Knowing how they feel: Perceiving emotions felt by outgroups

Charles R. Seger a,*, Eliot R. Smith a, Zoe Kinias b, Diane M. Mackie c

a Indiana University, Bloomington, Department of Psychological & Brain Sciences, 1101 E. 10th Street, Bloomington, IN 47404, USA
b Department of Management and Organizations, Kellogg School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208
c Department of Psychology, University of California, Santa Barbara, CA 93106–9660

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Individuals can often accurately perceive others’ emotions in a purely interpersonal context. However, when people identify with an important ingroup, they experience distinctive patterns of emotion [Smith, E. R., Seger, C. R., & Mackie, D. M. (2007). Can emotions be truly group-level? Evidence regarding four conceptual criteria. Journal of Personality and Social Psychology, 93, 431–446]. Thus, in three studies using a variety of meaningful groups, we examine how a salient distinction between groups might influence people’s ability to estimate the emotions of outgroup members. Participants demonstrated substantial though imperfect accuracy in estimating the emotions reported by outgroups. Specific biases affected their estimates, especially the overlap of perceived emotions of the outgroup with the ingroup’s own emotions. Furthermore, there was a general overprediction of outgroups’ negative emotions and underprediction of their positive emotions. Because of the importance of an outgroup’s emotions as potential causes of their behavior, accuracy and biases in group emotion estimation may be consequential for intergroup relations.

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Introduction

When the United States and its allies invaded Iraq in 2003, supporters of the war expected the action to be greeted with open arms by Iraqis. Some senior officials in the Pentagon went so far as to liken the overthrow of Saddam Hussein and liberation of Baghdad to the liberation of Paris from the Nazis, anticipating that Iraqis would feel much gratitude and joy (Fisher, 2003; Landay & Strobel, 2003). Thus, there was considerable surprise when many Iraqis reacted with anger, fear, and contempt instead. Had the Bush administration accurately predicted Iraqis’ feelings, it is likely the military’s strategy would have been very different (Landay & Strobel, 2003).

In many intergroup situations it is important to be able to estimate the feelings of others, because emotions often influence behavior. The goal of this paper is to examine how well members of one group can estimate the emotions reported by members of an outgroup, and what biases influence such estimates. As background for this issue, consider that in ordinary interpersonal situations, in which group memberships are not salient, people have at least some accuracy in perceiving the emotions of others (e.g., Ickes, 1997). The novel question that we address is how a salient distinction between groups might influence people’s ability to perceive the emotions of outgroup members. We might expect some accuracy even in this situation, in part because of the adaptive importance of knowing how outgroup members feel and therefore how they might behave. On the other hand, group-related biases might plausibly influence intergroup emotion perceptions. Biases might include people’s tendency to assume that outgroups are similar to—or different from—the ingroup in their emotional profiles, or the kinds of evaluative intergroup biases that are so pervasive in intergroup situations in general. Before we introduce our specific hypotheses for these studies, we review relevant theoretical considerations.

Emotions based on group membership

Group memberships are relevant to the understanding of others’ emotions because when people identify with their ingroups, they experience a distinct pattern or profile of group-related emotions. This distinction between group-level and individual-level emotions is fundamental to Intergroup Emotions Theory (Devos, Silver, Mackie, & Smith, 2002; Mackie, Devos, & Smith, 2000; Mackie, Silver, & Smith, 2004; Smith, 1993). It is based on the idea that when a distinction between social groups becomes salient people begin to think of themselves and others in terms of their group memberships. As many studies have documented, this process of “depersonalization” has important effects, including perceiving...
oneself, ingroup members, and outgroup members in terms of shared stereotypes of the groups, as well as evaluating the ingroup and its members more positively than the outgroup and its members (Doosje & Branscombe, 2003; Haslam, Oakes, Turner, & McGarty, 1995; Hewstone, 1990; Jetten, Spears, & Postmes, 2004). The depersonalization process also leads people to experience emotions in response to situations and events that impinge on the group, even if the individual is not directly or personally involved in the events (Mackie & Smith, 1998, 2002; Mackie et al., 2000; Smith, 1993). Like any emotion, these group-level emotions are associated with action tendencies or desires to act in particular ways, especially in ways involving group-relevant or collective actions (Smith, Seger, & Mackie, 2007). For example, members of a winning team may feel pride and be moved to display team flags and symbols; members of a threatened group might experience group-based anxiety, and attempt to avoid the threatening outgroup.

Research has focused on two somewhat distinct types of group-based emotions. Early IET research focused on emotions felt in response to specific events or objects that are relevant to the ingroup (e.g., Mackie et al., 2000)—for example, feelings of fear or anger directed at a threatening rival group. However, as individuals people not only experience acute emotions in response to specific events, but also more general or chronic affective states, such as feelings of anxiety, depression, happiness, or irritation. The widely used PANAS (Watson, Clark, & Tellegen, 1988) and its variants are examples of scales that ask respondents to what extent they generally feel each of a number of emotions, rather than what emotions they feel in response to specific events or objects. Group-based emotions can also be of this more general or chronic type. We have measured these more chronic emotions using wordings analogous to the PANAS, asking people to what extent they generally feel a number of positive and negative emotions when they identify with or think of themselves as members of a particular ingroup (e.g., Smith et al., 2007). Validating the meaningfulness and importance of such emotions, they have been shown to predict intergroup attitudes and behavioral tendencies, above and beyond the predictive power of individual-level emotions.

A recent investigation of group-based emotions (Smith et al., 2007), on which the current studies directly build, provided evidence for the existence and meaningfulness of such chronic group emotions. First, the pattern or profile of group-level emotions is distinct from the same person’s individual-level emotions. Second, group-level emotions depend on the person’s level of group identification, with those identifying more strongly with the group reporting generally more positive and less negative emotions. Third, group-level emotions are socially shared within a group. For example, when thinking of themselves as Americans, people tended to converge toward an “American” profile of emotions, which is distinct from the emotion profile reported by the same individuals when thinking of themselves as students of their university. Finally, group-level emotions contribute to motivating and regulating intragroup and intergroup attitudes and behavior. Profiles of chronic group-level emotions (measured without any reference to a specific event or a situation) predict desires to take actions such as confronting the outgroup, avoiding the outgroup, or affiliating with the ingroup, above and beyond the effects of individual emotions.

