely to display their anger, women may be more likely to conceal their anger. Thus, women may face an especially difficult challenge in anticipating intrasexual anger and aggression. If women lack reliable cues to incoming and potentially costly intrasexual aggression, what defenses might they possess to help them avoid harm?

Female Aggression and Anger

There are robust sex differences in anger-based aggression (e.g., Archer, 2004; Campbell, 1999, 2002). Whereas males are responsible for a large proportion of direct physical aggression, women typically prefer indirect tactics of aggression, such as social exclusion or gossip (Benenson et al., 2013; Campbell, 1995, 1999)—particularly when aggressing against other women (Benenson et al., 2013; Vaillancourt, 2013). Indirect tactics often involve covert social manipulation and often take place "behind the back" of a target (Campbell, 1999; Vaillancourt, 2013). The typically covert nature of indirect aggression makes it difficult for targets to anticipate it, and sometimes targets may not even be aware of aggression that has taken place.

Research on the expression of emotion also implies that women face challenges in anticipating intrasexual aggression. Although women are generally more emotionally expressive than men, they may be less likely to display and more likely to suppress overt expressions of anger (e.g., Evers, Fischer, & Manstead, 2011; Fabes & Martin, 1991; but see Simon & Nath, 2004), especially

Corresponding Author:
Jaimie Arona Krems, Department of Psychology, Arizona State University, Tempe, AZ 85287
E-mail: jaimie.krems@asu.edu

toward other women. Yet women do not feel anger less frequently or intensely than men (Benenson et al., 2013; Kring, 2000). Thus, it may be especially hard for women to tell when other women are angry at them.

Females' Functional Projection of Anger

Women's preference for enacting indirect aggression toward other women, combined with their tendency to suppress expressions of anger, perhaps especially when that anger is directed at other women, implies that women may have difficulty inferring when they have elicited another woman's anger and consequent aggression. What defenses might women possess to manage this particular challenge?

Women are somewhat better than men at identifying genuine anger (Goos & Silverman, 2002), and this increased sensitivity may help women anticipate aggression. Nonetheless, women's identification of intrasexual anger is far from perfect, and failure to identify anger can be costly. We thus propose that women may have a distinct cognitive defense against intrasexual aggression: They may possess a bias to "see" anger on the faces of other women—a bias that leads them to err on the side of mistakenly identifying emotionally benign women as angry.

The adaptive logic of error-management theory (Haselton & Buss, 2000) acknowledges that, although accurate social perception would be ideal, social perception is imperfect. It further recognizes that some errors are more costly than others, and that individuals should manage their biases to minimize such costly errors (Haselton & Nettle, 2006; Nesse, 2001). In general, failure to identify an actual threat is more costly than assuming the presence of threat where none exists. To the extent that anger expressions are cues to the threat of possible aggression, individuals may possess a bias toward inferring anger on others' faces even in the absence of genuine expressions of anger. This projection of anger onto faces with neutral expressions could be seen as functional, in that it is less costly to mistakenly infer anger from the face of a person who intends no harm than it would be to mistakenly miss anger on the face of a person who is aggressively inclined. For instance, previous research demonstrated that White perceivers concerned with physical safety were biased to infer anger from the faces of targets (out-group males) stereotypically believed to be likely and dangerous physical aggressors (Maner et al., 2005). A tendency to functionally project anger onto benign out-group males may cause unnecessary fear and flight, but that is less costly than missing a genuinely angry male and leaving oneself vulnerable to direct aggression.

We applied error-management logic to the challenges inherent in women's intrasexual sociality. Mistakenly perceiving anger in another woman's neutral facial expression may cause unnecessary worry, unrequired apologies, or preemptive covert aggression, but these consequences may be less costly than missing a genuine anger expression on another woman's face and leaving oneself vulnerable to indirect aggression, which can levy especially high costs on female victims (e.g., Vaillancourt, 2013). We thus predicted, first, that women (but not men) will project anger onto other women (but not men).[1]

Moreover, the likelihood of indirect victimization may be greater for women perceived as strong competitors for desirable mates—women, for example, who are viewed as especially sexually desirable or promiscuous (e.g., Buss & Schmitt, 1993). Indeed, these women are frequent targets of intrasexual aggression (Leenaars, Dane, & Marini, 2008; Vaillancourt & Sharma, 2011; Vrangalova, Bukberg, & Rieger, 2014). We thus predicted, second, that sexually desirable or unrestricted (available) women (frequent victims of women's indirect aggression) will show an exaggerated projection of anger onto neutral female faces.

