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## Article

## Group Emotions: Cutting the Gordion Knots Concerning Terms, Levels-of-Analysis, and Processes

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#### ABSTRACT

Research has established that groups are pervaded by feelings. But group emotion research within organizational science has suffered in recent years from a lack of terminological clarity, from a narrow focus on small groups, and from an overemphasis on micro-processes of emotion transmission. We address those problems by reviewing and systematically integrating relevant work conducted not only in organizational science, but also in psychology and sociology. We offer a definition of group emotions and sort the conceptual space along four dimensions: group emotion responses, recognition, regulation, and reiteration. We provide evidence that group emotions occur at all levels of analysis, including levels beyond small work groups. The accounts of group emotion emergence at higher levels of analysis differ substantially between organizational science, psychology and sociology. We review these accounts - emergence through inclination, interaction, institutionalization, or identification - and then synthesize them into one parsimonious model. The consequences of different group emotions are reviewed and further constructs (including emotional aperture, group emotional intelligence, emotional culture and emotional climate) are discussed. We end with a call for future research on several neglected group emotion topics including the study of discrete shared emotions, emotions at multiple levels, the effects of social network patterns, and effects on group functioning.

In organizational behavior research, there has been a rising interest in group emotions over the last three decades. The treatment of emotion as a group-level phenomenon and the emergence of the "affective tone" of a group as a new construct were heralded by pioneering work in the 1990s (George, 1990; George, 1996). Early resistance to the idea of group emotions (Yammarino & Markham, 1992) was soon overcome (George & James, 1993), and several landmark studies followed. These showed that emotions converge in small work groups as a

result of contagion between group members (Barsade, 2002; Bartel & Saavedra, 2000) or between the group leader and group members (Sy, Côté, & Saavedra, 2005). The progress of group emotion research at the level of small groups and teams has been well-documented in a number of reviews focusing on organizational behavior research (Barsade & Gibson, 2012; Barsade & Knight, 2015; Collins, Lawrence, Troth, & Jordan, 2013; George, 1996; Kelly & Spoor, 2006).

Despite these advances, questions about group emotions remain unanswered. What does it mean for a group to have an emotion? A concise definition of group emotions is hard to find. The term "group emotion" carries the risk of an anthromorphism<sup>1</sup>: we may wonder whether groups are having emotions or whether it is the individuals within groups that have emotions. Another question concerns the size of the group. How big can a group be and still have a group emotion? Organizational behavior research has focused mostly on small work groups of interacting members (see reviews cited above). But this almost exclusive focus on emotions of small groups has probably discouraged scholars in other areas of organizational science such as strategy, operations, marketing, and human resource management from the consideration of group emotions, because these scholars tend to be concerned not with small groups, but with organizations, industries, and alliances. Yet another question is about the processes of emergence. How do emotions become shared in groups, especially in larger groups? The usual answer in organizational behavior research is: through emotion contagion, the transfer of emotions from one person to the next (Barsade & Knight, 2015; Elfenbein, 2014). But can such a micro-process account for the similarity of feelings across people in large groups?

These questions concerning terms, levels-of-analysis, and processes are the Gordion knots of group emotion research. They have lingered unanswered for decades, likely impeding the progress of group emotion research in organizational science. Here we synthesize existing research in organizational behavior and draw on discoveries made in adjacent disciplines such as psychology and sociology to sever these Gordion knots. First, is the issue of terminological proliferation. Some scholars see group emotion as an all-embracing term to be applied indiscriminately whereas other scholars assign labels to differentiate nuances of group emotions. We help prune the profusion of new terms. Second, we confront doubts about the extension of group emotions to higher levels of analysis. Because emotions are intimate ephemeral experiences, and because the mantra in organizational behavior research is that emotions become similar in groups through micro-processes involving emotion contagion, there is

