We Feel, Therefore We Are: Emotion as a Basis for Self-Categorization and Social Action

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Building on intergroup emotion research, we test the idea that intergroup emotion influences self-categorization. We report two studies using minimal (Study 1) and natural (Study 2) groups in which we measured participants' emotional reactions to a group-relevant event before manipulating the emotional reactions of other ingroup members and outgroup members (anger vs. happiness in Study 1; anger vs. indifference in Study 2). Results supported the hypotheses that (a) the fit between participants' own emotional reactions and the reactions of ingroup members would influence self-categorization, and (b) the specific content of emotional reactions would shape participants' willingness to engage in collective action. This willingness was greater when emotional reactions were not only shared with other group members, but were of anger (consistent with group-based action) rather than happiness or indifference (inconsistent with group-based action). Implications for the relationship between emotion and social identities are discussed.

Keywords: intergroup emotion, self-categorization, social identity, collective action

Research on the relationship between social identity and emotion has typically focused on how self-categorization provides a basis for the experience of group-based emotions (Smith, 1993; see Iyer & Leach, 2008, for a review). However, we suggest that the way in which emotion influences self-categorization has been neglected. We begin by reviewing and integrating approaches to intergroup and interpersonal emotion with work on the factors that determine the salience of social categories. We then report two studies testing the idea that the sharedness and content of emotional reactions to an event impact on participants' social identities and action tendencies in relation to the event.

The Impact of Group Membership on Emotion

The role of group-based emotions in the behavior of group members has attracted increased attention in recent years. At the heart of this development is intergroup emotion theory (IET: Smith, 1993), which proposes that defining oneself in terms of a salient social identity provides a basis from which group members experience group-based emotions. For IET, intergroup emotions (e.g., anger) arise from intergroup appraisals (e.g., illegitimacy), and in turn predict intergroup action tendencies, such as moving against an outgroup. IET suggests that intergroup emotions are affected by self-categorization: When different social identities become salient, the emotions felt in relation to particular events are also affected. For example, Gordijn, Wigboldus, and Yzerbyt (2001) found that observers felt more anger as a result of an outgroup's negative actions toward others when the others were seen as an ingroup rather than an outgroup (see also Dumont, Yzerbyt, Wigboldus, & Gordijn, 2003, and Yzerbyt, Dumont, Wigboldus, & Gordijn, 2003).

IET also suggests that social identities impact on emotions by providing a basis from which we *appraise* particular events. For example, anger is aroused by an appraisal of an outgroup's actions toward the ingroup as illegitimate (e.g., Mackie, Devos, & Smith, 2000; Van Zomeren, Spears, Fischer, & Leach, 2004), while ingroup actions that are appraised as illegitimate can evoke guilt or shame (e.g., Doosje, Branscombe, Spears, & Manstead, 1998; Iyer, Leach, & Crosby, 2003; Iyer, Schmader, & Lickel, 2007; Leach, Iyer, & Pederson, 2006). These emotional reactions in turn predict specific action tendencies, such as collective action against the perceived perpetrator or injustice, in the case of anger, or support for reparations, in the case of guilt.

In sum, the growing literature on group-based and intergroup emotions has highlighted the important role of social identities in shaping how we react to the world around us. However, the ways in which emotion might influence self-categorization has been

neglected. This neglect is at odds with the very *social* and *group-based* nature of these emotions. The central proposition of this paper is that group-based emotions play an important role in shaping social identities themselves. We now develop these ideas in relation to existing theoretical approaches to the role of emotions in social life.

Group Emotions as Sources of Information and Channels of Communication

Social appraisal theory (Manstead & Fischer, 2001; Parkinson, Fischer, & Manstead, 2005) suggests that how we react to a particular event is affected not only by our own appraisals of the event, but also by appraisals of what other people feel about the event. Thus, while an appraised situation can clearly produce emotions, these emotions (and particularly those expressed by other people) can in turn feed back into the situation by shaping our own reactions to it (Parkinson, 2001). Emotions not only motivate the person who feels them, but also serve to communicate with others in a situation (Parkinson, 1996; Parkinson et al., 2005; Peters & Kashima, 2007). Moreover, the expression of emotion communicates one's orientation to a situation in a manner that allows others to infer the significance of the event, and even specific appraisals regarding responsibility for and likely future action in a situation (e.g., in negotiation settings: Van Kleef, De Dreu, & Manstead, 2004a, 2004b). Others' emotions therefore communicate how *we* could or should orient ourselves in the situation. For example, expressing anger not only reflects one's own disapproval of an event, but can also communicate to others that this is an event of which they should also disapprove (Parkinson, 1996). Moreover, expressions of anger can communicate and enlist collective support in resisting the situation of which one disapproves (Peters & Haslam, 2010; Thomas, McGarty, & Mavor, 2009a, 2009b; see Klandermans, 1997; Lazarus, 1991; Spears, Lea, Corneliussen, Postmes, & Ter Haar, 2002; and Van Zomeren et al., 2004 for similar points in relation to social support and collective action).

The Impact of Emotion on Self-Categorization: Emotional Fit

The interpersonal emotion literature thus provides a theoretical basis for the proposition that our emotions and the emotions of others can influence our understanding of the social context and of how to act. Rather than being a "given" from which social identities become salient and intergroup emotions arise, the social context is likely to be *affected by* our own and others' emotions. Such emotions, especially when shared by the group, are in turn likely to impact on self-categorization. However, the question of whether and how our own and others' emotions combine to shape social identities and action remains largely unexamined. A notable exception is a recent study by Kessler and Hollbach (2005), who showed that group identification increased with happiness toward the ingroup and anger toward the outgroup, but decreased with anger toward the ingroup and happiness toward the outgroup. We adopt a slightly different approach and suggest that the emotional reactions to an event, and specifically the extent to which one's own and others' reactions align themselves, can influence the tendency to self-categorize at the group level, with consequences

for group behavior. There is an important distinction to be made here between *identification* (as was examined by Kessler & Hollbach, 2005)*,* which refers to the subjective importance of or readiness to define oneself in terms of a specific self-category (Turner, 1999), and the more general process of *self-categorization* through which we come to define ourselves in terms of different, available self-categories in the first instance (i.e., when and how self-categories become *salient;* Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Our concern in the present paper is with the more context-sensitive process of self-categorization—participants' self-definition in terms of different available self-categories—rather than levels of identification with any particular self-category.

Our focus on self-categorization signals the relevance of self-categorization theory (Turner et al., 1987), and especially the principles of *comparative fit* and *normative fit* that have been shown to affect the salience of social categories. However, in order to fully capture the theoretical advance, the distinctive nature of group-based emotions requires that we extend these fit principles to develop a concept of *emotional* fit.

The principle of comparative fit proposes that a particular social identity will become salient to the extent that it maps onto similarities and differences between individuals in a particular context (Haslam & Turner, 1992; Hogg & Turner, 1987; Oakes, 1987; Oakes, Turner, & Haslam, 1991). This suggests that my tendency to define myself in terms of a particular group membership (e.g., "psychologist") will be greater when I share important characteristics with other psychologists that at the same time differentiate us from other groups (e.g., physicists). Alongside similarity or difference per se (i.e., comparative fit), the specific content of intergroup differences is also an important determinant of self-categorization. This is addressed in the self-categorization theory principle of *normative fit* (Oakes, 1987). This proposes that self-categorization is more likely when the observed similarities and differences between groups match stereotypic expectations regarding the content of those group identities (Blanz, 1999; Blanz & Aufderheide, 1999). Thus psychologists may be expected to share an interest in human behavior that differentiates them from physicists who would be more interested in natural phenomena (if for any strange reason the reverse were true, comparative fit would still be high, but normative fit low).

In the present research we propose a third type of fit, "emotional fit," that incorporates the comparative and normative fit principles but goes beyond them in key ways. Emotional reactions may also differentiate between groups, and be more expected for some groups than others (comparative and normative fit, respectively). However, the affective intensity of emotions, and their particular relevance to the self, especially in motivating particular forms of action, point to additional factors that could strengthen the invocation of a group identity based on emotional fit. Put another way, whereas comparative and normative fit refer to cognitive determinants of group salience, emotional fit implicates affective and behavioral components, as well as being more self-implicating.

To illustrate the potential power of emotional fit (above and beyond the other forms), consider a scenario that might evoke group emotion, such as a threat to funding at my Department of Psychology. If the threat is only made to Psychology (and not to Physics, e.g.) this creates comparative fit, making salient an intergroup difference. Note that this should be equally salient to the

physicists, based on comparative fit. However if members of my department are angry about this (as I am), whereas the Physicists appear indifferent, this creates an emotional fit that has meaning beyond the mere fact of a group difference. These group emotions are self-implicating because they affect the self or ingroup, albeit in different ways (anger feels different to indifference, but our anger would also feel different to us to their anger). Thus, unlike other forms of content, emotions are self-referential and make particular sense as experiences from the perspective of the self or ingroup. Indeed, compared to other forms of fit, emotional fit arguably puts the "self" back in to self-categorization.

It is important to note that emotional fit goes beyond normative fit, which refers to fit associated with norms or stereotypes one might expect from the group. Although we might expect people to be angry when their university department is faced with cuts, this is not specific to expectations about psychologists. More generally, there are often no a priori norms concerning which emotions are appropriate in the circumstances. This is likely to depend on how the situation is appraised by others (i.e., social appraisal) as well as the self. The power of an emotion-based analysis is that, unlike the broad prescriptions of norms or stereotypes, different emotions can specify a range of experiential and behavioral possibilities that are flexible, and specific and relevant to the particular social context.