Study 1 tested the assumption that it may be especially hard for women to tell when other women are angry at them. Studies 2 and 3 investigated our specific predictions about women's functional projection of anger as a possible defense against intrasexual aggression.

Study 1

Whereas men's direct aggression reveals a relatively obvious intent to harm, women's indirect aggression does not. Thus, targets of women's indirect aggression—typically other women—may rely more heavily on alternative cues (e.g., facial expressions of anger) for anticipating aggression. At the same time, female aggressors may prefer indirect tactics because they conceal intent to harm (Björkqvist, 1994). Hence, female aggressors may be unlikely to telegraph their intent to harm (e.g., show anger), and perhaps particularly their intent to harm the likely targets of their indirect aggression (i.e., other women).

Indeed, some work demonstrates that women suppress overt expressions of anger (e.g., Evers et al., 2011). Other work (e.g., Simon & Nath, 2004) challenges this finding, however. This disagreement may arise because women differentially express anger directed at men versus other women. In Study 1, we tested the hypothesis that women are more inclined than men to suppress overt expressions of actual anger toward other women by displaying, instead, neutral or otherwise emotionally ambiguous expressions. Such a finding would support the notion that women face difficulty anticipating other

women's anger and aggression, making plausible the hypotheses tested in Studies 2 and 3—that women are biased toward inferring anger from female faces with neutral expressions and that sexually desirable or available women show an especially large bias.

Method

Participants. Two hundred twenty-six participants located in the United States were recruited into a study on "emotion expressions" from Amazon's Mechanical Turk (MTurk) online survey-participation platform and were monetarily compensated for their work. We included in analyses only those participants who did not exceed their budget allotment in the task (see the next section) and who also filled out all focal dependent variables. Our final sample consisted of 218 participants (111 female).

Design and procedure. Participants reported their sex and completed a budget-allotment task in which they indicated which emotional expression (or expressions) they would "put on" when angry at a stranger. All participants were instructed that sometimes people show the emotions they are feeling on their faces and sometimes they do not. For instance, one might find something funny at a funeral, but would not "put on" a smile in that context. Participants were randomly assigned to imagine being angry at a male or female stranger, which resulted in four distinct combinations of participant's sex and target's sex: males angry at males, males angry at females, females angry at males, and females angry at females. Targets were specified as strangers because we wanted to focus on emotion display outside of friendships and romantic relationships (e.g., Cross, Tee, & Campbell, 2011).

Participants were given a budget of 100 "likelihood" points to allocate across four emotional expressions: two focal expressions—angry and neutral ("a 'blank' expression showing no emotion")—and two distractor expressions—fearful and happy. Participants were told to allocate more points to an expression the more likely they were to display it toward the target of their anger. The four options were presented in randomized order.

Results and discussion

To directly test our hypothesis, we focused our analyses on the self-reported likelihood of displaying angry versus neutral expressions.[2] A mixed-factors analysis of variance (ANOVA) revealed main effects of emotional expression (angry vs. neutral), $F(1, 214) = 12.60$, $p < .001$, $\eta_p^2 = .056$, and target's sex, $F(1, 214) = 6.89$, $p = .009$, $\eta_p^2 = .031$, as well as a marginally significant interaction of emotional expression and participant's sex, $F(1, 214) = 2.92$, $p = .089$, $\eta_p^2 = .013$. Most important, these effects were qualified by the predicted three-way interaction of emotional expression, participant's sex, and target's sex, $F(1, 214) = 7.30$, $p = .007$, $\eta_p^2 = .033$; in every combination of participant's sex and target's sex except one (women angry at other women), participants reported that when angry, they would be more likely to display anger than neutrality (see Fig. 1). Specifically, this was true for men who imagined being angry at other men (anger: $M = 50.11$, $SE = 3.78$; neutrality: $M = 38.25$, $SE = 3.40$; $p = .081$) and at women (anger: $M = 53.13$, $SE = 3.69$; neutrality: $M = 28.55$, $SE = 3.32$; $p = .029$). Thus, men reported a lack of ambiguity in their facial expressions. Similarly, women reported that they would be more likely to display anger than neutrality when angry at men (anger: $M = 55.02$, $SE = 4.04$; neutrality: $M = 36.28$, $SE = 3.63$; $p = .010$). In contrast, however, women reported being no more or less likely to display anger than neutrality when angry at other women (anger: $M = 39.37$, $SE = 4.00$; neutrality: $M = 45.35$, $SE = 3.60$; $p = .403$). Thus, women's facial expressions directed toward other women (but not men) at whom they are angry are especially likely to be ambiguous. These results supported our prediction that women are more inclined than men to exhibit ambiguous facial expressions when angry at women.