<sup>&</sup>lt;sup>1</sup> The anthropomorphism concern is part of a long-running debate in social science that extends beyond group emotion research and focuses on the question of whether individual attributes such as learning, intelligence and emotions can be legitimately applied to groups (Barsade & Gibson, 1998). On one side of the debate is the argument that individual attributes reside in people's brains and can therefore not characterize groups beyond saying that group members individually exhibit those attributes (cf. Allport, 1962). On the other side is the argument that groups hold attributes that go beyond and exist in addition to the individual attributes of group members, and that therefore a group is more than the sum of its parts (cf. LeBon, 1896; Sandelands & St. Clair, 1993). At present, there is agreement across behavioral, physiological, and neuroscience research concerning the importance of collectively shared representations of the world (i.e., "group mind") (for a review, see Van Bavel, Hackel, & Xiao, 2014). With respect to group emotions, both sides of the debate are helpful to understand group emotions (Barsade & Gibson, 1998). Just as individuals contribute their own individual feelings to groups and thus shape group emotions, group emotions affect the individuals within a group and infuse them with distinct feelings. Group emotions, as opposed to individual emotions, link individuals to something larger than themselves. Groups provide unique arenas in which emotions transcend the individual to the extent that those emotions are brought about by the group as a whole.

widespread resistance among organizational behavior scholars to the idea that emotions converge at the levels of departments, organizations, alliances or even entire industries. We provide theory and we review evidence to justify the study of group emotions at higher levels of analysis. Third, we broaden our understanding concerning the processes through which group emotions emerge. By repeatedly invoking the same processes for group emotion emergence, organizational scholars have reinforced existing knowledge but have neglected to consider and explore alternative explanations. We consider whether processes advanced in psychology and sociology can enrich the pool of knowledge concerning group emotion emergence.

Group emotion research in psychology and sociology is burgeoning (e.g., Jasper, 2011; Niedenthal & Brauer, 2012; Solak, Jost, Sümer, & Clore, 2012; Turner & Stets, 2006; von Scheve & Salmela, 2014). This research differs from organizational behavior research on group emotions in that it extends beyond the small group to higher levels of analysis involving, for example, dispersed collectivities brought together emotionally on the basis of shared demographics. Psychological and sociological accounts of group emotions offer processes for the emergence of group emotions that rely less on the social interaction of co-located group members and more on group-based identification and norms. Whereas organizational scholars tend to conceive of group emotions as synchronized emotional experiences that emerge through interpersonal interaction, scholars in psychology and sociology often construe group emotions as resulting from members' identification with their group (the psychologists' viewpoint) or from institutionalized group emotion norms (the sociologists' viewpoint).

With this review, we offer an interdisciplinary synthesis of group emotion research that draws from and contributes to organizational science, psychology and sociology. We move the study of group emotions from fragmentation to integration, and we help resolve pressing questions. We took inspiration from classic books, chapters, and articles in each area of research, and systematically analyzed the literature by collating and organizing relevant articles published in high-impact journals over the course of the last 15 years.<sup>2</sup> We advance a common language by defining group emotions and by clustering the conceptual space along several dimensions. We

<sup>&</sup>lt;sup>2</sup>We initially searched Google Scholar for "collective emotion." We went through the first 12 pages of results to gather high-impact publications (independent of where they were published) and we compiled the terms from these papers that were commonly used to refer to group emotions. We then applied these terms in a systematic search for relevant papers in high-impact journals in organizational sciences, psychology and sociology. The literature search was conducted over the summer of 2014. As search terms, we used: group emotion, collective emotion, shared emotion, group affect, collective affect, shared affect, group mood, collective mood, shared mood, affective climate, emotional climate, intergroup emotion, intergroup affect, widespread emotion, emotional contagion, emotional atmosphere, affective atmosphere, affective tone, and emotional energy. For the organizational sciences, we systematically searched the following journals: Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Journal of Applied Psychology, Journal of Management, Journal of Management Studies, Journal of Organizational Behavior, Journal of Vocational Behavior, Leadership Quarterly, Organization Science, Organization Studies, Organizational Behavior and Human Decision Processes, Personnel Psychology, and Research in Organizational Behavior. For psychology, we searched: American Psychologist, Annual Review of Psychology, Emotion, European Journal of Social Psychology, Group Processes and Intergroup Relations, Journal of Experimental Social Psychology, Journal of Personality and Social Psychology, Personality and Social Psychology Bulletin, Personality and Social Psychology Review, Psychological Bulletin, Psychological Methods, Psychological Review, Psychological Science, and Social Psychological and Personality Science. For sociology, we searched: American Journal of Political Science, American Journal of Sociology, American Political Science Review, American Sociological Review, Annual Review of Political Science, Annual Review of Sociology, British Journal of Political Science, European Sociological Review, Journal of European Social Policy, Journal of Politics, Political Analysis, Social Forces, Social Science Research, Sociology, and Theory, Culture & Society.