Because group-based emotions influence intergroup behavior (Smith et al., 2007), being able to perceive the general emotions of an outgroup should be adaptively important in helping people to predict and respond to the outgroup members’ actions. Our focus in the current studies is whether people can accurately estimate outgroup members’ group-level emotions, and the extent to which their estimates are influenced by biases that so often affect social cognition and behavior in intergroup situations.

Analyses assessing intergroup perception

As is well known, several conceptual pitfalls can interfere with the assessment of accuracy based on the overlap or match between one person’s predictions regarding a target and the target’s self-reported characteristics (Cronbach, 1955). We follow the two approaches outlined by Judd and Park (1993) in their investigations of the accuracy of predictions regarding outgroup traits and behaviors. The first approach assesses accuracy in a correlational sense, as defined by sensitivity, which overcomes many of the response-language biases highlighted by Cronbach (1955; Judd & Park, 1993). This approach asks: How sensitive are members of one group to the fact that the outgroup experiences more of some emotions and less of others? It answers that question with a correlation or regression coefficient (across a list of particular emotions) showing the relationship between the ingroup members’ estimations about the outgroup and the outgroup members’ reports of their actual group-based emotions. That is, if an ingroup member perceives that the outgroup experiences relatively more of emotions A, B, and C and less of emotions D, E, and F, is that same relative pattern found in the outgroup’s actual reports of their emotions? We analyzed the sensitivity of emotional estimations using a multilevel regression approach, described later in the paper.

We also employ a second, complementary analytic approach: analyses of discrepancies. As Judd and Park (1993) note, the analysis of sensitivity correlations allows for the assessment of the overlap between perceived and actual outgroup emotions, but does not directly indicate whether these perceptions are over- or underestimates. For this purpose, discrepancy scores must be examined. We calculate a discrepancy score for each participant, for each emotion, as the participant’s estimate of the outgroup emotion minus the mean level of that emotion reported by the outgroup. These scores can then be analyzed to reveal patterns of over/underestimation of outgroup emotions. As a counterpart to the analysis of sensitivity, then, the analysis of discrepancy scores will suggest the nature and direction of potential biases in these perceptions.

Hypotheses

Research on interpersonal perception suggests that individuals have at least some accuracy in perceiving others’ emotions (e.g., Ambady, Hallahan, & Rosenthal, 1995; Ickes, 1997). Although “empathic accuracy” is generally higher when people have some familiarity with the target, accuracy can be found even in zero acquaintance situations (Hall & Schmid Mast, 2007).

But accuracy in perceiving others in interpersonal situations is not unalloyed. The social projection literature demonstrates clear biases that may also influence perceptions of the emotions of others (Krueger, 2007; Krueger, Acevedo, & Robbins, 2006). It has been repeatedly shown that individuals project their own attitudes and personality characteristics onto known and unknown others (Robbins & Krueger, 2005), resulting in perceiving others as similar to the self. Van Boven and Loewenstein (2003) even showed that people tend to project their own transient physical states (e.g., thirst, hunger) onto others. This literature suggests that people are likely to estimate that others’ emotions are similar to the perceiver’s own emotions.

However, the literature on emotion perception has focused almost exclusively on interpersonal rather than intergroup situations. How will a salient group distinction influence estimates of emotions experienced by members of an outgroup? This is the key question addressed by this paper. We describe three specific hypotheses, discussing the theoretical rationale for each.
Accuracy

In intergroup situations, people have important motives to understand outgroup members' emotions in order to predict their behavior, just as in everyday interpersonal encounters we have reasons to want to understand the emotions of our interaction partners. Further, people have access to cues that might give insight into outgroup members' emotions. People can perceive outgroup individuals (e.g., men or women) or spokespersons (for groups like Republicans or Democrats) and use those observations to estimate the typical emotions of outgroup members. However, because individual and group-level emotions can be quite distinct (Smith et al., 2007), perceivers must attempt to understand whether an outgroup member's emotions are personal or are group-based. Seeing a Republican who is sad because of a recent relationship breakup, for instance, should not lead a perceiver to attribute sadness to Republicans as a group. For this reason, perceivers might choose to attend only to emotions that are shared by numerous outgroup members, or emotions that are expressed in a clearly intergroup context (e.g., the emotions of Democratic or Republican spokespersons talking about an election contest). Because of the adaptive importance of understanding outgroup emotions, and the availability of cues that should be of at least some utility in that process, we predict that people should have significant sensitivity (accuracy in the correlational sense) in estimating outgroup emotions, just as they have some level of sensitivity in interpersonal emotion perception.

Assumed ingroup–outgroup similarity

In interpersonal perception people generally tend to project: to estimate that others have similar attitudes or other characteristics as the perceiver him or herself. But in an intergroup situation, will people estimate that ingroup and outgroup emotions are similar? The existing literature, summarized by Robbins and Krueger's (2005) meta-analysis, suggest that people generally do not project attitudes or other personal characteristics onto outgroup members. However, this conclusion may not apply directly to the estimation of an outgroup's emotions. In an intergroup situation people might refuse to project ingroup attitudes onto the outgroup, in part because groups are often differentiated by their conflicting attitude positions. However, people might assume that if their ingroup is feeling anxious or angry in any given intergroup relationship, the outgroup might be experiencing similar feelings. That is, an outgroup's emotions (in contrast to their attitudes) might be assumed to be similar to the ingroup's.

Recall that people's individual-level and ingroup emotions are often distinct (Smith et al., 2007). The line of reasoning just outlined suggests that people should perceive that the outgroup's emotions are similar to their ingroup emotions, rather than their individual-level emotions. As noted earlier, one would not want to infer that the outgroup is experiencing an emotion as a group from observing a single outgroup member who is displaying that emotion for idiosyncratic individual reasons. Similarly, one would not want to assume that an outgroup shares an emotion that one is personally experiencing for individual reasons. Rather, it would make more sense to assume that both groups in an intergroup situation (whether characterized by cooperation, wariness, overt conflict, etc.) will experience generally similar profiles of emotions at the group level. Thus, there should be some overlap or similarity between people's reports of their own ingroup emotions and estimates of outgroup emotions. This is our second major hypothesis for these studies.