In sum, men who imagined being angry either at other men or at women reported relatively strong intentions to overtly display their anger, as did women who imagined being angry at men. Because these overt expressions would provide advance warning of an intention to aggress, targets wanting to avoid aggression would have an opportunity to behave in ways facilitating that avoidance (e.g., via flight, apologies, preemptive aggression). As predicted, however, women who imagined being angry at other women reported that they were just as likely to display ambiguous (i.e., neutral) facial expressions as to display angry facial expressions. This poses a special challenge: If a woman cannot readily identify whether another woman is angry and may intend to aggress, how can she defend against such potential aggression? In Study 2, we began to explore this question.

Study 2

In light of the difficulty women may face in anticipating intrasexual anger and anger-based aggression, we reasoned that women may be biased toward inferring that other women's neutral facial expressions mask anger. We employed an established emotion-inference paradigm to test this prediction.

Method

Participants. One hundred one MTurk workers located in the United States participated in a study on "social

Fig. 1. Results from Study 1: male and female participants' allocated likelihood points for displaying angry or neutral facial expressions when angry at male or female targets. Error bars represent ±1 *SE*.

perception" in exchange for monetary compensation. Eighty-eight participants (37 male, 51 female) completed all focal dependent variables and were included in analyses.

Design and procedure. Following established methodology (Maner et al., 2005), we told participants that they would be viewing a series of photographs that had been taken after each target had relived an emotion—anger, happiness, sadness, sexual arousal, fear, or pride—and then had attempted to hide that emotion with a neutral expression. To avoid the possibility that participants would tend to assume that male and female targets had selected sex-typical emotions to relive and suppress, we instructed participants that the emotions relived by the targets had been randomly assigned to them. Participants were further instructed that "microexpressions" of hidden emotions may be readable on faces, and that people are generally accurate in perceiving microexpressions. In reality, each target face wore a neutral expression. We then asked participants to indicate the extent to which they perceived each of the possible emotions on the target faces, using 7-point scales (*not at all* to *very much*). This paradigm enables researchers to identify reliable inferential biases participants may have about the emotions underlying the targets' facial expressions. To the extent that certain emotional inferences (e.g., anger) are reported only for certain target faces (e.g., female faces) and only by certain groups of perceivers (e.g., females), the data potentially provide useful information about fundamental functional biases.

The order in which the emotion labels were presented was randomized for each of the 18 targets (9 males, 9 females), which were taken from the NimStim photo set (Tottenham et al., 2009). Each photo was of a White target of average attractiveness, and experts had verified that all the facial expressions were neutral.[3]

Results and discussion

A mixed factorial ANOVA on ratings of anger revealed a significant Participant's Sex × Target's Sex interaction, $F(1, 86) = 7.30$, $p = .008$, $\eta_p^2 = .078$ (see Fig. 2a). As predicted, (a) female participants inferred more anger from the neutral female faces ($M = 3.16$, $SE = 0.14$) than did male participants ($M = 2.72$, $SE = 0.13$), $F(1, 86) = 5.80$, $p = .018$, $\eta_p^2 = .063$, and (b) female participants inferred more anger from the neutral female faces than from the neutral male faces ($M = 2.64$, $SE = 0.16$), $F(1, 86) = 14.81$, $p < .001$, $\eta_p^2 = .147$.