describe the different processes invoked by organizational science, psychology and sociology to explain the emergence of group emotions at higher levels of analysis, and we advance a parsimonious account for such emergence by combining these different processes into one overarching process model of group emotions. We also review why group emotions matter by collating empirical evidence on the consequences of group emotions across disciplines. We conclude by considering other related concepts such as emotional aperture, group emotional intelligence, emotional culture and emotional climate, and by identifying future research questions.

## TERMINOLOGICAL CLARIFICATIONS

Group emotion research is fraught with problems concerning the definition of key constructs. One source of confusion can be found in the inconsistent terminology used across disciplines to refer to levels of analysis; another source of confusion is in the labels scholars use (within and across disciplines) to examine group emotions. We address both issues by answering first what we mean by *group*, and second what we mean by *group emotion* as opposed to other group affect constructs.

## What are groups?

Organizational scholarship concerning emotional convergence tends to bound research within organizational levels of analysis including supervisor-subordinate dyads, small work groups, departments, and entire organizations. In contrast, psychologists and sociologists study the convergence of emotions in dyads and in groups of varying sizes, from small groups such as work teams to mid-sized groups such as organizations to large groups such as demographic groups that are based, for example, on occupation, nationality, or gender. A potential source of misunderstanding between the different disciplines is, therefore, that organizational scholars tend to use the term "group" to refer to relatively small teams of interacting members (Barsade & Gibson, 2012: 120), whereas psychologists and sociologists use the term "group" to refer to collectivities of any size. Thus, when organizational scholars examine "group emotions," they usually look at how members of a small, purposive group share emotions while pursuing a task together, whereas when psychologists and sociologists examine "group emotions" they focus on emotional convergence in groups (of any size) defined either by social interaction or by shared attributes such as gender.

To avoid being restricted by ideas prevalent in one specific academic area, we adopt a commonplace definition of *group* as "a number of people who are connected by some shared activity, interest, or quality" (Merriam Webster Online Dictionary, 2014). To differentiate between groups of different sizes and to ensure compatibility with usage in organizational science, we delineate the following levels of analysis: dyads (e.g., peer relationships, supervisor-subordinate pairings), small groups (e.g., work groups, teams), mid-size groups (e.g., branches, departments, organizations), and large groups (e.g., industries, demographic groups). In Table 1, we provide an overview of levels of analysis; and we list studies conducted in organizational science within the last 15 years that are located at each of these levels.

\*\*\* Insert Table 1 here \*\*\*

#### What are group emotions?

Definitional struggles have long characterized emotion research. Even after decades of debate, the question of what constitutes an emotion has not been conclusively answered (Solomon, 2003). Things get even worse when we move to higher levels of analysis. Here researchers find themselves confronted with a confusing plethora of vaguely defined and often overlapping constructs and terms. Among the more commonly used terms are affective tone, group affect, group mood, group emotion, group-based emotion, shared emotion, collective emotion, emotional energy, emotional atmosphere, effervescence, affective climate, and emotional climate. The distinctions between these constructs are blurred, and some constructs are used interchangeably. For example, "group emotion" and "group affective tone" have been used as synonyms (Barsade, 2002: 645), and "affective tone" and "affective climate" have been treated as comparable constructs (Gamero, González-Romá, & Peiró, 2008; Pirola-Merlo, Härtel, Mann, & Hirst, 2002). It is hard to find a concise definition of group emotion in the current literature, in part because group emotions can be conceptualized in different ways (Barsade & Gibson, 2012).