Intergroup bias

Finally, in considering how estimates of the emotions of others might be altered by an intergroup context, we must recognize that intergroup situations in general produce evaluative biases. Such biases are pervasive: people almost always evaluate ingroups and their products more positively than they do outgroups (Brewer, 1979; Dovidio & Gaertner, 1993; Mullen, Brown, & Smith, 1992). There is no existing research examining potential evaluative biases in the perception of ingroup and outgroup emotions, but based on the existing literature we should expect people to perceive that outgroups feel less positively than the ingroup does. Thus, we expect that members of a given group (e.g., women) will estimate that men experience less pleasant and positive group-level emotions, compared to the emotions that men actually report experiencing.

Summarizing these predictions, we expect to observe:

1. A substantial and meaningful degree of accuracy (as evidenced by sensitivity correlations; Judd & Park, 1993) in people's perceptions of outgroup emotions.
2. Positive overlap between the perceiver's own reported emotions for their ingroup and estimates of the emotions experienced by the outgroup. Overlap between the perceiver's individual (as opposed to group-level) emotions and perceptions of the outgroup's group-level emotions should be less prominent.
3. An evaluative intergroup bias in estimates of group emotions, with the outgroup being estimated to experience more intense negative emotions and less intense positive emotions than the outgroup reports experiencing.

One final, subsidiary question involves effects of ingroup identification. Levels of group identification pervasively affect many types of intragroup and intergroup processes (e.g., Castano, Yzerbyt, Bourguignon, & Seron, 2002), including emotional processes. For example, Smith et al. (2007) found that more highly identified group members tended to report group-level emotions that were closer to the group's prototypical emotion profile. So how might group identification affect perceptions of outgroup emotions? We are reluctant to make definite predictions in the face of opposing theoretical considerations. On the one hand, more strongly identified group members (i.e., those for whom group membership is more important) should have more incentive to understand outgroup emotions, and possibly more opportunity to observe outgroup members, leading to expectations that they might attain higher levels of accuracy. On the other hand, highly identified group members might struggle to escape from their group-based "mindset" to understand how others can experience the world differently or respond with different emotional feelings. This would limit their accuracy in estimating outgroup emotions, and possibly increase their tendency to assume that ingroup emotions and outgroup emotions are similar, as well as their susceptibility to intergroup biases. Our analyses will indicate which of these competing possibilities actually holds.

To test these hypotheses, we analyzed three similarly structured data sets. In each instance, we measured respondents' individual-level emotional feelings, their identification with a variety of different groups (gender, political party, etc.), and their group-based emotions felt as members of those groups. We also measured, using the same scales, their perceptions of the group-based emotions of members of the corresponding outgroups. We describe the data-collection methods of the three studies next, and then present analyses from all three studies together.

Method

Studies 1 and 2

Studies 1 and 2 (Ns = 413 and 204, respectively) were conducted at Indiana University using web-based questionnaires. Study 1 is the same data-collection reported as Study 2 in Smith
tionnaire (see Smith et al., 2007), assessing their identification with Asians were analyzed on ethnic measures. Although this was a forced choice, individuals feeling no meaningful ties to either group should report low levels of group identification (cf. Smith et al., 2007). The question wording was: “As an individual, when you think about yourself as a person, to what extent do you feel each of the following emotions?”

Self-categorization

For Study 1, on the following page participants indicated whether they identified more as a Democrat or a Republican and completed subsequent items with regard to the party they chose. Although this was a forced choice, individuals feeling no meaningful ties to either group should report low levels of group identification (see below). Non-US citizens were excluded from all analyses in Study 1. In Study 2, participants checked boxes to indicate their gender and ethnic category; only responses from Caucasians and Asians were analyzed on ethnic measures.

Identification

Participants then completed a 4-item group identification questionnaire (see Smith et al., 2007), assessing their identification with the relevant ingroup. Sample items included “I see myself as a (group member),” “I am pleased to be a (group member).”

Ingroup emotions

Participants then reported their emotions as a group member, with the following instructions: “When you think about yourself as a Democrat or Republican, to what extent do you feel each of the following emotions? Choose the number that indicates your best estimate of how much you experience each emotion when you think about yourself as a member of your party.” The emotion list was identical to that used for individual-level emotions, except that “angry at self” and “angry at other people” was replaced by “Angry at Democrats” and “Angry at Republicans” (Study 1) and by Angry at Men/Women/Asians/Caucasians as appropriate in Study 2.

Outgroup emotion perceptions

Finally, participants were asked to estimate the emotions felt by members of the opposing groups, with the instructions (for political groups) “We are interested in whether Democrats and Republicans can accurately predict the feelings of people in the opposite party. Earlier, you identified yourself as either a Democrat or Republican. Choose the number that indicates your best estimate of how much you think members of the opposing party experience each emotion when they think about themselves as a member of their party.” A similar wording was used in study 2; for example, “We are interested in whether men can accurately predict the feelings of women. Choose the number that indicates your best estimate of how much you think women experience each emotion when they think about themselves as a woman.”