This brings us to the second aspect of emotional fit that differentiates it from other forms, namely its implications for behavior. Emotions differ not just in their appraisals and feeling status, but also in their implications for action, or "action tendencies" (Frijda, 1986). Thus when it comes to the role of emotions in shaping self-categorization, shared emotions are likely to be important in terms of how they how they shape the potential for (collective) action (Thomas et al., 2009b). Consider again the example of a threat to funding in my department. While the *sharedness* of my and my colleagues' emotional reactions is clearly an important determinant of whether I define myself in terms of this group membership, the *content* of that emotion has implications for group-based action. For example, anger is associated with the tendency to move against an obstacle or injustice (Lazarus, 1991, 2001; Mackie et al., 2000; Mummendey, Kessler, Klink, & Mielke, 1999; Roseman, 2001; Van Zomeren et al., 2004; Weiss, Suckow, & Cropanzo, 1999), whereas sadness and indifference is less associated with any particular action. The content of emotions therefore matters because of the way in which it motivates specific forms of group-based action (Frijda, 1986).

To summarize, experienced emotional fit will be high to the extent that one's emotional reaction is shared by the ingroup, and to the extent that the shared emotion implies some form of group-based concern and collective response (e.g., anger rather than indifference). These shared experiential, and group level behavioral implications distinguish emotional fit from other forms of fit.

The Present Research

Below we report two studies in which we tested the above hypotheses regarding the impact of emotions on self-categorization and action tendencies. In both studies, we manipulated the emotional reactions of an ingroup and an outgroup in response to an event, and examined how the similarity (matched vs. different emotions) and content of these emotions shape (a) participants' self-categorization, and (b) participants' action ten-

dencies in relation to the event. We also tested whether participants' own emotional reactions moderate the impact of ingroup and outgroup emotions on these outcomes in a manner consistent with our hypotheses. In both studies, there are therefore three emotional inputs (the participants' own, the ingroup's, and the outgroup's emotions). In order to test the interactive role of these emotional inputs, we also examined two possible social categorizations in each study; namely, the ingroup, and the superordinate category that includes the ingroup and the outgroup. This is because self-categorization is in many ways a relative process (Turner, 1985). Many self-categories are available to us, and they can exist as alternatives to one another. This means that in order to show meaningful effects of emotions on self-categorization, it is important not just to show that self-categorization in terms of one category increases or decreases, but that this occurs relative to another possible self-category. This allows us to show that the effects of emotion are on specific and meaningful self-categorizations, rather than a more general sense of subjective involvement per se.

In Study 1, we tested our hypotheses using minimal groups (i.e., groups that have no prior significance to participants). The aims of this study are twofold. First, we tested whether the fit between emotional responses shapes participants' tendency to self-categorize in terms of this new social identity and/or in terms of a preexisting superordinate identity that incorporates the ingroup and outgroup. Second, we tested whether this fit also affects participants' willingness to engage in action at the level of the superordinate category.

In Study 2, we turn our attention to preexisting groups. Using a sample from the South Wales area in the U.K., we tested whether the fit between emotional responses shapes participants' tendency to self-categorize in terms of a preexisting ingroup (South Wales), and a preexisting superordinate group (Wales) that includes the ingroup and an outgroup (North Wales). We also extend Study 1 by testing whether the fit between emotional responses affects willingness to engage in action not only at the level of the superordinate category, but also at the level of the ingroup.

Study 1

Here we tested our hypotheses using minimal groups (e.g., Tajfel, Flament, Billig, & Bundy, 1971). Following a standard procedure for assigning participants to the category *inductive thinker* (as opposed to the outgroup *deductive thinkers*–see Doosje, Spears, & Koomen, 1995; Ellemers, Spears, & Doosje, 1997), participants were presented with an event involving their university and asked to report their emotional reactions to the event. This event was designed so that it could plausibly provoke anger or happiness among students: a proposed measure that would make degrees harder to achieve. We then provided feedback regarding the emotional reactions of ingroup members (inductive thinkers at the participants' university), and outgroup members (deductive thinkers at the participants' university). We orthogonally manipulated the content of these emotions in a 2×2 design, such that the ingroup's reaction was reported to be either of anger or of happiness, as was the outgroup's reaction.

We expected that the fit between the participant's own emotional reaction and the ingroup's reaction would increase self-categorization in terms of this "new" social identity, relative to the

pre-existing superordinate category. We also expected that willingness to campaign against the proposals as a superordinate group (i.e., students) would be affected by the comparative *and* emotional fit of the ingroup's and outgroup's emotional reactions. Specifically, we expected that such willingness would be greatest when the ingroup's and outgroup's reactions were the same, and were ones of anger rather than happiness.

Method

Participants

Participants were 95 undergraduate psychology students attending a U.K. university. There were 83 female and 13 male participants. The mean age of the sample was 19.73 years ($SD = 3.42$).

Design

The study had a 2 (ingroup reaction: angry vs. happy) $\times$ 2 (outgroup reaction: angry vs. happy) between-subjects design. Participants' own emotional reactions (anger and happiness) were measured as continuous moderators.

Materials, Procedure, and Manipulations

Participants were tested individually, and all materials and questionnaire items were delivered via computer.

Minimal group induction. In order to provide an apparent basis for participants' allocation to their minimal group, they were asked to complete a set of word- and number-association tasks (see Doosje et al., 1995). After completing these tasks, participants were presented with a screen in which they were informed that they were an inductive thinker. The information on the screen also emphasized that the tests were reliable, that one thinking style was not better than the other, and that groups were of roughly equal size and gender distribution. Once participants had read this information, they moved on to the next screen.

Group-relevant event. The next screen contained a report about proposed radical changes to the way in which students' work would be assessed in future. It suggested that the objective standard of students' work had fallen dramatically, and that present marking procedures were much too lenient. Consequently, the value of students' degrees had been greatly reduced. A (fictitious) quote from a University Vice-Chancellor stated: "The standard of students' work has significantly declined over the last decade or so. The impetus here is on students to shed their lazy image and put some value back into their degrees."

The report also suggested that in response to this situation, the ingroup university would introduce a tougher marking policy, such that a much higher standard of work would be required to achieve good grades and that the percentage of students achieving top degrees would reduce from 60% to 40% in the next academic year. The tougher marking policy was justified in the report by another fictitious quote from an ingroup university source to the effect that the university had to defend its reputation for high-quality degrees, and that all students would ultimately benefit from the changes.

The report was therefore ambiguous in terms of whether it implied a threat to participants. On the one hand, the implied derogation of students' work and the prospect of facing much harsher marking could be construed as threatening, and hence a source of anger. On the other hand, the possibility that the ingroup's standards relative to other universities and the value placed on participants' work might actually improve could be construed as a positive opportunity, and hence a source of happiness. In this way, the information in the report was carefully constructed so as to make reactions of anger and of happiness plausible.

Premanipulation emotions. On the next screen, participants were asked to complete 11 items gauging their emotional reaction to the information in the report: 'The proposed measures against degree inflation make me feel [emotion word]'. Among these items were a 4-item scale of anger (*angry*, *furious*, *resentful*, *annoyed*; $\alpha = .83$), a 4-item scale of happiness (*content*, *happy*, *pleased*, *delighted*; $\alpha = .89$), and a 3-item scale of emotional intensity (*indifferent*, *strongly*, *unconcerned*; $\alpha = .68$). Participants responded on a scale ranging from 1 (*not at all*) to 12 (*extremely*).

Manipulations. The next screen contained the manipulations of ingroup and outgroup reactions in the form of two bar graphs ostensibly showing the findings of the research so far. Each graph illustrated how angry, furious, strongly, pleased, and happy (one bar each) respondents felt, on a scale of 1 (*not at all*) to 7 (*extremely*). One graph presented findings for people from the ingroup (inductive thinkers at the ingroup university) while the other showed findings from the outgroup (deductive thinkers at the ingroup university). In the ingroup angry conditions, the findings from inductive thinkers showed high scores for "angry" (6.0) and "furious" (6.1), and low scores for "pleased" (1.4) and "happy" (1.5). These values for "angry" and "pleased" and "furious" and "happy" were reversed in the ingroup happy conditions. In the outgroup angry conditions, the findings from deductive thinkers showed high scores for "angry" (6.3) and "furious" (5.8), and low scores for "pleased" (1.6) and "happy" (1.3). These values for "angry" and "pleased" and "furious" and "happy" were reversed in the outgroup happy conditions. The value of the "strongly" bar was constant across conditions.

Manipulation checks. The manipulations were checked using six items (three for each subgroup): 'According to these findings, to what extent do the proposed measures against degree inflation make inductive [deductive] thinkers feel angry/strongly/pleased?' (1 = *not at all*; 7 = *extremely*).

Self-categorization. Self-categorization was measured using two pictorial measures (one for the ingroup, and one for the superordinate category), based on measures developed by Schubert and Otten (2002) and Tropp and Wright (2001). The participant was represented by a small circle (labeled "me") and the relevant group by a large circle labeled with the appropriate group ('ingroup uni. inductive thinkers' for the ingroup, *or* 'all ingroup uni. students' for the superordinate group). The measure consisted of seven such pairs, differing in their closeness. The pairs ranged from separate and distant (coded as 1), to complete overlap such that the small circle was located in the center of the larger circle (coded as 7). Participants indicated their response in each case by checking a box beside one of the pairs.

Action tendency. Willingness to campaign was measured by asking participants how likely they would be to campaign together with all ingroup university students (across all problem-solving styles), from 1 (*not at all likely*) to 7 (*extremely likely*).