In differentiating between emotion constructs at higher levels of analysis, it is useful to draw on the differences between emotions, moods, and affect that psychologists have identified for individuals (Scherer, 2000). At the individual level of analysis, emotions represent relatively specific feelings such as joy, happiness, pride, anger, guilt and sadness, that arise in response to a discernible stimulus such as an event, an object or an affiliation (Frijda, 2007; Izard, 2009). Moods are relatively vague feelings that range from positive to negative, lack any concrete link to an eliciting stimulus, and are often not consciously recognized (Frijda, Lewis, & Haviland, 1993; Watson & Tellegen, 1985). Affect is the umbrella term that embraces both emotions and moods as well as other constructs with relevance to emotions. Applied to higher levels of analysis, this categorization suggests that group emotions involve a group's specific felt responses to discernible stimuli; group moods give a group a general positive or negative undercurrent in the absence of any specific stimulus and operate mostly below the threshold of group members' consciousness; and group affect refers broadly to emotion-related aspects of groups.

Here we focus on group emotions. At a broad level, we suggest that group emotions can be defined as those feelings that emerge from, or in, groups. We include in this review work on group moods where appropriate, because these are often difficult to differentiate from group emotions, especially when group emotions are measured based on valence (i.e., positive/negative), and because group moods often represent traces of faded group emotions. In order to specify group emotions further, we turn to differences that pertain to whether these emotions are experienced collectively or individually, whether they are acute or chronic/latent, and whether they involve convergence or divergence.

## Group-shared emotions versus group-based emotions.

We distinguish between group-shared emotions that members collectively experience during interactions with other group members and group-based emotions that group members experience individually based on their group membership but in the absence of other group members (Bar-Tal, Halperin, & De Rivera, 2007; Niedenthal & Brauer, 2012). Group-shared emotions require the physical or virtual co-presence of other group members, synchrony of attention among group members to the emotion-eliciting stimuli, and some level of social interaction among group members. These conditions are evident in workgroups in which group members energize each other with positive emotions (Barsade, 2002; Bartel & Saavedra, 2000), in large crowds that become gripped with mass panic, and among concert attendees who experience collective exuberance. Group-based emotions, by contrast, involve group

membership but require neither the presence of others nor simultaneous exposure to emotional triggers. Group-based emotions are exhibited when individual Americans converge with their compatriots in similar feelings of pride on such occasions as the Fourth of July and when widelydispersed students individually experience the same angry response to proposals to raise student fees (Gordijn, Yzerbyt, Wigboldus, & Dumont, 2006; Smith, Seger, & Mackie, 2007).

The distinction between group-shared emotions and group-based emotions is useful as it separates collective, synchronous, interactive experiences of group emotions from individual, asynchronous, non-interactive emotional experiences based on group membership. Whereas group-shared emotions imply both similarity of feeling and the sharing of those feelings among group members, group-based emotions imply only similarity in feelings among group members. Both group-shared emotions and group-based emotions usually involve emotional convergence, a state in which group members feel alike.

#### Acute versus latent/chronic group emotions.

Group emotions can be acute or latent/chronic (Smith et al., 2007). Acute group emotions are specific, short-lived, intensely felt responses that group members experience in reaction to a particular stimulus such as other emoting group members or events that matter for the group (e.g., crises, attacks, speeches, changes in leadership). For example, group members can experience acute feelings of guilt when they learn about their group's wrong doing (Caouette, Wohl, & Peetz, 2012). Latent or chronic group emotions are the specific feelings that group members associate with their group and that generally characterize the group. For example, past wrong doings of a group can imbue group members with enduring latent group emotions of guilt. Latent group emotions become activated – and are thus turned into acute emotions – when group members enter relevant group settings or are reminded of their group membership. For example, in contexts that invoke the group's past, group members with latent group emotions of guilt are likely to experience acute feelings of group guilt (Gunn & Wilson, 2011).