Study 3

Two hundred seventy-four students at the University of California, Santa Barbara, participated in this study for partial fulfillment of course requirements or for $5. The participants included 81 men and 191 women (2 participants did not indicate gender), 60 smokers, 45 gay men, lesbians, and bisexual people (GLBs), and 252 Americans. Actual sample sizes for some analyses were slightly smaller, as there was incomplete data from 5 participants. Study 3 involved minor wording and procedural differences from the first two studies that make it possible to replicate results across nonessential methodological differences and hence demonstrate that findings are not highly sensitive to such details. Emotions were reported “as an individual,” “as a man,” “as a woman,” “as a smoker,” “as a gay man, lesbian, or bisexual person,” and “as an American.” The emotions assessed were feeling accepted, afraid, angry, ashamed, disgusted, grateful, guilty, happy, hopeful, irritated, lonely, proud, respectful, satisfied, and uneasy, all rated on 9-point scales. With respect to each group, participants responded first to a 1-item assessment of their group membership (e.g., are you a woman?), then answered the group-level emotion items “as a member of the group” (if they were) or “imagining you are a member of the group” (if they were not actually a member). Finally, participants who were actually group members completed an 8-item measure of identification with their ingroup (outgroup members were directed to skip these questions), also on a 1–9 scale. Four items on this identification scale were adapted from the centrality subscale of Luhtanen and Crocker’s (1991) Collective Self-Esteem Scale, and the other 4 items assessed feelings of attachment to the ingroup (e.g., “I feel a common bond to other women,” Eccleston & Major, 2006). These 8-item scales were reliable with respect to all groups (alphas ranged from .78 to .88).

Results

Preliminary analyses: Convergence of group emotions

Before turning to our main focus, the accuracy of estimates of outgroup emotions, it is important to establish that group emotions actually do constitute a meaningful profile to which group members converge in these studies. If consensual profiles were not found, there would be nothing meaningful to estimate. Therefore we first examined the extent to which members of different groups in these three samples converged to prototypical profiles of ingroup emotions, replicating and extending the results of similar analyses in Smith et al. (2007).

Our analyses treated the issue of convergence within an ingroup as a statistical prediction question: To what extent is a particular participant’s level of a particular group emotion (happiness as a woman, say) predicted by (a) the same participant’s individual-level happiness and (b) the average level of group happiness reported by all women in the sample? Individual emotions should be a predictor because some overlap between individual and group emotions is expected (see Smith et al., 2007). Convergence is indicated if the group-average emotion profile is also a significant predictor, above and beyond any overlap between individual and group-level emotions (indicated by the first predictor). This analysis involves a hierarchical linear models approach, with the analysis conducted separately for each group (e.g., for men and for women separately); for a detailed description of this procedure see Smith et al. (2007).

To examine whether group identification moderates the convergence process, we also included the participant’s group identification (centered to a mean of zero) as a further independent variable, as well as interactions between identification and the
other two predictors. Specifically, we hypothesized that the strength of the relationship between the group-average profile of emotions and the individual participant’s group emotion reports (i.e., how much one converges toward the group-average profile) would be greater for participants who identify more strongly with the particular group, as was the case in Smith et al. (2007).

The coefficients in the fourth column of Table 1 represent the predictive power of individual emotions, whereas the fifth column represents the effects of the average group profile of emotions, for participants at the average level of group identification for each group. The convergence analyses for Democrats and Republicans in Study 1 (first two shaded rows of the table) were previously reported in Smith et al. (2007) and are repeated here for comparison; all of the other analyses are new data. Across all of these groups, individual emotions significantly predicted participants’ reports of group-level emotions. However, in every case the group’s average profile of emotions was a highly significant predictor when controlling for emotions felt as an individual. To ease interpretation, these are nonstandardized regression coefficients, so a coefficient of 0.0 indicates zero convergence, and values near 1.0 indicate that group members’ reported emotions nearly perfectly track the group-typical profile of emotions; i.e., if the group mean was 1 scale point higher on a particular emotion, the individual’s reported group emotion would correspondingly be 1 scale point higher. The group-average profile of emotions produced larger effects than individual-level emotions, for all 11 groups in this study.

The last two columns display coefficients for interactions of group identification with individual emotions and the group-profile predictor, respectively. Group identification significantly and positively interacted with ingroup emotions for all groups except Asians, smokers, and GLBs, as well as groups that are minorities, such as Caucasians. Further, in most cases strongly identified individuals show greater convergence of their group-level emotions toward the group average.

Having shown that group members do actually converge on an ingroup emotional profile, we now turn to our main questions regarding the estimation of outgroup emotions by members of a given ingroup.

Estimation of outgroup emotions: Sensitivity analyses

Sensitivity analyses are able to examine our hypotheses regarding (1) accuracy in estimates of outgroup emotions (by assessing the relationship between ingroup members’ estimates and the outgroup’s emotion reports) and (2) perceived similarity of the emotions of the outgroup to individual and ingroup emotions (by assessing the relationship between outgroup estimates and the ingroup member’s own reported individual and group emotions). The analysis of outgroup predictions follows a similar logic as the convergence analyses reported above. Using a multilevel regression, we analyzed estimates made by members of an ingroup (e.g., men) about the emotions of members of the corresponding outgroup (women). The dependent variable was the participant’s estimate of one particular outgroup emotion (e.g., a man’s estimate of women’s group-based happiness). Three independent variables were: (a) the participant’s individual-level emotion (participant’s individual happiness), (b) the participant’s group-based emotion (participant’s happiness as a man), and (c) the actual average level of that group emotion reported by the outgroup (women’s average group-level happiness). The first two of these independent variables are included to assess the overlap between the perceiver’s own emotions (at the individual and group levels, respectively) and outgroup estimates, whereas the third assesses the accuracy (sensitivity) of the estimates. Our analyses also included the perceiver’s level of group identification and its interaction with the other factors.

The regression coefficients in the fifth column of Table 2 index the correspondence between actual outgroup emotions and ingroup members’ estimates of those emotions (i.e., accuracy as indexed by sensitivity), for each group.1 These are unstandardized coefficients, which are interpretable because ingroup member’s predictions and the actual outgroup emotions are reported on the same response scales. A coefficient of 0.0 would indicate no sensitivity to the outgroup emotions, while 1.0 would indicate perfectly calibrated perceptions of the outgroup. The actual coefficients across these groups are around .50–.60 (except for one outlier value of .24) indicating highly significant and substantial, though imperfect, sensitivity in estimates of outgroup emotions, as predicted in our first hypothesis.