After completing the questions, participants provided demo-graphic information before being thanked and fully debriefed.

Results

Premanipulation Emotions

Participants' mean level of anger was 5.83 (SD = 2.21), and scores ranged from 1 to 10.50. Their mean level of happiness was 4.48 (SD = 2.04), and scores ranged from 1 to 9.25. Mean emotional intensity was 8.13 (SD = 1.95), and scores ranged from 2.67 to 12. The correlation between anger and happiness was $r(93)$ = −.460, p < .001.

Manipulation Checks

Ingroup reaction. Scores on the ingroup reaction manipulation checks were analyzed in 2 (ingroup reaction: angry vs. happy) × 2 (outgroup reaction: angry vs. happy) between-subjects ANOVAs. Analysis of the ingroup anger check revealed a highly significant main effect of ingroup reaction, $F(1, 91)$ = 671.90, p < .001, η_p^2 = .881, with the ingroup seen as more angry when its reaction was reported to have been of anger (M = 6.30, SD = 0.66) than when it was of happiness (M = 2.15, SD = 0.95). There was also a main effect of outgroup reaction, $F(1, 91)$ = 9.04, p = .003, η_p^2 = .090, with the ingroup seen as more angry when the outgroup's reaction was reported to have been of happiness (M = 4.38, SD = 2.23) than when it was of anger (M = 4.02, SD = 2.26).

A similar ANOVA on the ingroup happiness check revealed a highly significant main effect of ingroup reaction, $F(1, 91)$ = 421.36, p < .001, η_p^2 = .822, with the ingroup seen as more happy when its reaction was reported to have been of happiness (M = 5.90, SD = 1.12) than when it was of anger (M = 1.94, SD = 0.82). There was also a main effect of outgroup reaction, $F(1, 91)$ = 9.17, p = .003, η_p^2 = .092, with the ingroup seen as happier when the outgroup's reaction was reported to have been of anger (M = 4.17, SD = 2.12) than when it was of happiness (M = 3.71, SD = 2.31).

Outgroup reaction. Analysis of the outgroup anger check revealed a highly significant main effect of outgroup reaction, $F(1, 91)$ = 536.70, p < .001, η_p^2 = .855, confirming that the outgroup was seen as more angry when its reaction was reported to have been of anger (M = 6.26, SD = 0.49) than when it was of happiness (M = 2.27, SD = 1.13). There was also a main effect of ingroup reaction, $F(1, 91)$ = 6.32, p = .014, η_p^2 = .065, with the outgroup seen as more angry when the ingroup's reaction was reported to have been of happiness (M = 4.40, SD = 2.11) than when it was of anger (M = 4.09, SD = 2.26).

Analysis of the outgroup happiness check revealed a highly significant main effect of outgroup reaction, $F(1, 91)$ = 554.78, p < .001, η_p^2 = .859, confirming that the outgroup was seen as happier when its reaction was reported to have been of happiness (M = 6.17, SD = 0.83) than when it was of anger (M = 2.17, SD = 0.92). There was also a main effect of ingroup reaction, $F(1, 91)$ = 9.07, p = .003, η_p^2 = .091, with the outgroup seen as happier when the ingroup's reaction was reported to have been of anger (M = 4.38, SD = 2.03) than when it was of happiness (M = 4.00, SD = 2.34).

Self-Categorization

In order to examine how emotional fit influenced ingroup self-categorization relative to self-categorization in terms of the more established superordinate group, we conducted a mixed ANOVA with a 2 (category: ingroup vs. superordinate group) × 2 (ingroup reaction: angry vs. happy) × 2 (outgroup reaction: angry vs. happy) × own emotional reaction (anger: continuous and mean-centered) design, with repeated measures on the category factor.

Two between-subjects effects emerged. First, there was a significant interaction between ingroup and outgroup reaction, $F(1, 87)$ = 4.35, p = .040, η_p^2 = .048. Simple effects analysis revealed that the effect of ingroup reaction was significant when the outgroup's reaction was of anger, $F(1, 87)$ = 5.73, p = .019, η_p^2 = .062, but not when the outgroup's reaction was of happiness, F < 1. Second, the interaction between ingroup reaction and own reaction was also significant, $F(1, 87)$ = 32.50, p < .001, η_p^2 = .272. However, this was qualified by the expected three-way interaction between category, ingroup reaction, and own reaction[1], $F(1, 87)$ = 8.23, p = .005, η_p^2 = .086. This interaction is illustrated in the upper panel of Figure 1.

Further analyses of this three-way interaction indicated that the two-way interaction between category and ingroup reaction was only significant when own anger was high (M + 1SD), $F(1, 87)$ = 14.15, p < .001, η_p^2 = .140 (F < 1 when own anger was low). Analysis of the simple effects of category revealed that when participants' own anger was high, they self-categorized more in terms of the superordinate than the ingroup category when the ingroup was happy $F(1, 87)$ = 13.62, p < .001, η_p^2 = .135. However, the effect of category disappeared (and indeed displayed a trend in the opposite direction) when the ingroup's reaction was also of anger, $F(1, 87)$ = 2.44, p = .122, η_p^2 = .027.

We then repeated the ANOVA, but with own happiness in place of own anger as the measured moderator. This was done in order to check that the above effects involving own anger were not due to affective arousal per se, but rather depended on the specific nature of participants' felt emotion. The interaction between ingroup and outgroup reaction was marginally significant, $F(1, 87)$ = 3.75, p = .056, η_p^2 = .041. Simple effects analysis revealed that the effect of ingroup reaction was significant when the outgroup's reaction was of anger, $F(1, 87)$ = 5.54, p = .021, η_p^2 = .060, but not when the outgroup's reaction was of happiness, F < 1.

This second ANOVA also revealed a two-way interaction between ingroup reaction and own reaction, $F(1, 87)$ = 31.90, p < .001, η_p^2 = .268, but this was again qualified by a three-way interaction between category, ingroup reaction, and own reaction,

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[1] Unexpectedly, the three-way interaction between category, outgroup reaction, and own reaction was also significant, $F(1, 85)$ = 4.19, p = .044, η_p^2 = .047. Further analyses indicated that the two-way interaction between category and outgroup reaction was only significant when own anger was low (M - 1SD), $F(1, 85)$ = 4.02, p = .048, η_p^2 = .045 (F < 1 when own anger was high). Analysis of the simple effects of category revealed that when participants' own anger was low, they felt relatively closer to the superordinate than to the ingroup category when the outgroup was angry, $F(1, 85)$ = 13.27, p < .001, η_p^2 = .135. In contrast, the effect of category was not significant when the outgroup's reaction was of happiness, $F(1, 85)$ = 1.10, p = .298, η_p^2 = .013.
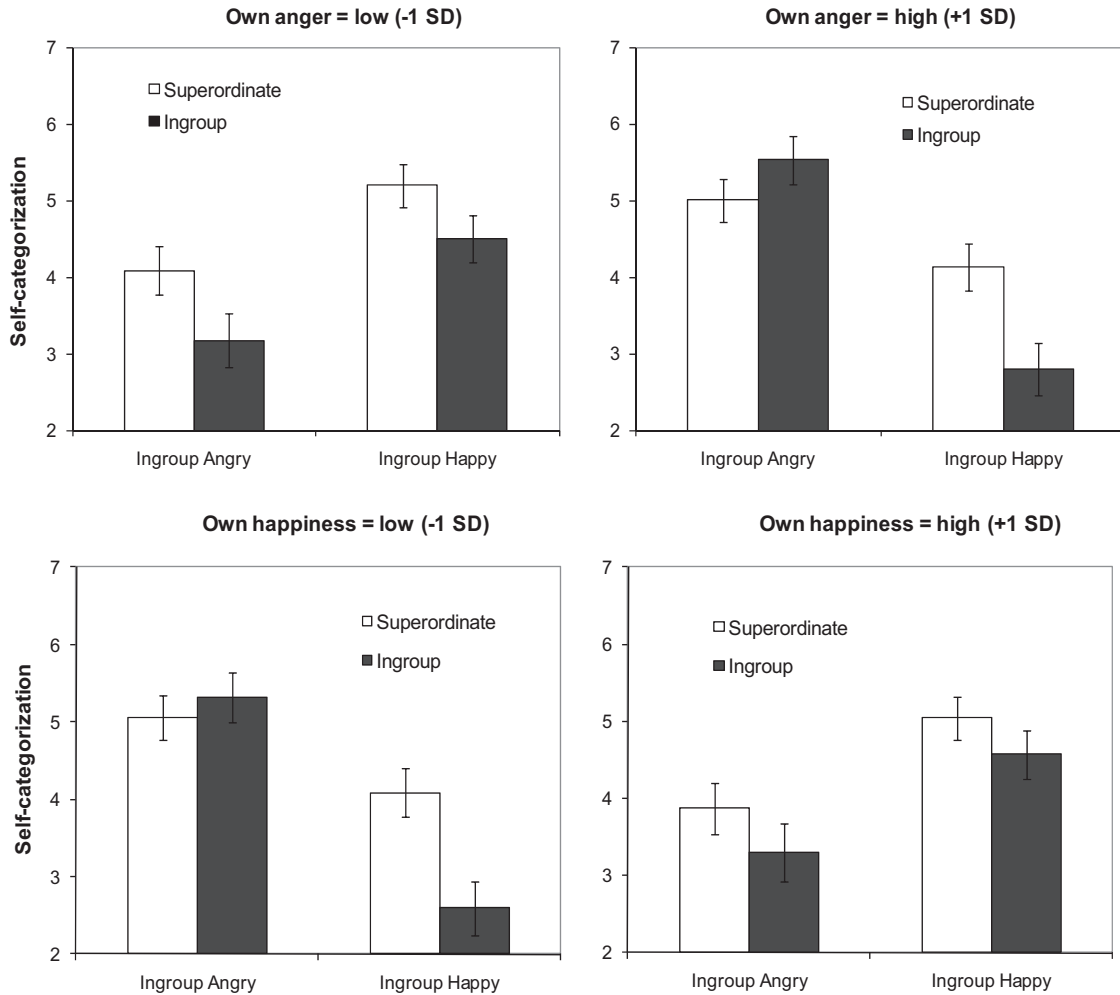
Figure 1. Interaction between ingroup emotional reaction and participants' own emotional reaction (anger in upper panel, happiness in lower panel) on pull of ingroup and superordinate self-categorization (Study 1). Error bars represent standard errors.