This pattern of emotion inference—women inferring more of a specific emotion from neutral female faces than men did, and women inferring more of a specific emotion from neutral female than from neutral male faces—was unique to the emotion of anger. We did not find sex differences in inferences of the other measured emotions (ps > .23) except in the case of sexual arousal, and in that case the pattern was distinct from that for anger: Men inferred more sexual arousal from neutral female faces than women did, $F(1, 86) = 8.83$, $p = .004$, $\eta_p^2 = .093$. (Descriptive statistics for ratings of all six emotions are presented in the Supplemental Material available online.) In sum, the results from Study 2 support our

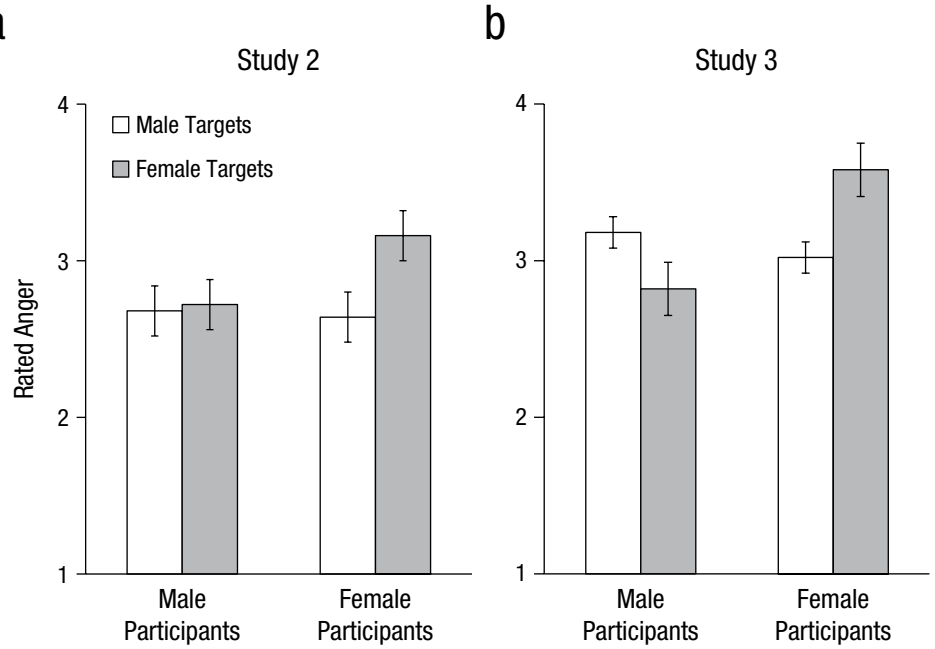

Fig. 2. Results from (a) Study 2 and (b) Study 3: mean amount of anger projected onto neutral male and female target faces by male and female participants. Error bars represent ±1 *SE*.

prediction that women (but not men) project anger onto neutral female (but not male) faces.

Study 3

In Study 3, we tried to replicate our results from Study 2 and tested our second prediction—that sexually desirable or available women show an exaggerated bias for inferring anger from women's neutral faces.

Method

Participants. Sixty participants located in the United States were recruited from MTurk for a study on "social perception." Four subjects failed to complete the focal dependent variables and were excluded from analyses. Data from 56 participants (28 male, 28 female) were analyzed.

Design and procedure. We repeated the design of Study 2 using four emotions—anger, happiness, fear, and pride. In addition, we collected individual difference measures of participants' self-perceived mate value, or sexual desirability (from Landolt, Lalumière, & Quinsey (1995; e.g., "Members of the opposite sex are attracted to me"; scale from 1, *I disagree*, to 7, *I agree*), and of their sociosexuality, or sexual availability (from Penke & Asendorpf, 2008; e.g., "Sex without love is OK"; scale from 1, *strongly disagree*, to 9, *strongly agree*).

Results and discussion

We replicated our findings from Study 2: A mixed factorial ANOVA on anger ratings revealed a significant Participant's Sex × Target's Sex interaction, $F(1, 54) = 10.55$, $p = .002$, $\eta_p^2 = .163$ (see Fig. 2b). As predicted, (a) female participants inferred more anger from neutral female faces ($M = 3.58$, $SE = 0.18$) than did male participants ($M = 2.82$, $SE = 0.18$), $F(1, 54) = 9.16$, $p = .004$, $\eta_p^2 = .145$, and (b) female participants inferred more anger from neutral female faces than from neutral male faces ($M = 3.02$, $SE = 0.16$), $F(1, 54) = 7.90$, $p = .007$, $\eta_p^2 = .128$.

This pattern of inference—women inferring more of a specific emotion from neutral female faces than men did, and women inferring more of a specific emotion from neutral female than from neutral male faces—was again unique to anger. There were no significant sex differences in projection of the other emotions onto neutral faces of either sex (ps > .13; descriptive statistics for ratings of all four emotions are presented in the Supplemental Material available online).

