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### Emotional collectives

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# Emotional collectives: How groups shape emotions and emotions shape groups

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Group settings are epicentres of emotional activity. Yet, the role of emotions in groups is poorly understood. How do group-level phenomena shape group members' emotional experience and expression? How are emotional expressions recognised, interpreted and shared in group settings? And how do such expressions influence the emotions, cognitions and behaviours of fellow group members and outside observers? To answer these and other questions, we draw on relevant theoretical perspectives (e.g., intergroup emotions theory, social appraisal theory and emotions as social information theory) and recent empirical findings regarding the role of emotions in groups. We organise our review according to two overarching themes: how groups shape emotions and how emotions shape groups. We show how novel empirical approaches break important new ground in uncovering the role of emotions in groups. Research on emotional collectives is thriving and constitutes a key to understanding the social nature of emotions.

*Keywords:* Emotions; Groups; Social Collectives; Emotional Expression; Social Interaction.

Group life is inherently emotional. Social interactions are the primary elicitors of emotions (Anderson & Guerrero, 1998; Parkinson, Fischer, & Manstead, 2005; Planalp, 1999; Tiedens & Leach, 2004), and such interactions logically abound in groups. As a result, many emotions occur in group settings or in the context of group events, for instance, during work meetings, rituals, memorials, festivities or sports events. Given that group processes are potent triggers of emotions, understanding such emotional processes is critical to understanding group life. Nevertheless,

fundamental questions about the role of emotions in social collectives remain poorly understood. How do group-level phenomena shape the experience and expression of emotions in groups, and how do the resulting emotional states influence group members' behaviour? How are emotional expressions recognised, interpreted and shared in group settings, and how do such expressions influence the emotions, cognitions and behaviours of fellow group members and outside observers? Questions such as these have begun to receive empirical attention in the past decades, and recent

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research on emotions in groups is breaking important new ground. The realisation of a special issue on “emotional collectives” in *Cognition and Emotion* seemed a good opportunity to provide a forum for new research and to investigate where we stand: What do we know about the various ways in which emotions shape groups and groups shape emotions, and which issues remain to be addressed?

Our objective with this article is to highlight the relevance and diversity of research on emotions in groups. Rather than offering a comprehensive treatment of the literature, we discuss key theories and illustrative studies that are representative of the various streams of research in this field of inquiry. This article unfolds as follows. We start out by providing a brief historical overview of research on emotions in groups. We then identify two key overarching themes in the literature: how groups shape emotions and how emotions shape groups. These themes provide the backbone of the current article. In addition, we identify a number of subthemes in research on emotions in groups, which we relate to the various empirical contributions to this special issue. We conclude by offering some reflections on the state of the art and providing suggestions for future research.

## A BRIEF HISTORY OF RESEARCH ON EMOTIONS IN GROUPS

Scientific interest in the interplay of emotions and group dynamics dates back at least to Le Bon's (1895) classic work on the role of the “group mind” in crowd behaviour. Le Bon argued that any individual who is immersed in a large group for a sufficient period of time will sooner or later find him- or herself in a special state characterised by increased emotionality, impulsiveness, incapacitated reasoning and lack of critical judgement. Similarly, McDougall (1923) characterised the experience of crowd membership as being “carried away by forces” which one is “powerless to control” (p. 57). These overpowering forces were thought to create collective emotional attributes that transcend the consciousness of the individual group

members (Barsade & Gibson, 1998). Around the same time, Durkheim (1912) also proposed that emotions that are shared during social gatherings foster a sense of collectivity, but his outlook was more positive. He contended that collective emotions reinforce shared ideas, values and actions, and that the resulting “collective effervescence” holds societies together by overriding egoism (see Páez, Rimé, Basabe, Włodarczyk, & Zumeta, 2015).

Despite the provocative nature of these early ideas, the interplay between emotions and groups has only relatively recently begun to attract concerted attention from emotion scholars. Interest in the topic was catalysed, among other things, by studies on emotions in intergroup relations, which revealed that emotions are not only experienced at the individual level but also at the group level. Many studies have shown that people may experience emotions on behalf of groups with which they identify (e.g., Cialdini et al., 1976; Doosje, Branscombe, Spears, & Manstead, 1998; Leach, Spears, Branscombe, & Doosje, 2003). For instance, football fans may cheer or cry because of the success or failure of the teams they support, even though they themselves had no influence on the outcome. During this era, research on stereotyping and prejudice also started incorporating emotions. This work shows, among other things, that people's beliefs about other groups have rich emotional content (Dijker, 1987; Fiske, 1998), and that these emotions influence how people process information about other groups (Bodenhausen, Sheppard, & Kramer, 1994; Lambert, Khan, Lickel, & Fricke, 1997).