$F(1, 87) = 6.10$, $p = .015$, $\eta_p^2 = .066$. This interaction is illustrated in the lower panel of Figure 1. Further analyses indicated that the two-way interaction between category and ingroup reaction was only significant when own happiness was low ($M - 1SD$), $F(1, 87) = 11.76$, $p = .001$, $\eta_p^2 = .119$ ($F < 1$ when own happiness was high). Analysis of the simple effects of category revealed that when participants' own happiness was low, they self-categorized more in terms of the superordinate than the ingroup category when the ingroup was pleased, $F(1, 87) = 15.70$, $p < .001$, $\eta_p^2 = .153$. In contrast, the effect of category was not significant when the ingroup's reaction was of anger, $F < 1$.

Action Tendencies

Turning to how emotional fit influences action tendencies, we hypothesized that tendencies toward campaigning as a superordinate group (i.e., students) would increase when there was "fit" between the emotional reactions of ingroup and outgroup members. Here, the emotional reactions of the outgroup should also come into play. Specifically, when in- and outgroup reactions

match, willingness to campaign as a superordinate group should be stronger—but particularly so when their reaction is of anger, consistent with group-based action. This willingness should be reduced when in- and outgroup reactions do not match, undermining the "fit" required to act together as a superordinate group.

In order to test this hypothesis, we conducted a 2 (ingroup reaction: angry vs. happy) $\times$ 2 (outgroup reaction: angry vs. happy) $\times$ own reaction (anger: continuous and mean-centered) ANCOVA on the measure of participants' willingness to campaign within the superordinate student group, controlling for own happiness.

The analysis revealed significant main effects of own happiness, $F(1, 86) = 6.58$, $p = .012$, $\eta_p^2 = .071$, and own anger, $F(1, 86) = 5.19$, $p = .025$, $\eta_p^2 = .057$. Specifically, willingness to campaign was positively predicted by anger, and negatively by happiness.

The analysis also revealed that the expected interaction between ingroup and outgroup reaction was significant, $F(1, 86) = 4.77$, $p = .032$, $\eta_p^2 = .053$. Simple effects analysis revealed that the effect of ingroup reaction was significant only when the out-

group's reaction was of anger, $F(1, 86) = 5.64$, $p = .020$, $\eta_p^2 = .062$ ($F < 1$ when outgroup's reaction was of happiness). As indicated in Figure 2, willingness to campaign was greater when both the ingroup's and outgroup's reaction were of anger.

Discussion

Emotional Fit and Self-Categorization

Employing minimal groups in order to rule out the influence of any prior association with or investment in the ingroup, we found, as predicted, that the tendency to self-categorize in terms of this new social identity relative to a pre-existing superordinate identity was affected by the interaction between own emotion and ingroup emotion. Unsurprisingly, participants self-categorized more in terms of the pre-existing superordinate category than the unfamiliar minimal ingroup category in most cases. However, when the ingroup felt anger and participants' own anger was high (i.e., when their emotions matched and were consistent with group action—high emotional fit), participants self-categorized as strongly in terms of the ingroup as they did in terms of the superordinate group—and indeed showed a nonsignificant trend in *favor* of the minimal ingroup. A corresponding pattern emerged when own happiness rather than own anger was entered as the moderator. Thus, when participants' own and the ingroup's emotions were (a) similar, and (b) consistent with group action—that is, emotional fit was high—participants self-categorized as strongly in terms of the new, ostensibly meaningless ingroup as they did in terms of a preexisting superordinate category that presumably held some prior value to them. For all other combinations self-categorization in terms of the established superordinate group was dominant. Moreover, this occurred both for reactions of anger and of happiness, indicating that this effect is not the result of affective arousal per se; rather, the pattern is specific to the felt emotion. Although the correlation between participants' anger and happiness scores suggests that these are unlikely to be truly independent effects, they nevertheless offer support for our contention that the specific content of the emotion felt by group members—and its fit with the emotional reactions of others—plays a crucial role in shaping self-categorization.

Emotional Fit and Action Tendencies

Turning to participants' willingness to campaign as a superordinate group against the proposals, we expected that while participants' own anger would predict willingness to campaign as a superordinate group (in line with existing models of collective action; e.g., Van Zomeren et al., 2004), ingroup and outgroup reactions would also interact to shape this willingness. Indeed, we found that willingness to campaign was greatest when the ingroup's and outgroup's reactions were the same, and angry This supports the view that emotions shape social identities and action not only by indicating similarity per se, but also through their specific content (i.e., emotional fit). In the present case, similarity between the ingroup's and outgroup's reactions led to a greater willingness to campaign together only when it was anger (consistent with group-based action), rather than happiness (which has no clear implications for group-based action), that was shared.

Implications

Using minimal groups within the framework of a pre-existing superordinate group, these findings show that in reaction to an event, the interplay between one's own emotions and the emotions of ingroup members, affects the extent to which participants self-categorize in terms of a novel social identity relative to a preexisting superordinate category. Moreover, the interplay between the emotions felt by ingroup and outgroup members affects action tendencies. Although these findings are encouraging−particularly in terms of the role of emotional fit—the use of minimal groups to test our hypotheses has some limitations. One issue is that precisely because minimal groups are devoid of a priori meaning, they may not represent a plausible basis for collective action (Jetten, Spears, & Manstead, 1996). For this reason we considered only the willingness to engage in collective action with the preexisting superordinate group, with which participants had some familiarity. Moreover, the proposed policy affected the superordinate group as a whole, rather than one subgroup specifically. In many situations, however, different pre-existing identities also offer different possibilities for collective action (e.g., campaign as a subgroup vs. campaign as a superordinate group). The question remains as to how emotions might affect the tendency to campaign at different levels of categorization (e.g., as a superordinate group vs. as a subgroup).

The significance attached to pre-existing identities also means that participants are more likely to define themselves in terms of a preexisting identity than they would do in terms of a minimal group identity. Examining the role of emotion in shaping self-categorization in terms of a pre-existing ingroup would therefore represent a fuller and more balanced test of our hypotheses. This was our aim in Study 2.

Study 2

Here we tested our hypotheses regarding the role of emotions in shaping self-categorization and action using pre-existing groups.
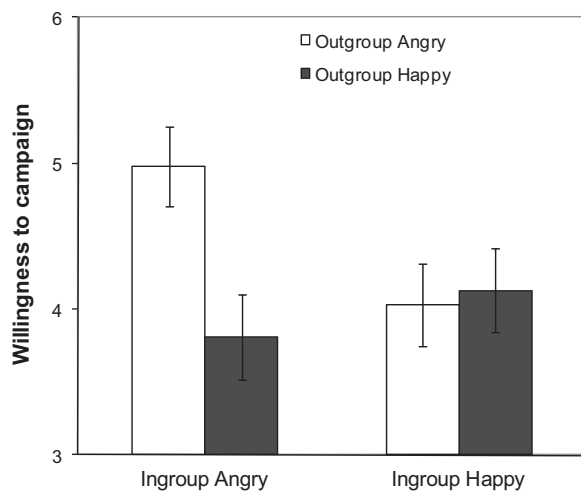

Figure 2. Interaction between ingroup and outgroup emotional reactions on willingness to campaign as a superordinate group (Study 1). Error bars represent standard errors.

We sampled from a regional subgroup within Wales in the U.K.: people from South Wales. Consistent with the design of Study 1, this meant that participants were members of an ingroup (South Wales) contained within a superordinate group (Wales) that also encompasses another subgroup (North Wales). Following the design of Study 1, participants were presented with a potential group threat. This took the form of a fictional but credible report on the withdrawal of financial support for important heritage sites in South Wales from a source (the U.K. government based in London) external to the superordinate category. We measured participants' own emotional reactions to the threat before manipulating ingroup (South Wales) and outgroup (North Wales) emotional reactions and measuring their effects on self-categorization and action tendencies.

In view of the "real" nature of the setting, we also simplified the procedure in order to focus on the unresolved issues of Study 1–namely, self-categorization in terms of the different social categories (i.e., the ingroup and superordinate group), and collective action tendencies at different levels of categorization. For reasons of plausibility, we also developed a stimulus scenario that—in contrast to Study 1−was unambiguously negative. Although the Study 1 scenario was useful in demonstrating that the effects of emotional reactions were not limited to one particular emotion, our priority in Study 2 was to present a scenario that was clear and plausible enough to evoke an emotional reaction in members of a preexisting group. Also for reasons of plausibility, we chose to focus on anger and indifference (rather than happiness) as emotional reactions. Thus, measures of participants' own emotional reactions focused on anger, while ingroup and outgroup emotion were manipulated so that their members were reported to feel angry or indifferent.