## Converging versus diverging group emotions.

Group emotions may imply both convergence and predictable divergence. The bulk of research is on convergence - the observation that group members feel similarly - and on the powerful effects that such convergence facilitates or produces. Convergence is noteworthy, because the default assumption is that emotions are individual phenomena and that therefore there should be heterogeneity and not homogeneity in feelings amongst members of groups. However, there is also some work on divergence that examines how heterogeneity in emotions within groups is generated and brings about effects. Of particular interest here is not random emotional heterogeneity, but predictable divergence among group members that relates to distinct emotional patterns within a group. For example, most groups are hierarchically structured, and those in powerful positions within the group tend to feel differently than those in low power position (Kemper, 1990, 1991; Tiedens, Ellsworth, & Mesquita, 2000); both parties' emotions together, however, make up the group emotion. In a pertinent study, Lucas and Lovaglia (1998) found that high-status leaders reported feeling more positive emotions during a group task than other group members. There is also evidence for within-group divergence, if group members vary to the extent that they identify with the group. Those who identify strongly tend to experience more intense group emotions compared to those with low group identification (Smith et al., 2007). Divergence in group emotions could be interpreted as a challenge to the very concept of a group emotion, or it could be seen as a reflection of the inherently fluctuating and multi-layered nature of emotions. Group emotions are unlikely to consist of complete synchrony and homogeneity in group members' experience, but it is also unlikely that group members' emotions will entirely

diverge as long as individuals see themselves as belonging to the group. Thus, some individual divergence in feeling within a group does not preclude the possibility of overall convergence in group emotions. Models concerning emotional divergence and variation within groups have been proposed elsewhere (Tiedens, Sutton, & Fong, 2004; Walter, Vogel, & Menges, 2013). Because empirical work on group emotion divergence is limited, we primarily cover the topic of group emotion convergence, but where appropriate highlight meaningful patterns of divergence.

#### What about other group affect constructs?

Whereas group emotions primarily pertain to emotional *responses* or experiences of groups, the conceptual space of group emotion and group affect research is also populated with constructs that concern the recognition, regulation, or reiteration of group emotions. The *recognition* of group emotions involves the perception of how a group feels – be it the feelings of a group to which the perceiver belongs (i.e., the ingroup) or of a group to which the perceiver does not belong (i.e., an outgroup). The *regulation* of group emotions pertains to how group members deal with group emotions once the group has been gripped with emotion. The *reiteration* of group emotions concerns patterns or regularities in group emotions that emerge over time. By sorting, in Table 2, the messy conceptual space along these four dimensions – group emotion response, recognition, regulation, and reiteration (the four Rs of group emotion research) – we bring construct clarity to group emotion research.

\*\*\* Insert Table 2 here \*\*\*

The majority of this review is devoted to group emotion responses, because a more comprehensive understanding of group emotions is key to advancing knowledge concerning any construct related to group emotions. Thus we first consider the levels of analysis at which group emotions converge, the processes by which they emerge, and their consequences. Later in this review we return to the constructs listed in Table 2 and discuss the recognition, regulation, and reiteration of group emotions.

## **GROUP EMOTIONS AT HIGHER LEVELS OF ANALYSIS**

Organizational scholars tend to be skeptical of the notion that emotions converge within branches, units, department, organizations and entire industries. The skepticism arises despite highly-publicized examples of such emotion convergence. For example, BP's failure to fix the oil spill in the Gulf of Mexico over the course of several weeks reportedly caused widespread anger among the affected population (Bergin, 2010) and called into question the emotions of pride shared by BP employees (Weber, 2010). When Steve Jobs died the employees at Apple felt grief at the loss of their founder and CEO as a representative newspaper headline indicates: "Steve Jobs' death saddens Apple workers and fans" (LaGanga, 2011). And Microsoft's annual employee meetings, which until 2012 attracted tens of thousands of employees to Safeco Field Stadium in Seattle, were reportedly infused with intense upbeat emotions. As a journalist noted, "positive energy is what powers Microsoft's all-hands meetings" (Thomas, 2011). Despite such anecdotal evidence, scholarly work in organizational science has focused mostly on emotion convergence in dyads and in small groups as shown in Table 1.

At the dyadic level, evidence across academic disciplines shows that interaction partners affect each other's emotion, both unconsciously (Hatfield, Cacioppo, & Rapson, 1994) and deliberately (Pugh, 2001), and both momentarily (Neumann & Strack, 2000) and over time (Anderson, Keltner, & John, 2003). Thus, leaders and followers (e.g., Erez, Johnson, Misangyi, LePine, & Halverson, 2008; Visser, van Knippenberg, van Kleef, & Wisse, 2013), frontline employees and customers (Barger & Grandey, 2006), and dating partners as well as college roommates (Anderson et al., 2003) converge in their emotions.