Contemporary research on the role of emotions in groups resonates more with the rather optimistic view that was put forward by Durkheim (1912) than with the somewhat gloomy perspective of Le Bon (1895). Over the past two decades, several theorists have proposed that emotions fulfil key social functions in groups that help their members address the various problems associated with living and working in groups (Bar-Tal, Halperin, & de Rivera, 2007; Keltner & Gross, 1999; Spoor & Kelly, 2004; von Scheve & Salmela, 2014; Van Kleef, in press). Emotions have been proposed to

play a role in the development and maintenance of interpersonal bonds, group cohesion and group identity; the division of responsibilities and the negotiation of power roles among group members; the resolution of problems associated with deviance and defection; and the coordination of collective efforts towards the achievement of shared goals (Barsade & Gibson, 1998; Fischer & Manstead, in press; Frijda & Mesquita, 1994; Iyer & Leach, 2008; Kelly & Barsade, 2001; Keltner, Van Kleef, Chen, & Kraus, 2008; von Scheve & Salmela, 2014; Spoor & Kelly, 2004).

The integration of emotion research in the social psychology of groups and intergroup relations was aided by the rise of cognitive theories on emotion (e.g., Ortony, Clore, & Collins, 1988; Roseman, 1984; Smith & Lazarus, 1993). The differentiation of discrete emotions according to their associated appraisals and action tendencies could help explain differential beliefs about and responses to other groups in a more fine-grained manner than was possible on the basis of valence-based models. For example, based on the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002), it could be predicted that people feel envious of groups of higher status with which they are in competition, whereas they feel admiration for high-status groups with which they are not in competition (Caprariello, Cuddy, & Fiske, 2009).

The cognitive approach to emotion was then combined with basic elements of the social identity perspective (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) to form the overarching theoretical framework of intergroup emotion theory (Mackie, Devos, & Smith, 2000; Smith, 1993). The straightforward argument put forth in this framework is that when group membership becomes a salient part of the self, one can come to feel emotions on behalf of the group rather than as an individual. This idea has led to an explosion of research on emotions in intergroup relations. This work has established that group-based emotions are distinct from and can vary independently of individual emotions, and that they have relevant behavioural consequences (e.g., Smith, Seger, & Mackie, 2007; Van Zomeren, Spears, Fischer, & Leach, 2004).

In the last decade or so, research on emotions in groups has begun to expand to other areas of psychology, sociology, philosophy and management, and the emphasis on intergroup relations has been complemented with a renewed focus on the role of emotions *within* groups (e.g., Barsade, 2002; Heerdink, Van Kleef, Homan, & Fischer, 2013; Sy, Côté, & Saavedra, 2005; Van Kleef, Homan, Beersma, & Van Knippenberg, 2010; cf. George, 1990). This development also entailed that the study of group-based emotions, for which the presence of a group is not a requirement (e.g., one can read a book about one's colonial past and feel guilty about being Dutch when no others are present; cf. Doosje et al., 1998) was complemented by a focus on the antecedents and consequences of emotions that are experienced and/or expressed in the context of group interaction, for example, when one is part of a mass demonstration, a ceremony or a work team. Both streams of research are represented in the current special issue.

## KEY THEMES IN RESEARCH ON EMOTIONAL COLLECTIVES

We identify two overarching themes in research on emotional collectives: (1) how groups shape emotions and (2) how emotions shape groups. The first theme concerns the ways in which group-relevant variables and processes influence (a) emotional experience and associated action tendencies and behaviour, (b) the social sharing of emotion and (c) mimicry and emotional contagion. The second theme revolves around the interrelated questions of (a) how emotional expressions in groups are perceived, (b) how such expressions are interpreted, (c) how they influence group processes and outcomes and (d) how collective emotional experience contributes to the formation of group identities. The various contributions to this special issue can all be rubricated under these broad themes. Below we discuss these themes, in turn, and we show how the associated research questions are jointly illuminated by previous research and by the contributions to this special issue.

## How groups shape emotions

A first overarching theme in research on emotional collectives is how groups shape emotions. In analysing this problem, we consider three interrelated questions. We first examine how group-related factors such as identification influence emotional experience and associated (collective) action tendencies. We then consider how group-level factors influence the social sharing of emotions in groups, and how experiencing events as a group changes emotional responses compared to experiencing events as an individual. Finally, we discuss how group-level factors impinge on mimicry, emotional contagion and the occurrence of affective convergence versus divergence in groups.

### *Group-level influences on emotional experience*

As noted above, a rather generative stream of research has focused on how group identification influences emotional experience. Instead of appraising an event on the basis of one's personal concerns, as in classic appraisal models, people may appraise an event based on group concerns. Identification with one's group is a critical element in this process. In a classic study on group-based guilt, Doosje et al. (1998) manipulated the salience of the past behaviour of one's ingroup (favourable, unfavourable or ambiguous) and found that people reported experiencing more collective guilt when the past behaviour of their ingroup (whether minimal or actual) was presented as negative. The amount of collective guilt was further influenced by identification, especially in the ambiguous condition: Compared to low identifiers, high identifiers were less likely to experience collective guilt.