Predictions

In line with Study 1, we predicted that emotional fit would affect participants' tendency to self-categorize in terms of the ingroup (South Wales) relative to the superordinate category (Wales). An important difference with Study 1, however, is that we expected outgroup reactions to come into play. In contrast to minimal groups, members of pre-existing groups have prior knowledge and beliefs about the ingroup and the outgroup, and about how they relate to one another within a superordinate group (e.g., Hornsey & Hogg, 2000). Because the ingroup is pre-existing and meaningful, it is also likely to be the case that, other things being equal, participants will self-categorize as strongly in terms of the ingroup as the superordinate group (cf. Study 1). The effect of emotional fit between ingroup and outgroup reaction is therefore likely, under the right conditions, to manifest itself in participants self-categorizing *more* in terms of the ingroup than the superordinate group. We expected this to happen when the ingroup's reaction was one of anger (suggesting a group-based concern among ingroup members) and the outgroup's reaction was one of indifference (suggesting a lack of group-based concern). In this combination, the salience of the superordinate group is reduced by the lack of similarity between ingroup and outgroup reactions (low comparative fit of the superordinate category) and the salience of the ingroup is enhanced by the specific content of the ingroup's reaction (emotional fit).

Action tendencies.   We expected that emotional fit would also affect participants' willingness to campaign against the threat. Extending the design of Study 1, we tested this prediction in relation to willingness to campaign as the ingroup subgroup, as well as campaign as a superordinate group. Following our prediction regarding the role of ingroup and outgroup emotion in shaping self-categorization, we predicted that willingness to campaign as an ingroup would be greatest when the ingroup was angry (suggesting group-based concern) but the outgroup was indifferent (suggesting a lack of group-based concern). We expected that this interaction would in turn be stronger when participants' own anger was high, prompting a willingness to campaign in the first instance. Finally, because the threat pertained specifically to the ingroup (cf. Study 1), we also expected that the role of emotional fit would be greater in shaping willingness to campaign as an ingroup than in willingness to campaign as a superordinate group. Thus, we expected that the interaction between the ingroup's, outgroup's, and participants' own emotions would in turn be moderated by the within-subjects effect of category (superordinate group campaign vs. ingroup campaign).

Method

Participants

Participants were 84 adults from South Wales, of whom 42 were female, 40 were male, and two did not record their sex. The mean age of the sample was 28.83 years ($SD = 12.64$). Participants were recruited in public places (e.g., a café) in South Wales, and participated on a voluntary basis.

Design

The study had a 2 (ingroup reaction: angry vs. indifferent) $\times$ 2 (outgroup reaction: angry vs. indifferent) between-subjects design. Participants' own emotional reaction (anger) was measured as a continuous moderator. Participants were randomly allocated to one of the four conditions.

Questionnaire and Procedure

After giving their informed consent to participate in the study, participants were presented with the questionnaire and instructed to work through it. The opening page of the questionnaire introduced the purported threat to ingroup heritage sights. This was presented in the form of an extract from a recent newspaper story about the future of heritage sites in South Wales. The extract reported that the British government (based in London) was to withdraw support for heritage sights in South Wales, and that as a consequence the sites faced the threat of closure. The potentially damaging results of such closures for local communities were emphasized.

Following the extract, six items gauged participants' anger in relation to the information in the extract ($\alpha = .92$). Participants were asked, 'Does the prospect of heritage site closures make you feel angry/furious/resentful/bitter/annoyed/frustrated?', and responded on a scale ranging from 1 (*not at all*) to 7 (*extremely*).

Manipulations.   These emotional reaction items were followed by the manipulations of ingroup and outgroup reactions. These took the form of two bar graphs that purported to show the findings of the

research so far. Each graph illustrated how angry, furious, uncon-cerned, and indifferent (one bar each) respondents felt. One graph presented findings for people from the ingroup (South Wales) while the other supposedly showed findings from the outgroup (North Wales). In the ingroup angry conditions, the findings from South Wales showed high scores for "angry" (6.0) and "furious" (6.1), and low scores for "unconcerned" (1.4) and "indifferent" (1.5). These values for "angry" and "indifferent" and "furious" and "unconcerned" were swapped in the ingroup indifferent conditions. In the outgroup angry conditions, the findings from North Wales showed high scores for "angry" (6.3) and "furious" (5.8), and low scores for "uncon-cerned" (1.6) and "indifferent" (1.3). These values for "angry" and "indifferent" and "furious" and "unconcerned" were reversed in the outgroup indifferent conditions.

Manipulation checks. The manipulations were checked by way of eight items (four for each subgroup/graph). Participants were first asked, 'According to these findings, to what extent does the prospect of heritage site closures make South Wales people feel angry/furious/unconcerned/indifferent?' ($1 = not\ at\ all$; $7 = extremely$). Equivalent items followed for the manipulation of the outgroup (North Wales) reaction. The "unconcerned" and "indif-ferent" items were reverse-scored in each case to form a single four-item scale for each subgroup reaction (both α's = .96).

Self-categorization. Self-categorization in terms of the in-group (people from South Wales) and the superordinate category (Welsh) was measured using pictorial measures similar to those used in Study 1 (one for the ingroup, and one for the superordinate category). As in Study 1, the participant was represented by a small circle and the relevant group (*South Wales people* or *Welsh people*) by a large circle.

Action tendencies. Two action tendencies were measured by asking participants how likely they would be to do the following: (a) campaign together with Welsh people everywhere, and (b) campaign together with South Wales people, without North Wales people. Participants responded on a scale from 1 (*not at all likely*) to 7 (*extremely likely*).

Results

Own Anger

Participants' mean level of anger was 4.22 ($SD = 1.49$).

Manipulation Checks

Scores on the ingroup and outgroup reaction manipulation checks were analyzed by a 2 (ingroup reaction: angry vs. indiffer-ent) $\times$ 2 (outgroup reaction: angry vs. indifferent) between-subjects ANOVA. Analysis of the ingroup reaction check revealed a highly significant main effect of ingroup reaction, $F(1, 79) = 123.68$, $p < .001$, $\eta_p^2 = .610$, with the ingroup seen as more angry when its reaction was one of anger ($M = 5.88$, $SD = 1.25$) than one of indifference ($M = 2.39$, $SD = 1.63$). There was also a main effect of outgroup reaction, $F(1, 79) = 6.89$, $p = .01$, $\eta_p^2 = .080$, with the ingroup seen as more angry when the outgroup's reaction was one of anger ($M = 4.58$, $SD = 2.18$) than one of indifference ($M = 3.68$, $SD = 2.32$). This unexpected main effect of outgroup reaction may reflect a motivation to emphasize the ingroup's "angry" credentials when it became clear that the outgroup was

angry on the ingroup's behalf, so as not to appear inappropriately unconcerned about the scenario—a case of, "if they're angry about it, then so should we be." In any case, the strong main effect of ingroup reaction confirmed the effectiveness of the manipulation. Moreover, the interaction was not significant, $F < 1$.

Analysis of the outgroup reaction check revealed a highly sig-nificant main effect of outgroup reaction, $F(1, 77) = 181.08$, $p < .001$, $\eta_p^2 = .702$, confirming that the outgroup was seen as more angry when its reaction was one of anger ($M = 6.09$, $SD = 1.10$) than one of indifference ($M = 2.18$, $SD = 1.47$). No other effects were significant, F's < 1.

Self-Categorization

To examine how emotional fit influenced ingroup self-categorization relative to superordinate group self-categorization, we conducted a mixed 2 (category: ingroup vs. superordinate group) $\times$ 2 (ingroup reaction: angry vs. indifferent) $\times$ 2 (outgroup reaction: angry vs. indifferent) $\times$ own reaction (continuous, cen-tered) ANOVA, with repeated measures on the category factor.

The analysis revealed a significant effect of category, $F(1, 74) = 5.55$, $p = .021$, $\eta_p^2 = .070$, and two-way interactions between category and ingroup reaction, $F(1, 74) = 9.93$, $p = .002$, $\eta_p^2 = .118$, and between category and outgroup reaction, $F(1, 74) = 5.80$, $p = .019$, $\eta_p^2 = .073$. These were qualified by a three-way interaction between category, ingroup reaction, and outgroup reaction, $F(1, 74) = 5.05$, $p = .028$, $\eta_p^2 = .064$, and a marginally significant four-way interaction between all of the variables, $F(1, 74) = 3.96$, $p = .084$, $\eta_p^2 = .040$. This four-way interaction is illustrated in Figure 3.

Simple effects analyses revealed that the effect of category when the ingroup's reaction was of anger, and the outgroup's reaction was of indifference was significant for both high (panel b) and low (panel d) levels of own anger, $F(1, 74) = 8.44$, $p = .005$, $\eta_p^2 = .102$, and $F(1, 74) = 15.13$, $p < .001$, $\eta_p^2 = .170$. When own anger was high, the effect of category was also significant when the ingroup's reaction was of indifference, and the outgroup's reaction was of anger (panel a), $F(1, 74) = 4.70$, $p = .033$, $\eta_p^2 = .060$. Specifically, participants in this condition self-categorized more in terms of the superordinate category than of the ingroup category. The reverse trend emerged in the same condition when own anger was low (panel c), $F(1, 74) = 3.48$, $p = .066$, $\eta_p^2 = .045$. Here, participants self-categorized more in terms of the ingroup category than of the superordinate category. In contrast, participants self-categorized equally in terms of the superordinate and ingroup categories in each case in which ingroup and outgroup emotional reactions were matched (i.e., were both of anger or of indifference), F's < 1.