The coefficient for individual emotions (column 6) indicates the overlap between outgroup emotion estimates and the perceiver’s own individual-level emotions. These coefficients are generally fairly small, although positive and significant in five of seven cases,

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**Table 1**

Unstandardized regression coefficients from multilevel analysis of ingroup convergence, predicting each respondent’s level of group emotion from the same person’s individual level of that emotion and the ingroup’s average level of that emotion

<table>
<thead>
<tr>
<th>Study</th>
<th>Group</th>
<th>Intercept</th>
<th>Individual emotions</th>
<th>Mean emotional profile of ingroup</th>
<th>Group identification</th>
<th>Individual emotions × group identification</th>
<th>Ingroup emotion mean × group identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Republicans</td>
<td>0.02</td>
<td>0.14***</td>
<td>0.89***</td>
<td>-0.56***</td>
<td>-0.05***</td>
<td>0.11***</td>
</tr>
<tr>
<td>1</td>
<td>Democrats</td>
<td>0.00</td>
<td>0.18***</td>
<td>0.61***</td>
<td>-0.66***</td>
<td>0.01</td>
<td>0.23***</td>
</tr>
<tr>
<td>2</td>
<td>Caucasians</td>
<td>-0.01</td>
<td>0.28***</td>
<td>-0.71***</td>
<td>-0.41***</td>
<td>-0.02</td>
<td>-0.17***</td>
</tr>
<tr>
<td>2</td>
<td>Asians</td>
<td>-0.02</td>
<td>0.42***</td>
<td>-0.72***</td>
<td>-0.05</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>2</td>
<td>Women</td>
<td>-0.22</td>
<td>0.27***</td>
<td>0.78***</td>
<td>0.92**</td>
<td>0.00</td>
<td>-0.27**</td>
</tr>
<tr>
<td>3</td>
<td>Women</td>
<td>0.27</td>
<td>0.44***</td>
<td>0.57***</td>
<td>-0.14</td>
<td>-0.03</td>
<td>0.08</td>
</tr>
<tr>
<td>2</td>
<td>Men</td>
<td>-0.08</td>
<td>0.17***</td>
<td>0.64***</td>
<td>-0.74***</td>
<td>-0.01</td>
<td>0.24***</td>
</tr>
<tr>
<td>3</td>
<td>Men</td>
<td>1.91***</td>
<td>0.51***</td>
<td>0.62***</td>
<td>-0.38***</td>
<td>-0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>Americans</td>
<td>0.37</td>
<td>0.20***</td>
<td>0.75***</td>
<td>-1.54***</td>
<td>-0.03</td>
<td>-0.30***</td>
</tr>
<tr>
<td>3</td>
<td>GLBs</td>
<td>-0.16</td>
<td>0.41***</td>
<td>0.62***</td>
<td>-0.88***</td>
<td>-0.05</td>
<td>-0.14</td>
</tr>
<tr>
<td>3</td>
<td>Smokers</td>
<td>-1.15</td>
<td>0.20***</td>
<td>1.07***</td>
<td>-0.35</td>
<td>-0.05</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

*Shaded rows are results previously reported in Smith et al. (2007) and repeated here for comparison.

* p < .05.

** p < .01.

*** p < .001.

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1 Unfortunately, Asian/Caucasian prediction could not be included, because the Asian sample was too small to fulfill the model’s convergence criteria.
indicating some overlap between individual emotions and estimated outgroup emotions. The coefficient for ingroup emotion (column 7) indicates the overlap between outgroup emotion estimates and the perceiver's ingroup emotions. This coefficient is significant for all groups, indicating substantial similarity between ingroup emotions and estimated outgroup emotions. Notably, these coefficients are all positive, indicating that individuals generally expect the outgroup to feel the same way that they feel as ingroup members, not to feel the opposite way. In other words, people assume that if “we” are happy “they” must be happy. Consistent with Hypothesis 2, despite the substantial overlap of ingroup emotions and estimated outgroup emotions, as noted above the coefficient for the outgroup mean emotion (column 5, indicating sensitivity of estimates) is larger in six of the seven cases. There is substantial sensitivity to actual outgroup emotion patterns, over and above the perceived overlap of ingroup and outgroup emotions.

Does the perceiver’s group identification moderate any of these effects? The interaction of identification with actual outgroup emotions is significant (or near-significant) in three cases and positive in six of the seven. Although the effect is weak, ingroup identification tends if anything to be associated with higher rather than lower outgroup accuracy or sensitivity. Interactions of identification with individual and ingroup emotions are nonsystematic, suggesting that high group identifiers (compared to low identifiers) do not perceive more overlap of either their individual or ingroup emotions with outgroup emotions.4

Summarizing the analyses presented in Table 2, all groups display substantial and significant sensitivity in their estimates of outgroup emotions, as indexed by correlations between the estimates and the outgroup members’ reports of their actual group-level emotions. In addition, there is considerable positive overlap of outgroup emotion estimates with individual and (especially) ingroup emotions. We turn next to our second type of analysis, examining the extent and patterning of the discrepancies in people’s estimates.

**Analyses of discrepancy scores: Biases in intergroup perception**

As explained in the Introduction, patterned departures from accurate perceptions (discrepancies) are entirely compatible with a significant level of sensitivity in the correlational sense. We report analyses of discrepancies (an individual’s estimate minus the outgroup’s actual reported emotion mean) to examine the relative overprediction or underprediction of various emotions for particular groups. This analysis will address our third hypothesis, for a novel form of evaluative intergroup bias: the overestimation of the outgroup’s negative emotions, and underestimation of positive emotions (compared to the outgroup’s reports of their own emotions). To facilitate interpretation, emotions were grouped into four theoretically based scales measuring Anger, Anxiety, Guilt, and Positive emotions.5 These scales had reasonable internal consistency; Cronbach alphas for positive emotions (across all groups) were above .9; alphas for the three other scales (which contained fewer items) were generally .7 to .9 across the different groups.