To test our second prediction, we explored the impact of participants' self-perceived mate value and sexual availability on their inferences of anger. As previous evidence suggests that female sexual desirability (Leenaars et al., 2008) and sexual availability (e.g., Vaillancourt & Sharma, 2011; Vrangalova et al., 2014) can each evoke intrasexual aggression, we explored these features separately. If, as predicted, sexual desirability influences women's (but not men's) inferences of anger from neutral

female (but not male) faces, we would see significant Participant's Sex × Mate Value and Participant's Sex × Sexual Availability interactions for ratings of anger in neutral female faces, but not neutral male faces.

Looking first at female targets, we regressed perceived anger onto participant's sex, self-perceived mate value, and the resultant interaction term. There was a significant Participant's Sex × Mate Value interaction, $t(52) = 6.36$, $p < .001$, $\beta = 0.77$ (see Fig. 3a). For male targets, however, no variable reached significance (ps > .26).

Following Aiken and West (1991), we explored predicted sex differences in inferences of anger from female faces for participants at 1 standard deviation below and above the mean of self-perceived mate value. Whereas low-mate-value women inferred less anger from female faces than did low-mate-value males, $t(52) = -2.10$, $p = .040$, $\beta = -0.28$, this sex difference was reversed and exaggerated in high-mate-value participants, $t(52) = 7.03$, $p < .001$, $\beta = 0.92$. Moreover, sexually desirable women inferred more anger from female faces than did less sexually desirable women, $t(52) = 6.87$, $p < .001$, $\beta = 0.96$. For male participants, the trend was marginally significant in the opposite direction, $p = .076$. Thus, results supported our hypothesis: Women who believed themselves to have high mate value were especially likely to infer anger from female faces with neutral expressions.

We performed these same analyses substituting self-reported sexual availability for self-perceived mate value. Looking first at anger ratings of female targets, we found a significant Participant's Sex × Sexual Availability interaction, $t(52) = 3.71$, $p = .001$, $\beta = 0.70$ (see Fig. 3b). For anger ratings of male targets, however, no variable reached significance (ps > .19). Whereas the predicted anger ratings for relatively unavailable men and women (i.e., those at 1 *SD* below the mean) did not differ significantly ($p = .715$), there was a significant predicted sex difference for more sexually available individuals (i.e., those at 1 *SD* above the mean), $t(52) = 5.02$, $p < .001$, $\beta = 0.81$. Moreover, more sexually available women inferred more anger from female faces than did less sexually available women, $t(52) = 4.11$, $p < .001$, $\beta = 0.55$. For men, the trend was nonsignificant and in the opposite direction. Thus, results again supported our hypothesis: Sexually available women were especially likely to infer anger from female faces with neutral expressions.

Study 3 thus replicated our findings from Study 2—that women (but not men) inferred anger from neutral female (but not male) faces—and supported our second prediction—that women who may be frequent targets of intrasexual aggression (i.e., sexually desirable or available women) show an exaggerated bias.

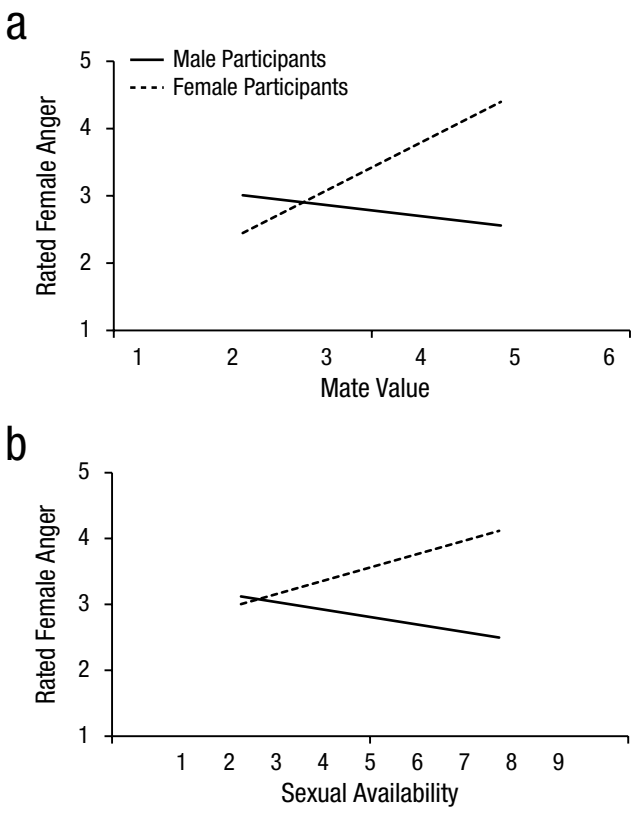

Fig. 3. Results from Study 3: regression lines indicating male and female participants' predicted ratings of anger in neutral female faces as a function of participants' (a) self-perceived mate value (i.e., sexual desirability to the opposite sex) and (b) self-reported sexual availability.