Action Tendencies

To test the effects of emotional reactions on action tendencies, we submitted the action tendency scales to a mixed 2 (campaign: ingroup vs. superordinate group) $\times$ 2 (ingroup reaction: angry vs. indifferent) $\times$ 2 (outgroup reaction: angry vs. indifferent) $\times$ own reaction (continuous, centered) ANOVA, with repeated measures on the campaign factor.

Lower-order effects were qualified by a four-way interaction be-tween all of the factors, $F(1, 74) = 4.70$, $p = .033$, $\eta_p^2 = .060$. Further

Own anger = high (*M* + 1*SD*)

(a) Outgroup angry

(b) Outgroup indifferent

Own anger = low (*M* − 1*SD*)

(c) Outgroup angry
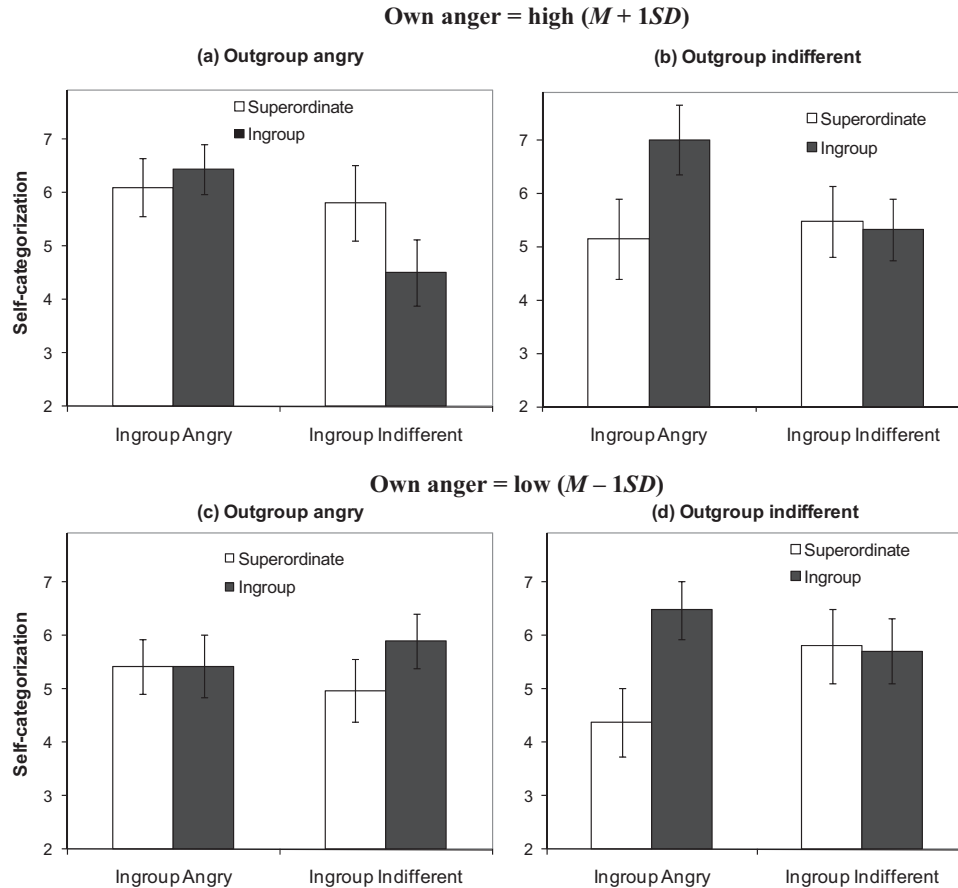
(d) Outgroup indifferent

Figure 3. Interaction between ingroup, outgroup, and participants' own emotional reactions on ingroup and superordinate self-categorization (Study 2). Error bars represent standard errors.

analyses confirmed that the three-way interaction between own emotion, ingroup emotion, and outgroup reaction was significant only for the tendency to campaign as an ingroup, $F(1, 74) = 6.44$, $p = .013$, $\eta_p^2 = .080$ ($F < 1$ for tendency to campaign as a superordinate group). This three-way interaction is illustrated in Figure 4.

Further analyses revealed that the two-way interaction between ingroup reaction and outgroup reaction was only significant when own anger was high, $F(1, 74) = 14.36$, $p < .001$, $\eta_p^2 = .163$ ($F < 1$ when own anger was low). This two-way interaction (illustrated in the right-hand panel of Figure 4) was decomposed further through simple effects analyses revealing that when the outgroup's reaction was indifference, willingness to campaign as a subgroup was greater when the ingroup's reaction was anger rather than indifference, $F(1, 74) = 11.63$, $p = .001$, $\eta_p^2 = .136$. In contrast, when the outgroup's reaction was anger, willingness to campaign as a subgroup was greater when the ingroup's reaction was indifference rather than anger, $F(1, 74) = 3.33$, $p = .072$, $\eta_p^2 = .043$.

Discussion

The results of Study 2 confirm that emotion and emotional fit play a role in shaping self-categorization among members of preexisting groups. One difference with Study 1, was that—as predicted—the outgroup's emotional reactions played a moderating role, in addition

to the roles of ingroup and participants' own reactions. We expected the outgroup's emotional reaction to be more important here than in Study 1 because a pre-existing outgroup is already to some degree defining of the superordinate group (Hornsey & Hogg, 2000). Its members' emotional reactions are therefore likely to exert an influence on participants' self-categorization in terms of the ingroup and the superordinate group. We expected that when the emotional and comparative fit of the ingroup was high—that is, when the ingroup's reaction was anger (suggesting a group-based concern among ingroup members) and the outgroup's reaction was indifference (suggesting a lack of group-based concern)—participants would self-categorize *more* in terms of the ingroup than the superordinate group. This was the case, supporting our contention that the salience of the superordinate group is reduced by the lack of similarity between ingroup and outgroup reactions (indicating low comparative fit of the superordinate category) and the salience of the ingroup is enhanced by the specific content of the ingroup's reaction (indicating high emotional fit of the ingroup).

Action Tendencies

In Study 2, we extended the analysis of Study 1 to consider group members' preference for campaigning as an ingroup versus as a superordinate group. The four-way interaction between cate-
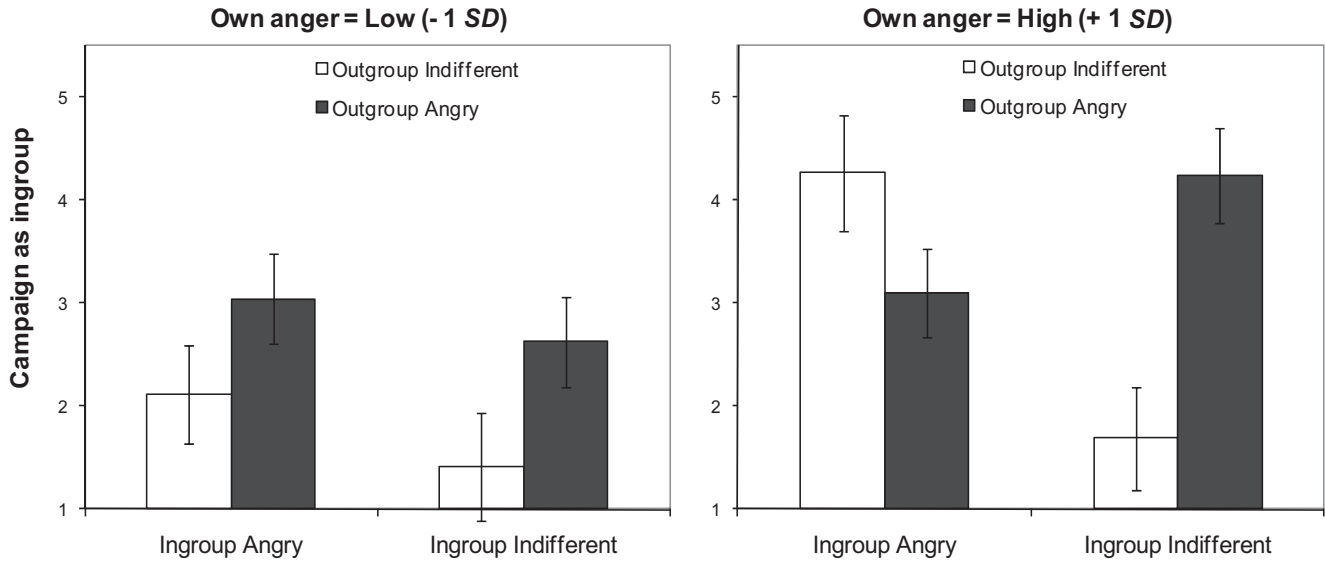
Figure 4. Interaction between ingroup, outgroup, and participants' own emotional reactions on willingness to campaign as an ingroup (Study 2). Error bars represent standard errors.

gory, ingroup emotion, outgroup emotion, and participants' own emotion confirmed that emotional fit affected participants' preference for campaigning as an ingroup or as a superordinate group. The three-way interaction between ingroup emotion, outgroup emotion, and participants' own emotion was, as expected, only significant for the measure of willingness to campaign as an ingroup. In turn, the two-way interaction between ingroup emotion and outgroup emotion was only significant when participants' own anger was high (high emotional fit), again as expected.