Table 3 displays the results of a Group × Emotion ANOVA on the discrepancy scores; each row lists an ingroup predicting their relevant outgroup.6 The Overall Elevation column indicates whether overall (the grand mean across all emotions and both groups where applicable) there is significant overestimation versus underestimation of outgroup emotions. All these effects are positive (where significant), indicating that there is a tendency to overestimate outgroup emotions in general. The F(Emotion) column tests whether one group in each pair over- or underestimates outgroup emotions more than the other group does. This is significant in only one case: men in Study 2 overestimate women’s group emotions to a greater extent than women overestimate men. The F(Emotion) column indicates whether, across each pair of groups (e.g., men and women) some emotions are over/underestimated relative to others. This effect is significant for gender, political, and ethnic groups as well as for non-smokers and heterosexuals.

The key effect is the Group × Emotion interaction (for the analyses including two groups), indicating whether the two groups differ in their patterns of over/underestimation of specific emotions for the outgroup. This interaction is significant for both gender samples and Caucasians/Asians, but not for the political groups. Mean discrepancy scores are shown in Table 4. For example, men in study 2 overestimate women’s anger by .60 scale units. Table 4 as a whole shows that, despite the significant correlation between

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2 In three cases we did not measure ingroup emotions or group identification for members of the predicting group, because it was unclear whether the predicting group would elicit a meaningful profile of emotions or identification. For these groups (i.e., non-Americans predicting Americans, non-smokers predicting smokers, and heterosexuals predicting GLBs), a simpler analysis was used. Only individual emotions and the average emotional profile of the outgroup contributed to the equation. The results from these analyses follow the same pattern as the group in Table 2: Although there is some overlap of individual emotions with predictions of the outgroup, sensitivity to outgroup emotions was statistically significant regarding all groups.

3 Specific emotions included in the scales are: in Studies 1 and 2 Anger (angry at others, disgusted, irritated), Anxiety (afraid, uneasy), Guilt (guilty, angry at self), and Positive (all six positive emotions). Study 3 Anger (angry, disgusted, irritated), Anxiety (afraid, uneasy), Guilt (guilty, ashamed, lonely), and Positive (all 7 positive emotions).

4 Analyses for foreigners predicting American emotions are excluded, because the extremely low N of foreigners prevents meaningful interpretation. And while we analyzed non-smokers’ estimates of smokers’ emotions and heterosexuals’ estimates of gay and lesbians’ emotions, the reverse estimates are not analyzed (because ingroup emotions were not reported by non-smokers and heterosexuals).
between estimated and reported emotions indicated by the sensitivity analysis, errors in estimation do tend to be systematic. Positive emotions in the outgroup tend to be either underpredicted or relatively close to actual emotions, except for smokers. In contrast, negative outgroup emotions tend to be overpredicted, especially by men, political groups, non-smokers, and heterosexuals. This pattern fits the hypothesized evaluative intergroup bias in estimation of outgroup emotions: less positive and more negative emotion is seen compared to what outgroup members actually report. However, the table does show a few specific exceptions to this generalization (guilt is underestimated by women and Caucasians).

We examined whether stronger group identification would be associated with a stronger tendency to display the evaluative intergroup bias, but results showed the opposite. Group identification was significantly associated with estimates of higher levels of positive outgroup emotions in five of the seven cases, whereas its relationships to estimates of negative emotions were nonsystematic (only 2 of 21 tests were significant). Thus, although our results show an overall evaluative bias in predictions of outgroup emotions, strong group identifiers display this bias in weaker (not stronger) form—especially because they estimate that the outgroup will experience more positively valenced group emotions.

Table 3
Discrepancy analysis for groups in studies 1–3

<table>
<thead>
<tr>
<th>Study, location</th>
<th>Predicting group</th>
<th>n</th>
<th>Overall elevation</th>
<th>F(group)</th>
<th>F(emotion)</th>
<th>F(Group × Emot. interaction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, IU</td>
<td>Men</td>
<td>110</td>
<td>.21***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>69</td>
<td></td>
<td>F(1,178) = 6.05*</td>
<td>F(3,534) = 2.59*</td>
<td>F(3,534) = 27.32***</td>
</tr>
<tr>
<td>3, UCSB</td>
<td>Men</td>
<td>79</td>
<td>.35***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>181</td>
<td></td>
<td>F(1,258) &lt; 1</td>
<td>F(3,774) = 12.75***</td>
<td>F(3,774) = 6.52*</td>
</tr>
<tr>
<td>1, IU</td>
<td>Democrats</td>
<td>203</td>
<td>.40***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Republicans</td>
<td>150</td>
<td></td>
<td>F(1,351) &lt; 1</td>
<td>F(3,1053) = 4.54*</td>
<td>F(3,1053) &lt; 1</td>
</tr>
<tr>
<td>2, IU</td>
<td>Caucasians</td>
<td>133</td>
<td>.11***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asians</td>
<td>29</td>
<td></td>
<td>F(1,160) &lt; 1</td>
<td>F(3,480) = 19.98***</td>
<td>F(3,480) = 3.34</td>
</tr>
<tr>
<td>3, UCSB</td>
<td>Non-smokers</td>
<td>204</td>
<td>1.13***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td>F(3,609) = 22.75***</td>
<td>N/A</td>
</tr>
<tr>
<td>3, UCSB</td>
<td>Heterosexuals</td>
<td>224</td>
<td>.86***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td>F(3,657) = 92.07***</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: 7-point scales used in IU samples, 9-point scales used at UCSB.