General Discussion

Female intrasexual sociality may present unique challenges. Women tend to employ covert tactics of aggression, particularly toward other women (e.g., Campbell, 2002; Vaillancourt, 2013), and women's anger displays, particularly those toward other women, may be ambiguous. Together, these tendencies imply that female targets of intrasexual anger and anger-based aggression may often lack reliable cues to tell when anger and aggression will be directed toward them. We predicted and found one possible cognitive defense—a bias for women to err in the direction of "seeing" neutral female faces as being angry. This inferential bias may be functional insofar as it allows women to minimize the potentially high costs of intrasexual aggression (Vaillancourt, 2013).

This bias was most apparent in women of relatively high sexual desirability and availability. Why? Consider the benefits and the costs of inferring that another woman's neutral facial expression is masking anger. If the other woman is actually angry, a primary benefit of such an inference is that it may motivate the target of that anger and impending aggression to act in ways that might mitigate the potentially high costs of being victimized. If the other woman is not actually angry, then the costs of mistakenly inferring that she is may include unnecessary social anxiety and (perhaps damaging) efforts to manage a nonexisting problem. Because sexually desirable and available women are actually particularly likely to be the

targets of anger and consequent indirect aggression from other women, the possible benefits of this bias (i.e., potentially reducing the threat) likely outweigh the costs (i.e., opportunity costs imposed by these efforts). Because less desirable and more sexually restricted women are less likely to be frequent targets of indirect aggression from other women, the possible costs of this bias (i.e., anxiety and effortful attempts to reduce what is actually a low-probability threat) may outweigh the benefits.

Study 1, as well other research (e.g., Vaillancourt & Sharma, 2011), suggests that women's neutral expressions can, in fact, be displays of anger and aggression toward other women. This implies that the inferential bias exhibited in Studies 2 and 3 may reflect a kernel of truth and may support accuracy. That is, because neutral female faces are sometimes expressions of anger toward other women, the "biased" perception of anger evidenced by female perceivers in Studies 2 and 3 may sometimes engender accurate perceptions of other women's emotional states (anger) and behavioral intentions (aggression). One might thus speculate that highly sexually desirable and sexually available women develop this bias in response to a history of being the frequent targets of other women's anger and aggression.

But why might women employ ambiguous expressions of anger toward other women (but not men) in the first place? One possible reason why women's intrasexual anger might be suppressed or ambiguously displayed is because this facilitates (or, more accurately, does not thwart) women's intentions to aggress against other women covertly. Moreover, because the stability of women's same-sex friendships may be especially sensitive to even ephemeral cues of turmoil (e.g., Benenson & Christakos, 2003), women may suppress displays of anger toward one another to avoid destabilizing valued bonds.

The bias in emotion inference was unique to anger, which indicates that gender-related norms for emotion display (or suppression) alone cannot account for our results. For instance, like anger, pride is a stereotypically male expression, but participants did not project pride onto women's faces. One might also wonder whether the pattern of inferring anger from neutral female faces emerged because women's neutral expressions appear angrier than men's, as a lack of a smile is a deviation—in the negative direction—from the (smiling) female norm (e.g., Deutsch, LeBaron, & Fryer, 1987). If so, however, both sexes should have perceived more anger in female faces than in male faces. Likewise female participants, regardless of their own mate value and sexual availability, should have shown similar effects. Instead, the data were consistent with our hypothesis that this perceptual bias may help women manage intrasexual aggression: Women—and especially women frequently targeted by intrasexual aggression—saw more anger on neutral female faces than men did.