At the level of work groups and teams, too, there is rich evidence for the convergence of emotions, particularly in studies conducted by organizational behavior scholars. For example, a study of 26 sales groups (with between two and 16 members) showed that similar affective dispositions of team members led to the development of team-level "affective tone," a feeling characteristic of the team as a whole (George, 1990). Two studies (of community nurses and accountants) found that team members tended to have similar moods and that individual team members' moods were affected by the collective mood of the team over time (Totterdell, Kellett, Teuchmann, & Briner, 1998). Another study of 70 small work groups in 51 different organizational contexts found that emotions converged in four- to eight-member groups. High-energy emotions such as enthusiasm and irritation were more likely to converge than low energy emotions such as warmth or sluggishness (Bartel & Saavedra, 2000). An experimental study involving a confederate spreading emotions showed in a sample of 29 groups of two- to four- undergraduate students that group members came to feel alike in the course of the experiment (Barsade, 2002). Finally, a longitudinal field study detected common positive emotions across groups of three to 30 members working for an Australian government agency (Mason & Griffin, 2003).<sup>3</sup> In summary, there is widespread evidence that emotions converge in small groups and teams.

But at the level of mid-sized groups - branches, units, departments, and organizations - the evidence for group emotions stemming from organizational research is weaker. There are several studies located at that level (see Table 1), but only two studies compare different groups' levels of emotion convergence. A study of a large Korean insurance company's 81 branches, each with on average 20 employees, found that employees within a branch tended to feel similarly about the introduction of a new innovative practice, but that there was variance in positive and negative group emotions between branches (Choi, Sung, Lee, & Cho, 2011). Although branch size was on average comparable to a small group, the study reported a threetier managerial hierarchy, suggestive of multiple teams within each branch. Thus we see this study as providing preliminary evidence that emotions converge beyond the small group level. Another study, at the level of mid-sized groups, reported emotional convergence in 158 independent organizations in Germany that ranged in size from 16 to 3400 employees. Employees within each organization considerably agreed in ratings of how cheerful, contented, elated, and satisfied the organization's workforce tended to be (Menges, Walter, Vogel, & Bruch, 2011). Emotion convergence at the organizational level was also observed in a social psychology study of 110 Indiana University Bloomington students, whose responses about how they felt as IU students were significantly predicted by the average profile of emotions of IU students. Even though IU's student body consisted of more than 40,000 students, the study suggested that these

<sup>&</sup>lt;sup>3</sup> The study included groups as big as 189 employees, but the findings reported are based on work groups with 30 or fewer group members because larger groups were thought to split up in sub-groups and would thus not be representative for group-level effects. The group size criterion, together with other criteria concerning the completeness of data, led to a reduction of initially 169 work groups to 97 work groups, on which the analyses were based.

students tended to feel alike (Smith et al., 2007). Thus the evidence for emotion convergence at the level of mid-sized groups is modest relative to that for small groups.<sup>4</sup>

At the large group level, we did not find any empirical work by organizational scholars that relates to the emergence of group emotions based on, for example, industry affiliation. But there is substantial evidence in both psychology and sociology for similarities in emotions at this level. For example, people who identify with the same political party (Smith et al., 2007), hold the same nationality (Smith et al., 2007), have the same sexual orientation (Seger, Smith, Kinias, & Mackie, 2009), or are smokers (Seger, Smith, Kinias, et al., 2009) tend to converge on similar emotions when their group membership is made salient to them. Emotions differ between people, depending on their age, gender, and socioeconomic status (Lively & Heise, 2004). A study based on a nationally representative sample of adults living in households in the United States who took part in the 1996 General Social Survey found no differences between men and women in the absolute magnitude of daily emotion experiences, but detected that the quality of emotion experiences differed by gender (Simon & Nath, 2004). Another study, also drawing on data from the 1996 General Social Survey, found that those with the highest and lowest occupational statuses experienced more anger than those residing in the middle of this hierarchy (Collett & Lizardo, 2010). Throughout the world, religious people tend to be happier than non-religious people, particularly if they live in religious societies, as evidenced in combined data from the World (5th wave) and European (4th wave) Values Studies (Stavrova, Fetchenhauer, & Schlösser, 2013). Together, these studies demonstrate that even at the level of large groups consisting of hundreds of thousands of people, emotions are felt similarly.