As evident from the right hand panel of Figure 4, participants' willingness to campaign as an ingroup was higher when the ingroup was angry and the outgroup was indifferent, compared to when both the ingroup and outgroup were indifferent. This complements the Study 1 finding that willingness to campaign as a member of a particular group depends on the fit between ingroup and outgroup emotion. Whereas the Study 1 findings showed that willingness to campaign at a superordinate level is greatest when both the ingroup and outgroup are angry (i.e., both share an emotion that suggests group-based concern), the present findings suggest that willingness to campaign as an ingroup (without the outgroup) is greater when the ingroup is angry and the outgroup is indifferent (i.e., when only the ingroup displays an emotion that suggests a group-based concern). Both sets of findings underline the value of the emotional fit concept in explaining self-categorization and action tendencies, over and above the similarity of reactions per se (comparative fit) and content defined in terms of stereotypic expectations (normative fit). Emotional fit here provides a more precise handle not only on how participants self-categorize in response to an event, but also on how—and with whom—they wish to react to it.

It is also noteworthy that willingness to campaign as an ingroup was lower when the ingroup and outgroup were angry, compared to when the ingroup was angry and the outgroup was indifferent. In other words, willingness to campaign was lower when *everyone* felt angry. Although this was not specifically predicted, it is

explicable in terms of diffusion of responsibility. Specifically, if everyone is angry, then it might be reasonable to infer that collective action is likely regardless of what I myself might do. In other words, the greater the number of people who are angry, the less need there is for me personally to engage in collective action (Klandermans, 1997; Vasi & Macy, 2003). In contrast, when anger is limited to the ingroup, the emergence of an effective campaign may not be seen as inevitable, thereby placing an onus on oneself to act on the basis of one's anger.

Finally, and somewhat unexpectedly, willingness to campaign as an ingroup was as high when the ingroup was *indifferent* and the outgroup was angry, as it was when the ingroup was angry and the outgroup was indifferent. In other words, when the ingroup was indifferent, there was an effect of outgroup emotion on willingness to campaign as an ingroup. By expressing anger, the outgroup may encourage angry group members to pursue collective action with the ingroup, even when the ingroup is initially indifferent. This interpretation is consistent with approaches to emotion that emphasize its role in communicating interpretations of events to others, making claims about the significance of the event, and signaling appropriate reactions to it (e.g., Parkinson, 1996; Parkinson et al., 2005). An outgroup's emotional reaction can allow ingroup members to reason that, 'if they are angry about this and willing to act, then so should we be.' Although unexpected, this finding is therefore explicable in the same terms as our other findings—namely, the role of emotion in signaling the possibility and appropriateness of specific collective action strategies.

General Discussion

The growing literature on intergroup emotion has shown how social identities provide a basis from which group members experience intergroup emotion. Here we have argued that there has been a neglect of the role that emotion might in turn play in shaping social identities. Drawing on literature from the fields of

social appraisal and interpersonal emotion (e.g., Manstead & Fischer, 2001; Parkinson et al., 2005) and self-categorization principles (e.g., Turner et al., 1987), we tested the hypotheses that the emotional fit (defined in terms of similarity and content) of others' and participants' own emotions would shape (a) self-categorization in terms of both minimal (Study 1) and pre-existing (Study 2) categories, and (b) participants' action tendencies in relation to an emotion-evoking event (Studies 1 and 2).

Results provided considerable support for our hypotheses. In terms of self-categorization, Study 1 indicated that the fit between participants' own emotions and the emotions expressed by a new (minimal) ingroup affects self-categorization in terms of this new ingroup, relative to a pre-existing superordinate group. Study 2 demonstrated that emotional fit also shapes self-categorization in terms of pre-existing categories.

Although the findings were broadly consistent across the two studies—especially regarding the role of emotional fit—two differences are worth noting. First, the emotional reaction of the outgroup played a moderating role in Study 2 but not in Study 1. Second, self-categorization in terms of the ingroup was generally higher in Study 2 than in Study 1, particularly relative to the superordinate group. As argued above, we explain both differences in terms of the use of minimal groups in Study 1 and more meaningful pre-existing groups in Study 2. In short, both the ingroup and the outgroup "matter" when they are pre-existing, meaning that (a) self-categorization in terms of the ingroup is likely to be higher, and (b) the outgroup's reaction matters when it helps to further (comparatively) define the emotional fit of the ingroup versus superordinate categories.

Turning to action tendencies, participants' willingness to campaign as a superordinate group in Study 1 was affected by the content as well as the similarity of the ingroup's and outgroup's emotional reactions, underlining the role and relevance of emotional fit. Specifically, the content (e.g., anger, rather than happiness) as well as the similarity of emotion is an important determinant of willingness to act on the basis of a particular social identity. This was also borne out by the findings of Study 2, which demonstrated the role of emotional fit in shaping willingness to campaign as a subgroup in response to a subgroup-specific threat. Participants' own emotional reactions also played a moderating role in Study 2, further underlining the importance of emotional fit. While it remains unclear why this did not occur in Study 1, the broader contribution of emotional fit in shaping action tendencies is evident across both studies.

Implications: The Relationship Between Emotion and Social Identity

To our knowledge, the present findings represent the first demonstration that intergroup emotions can provide a basis for self-categorization. Although Kessler and Hollbach (2005) showed that emotion can affect the extent to which group members identify with an ingroup, their research focused on (a) emotions felt specifically *about* the ingroup and an outgroup, and (b) individual group members' tendencies to strategically affiliate or distance themselves from the ingroup as a result of these emotions.

In contrast, in the present research we tested a more general set of principles regarding the role of emotion in shaping social identities and action tendencies. Research on intergroup emotion

theory has until now focused on how self-categorization affects intergroup emotions and action tendencies (Iyer & Leach, 2008; Mackie et al., 2000; Mackie, Silver, & Smith, 2004; Smith, 1993). The present findings suggest that emotions felt in response to a group-relevant event also impact on self-categorization, as well as the action tendencies that emerge (Thomas et al., 2009a, 2009b). In this way, we see the relation between emotion, social identity, and action as a dynamic and reciprocal one.

The present approach goes beyond existing intergroup emotion research in another important respect. Prior work has typically seen emotion as an intraindividual motivating factor that links appraisals to action. In contrast, the present research shows that an important part of the dynamic linking emotions and self-categorization is the role of emotion in communicating the subjective significance of an event to others. Of particular note here is that the only information available to participants in the present paradigm was the predominant emotion experienced by ingroup and outgroup members, yet this was a sufficient basis not only to categorize oneself (or not) with ingroup members, but also to draw inferences about the possibility of collective action. Thus, emotions have a more social role beyond their motivating function within socially isolated individual group members.

Context and Self-Categorization

A second set of implications relate to the role of social context in shaping self-categorization. Previous research on self-categorization theory has focused on the role of similarity and differences between group members as a determinant of the salience of a social identity (Haslam & Turner, 1992; Oakes et al., 1991) and also sees a role for the content of these similarities and differences (Blanz, 1999; Oakes, 1987; Reynolds, Turner, & Haslam, 2000). While the present findings are consistent with this earlier work, they extend it by introducing the concept of emotional fit, defined in terms of the similarity and content of our own and others' emotional reactions to a stimulus. While content is clearly important in self-categorization theory, its role has been conceptualized primarily in terms of whether group members manifest characteristics, consistent with stereotypic expectations regarding the group (normative fit). The present research develops this approach by suggesting that the content of emotions also influences self-categorization and action by signaling the extent to which others' reactions are *consistent with group-based action*, as well as being similar or different per se (Frijda, 1986; Roseman, 2001). The significance of the content of emotional reactions is therefore in terms of how it signals the appropriateness and possibility of acting in terms a social category (e.g., shared anger but not happiness makes it possible to try to resist a threat), rather than the extent to which it suggests normative consistency with prior expectations. This is particularly clear in Study 1, in which the use of minimal groups precludes any role for prior expectations regarding the stereotypic content of these identities. Even against this "blank" background, the content of emotional reactions plays a role in shaping self-categorization, and the possibility of campaigning as a superordinate group.

Limitations and Future Work

Despite the encouraging nature of the findings, there are several ways in which this research could be refined and extended. One

possibility would be to examine whether the interplay between own and others' emotions leads to the emergence of new social identities, where no previous category is made available to participants. This would represent a truly "minimal" setting in which to test the role of emotional fit in shaping self-categorization (cf. Postmes, Haslam, & Swaab, 2005; Postmes, Spears, Lee, & Novak, 2005). Another possibility would be to examine the specific value of emotional (vs. nonemotional) communication in social identity processes. One of the premises of the present research is that emotions are particularly good at communicating orientations to a situation or event. It follows that others' reactions to an event or situation should have a stronger impact on social identity-based outcomes when those reactions have emotional rather than purely cognitive content. Knowing that an event makes a target person angry or happy (an emotional reaction) should be a more potent determinant of a sense of shared identity with that target than if he or she expresses a nonemotional opinion (e.g., a belief that the event is good or bad). Finally, future work could examine the possible mediators of the effects of emotion on self-categorization and action tendencies, for example expected social support, or validation.

Conclusions

We found support for the idea that group-based emotions not only arise from salient social identities but also influence self-categorization and action tendencies. More broadly, the present research integrates approaches to the social dynamics of interpersonal emotion, with research on self-categorization and intergroup emotion theories. As well as providing an insight into the role of emotion in social identity, we hope that this research will stimulate further integration of the intergroup emotion and collective action literatures. Developing a fuller understanding of the reciprocal relationship between social identity and intergroup emotion should lead to a more complete understanding of the dynamics of social identity, collective action, and social change.

References

Blanz, M. (1999). Accessibility and fit as determinants of the salience of social categorizations. *European Journal of Social Psychology, 29,* 43–74.