Table 4
Numbers under the emotion column for each group represent their signed discrepancy in predicting the opposite group’s emotion

<table>
<thead>
<tr>
<th>Study, location</th>
<th>Predicting group</th>
<th>Anger</th>
<th>Anxiety</th>
<th>Guilt</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, IU</td>
<td>Men</td>
<td>.60***</td>
<td>.51***</td>
<td>.87***</td>
<td>.67***</td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>.13</td>
<td>-.05</td>
<td>.25</td>
<td>.22</td>
</tr>
<tr>
<td>3, UCSB</td>
<td>Men</td>
<td>1.24**</td>
<td>.44**</td>
<td>.36</td>
<td>.63***</td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>.73</td>
<td>.41</td>
<td>.33</td>
<td>.07</td>
</tr>
<tr>
<td>1, IU</td>
<td>Democrats</td>
<td>.72</td>
<td>.50</td>
<td>.44</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Republicans</td>
<td>.55</td>
<td>.54</td>
<td>.34</td>
<td>.06</td>
</tr>
<tr>
<td>2, IU</td>
<td>Caucasians</td>
<td>.49</td>
<td>.45</td>
<td>.40</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Asians</td>
<td>.81</td>
<td>.12</td>
<td>.08</td>
<td>.52</td>
</tr>
<tr>
<td>3, UCSB</td>
<td>Non-smokers</td>
<td>1.21**</td>
<td>1.41**</td>
<td>1.45**</td>
<td>.45***</td>
</tr>
<tr>
<td></td>
<td>(predicting smokers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3, UCSB</td>
<td>Heterosexuals</td>
<td>1.09**</td>
<td>1.64**</td>
<td>1.21**</td>
<td>.52***</td>
</tr>
<tr>
<td></td>
<td>(predicting GLBs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 7-point scales used in IU samples, 9-point scales used at UCSB.

Discussion

Existing research on perceptions of others’ emotions has been conducted almost exclusively in purely interpersonal contexts. How does an intergroup context—with perceiver and target on different sides of a salient group distinction—affect emotion perception? This is the key question for our studies: how do people perceive the emotions of outgroups? First, preliminary analyses replicated the finding (Smith et al., 2007) that group members converge to meaningful profiles of emotions, and extended it to six new groups. If such emotion convergence did not occur, questions about estimating outgroup emotions would become meaningless. Also replicating previous work, the within-group convergence of emotions was stronger for highly identified group members in nine of 11 cases.

Our main results concerning outgroup emotion estimation generally confirm the hypotheses described in the Introduction.

Accuracy

We assumed that people both want to know how outgroups are feeling and often have the opportunity to observe cues to their emotions. This led us to expect significant levels of accuracy in outgroup emotion estimation. The sensitivity analyses supported this hypothesis, demonstrating significant overlap or correlation between the perceiver’s estimates of outgroup emotions and the outgroup’s own reports of their group-level emotions. Although there is also some overlap of ingroup emotions and outgroup emotion estimates (to be discussed below), our analyses show that people attain accuracy over and above this similarity. In other words, people are accurate about the differences between ingroup and outgroup emotions, as well as about their similarities.

What processes contribute to this sensitivity to an outgroup’s emotions? One is likely direct perceptions of outgroup members, such as seeing or hearing an outgroup member or leader claim to be angry or anxious. In addition, perceivers may understand ingroup and outgroup norms regarding emotions—for example, the norm that many national groups are expected to feel patriotic pride, or that religious groups characterized by an emphasis on sin are expected to feel high levels of guilt. Finally, people may understand what specific events and appraisals are relevant for the outgroup and therefore what emotions outgroup members are likely to feel under any given circumstance. It does not take sophisticated insight to understand that if the outgroup has just experienced a major victory or setback, outgroup members as a
group might well be experiencing satisfaction and pride, or disappointment and sadness (respectively). Future research (especially minimal intergroup studies) can be designed to look at the relative contributions of these various processes to the general accuracy of intergroup emotion perceptions.

Assumed ingroup–outgroup similarity

We hypothesized that people would tend to see outgroup emotions as relatively similar to their own group-level emotions. This is because a specific intergroup situation might generally lead ingroups and outgroups to share similar emotional feelings (e.g., excitement and challenge in the case of a sports rivalry, or anxiety and anger in a more serious intergroup conflict). We also reasoned that people should perceive outgroup emotions as similar to their own group-level, rather than individual-level, emotions. Our results provided robust evidence for this hypothesis. While estimates of outgroup emotions did correlate with the perceiver's individual emotions, the overlap between those estimates and ingroup emotions was much stronger. Notably, in every case the correlation was positive: people who were feeling a particular emotion more strongly with regard to their ingroup membership estimated that the outgroup would feel more (not less) of that emotion. The underlying process leading to this outcome might be that people project their group-level emotions onto outgroups, or that they assume ingroup and outgroup members experience generally similar emotions based on the overall intergroup situation.

Intergroup bias

Evaluative biases are pervasive in intergroup perception. These studies found a novel type of intergroup bias, a tendency to estimate that outgroups experience more negative and less positive emotions compared to what the outgroups actually report. Generally, discrepancies in the perception of outgroups' negative emotions were overestimations, whereas their positive emotions were either fairly well estimated or underestimated. This pattern falls in line with many other findings that people view ingroups in a more positive light than outgroups.5

How does strength of group identification affect these major findings? We found no support for the idea that more highly identified group members may be entrapped in their ingroup's emotional mindset and therefore likely to be blind to an outgroup's experienced emotions. Instead, our sensitivity analyses offered weak support (directionally consistent in six of seven cases) for the opposite idea, that stronger ingroup identification correlates with more sensitivity to the actual emotions of the outgroup. Stronger group identification also tends to lessen the general evaluative bias in outgroup emotion estimation: stronger ingroup identifiers generally give higher estimates of the outgroup's positive emotions. Ingroup identification had only small and nonsystematic effects on the extent of overlap of outgroup emotion estimates with individual or ingroup emotions. Overall, moderating effects of group identification were relatively small compared to the robust across-the-board effects we found in our analyses, but if anything more strongly identified group members tended to be more accurate and to show less evaluative bias in their perception of outgroup emotions.

Limitations and future directions

Like all studies, these have limitations. First, for the initial investigation of intergroup emotion estimation we chose to study reality, meaningful groups that are of major importance to their members (such as gender, political party, and national groups). The trade-off for this design choice is that we are unable to document exactly what processes contribute to estimates of outgroup emotions. For example, do perceivers attain accuracy by directly perceiving emotions of individual outgroup members, or by making inferences about the outgroup's expected appraisals of group-relevant events? Is the overlap of the ingroup's group-level emotions with perceptions of the outgroup due to simple social projection, or to some other process? Future studies (probably using minimal groups in a laboratory context) will be necessary to resolve such issues, complementing the studies on real groups reported here.