Other studies have explored how people's responses to injustice and inequality are shaped by their group membership. For instance, Van Zomeren et al. (2004) showed that members of disadvantaged groups experienced group-based anger, which under particular circumstances fuelled tendencies to engage in collective action. More recent work within this line of inquiry distinguished between anger and contempt, demonstrating that the experience of group-based anger is

associated with tendencies to engage in relatively normative forms of protesting, whereas contempt is more likely to lead to anti-normative forms of protest (Tausch et al., 2011). A series of studies by Leach, Iyer, and Pedersen (2006) further revealed that membership of a structurally advantaged group can inspire feelings of guilt as well as anger, which may in turn motivate political action aimed at restoring equality (although the effects were more prominent for anger than for guilt). Over the years, this line of research has expanded to include additional emotions besides anger and guilt, such as *schadenfreude* (Iyer, Leach, & Crosby, 2003; Leach et al., 2003) and shame (Iyer, Schmader, & Lickel, 2007; Shepherd, Spears, & Manstead, 2013).

Besides identification per se, emotional experience is influenced by how similar or different one feels from other group members. As a case in point, Gordijn, Wigboldus, and Yzerbyt (2001) manipulated similarities or differences with the victims of an unfair decision and found that this manipulation affected the appraisals and emotions people reported. When observers were made to feel similar to victims of unjust behaviour, they reported more anger than when they were made to feel different. In a similar vein, focusing Belgian and Dutch participants' attention on an identity that included American victims of the 11th September terrorist attacks into a common ingroup led them to report more fear and stronger fear-related action tendencies and behaviours in the aftermath of the attacks, compared to when victims were categorised as outgroup members (Dumont, Yzerbyt, Wigboldus, & Gordijn, 2003). Interestingly, recent evidence shows that low-level appraisals of similarity can be instigated by (rhythmic) synchrony, and that such perceptions of similarity foster compassionate and altruistic responses towards victims of moral transgressions (Valdesolo & DeSteno, 2011).

Two of the contributions to this special issue provide additional insight into the ways in which similarity and identification shape emotional experience in groups. In a unique field study, Hopkins et al. (2015) examined the intensely positive emotional experiences that may arise from

participation in a large-scale collective event. Specifically, the authors investigated how the shared identity of Hindu pilgrims during a religious festival influenced positive emotions. They found that perceptions of a shared identity among crowd members had an indirect effect on their positive emotional experiences during the collective event via increased “collective self-realisation” (a sense of being able to enact one’s collective identity) and “relationality” (a sense of intimacy with fellow crowd members). This study illustrates that collective identities are not fixed properties but can be actively enacted during collective events, which in turn has downstream consequences for collective emotional experience.

In a related vein, Yzerbyt, Kuppens, and Mathieu (2015) investigated whether discussing a group-relevant event with other group members affects emotional reactions in a similar way as endorsing a particular social identity does. In two experiments, the authors confronted participants with a controversial policy proposal that negatively affected their group. The authors manipulated participants’ social identity and instructed them to discuss either the controversial proposal or an unrelated topic. The results indicate that talking about a negative event with other group members elicits more negative emotions than does talking about an irrelevant topic, and that talking has a stronger impact than merely emphasising one’s group membership. Together with the study by Hopkins et al. (2015), this research supports the assertion that social sharing is critical for the experience of collective emotions (Paez et al., 2015; Rimé, 2009).

In the studies discussed so far, emotional responses of group members were triggered by events that happened outside of the group yet were relevant to the group’s concerns. Clearly, however, emotions may also be triggered by social dynamics that take place *within* groups. For instance, individuals may be confronted with evaluations of their behaviour by their fellow group members, and such evaluations may trigger emotional reactions. This was the starting point of the contribution by Van der Lee, Ellemers, and Scheepers (2015), who compared emotional

reactions to evaluations of morality versus competence in groups. The authors found that evaluations of a focal group member’s immoral behaviour evoked guilt and diminished that person’s perceived coping abilities, whereas evaluations of incompetence elicited anger. They further demonstrated that a decrease in perceived coping potential intensified feelings of guilt, and that the opportunity to restore one’s self-image as a moral group member enhanced perceived coping abilities and reduced feelings of guilt.