Similarly, one might ask why women did not project more anger onto male than female targets. After all, men's direct aggression is arguably more damaging than other women's indirect aggression. As Study 1 indicates, when men are angry, they intend to show it. Moreover, when men aggress directly, the incoming aggression is often apparent. Women are not insensitive to such potential danger. For instance, previous work found that women see male targets who are wearing direct angry gazes as especially anger-prone, evidencing an attributional bias that may serve the same function as the perceptual bias we discuss here (i.e., to help avoid harm; Galperin, Fessler, Johnson, & Haselton, 2013). In contrast to men's observable, reliable, immediate cues of impending aggression (i.e., men's direct angry gazes), women's intrasexual displays of anger are often suppressed, and their intrasexual aggression is frequently covert. Thus, women face a particular challenge in anticipating intrasexual anger and anger-evoked aggression—and this compels a need to rely on less reliable cues. Although our methods and those of Galperin et al. (2013) were substantially different, both studies may provide evidence for potentially adaptive biases whereby perceivers may mitigate the costs of anger and aggression directed toward them.

Conclusion

Female aggression is a topic of growing interest (e.g., Benenson, 2013; Campbell, 1999). Less attention has been paid, however, to the ways in which women might manage intrasexual aggression directed toward them. Defensive tactics are important, as indirect aggression can levy high costs (e.g., Campbell, 2002; Vaillancourt, 2013). Our results suggest one possible defensive tactic—an inferential bias for women, especially those who are frequent targets of same-sex indirect aggression, to "see" other women's neutral faces as angry. Although a bias toward seeing such anger might cause unnecessary worry, it might also help women mitigate the potentially high costs of intrasexual victimization.

Author Contributions

J. A. Krems and S. L. Neuberg developed the study concept. All authors contributed to the study design. Data collection, analyses, and interpretation were performed by G. Filip-Crawford and J. A. Krems under the supervision of S. L. Neuberg. J. A. Krems drafted the manuscript, and all authors provided critical revisions. All authors approved the final version of the manuscript for submission.

Acknowledgments

Gabrielle Filip-Crawford is now at the Department of Psychology, Pennsylvania State University, University Park. The authors thank Keelah E. G. Williams for helpful comments on earlier versions of this manuscript.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Funding

This research was supported by funds provided to S. L. Neuberg by the ASU Foundation for a New American University.

Supplemental Material

Additional supporting information can be found at http://pss.sagepub.com/content/by/supplemental-data

Open Practices

All questionnaires and data are available by contacting the first author, J. A. Krems, jaimie.krems@asu.edu. The face stimuli in the NimStim photo set (Tottenham et al., 2009) are freely available from the Research Network on Early Experience and Brain Development (see http://www.macbrain.org/resources.htm). The complete Open Practices Disclosure for this article can be found at http://pss.sagepub.com/content/by/supplemental-data.

Notes

1. Of course, men's direct aggression can also levy high costs on women, but "seeing" anger on emotionally benign (non-out-group) men may be unnecessary if men's anger (unlike women's) is often overtly displayed and men's direct tactics signal reliable and readily detectable cues of incoming aggression (unlike women's indirect tactics; e.g., Björkqvist, 1994). For women, other women may be more likely, if not also more dangerous, indirect aggressors (e.g., Vaillancourt, 2013).
2. We adopted this focus not only to provide a direct test of our hypotheses, but also for statistical reasons: Because choices within the budget methodology are dependent on one another (i.e., points allocated to one emotional expression cannot be allocated to another emotional expression), conventional analyses require that this dependence be reduced. We did this by analyzing data for our two focal emotions only. Note, however, that we have conceptually replicated our main finding, employing two alternative methodologies not subject to the same considerations. The findings from our replication studies are presented in the Supplemental Material available online, as are descriptive statistics for all four emotional displays in the experiment reported in this article.
3. These data were originally collected for an unrelated study in which participants were randomly assigned to view faces labeled "heterosexual" or "homosexual." This manipulation was of no relevance to our current hypotheses, had no effect, and is not included in the reported analyses.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Archer, J. (2004). Sex differences in aggression in real-world settings: A meta-analytic review. *Review of General Psychology*, *8*, 291–322.

Benenson, J. F. (2013). The development of human female competition: Allies and adversaries. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *368*, 20130079.

Benenson, J. F., & Christakos, A. (2003). The greater fragility of females' versus males' closest same-sex friendships. *Child Development*, *74*, 1123–1129.

Benenson, J. F., Markovits, H., Hultgren, B., Nguyen, T., Bullock, G., & Wrangham, R. (2013). Social exclusion: More important to human females than males. *PLoS ONE*, *8*, Article e55851. doi:10.1371/journal.pone.0055851

Björkqvist, K. (1994). Sex differences in physical, verbal, and indirect aggression: A review of recent research. *Sex Roles*, *30*, 177–188.

Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 204–232.

Campbell, A. (1995). A few good men: Evolutionary psychology and female adolescent aggression. *Ethology and Sociobiology*, *16*, 99–123.

Campbell, A. (1999). Staying alive: Evolution, culture, and women's intrasexual aggression. *Behavioral & Brain Sciences*, *22*, 203–214.

Campbell, A. (2002). *A mind of her own: The evolutionary psychology of women*. New York, NY: Oxford University Press.

Cross, C. P., Tee, W., & Campbell, A. (2011). Gender symmetry in intimate aggression: An effect of intimacy or target sex? *Aggressive Behavior*, *37*, 268–277.

Deutsch, F. M., LeBaron, D., & Fryer, M. M. (1987). What is in a smile? *Psychology of Women Quarterly*, *11*, 341–352.

Evers, C. A. M., Fischer, A. H., & Manstead, A. S. R. (2011). Gender and emotion regulation: A social appraisal perspective on anger. In I. Nyklicek, A. Vingerhoets, & M. Zeelenberg (Eds.), *Emotion regulation and well-being* (pp. 211–222). New York, NY: Springer.

Fabes, R. A., & Martin, C. L. (1991). Gender and age stereotypes of emotionality. *Personality and Social Psychology Bulletin*, *17*, 532–540.

Galperin, A., Fessler, D. M. T., Johnson, K. L., & Haselton, M. G. (2013). Seeing storms behind the clouds: Biases in the attribution of anger. *Evolution & Human Behavior*, *34*, 358–365.

Goos, L. M., & Silverman, I. (2002). Sex related factors in the perception of threatening facial expressions. *Journal of Nonverbal Behavior*, *26*, 27–41.

Haselton, M. G., & Buss, D. M. (2000). Error management theory: A new perspective on biases in cross-sex mind-reading. *Journal of Personality and Social Psychology*, *78*, 81–91.

Haselton, M. G., & Nettle, D. (2006). The paranoid optimist: An integrative evolutionary model of cognitive biases. *Personality and Social Psychology Review*, *10*, 47–66.

Kring, A. M. (2000). Gender and anger. In A. H. Fischer (Ed.), *Gender and emotion: Social psychological perspectives. Studies in emotion and social interaction* (pp. 211–231). New York, NY: Cambridge University Press.

Landolt, M. A., Lalumière, M. L., & Quinsey, V. L. (1995). Sex differences in intra-sex variations in human mating tactics: An evolutionary approach. *Ethology and Sociobiology*, *16*, 3–23.

Leenaars, L. S., Dane, A. V., & Marini, Z. A. (2008). Evolutionary perspective on indirect victimization in adolescence: The role of attractiveness, dating and sexual behavior. *Aggressive Behavior*, *34*, 404–415.

Maner, J. K., Kenrick, D. T., Becker, D. V., Robertson, T. E., Hofer, B., Neuberg, S. L., . . . Schaller, M. (2005). Functional projection: How fundamental social motives can bias interpersonal perception. *Journal of Personality and Social Psychology*, *88*, 63–78.

Nesse, R. M. (2001). The smoke detector principle: Natural selection and the regulation of defenses. *Annals of the New York Academy of Sciences*, *935*, 75–85.

Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology*, *95*, 1113–1135.

Simon, R. W., & Nath, L. E. (2004). Gender and emotion in the United States: Do men and women differ in self-reports of feelings and expressive behavior? *American Journal of Sociology*, *109*, 1137–1176.

Tottenham, N., Tanaka, J. W., Leon, A. C., McCarry, T., Nurse, M., Hare, T. A., . . . Nelson, C. (2009). The NimStim set of facial expressions: Judgments from untrained research participants. *Psychiatry Research*, *168*, 242–249.

Vaillancourt, T. (2013). Do human females use indirect aggression as an intrasexual competition strategy? *Philosophical Transactions of the Royal Society B: Biological Sciences*, *368*, 20130080.

Vaillancourt, T., & Sharma, A. (2011). Intolerance of sexy peers: Intrasexual competition among women. *Aggressive Behavior*, *37*, 569–577.

Vrangalova, Z., Bukberg, R. E., & Rieger, G. (2014). Birds of a feather? Not when it comes to sexual permissiveness. *Journal of Social and Personal Relationships*, *31*, 93–113.