Blanz, M., & Aufderheide, B. (1999). Social categorization and category attribution: The effects of comparative and normative fit on memory and social judgment. *British Journal of Social Psychology, 38,* 157–179.

Doosje, B., Branscombe, N. R., Spears, R., & Manstead, A. S. R. (1998). Guilty by association: When one's group has a negative history. *Journal of Personality and Social Psychology, 75,* 872–886.

Doosje, B., Spears, R., & Koomen, W. (1995). When bad isn't all bad: Strategic use of sample information in generalization and stereotyping. *Journal of Personality and Social Psychology, 69,* 642–655.

Dumont, M., Yzerbyt, V. Y., Wigboldus, D., & Gordijn, E. (2003). Social categorization and fear reactions to the September 11th terrorist attacks. *Personality and Social Psychology Bulletin, 29,* 112–123.

Ellemers, N., Spears, R., & Doosje, B. (1997). Sticking together or falling apart: In-group identification as a psychological determinant of group commitment versus individual mobility. *Journal of Personality and Social Psychology, 72,* 617–626.

Frijda, N. (1986). *The emotions.* Cambridge, MA: Cambridge University Press.

Gordijn, E. H., Wigboldus, D., & Yzerbyt, V. (2001). Emotional conse-

quences of categorizing victims of negative outgroup behavior as ingroup or outgroup. *Group Processes and Intergroup Relations, 4,* 317–326.

Haslam, S. A., & Turner, J. C. (1992). Context-dependent variation in social stereotyping 2: The relationship between frame of reference, self-categorization and accentuation. *European Journal of Social Psychology, 22,* 251–277.

Hogg, M. A., & Turner, J. C. (1987). Intergroup behavior, self-stereotyping and the salience of social categories. *British Journal of Social Psychology, 26,* 325–340.

Hornsey, M. J., & Hogg, M. A. (2000a). Assimilation and diversity: An integrative model of subgroup relations. *Personality and Social Psychology Review, 4,* 143–156.

Iyer, A., & Leach, C. W. (2008). Emotion in inter-group relations. *European Review of Social Psychology, 19,* 86–125.

Iyer, A., Leach, C. W., & Crosby, F. J. (2003). White guilt and racial compensation: The benefits and limits of self-focus. *Personality and Social Psychology Bulletin, 29,* 117–129.

Iyer, A., Schmader, T., & Lickel, B. (2007). Why individuals protest the perceived transgressions of their country: The role of anger, shame, and guilt. *Personality and Social Psychology Bulletin, 33,* 572–587.

Jetten, J., Spears, R., & Manstead, A. S. R. (1996). Intergroup norms and intergroup discrimination: Distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology, 71,* 1222–1233.

Kessler, T., & Hollbach, S. (2005). Group based emotion as determinants of ingroup identification. *Journal of Experimental Social Psychology, 41,* 677–685.

Klandermans, B. (1997). *The social psychology of protest.* Oxford, UK: Basil Blackwell.

Lazarus, R. S. (1991). *Emotion and adaptation.* New York: Oxford University Press.

Lazarus, R. S. (2001). Relational meaning and discrete emotions. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion* (pp. 37–67). Oxford, UK: Oxford University Press.

Leach, C. W., Iyer, A., & Pedersen, A. (2006). Guilt and anger about in-group advantage as explanations of the willingness for political action. *Personality and Social Psychology Bulletin, 32,* 1232–1245.

Mackie, D. M., Devos, T., & Smith, E. R. (2000). Intergroup emotions: Explaining offensive action tendencies in an intergroup context. *Journal of Personality and Social Psychology, 79,* 602–616.

Mackie, D. M., Silver, L. M., & Smith, E. R. (2004). Intergroup emotions: Emotion as an intergroup phenomenon. In L. Z. Tiedens & C. W. Leach (Eds.), *The social life of emotions.* Cambridge: Cambridge University Press.

Manstead, A. S. R., & Fischer, A. H. (2001). Social appraisal: The social world as object of and influence on appraisal processes. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, research, application* (pp. 221–232). New York: Oxford University Press.

Mummendey, A., Kessler, T., Klink, A., & Mielke, R. (1999). Strategies to cope with negative social identity: Predictions by social identity theory and relative deprivation theory. *Journal of Personality and Social Psychology, 76,* 229–245.

Oakes, P. J. (1987). The salience of social categories. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, M. S. Wetherell (Eds.), *Rediscovering the social group: A self-categorisation theory* (pp. 117–141). Oxford and New York: Basil Blackwell.

Oakes, P. J., Turner, J. C., & Haslam, S. A. (1991). Perceiving people as group members: The role of fit in the salience of social categorizations. *British Journal of Social Psychology, 30,* 125–144.

Parkinson, B. (1996). Emotions are social. *British Journal of Psychology, 87,* 663–683.

Parkinson, B. (2001). Putting appraisal in context. In K. R. Scherer, A.

Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, research, application* (pp. 173–186). New York: Oxford University Press.

Parkinson, B., Fischer, A. H., & Manstead, A. S. R. (2005). *Emotion in social relations: Cultural, group, and interpersonal processes.* New York: Psychology Press.

Peters, K., & Haslam, S. A. (2010). *Capturing the mood of the group: The importance of emotion sharing for leadership.* Unpublished manuscript.

Peters, K., & Kashima, Y. (2007). From social talk to social action: Shaping the social triad with emotion sharing. *Journal of Personality and Social Psychology, 93,* 780–797.

Postmes, T., Haslam, S. A., & Swaab, R. I. (2005). Social influence in small groups: An interactive model of social identity formation. *European Review of Social Psychology, 16,* 1–42.

Postmes, T., Spears, R., Lee, T., & Novak, R. (2005). Individuality and social influence in groups: Inductive and deductive routes to group identity. *Journal of Personality and Social Psychology, 89,* 747–763.

Reynolds, K. J., Turner, J. C., & Haslam, S. A. (2000). When are we better than them and they worse than us? A closer look at social discrimination in positive and negative domains. *Journal of Personality and Social Psychology, 78,* 64–80.

Roseman, I. J. (2001). A model of appraisal in the emotion system: Integrating theory, research, and applications. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion* (pp. 68–91). Oxford, UK: Oxford University Press.

Schubert, T., & Otten, S. (2002). Overlap of self, ingroup and outgroup: Pictorial measurement of self categorization. *Self and Identity, 4,* 353–376.

Smith, E. R. (1993). Social identity and social emotions: Toward new conceptualizations of prejudice. In D. M. Mackie & D. L. Hamilton (Eds.), *Affect, cognition, and stereotyping: Interactive processes in group perception* (pp. 297–315). San Diego, CA: Academic Press.

Spears, R., Lea, M., Corneliussen, R. A., Postmes, T., & Ter Haar, W. (2002). Computer mediated communication as a channel for social resistance: The strategic side of SIDE. *Small Group Research, 33,* 555–574.

Tajfel, H., Flament, C., Billig, M. G., & Bundy, R. P. (1971). Social categorization and inter-group behavior. *European Journal of Social Psychology, 1,* 149–177.

Thomas, E. F., McGarty, C., & Mavor, K. I. (2009a). Aligning identities, emotions, and beliefs to create commitment to sustainable social and political action. *Personality and Social Psychology Review, 13,* 194–218.

Thomas, E. F., McGarty, C., & Mavor, K. I. (2009b). Transforming "apathy into movement": The role of prosocial emotions in motivating action for social change. *Personality and Social Psychology Review, 13,* 310–333.

Tropp, L. R., & Wright, S. C. (2001). Ingroup identification as the inclusion of ingroup in the self. *Personality and Social Psychology Bulletin, 27,* 585–600.

Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In E. J. Lawler (Ed.), *Advances in group processes* (pp. 77–122). Greenwich: JAI Press.

Turner, J. C. (1999). Some current themes in research in social identity and self-categorisation theories. In N. Ellemers, R. Spears & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 6–34). Oxford, UK: Blackwell.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorisation theory.* New York: Basil Blackwell.

Van Kleef, G. A., De Dreu, C. K. W., & Manstead, A. S. R. (2004a). The interpersonal effects of anger and happiness in negotiations. *Journal of Personality and Social Psychology, 86,* 57–76.

Van Kleef, G. A., De Dreu, C. W., & Manstead, A. S. R. (2004b). The interpersonal effects of emotions in negotiations: A motivated information processing approach. *Journal of Personality and Social Psychology, 87,* 510–528.

Van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. (2004). Put your money where your mouth is! Explaining collective action tendencies through group-based anger and group efficacy. *Journal of Personality and Social Psychology, 87,* 649–664.

Vasi, I. B., & Macy, M. (2003). The mobilizer's dilemma: Crisis, empowerment, and collective action. *Social Forces, 81,* 979–998.

Weiss, H. M., Suckow, K., & Cropanzano, R. (1999). Effects of justice conditions on discrete emotions. *Journal of Applied Psychology, 84,* 786–794.

Yzerbyt, V. Y., Dumont, M., Wigboldus, D., & Gordijn, E. (2003). I feel for us: The impact of categorization and identification on emotions and action tendencies. *British Journal of Social Psychology, 42,* 533–549.

Correction to Mauss, Tamir, Anderson, and Savino (2011)

In the article, "Can seeking happiness make people happy? Paradoxical effects of valuing happiness," by Iris B. Mauss, Maya Tamir, Craig L. Anderson, and Nicole Savino (*Emotion*, Advance online publication, April 25, 2011. doi: 10.1037/a0022010), there was an error in the title. The title of the article should read, "Can seeking happiness make people unhappy? Paradoxical effects of valuing happiness." All versions of this article have been corrected.