Even though emotional experience in groups can be fruitfully analysed in terms of appraisal accounts of emotions (including intergroup emotion theory; Mackie et al., 2000; Smith, 1993), it is clear that there is no one-to-one relationship between the appraisal of group-relevant events and emotional experience—individuals may deliberately upregulate or downregulate their emotions to attain certain goals (Gross, 1998). One such goal may be to feel like and be accepted as a group member. People do not only regulate their emotions for short-term hedonistic purposes but also to facilitate the attainment of longer term instrumental goals (Tamir, 2009). For instance, people may deliberately upregulate negative emotions such as anger if they believe that feeling anger will help them reach a certain aim (e.g., winning a competitive game). Building on this general notion, Porat, Halperin, Mannheim, and Tamir (2015) examined the possibility that people are motivated to regulate their emotions to improve their connection with their group. Focusing on group-based sadness in particular, they demonstrated in two correlational studies and two controlled experiments that people with a stronger need to belong have a stronger preference to experience group-based sadness. Porat and colleagues further found that this effect was mediated by participants’ expectations that experiencing sadness would be socially beneficial for them.

#### *Group-level influences on the social sharing of emotion*

People exhibit a general tendency to share their emotional experiences with others (Rimé,

Finkenauer, Luminet, Zech, & Philippot, 1998), and such social sharing plays an important role in the development of collective emotions (Hopkins et al., 2015; Rimé, Paez, Kanyangara, & Yzerbyt, 2011; Yzerbyt et al., 2015). However, the extent of sharing may depend on the type of group one is involved in. Groups differ in the degree to which they recognise or emphasise the importance of expressing emotions and providing emotional support to needy group members. For a support group for HIV victims, providing emotional support is likely to be a primary *raison d'être*, but the board of directors of a multinational would probably not see the provision of emotional support as a top priority. Groups that are more psychologically safe can be expected to provide greater benefits of emotional expression. Accordingly, people prefer to discuss emotional topics with friends rather than with strangers (Clark & Taraban, 1991), and they are more willing to express emotions to others to the degree that they have closer relationships with them (Clark & Finkel, 2005). This intuitive tendency is validated by empirical evidence that responses to expressions of happiness, sadness, worry and guilt are more favourable in cooperative rather than competitive relationships (for a review, see Van Kleef, De Dreu, & Manstead, 2010).

The sharing of emotions in groups may not only strengthen group cohesion but also alleviate the emotional burden on individual group members who are faced with negative events—think of the adage “shared pain is half the pain.” Mann, Feddes, Doosje, and Fischer (2015) examined the impact of public derogation as part of an initiation ritual on feelings of humiliation and group cohesion. In three studies, they found evidence that severe initiations are especially humiliating when experienced alone as opposed to as a group, and that feelings of humiliation undermine rather than foster affiliation among group members. These findings suggest that sharing a humiliating experience with one’s group decreases the humiliation and may increase group cohesion because group members expect social support from other group members during these negative events.

### *Group-level influences on mimicry and emotional contagion*

Ample research shows that emotional expressions are often mimicked by perceivers (Dimberg, Thunberg, & Elmehed, 2000), and that emotions may spread from one person to the next via processes of emotional contagion (Lundquist & Dimberg, 1995), which include mimicry, conditioning, perspective taking and social appraisal, among other things (Hatfield, Cacioppo, & Rapson, 1994; Hess & Fischer, 2013; Van Kleef, in press). Such processes turn out to be systematically influenced by various group-level factors. A classic study by Lanzetta and Englis (1989) revealed that mimicry of emotional expressions depends on the type of relationship one has with the expresser. Participants who expected a cooperative interaction with another person were more likely to mimic the other person’s smiles versus grimaces, thus producing converging affective states. In contrast, participants who expected a competitive interaction were more likely to respond to the other person’s emotional expressions with “counterempathic” affective reactions, matching smiles with grimaces and vice versa.

Related work speaks to the role of group membership in shaping processes of affective convergence versus divergence. In a series of experiments involving affective priming and lexical decision tasks, Weisbuch and Ambady (2008) examined affective reactions to the emotional expressions of ingroup versus outgroup members (operationalised in terms of race as well as sports team endorsement). They observed relatively more positive affective reactions to fear expressions and more negative affective reactions to joy expressions among outgroup perceivers compared to ingroup perceivers, indicating differential affective divergence as a function of group membership.

Compatible evidence was reported by Van der Schalk et al. (2011). In two experiments they used facial electromyography, coding of facial displays based on the Facial Action Coding System (Ekman & Friesen, 1978) and self-reports of emotion to examine patterns of mimicry in response to emotional expressions by ingroup and



outgroup members. Across the board, the studies yielded evidence that displays of anger and fear by outgroup members were mimicked to a lesser extent than displays of the same emotions by ingroup members. In addition, participants' self-reports yielded some evidence of divergent affective reactions to outgroup anger and fear displays, with outgroup anger evoking fear and outgroup fear evoking aversion.