Another limitation is that our discrepancy analyses can only compare estimates of an outgroup's emotions to the self-reported group-level emotions of the members of that outgroup. These self-reports might be biased, either because group members are not “in touch” with their actual feelings or because they do not wish to reveal those feelings on questionnaires. Thus, strictly speaking we cannot conclude (for example) that ingroup members overestimate outgroup members' negative emotions, for the data might actually reflect ingroup members accurately perceiving the outgroup's true feelings, while the outgroup members systematically underreport their own negative group-based emotions. We make two points in response to this suggestion. First, in the case of emotions it is not clear what alternative criterion other than self-report by the prediction target would have superior validity. Much of the research literature on emotion is based on the assumption that self-reports are valid (see Feldman Barrett & Russell, 1998), although some researchers hold out hope that at some future time, physiological or brain-imaging methods may be able to bypass self-reports. Currently, as Feldman Barrett (2004) states, “there is no known objective, external measure of the subjective, internal events that we experience as [emotions]. If we want to know whether people feel these emotions, we have to ask them” (p. 266). Second, existing research on evaluative intergroup biases (which our analyses and findings parallel) involves the same limitation. That is, studies may show that people rate ingroup member as smarter or nicer than outgroup members, or give ingroup members' essays higher grades than outgroup members' essays (Brewer, 1979). In no case is there any external, objective criterion that would indicate how smart or nice the person “really” is, or what grade the essay “objectively” warrants. Instead, intergroup biases are defined by systematic differences between ratings of the same object given by ingroup and outgroup members. And that is the same comparison that we make here, between one group's estimates of the outgroup's emotions and the self-reports of their emotions by the members of the target group itself.

Finally, some features of our studies limit the extent to which we can confidently generalize their results. Perhaps most obviously, we do not have any pairs of groups that are involved in high levels of intergroup conflict (e.g., Israelis and Palestinians). Our studies do include Democrats and Republicans, groups defined in opposition to each other, and their results generally fell in line with the other group pairs we studied. But clearly, some of our conclusions may not hold in situations of more extreme intergroup conflict. Accuracy of estimates of outgroup emotions may decrease, projection of ingroup emotions might turn negative (e.g., if we are happy and not afraid, assume that they are unhappy and afraid), and evaluative intergroup biases may intensify. Further research should examine these possibilities. Interestingly, there is a corresponding gap in studies of emotion perception in purely inter-

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5 While no previous research has demonstrated this kind of evaluative intergroup bias in the perception of emotions, Leyens and his colleagues (e.g., Leyens et al., 2000) have argued that people ascribe more “uniquely human” emotions to ingroup members, compared to outgroup members. However, this process does not account for our findings, for Leyens and co-workers have repeatedly emphasized and demonstrated that the uniquely human/non-uniquely human distinction is orthogonal to the valence of emotions.
personal contexts as well; studies generally assess perceptions of the emotions of a stranger or acquaintance, rarely if ever an individual with whom the perceiver is engaged in a high level of conflict. Accuracy in interpersonal emotion perception might well turn out to be less in such circumstances. Besides our focus on groups with only low or moderate levels of conflict, our studies also assess general or chronic group emotions using questions such as “to what extent do you feel these emotions” when identifying as a group member. Research examining acute emotional responses to specific objects or events might produce different results. Notably, accuracy regarding the outgroup’s emotions might well be even higher in such a study. For example, if one group has just defeated or surpassed the other in some competition, it might be easy for members of both groups to accurately estimate that the losers will feel disappointment and frustration while the winners bask in pride and exhilaration. It is noteworthy that even in the case of general emotions experienced in the absence of a specific stimulus object or event, people attain a good deal of accuracy regarding the outgroup. And as Smith et al. (2007) showed, these general emotion profiles do influence intergroup attitudes and behavioral tendencies.

Conclusion

This paper examined whether ingroup members can estimate the emotions of an outgroup. We found substantial sensitivity to the outgroup’s emotions, in the form of correlations between the outgroup’s actual emotions and estimates of those emotions. Participants’ outgroup estimates also overlapped with their own individual- and (more strongly) their ingroup-based emotions. Interestingly, overlap of ingroup emotions and estimated outgroup emotions was invariably positive rather than negative. We also found patterned discrepancies in outgroup emotion estimates, constituting a novel type of evaluative intergroup bias. Compared to self-reports by outgroup members, participants generally overpredicted negative emotions and underpredicted positive emotions of the outgroup.

Group identification moderated our findings in two major ways. High group identifiers tended to have somewhat higher sensitivity to outgroup emotions, and displayed the valence bias in emotion prediction to a lesser extent than did other participants. Based on these results, we can sketch an answer to the key question addressed in this paper: how does an intergroup context alter emotion perception? Our findings indicate that perceivers attain considerable accuracy in estimating outgroup emotions. Perceivers also tend to assume that ingroups and outgroups feel generally similar emotions—that is, there is some overlap between outgroup estimates and one’s own reported ingroup emotions. This finding indicates that people are able to intuitively understand the distinction between individual and group-level emotions, for they assume that outgroup emotions are similar to their own group emotions, more than their own individual emotions. Finally, as in so many other areas, people display an evaluative intergroup bias regarding outgroup emotions, seeing them as relatively more negative and less positive compared to the self-reports of outgroup members themselves.

These studies lay the foundation for a further research agenda on group-level emotion perception, aimed at attaining a deeper understanding of the interplay of interpersonal processes (such as interpretation of the emotions of a specific individual based on his or her expressions or actions) and intergroup processes (such as the ascription of the person’s emotion to either individual or group identities, or the evaluative biases that so pervasively affect perceptions in intergroup situations). Although we observed significant levels of accuracy, there were also significant, patterned discrepancies in the estimation of outgroup emotions. Given the influence of intergroup emotions on intergroup behavior, such mismatches are of more than just theoretical interest: to date more than 4000 US troops have been killed in Iraq, where US officials had originally predicted that Iraqis would feel positive emotions such as respect and gratitude.

References