In a conceptually related vein, Totterdell (2000) demonstrated that affective convergence in sports teams is shaped by group-level influences. Totterdell asked players from two professional cricket teams to provide ratings of their moods during a competitive match between the teams. The results showed that the players' moods were more strongly correlated with the current aggregate mood of their own team than with the aggregate mood of the other team, suggesting that emotions spread more readily among ingroup members whose goals are cooperatively linked than between ingroup and outgroup members whose goals are competitively linked. Studies by Totterdell and colleagues further revealed greater affective convergence among team members who were more committed to the team, who perceived the team climate as more positive, who were engaged in collective rather than individual activities and who experienced fewer hassles with fellow teammates (Totterdell, 2000; Totterdell, Kellett, Teuchmann, & Briner, 1998). Along similar lines, research has demonstrated stronger affective convergence among collectivistic (Ilies, Wagner, & Morgeson, 2007) and more identified group members (Tanghe, Wisse, & Van der Flier, 2010) than among individualistic and less identified individuals.

The degree of emotional contagion in a particular situation may also depend on the emotion in question; that is, some emotions may be more likely to spread within groups than others. Besides the fact that some emotions may be more likely to be shared than others (Rimé, 2009), some emotions may be more readily "caught" by the members of a group than others. Delvaux, Meeussen, and Mesquita (2015) examined this possibility in two longitudinal studies of emotional

contagion in interactive task groups. They argued that emotions that contain group-relevant information would spread more readily than emotions that merely convey information about an individual group member, because the former are relevant to all the members of the group. Consistent with this logic, Delvaux and colleagues showed that group-related pride, but not self-related pride, is spread among group members.

In sum, a growing body of research speaks to the various ways in which groups shape emotions. Group-level factors influence the experience of emotion and concomitant behavioural tendencies; the social sharing of emotions and the consequences of shared emotions in groups; and the degree to which emotional expressions are mimicked and emotions spread in social collectives via processes of emotional contagion.

### How emotions shape groups

A second overarching theme in research on emotional collectives is how emotional expressions shape group processes and outcomes. In analysing this question, we consider a number of interrelated issues, namely how group emotions are perceived; what information individuals distil from emotional expressions in groups; how emotional dynamics influence group processes and how emotions contribute to the formation of group identities.

#### *The perception of collective emotions*

A first step in analysing how emotional expressions shape group processes and outcomes is to consider how emotional expressions in groups are perceived. Emotions can provide a wealth of information not just to those who experience them (Frijda, 1986; Schwarz & Clore, 1983) but also to those who observe their expressions (Fischer & Manstead, in press; Van Kleef, 2009). So far, however, systematic investigations of the value of recognising emotional expressions have been limited to the perception of individual emotional expressions (Phillips, Weisbuch, & Ambady, 2014). As argued in the contribution by Sanchez-Burks, Bartel, Rees, and Huy (2015), the growing interest in emotions in groups requires a methodological

approach for assessing collective emotion recognition. To address this need, Sanchez-Burks and colleagues developed the Emotional Aperture Measure (EAM). In three studies, they provide evidence for the validity and reliability of the EAM, and demonstrate that collective affect recognition requires a different (i.e., more holistic) processing style than individual emotion recognition. This work extends the earlier conclusion that group-level emotions are distinct from individual-level emotions (Smith et al., 2007) by showing that the perception of collective emotions is qualitatively different from the perception of individual emotions, thus underlining the importance of studying emotional phenomena at the group level.

*The interpretation of emotional expressions in groups*

One of the major challenges of social life is to figure out what goes on in the minds of other people: what they are thinking and feeling, what they expect from us and how they intend to approach us. In many situations, people have limited insight into each other's feelings, goals, needs, desires and intentions. This lack of information poses a significant challenge to social interaction. If one does not know what goes on in other people's minds, it is difficult to relate to them, anticipate their behaviour and determine an appropriate course of action. When navigating social life, individuals may therefore use other people's emotional expressions to make sense of ambiguous situations (Manstead & Fischer, 2001; Van Kleef, Van Doorn, Heerdink, & Koning, 2011).

Several contemporary theoretical perspectives speak to the ways in which individuals use other people's emotions, two of which are especially relevant to the current discussion. One perspective is described in social appraisal theory (Bruder, Fischer, & Manstead, 2014; Fischer, Manstead, & Zaalberg, 2003; Manstead & Fischer, 2001; Parkinson, 2011), which emphasises the influence of other individuals on one's own emotional experiences and expressions. For instance, other people's emotional or behavioural reactions to events may influence one's own appraisals of those events, which in turn shape one's emotional experience.

In addition, individuals may anticipate how others will react to their own emotional expressions and/or how such reactions may affect the attainment of their goals (see Bruder et al., 2014, for a recent discussion of the theory).

Another perspective is that of emotions as social information (EASI) theory (Van Kleef, 2009; in press; Van Kleef et al., 2011). Rooted in a social-functional approach to emotion (Frijda & Mesquita, 1994; Keltner & Haidt, 1999), this theory seeks to explain how emotional expressions regulate social life by eliciting affective reactions (i.e., reciprocal and complementary emotions and sentiments about the expresser) and/or inferential processes (i.e., judgements about the source, meaning and implications of the expresser's emotion) in observers. Observers' responses to others' emotional expressions depend on the relative strength of inferential processes and affective reactions, which is determined by the observer's information processing motivation and ability and the perceived appropriateness of the emotional expression in light of the social context (for a comprehensive treatment of the theory, see Van Kleef, in press).

Although somewhat different in their outlook and proposed processes, the two theoretical approaches converge in highlighting the importance of emotions in coordinating social interactions. Accordingly, both perspectives can be used to analyse the effects of emotional expressions in groups. Social appraisal theory would predict, among other things, that a group member's emotional reaction towards a particular event is informed by the emotional responses of other group members. Furthermore, others' emotional reactions to a situation may reinforce the shared meaning of the collective event (Bruder et al., 2014). EASI theory maintains that emotional expressions in groups provide critical information that helps group members make sense of the situation and that assists them in preparing appropriate courses of action (Van Kleef, 2009). By specifying when and how individuals respond to the emotional expressions of others, EASI theory helps to explain how emotional expressions shape group processes and outcomes. Both theories thus speak

to the ways in which group members' emotions may act in the service of group goals.

An empirical case in point is provided by a recent series of studies by Heerdink, Van Kleef, Homan, and Fischer (2015a), who investigated the idea that emotional expressions in groups define group boundaries (see Collins, 1990; Keltner & Haidt, 1999). Heerdink and colleagues proposed that emotional expressions serve this function in part by acting as signals of group members' inclusionary status. Given that inclusion in social groups is vital to human survival and well-being (Cosmides & Tooby, 1992), it would be adaptive for human beings to be sensitive to moment-to-moment variations in the extent to which fellow group members accept them. Heerdink and colleagues argued that individuals use the emotional expressions of their fellow group members to gauge their momentary level of acceptance. In support of this idea, six experiments provided evidence that nonverbal expressions of happiness automatically trigger concepts associated with inclusion (i.e., acceptance, closeness and warmth), whereas nonverbal expressions of anger trigger associations with exclusion (i.e., rejection, distance and coldness).

Emotional expressions in groups may provide relevant information not only to fellow group members but also to third parties. Magee and Tiedens (2006) found that outside observers inferred various characteristics of three-person groups based on the valence and the consistency of the nonverbal emotional expressions of their members. Participants perceived a greater degree of common fate when all group members displayed either happiness or sadness than when they displayed different emotions, and this effect was mediated by inferences of psychological similarity. Furthermore, groups were perceived as more cohesive when all members displayed happiness than when they displayed sadness or showed variance in their emotions, and this effect was mediated by inferences of interpersonal liking. The authors concluded that "information about the feelings of group members could be a preferred basis for judgments about group characteristics" (p. 1705).

Further support for this idea is reported by Homan, Van Kleef, and Sanchez-Burks (2015).

These authors showed participants pictures of the facial emotional expressions of the members of a two-person team, of which both members showed either happiness or sadness. Participants anticipated more cooperative interactions, higher satisfaction, greater interpersonal liking and trust, and less conflict when both teammates showed happiness than when both showed sadness. The study further revealed that emotional expressions triggered stronger inferences when there was greater ambiguity surrounding the future success or failure of the team and when the emotional expressions were more likely to reflect team processes rather than dispositional tendencies towards positive or negative emotionality.

Extending the inquiry to a relatively unexplored dimension of emotions that is highly relevant in group settings, Rothman and Magee (2015) investigated what types of inferences outside observers of groups draw based on group members' expressions of socially engaging versus disengaging emotions. Across four experiments, they found that observers inferred greater relational well-being between group members and estimated their task performance to be better when the members showed socially engaging emotions (sadness and appreciation) rather than socially disengaging emotions (anger and pride). They further found that these inferences were mediated by appraisals of group members' self-interest, and that the influence of socially disengaging emotions was attenuated when groups had collectivistic norms.

#### *How emotional dynamics influence group functioning*

Several theorists have proposed that emotions are potentially functional in groups in that they assist groups in negotiating members' respective roles and responsibilities, aid in the resolution of problems associated with deviance and defection, facilitate the effective coordination of collective efforts towards the achievement of shared goals and signal the degree to which certain behaviours are approved or disapproved in light of prevailing norms or group goals (e.g., Barsade & Gibson, 1998; Fischer & Manstead, in press; Keltner & Haidt, 1999; Spoor & Kelly, 2004; Van Kleef, in

press). Even though these ideas have been around for some time, research on the effects of emotional dynamics on actual group outcomes (as opposed to satisfaction and interpersonal liking) is surprisingly scarce. Nevertheless, there is evidence that emotions can influence various aspects of group functioning.

An early field study by George (1990) revealed that positive group affective tone (i.e., shared positive affect) in work groups was negatively related to absenteeism, whereas negative group affective tone (i.e., shared negative affect) was negatively associated with prosocial behaviour. Along similar lines, a longitudinal field study of workgroups of government employees showed that positive affective tone was negatively associated with group absence rates (Mason & Griffin, 2003). Other studies have documented favourable effects of positive group affect on group efficacy (Gibson, 2003) and group creativity (Grawitch, Munz, & Kramer, 2003).

A related line of research speaks to the consequences of affective convergence for group interaction. In a seminal laboratory study, Barsade (2002) examined the downstream effects of emotional contagion on cooperation and conflict in groups. Participants in groups that included a confederate who displayed positive affect (e.g., cheerfulness and enthusiasm) reported more pleasant affective states later on than did those in groups with a confederate showing negative affect (e.g., hostility and irritability). Moreover, the extent to which group members caught the confederate's affective state was predictive of levels of cooperation and conflict, with dispersion of positive affect leading to greater cooperation and reduced conflict in the group. Other lab studies have provided compatible evidence that positive group affective tone is associated with effective group coordination (Sy et al., 2005) and that the deliberate sharing of emotions in groups improves feelings of group belongingness and information sharing (Klep, Wisse, & Van der Flier, 2011).

Recent work points to the possibility that emotional expressions can help groups address problems of non-conformity. Heerdink et al. (2013) proposed that individuals who are confronted

with expressions of anger on the part of their fellow group members experience pressure to conform to the apparent group norm, because expressions of anger signal potential rejection. In one of the studies conducted to test this idea, Heerdink et al. instructed two of the three group members of a live-interacting group to express either anger, happiness or no emotion in response to ideas voiced by the third (focal) group member. The results showed that participants who were confronted with an angry majority conformed more to the majority compared to those who were confronted with a neutral or happy majority. The effect of the majority's emotional displays on the focal group member's conformity was mediated by the focal member's inferences of rejection. This work suggests that particular patterns of emotional responding assist groups in reinforcing desired behaviour of individual members (e.g., rewarding welcome ideas with expressions of happiness) and discouraging undesired behaviour (e.g., sanctioning deviance with expressions of anger).

Given that emotional expressions in groups can have favourable as well as unfavourable consequences for group functioning (e.g., Barsade, 2002; George, 1990; Van Kleef, Homan, et al., 2010), it stands to reason that successful group functioning hinges on the degree to which group members are capable of regulating their emotions in the service of group goals (Côté, 2007; Elfenbein, 2005). Consistent with this idea, a number of studies have linked group member emotional intelligence with successful team performance (Chang, Sy, & Choi, 2012; Jordan, Ashkanasy, Härtel, & Hooper, 2002; Jordan & Troth, 2004). Collins, Jordan, Lawrence, and Troth (2015) extended this line of inquiry by examining how the collective emotional skills of group members influence the link between positive affective tone and team performance. Collins and colleagues challenge the commonsensical assumption that positive affective tone is always beneficial for team performance, proposing instead that the collective emotional skills of team members determine whether positive affective tone is beneficial or detrimental. In keeping with this idea, two studies

yielded evidence that team members' self-reported abilities to manage the emotions of others moderated the effects of positive group affective tone on team performance. This contribution thus highlights the importance of emotional intelligence for successful team functioning.

#### *Emotion and the formation of group identities*

As discussed above, identification with a group is a critical determinant of group-based emotions (Iyer & Leach, 2008; Mackie et al., 2000; Smith, 1993). Interestingly, there is some evidence that the link between identification and group-based emotions is bi-directional. Kessler and Hollbach (2005) found that group identification increased when group members experienced happiness towards the ingroup or anger towards the outgroup, whereas identification decreased when group members felt anger towards the ingroup and happiness towards the outgroup. This suggests that both shared positive emotions and shared negative emotions may contribute to ingroup identification, depending on whether the target of the emotion lies within (happiness) or outside (anger) the group.

Along conceptually related lines, Livingstone, Shepherd, Spears, and Manstead (2015) examined the possibility that shared emotions influence the formation of new self-categories. In an experimental study, the authors provided participants with information about the emotional reactions of other members of their group (university students) to a proposal about tougher university assessments. Participants in the experimental condition learned that two of their fellow students were angry about the proposal and that two were sad, whereas those in the control condition received no information about their fellow students' emotions. The results indicated that participants self-categorised more with fellow students who were portrayed as angry rather than sad, but only when participants' own anger about the proposal was high. Self-categorisation in turn had downstream consequences for students' preferences to work with angry as opposed to sad group members, suggesting that similarity of emotional responses to shared events does not only enhance self-categorisation as a

group member but also fuels tendencies to seek out future interactions with emotionally similar others.

In sum, a mounting body of evidence speaks to the impact of emotional dynamics on group processes and outcomes. We have seen that the perception of group emotions is qualitatively different from the perception of individual emotions, and that group members' emotional expressions provide relevant information to fellow group members as well as third-party observers about various aspects of the group's functioning. The affective reactions and inferential processes that are triggered by emotional expressions in groups in turn shape important group processes and outcomes such as cooperation, conformity and team performance. Finally, the experience of shared emotions contributes to the development of collective identities.

## CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

It is clear from the present review that research on emotional collectives is blossoming. Different streams of research are maturing and paint an increasingly complex and complete picture of the various ways in which groups shape emotions and emotions shape groups. An especially promising development is the growing focus on discrete emotions as opposed to diffuse positive versus negative affect. Besides the 'usual suspects' happiness, anger, sadness and fear, recent studies have incorporated less frequently studied emotions such as shame, guilt, schadenfreude, humiliation, pride and appreciation. This work is breaking important new ground in mapping out the unique effects of discrete emotions in groups.

Another recent development is the emergence of a body of research on the informational value of emotional expressions in groups. Whereas early work on emotional collectives was characterised by a strong emphasis on affective processes such as emotional contagion (e.g., Barsade, 2002; Sy et al., 2005), more recent studies have begun to investigate how observers use others' emotional

expressions to draw inferences about their own position and level of acceptance in the group (Heerdink et al., 2015a) as well as about important aspects of the group's functioning (Homan et al., 2015; Rothman & Magee, 2015; Van Kleef, Homan, et al., 2009). These two streams of research are mutually complementary, but they often inform different predictions (Van Kleef, 2009). More research is needed to determine more precisely when and how affective and inferential processes contribute to group dynamics and outcomes.

Our review reflects that research on emotional collectives takes place in distinct areas of research that are guided by different theoretical perspectives. For instance, research on the emergence of group-based emotions is heavily influenced by the social identity perspective (Tajfel & Turner, 1986; Turner et al., 1987) and intergroup emotions theory (Mackie et al., 2000; Smith, 1993), whereas research on the effects of emotions in groups is informed by perspectives such as emotional contagion theory (Hatfield et al., 1994), social appraisal theory (Manstead & Fischer, 2001) and EASI theory (Van Kleef, 2009, in press). So far, these lines of inquiry have been developing in relative isolation from one another. Although it is natural that different phenomena are accounted for by different theoretical approaches, what is missing in the literature on emotional collectives is cross-fertilisation between the various sub-literatures. Better integration of these disparate perspectives promises to contribute to a more complete understanding of the role of emotions in groups. Here lies an important challenge for future research.

To reduce the inherent complexity of research on emotions in groups, much of the work reviewed here has implicitly or explicitly assumed that all members of a group experience the same emotions. Clearly, however, real life is more complex—groups are not emotional monoliths. Different members of a group may experience and express different emotions, and individual group members may be differently affected by their fellow group members' emotions depending on the degree to which those emotions are shared (Heerdink, Van

Kleef, Homan, & Fischer, 2015b). This begs the question of how the various emotions that may occur in group settings combine to create group-level outcomes. Important progress could be made by employing more complex research designs that incorporate the possibility of emotional diversity in groups (cf. Barsade, Ward, Turner, & Sonnenfeld, 2000; Tiedens, Sutton, & Fong, 2004).

Given the many complexities and contingencies surrounding the effects of emotions in groups, it stands to reason that group success depends on the degree to which group members are able to regulate the emotions in the group in a way that is conducive to group functioning, an ability that is associated with emotional intelligence (Collins et al., 2015; Côté, 2007; Elfenbein, 2005). Whereas previous research has focused exclusively on motives and strategies involved in regulating one's own emotions (Gross, 1998), more recent work has stressed the importance of regulating the emotions of others (Netzer, Van Kleef, & Tamir, 2015; Niven, Totterdell, & Holman, 2009). When it comes to understanding emotional dynamics in groups, there is clear merit in investigating when and how group members may attempt to influence the emotions of their fellow group members and how such attempts shape group functioning.

Finally, we call for more attention to the dynamic social context within which emotional episodes in groups unfold (Fischer & Van Kleef, 2010). By their very nature, emotional processes are sensitive to changes in the (social) environment that have repercussions for goal attainment (Frijda, 1986), and as a result emotional dynamics often change over time. Nevertheless, the dynamics of the social context have so far hardly been incorporated in research on emotions in groups, which is probably due in large part to the intricate and multifaceted nature of social-contextual influences. Numerous important factors remain to be investigated, including (but not limited to) the role of group norms, the cooperative versus competitive nature of intra-group relationships, the role of power differentials in groups, the influence of cultural factors and the embeddedness of groups

within a larger system of inter-group relations. Although examining such influences is challenging, the payoff will be substantial. Investigations that incorporate the broader social context within which groups operate constitute a key to unlocking a true understanding of the social nature of emotions.

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