There is, then, evidence that emotions converge at levels of analysis that extend beyond small groups of frequently interacting members. The next question that we need to address is how emotions converge at higher levels of analysis. What are the processes that lead to the emergence of group emotions? The answer, we discovered, differs markedly between organization science, sociology and psychology.

## PROCESSES OF GROUP EMOTION EMERGENCE

Different disciplines tend to suggest different processes by which emotions emerge at higher levels of analysis. This differentiation across disciplines with respect to emotion emergence is indicated in Table 3. The table lists empirical articles on emotions at higher levels of analysis that were published in high impact journals in organization science, sociology and psychology in the last 15 years. The table points out the process(es) described in each article as accounting for the emergence of group emotions. As can be gleaned from the table, whereas organizational scientists sometimes invoke the *inclination* for people with similar emotional dispositions to feel alike, they mostly highlight processes of *interaction* by which people pass on emotions to each other and make sense together of emotion eliciting events, leading to emotion convergence. Sociologists point to processes of *institutionalization* by which people experience similar emotions through induction into taken-for-granted emotion-producing norms and rituals. And psychologists emphasize processes of *identification* by which people experience similar emotions

<sup>&</sup>lt;sup>4</sup> There is also some evidence that job satisfaction, a construct that often involves an affective component (Weiss & Cropanzano, 1996), can be aggregated to the organizational level. In a study of 298 schools and 13,808 teachers, it was evident that teachers' levels of job satisfaction within a school, but not between different schools, was relatively similar. Job satisfaction was therefore seen as a construct that can be justifiably conceptualized, aggregated to, and analyzed at the organizational level (Ostroff, 1992; see also Patterson, Warr, & West, 2004).

to the extent that they identify with the same group. Here we describe each process in turn<sup>5</sup>. Then we advance an integration of the different processes – the four l's – to establish the comprehensive model of group emotion emergence that is depicted in Figure 1.

\*\*\* Insert Table 3 and Figure 1 here \*\*\*

#### Inclination

Group members' affective dispositions (i.e., the general inclination to experience certain types of emotions and moods; Watson & Tellegen, 2002) shape the emotions they individually tend to experience. People with high levels of positive affectivity tend to be upbeat, whereas people with low levels of positive affectivity rarely experience enthusiasm and excitement. People with high levels of negative affectivity tend to feel guilty or angry, whereas their counterparts with low negative affectivity are typically calm and serene. Therefore, to the extent that group members possess similar affective dispositions, they are inclined to experience relatively similar emotions and are likely to converge in how they feel.

For example, ground-breaking research (George, 1990) found that group members' average positive personality infused groups with a positive affective tone, whereas group members' average negative personality led to the sharing of downbeat emotions. Relatedly, if people within the group exhibit diversity of affectivity (some people positive, some people negative), then mean group affect seems to suffer. A study of top management teams (Barsade, Ward, Turner, & Sonnenfeld, 2000) reported a negative correlation between teams' trait affect diversity and teams' average level of positive shared emotion. The study also found that affectively diverse top management teams with low mean positive affectivity had difficulty cooperating and experienced intense task and emotional conflict. Thus the similarity or diversity of group members' dispositional affect tends to influence both the emotional convergence of the group and the outcomes achieved by the group.

<sup>&</sup>lt;sup>5</sup> Technically, iInclination, interaction, institutionalization, and identification can be seen asare moderators that shape how emotion elicitors affect group emotions, but they can also act as mediators that bring about group emotions. For example, interaction is a moderator, because the emergence of the group-shared emotion depends on the social interaction among people: if there is no social interaction, then there is no group-shared emotion. And if there is social interaction, then the extent and type of interaction may affect the extent to which group-shared emotions converge in response to the event. But social interaction can also be a mediator. An event might attract a group of people to interact, and this interaction among people might in turn create a group-shared emotion. Here, the effect of the event on group-shared emotions is channeled through interaction, and the same applies to the other processes of group emotion convergence. The studies from which we extract the four I processes feature both mediation and moderation designs. Scholars have highlighted that mediation and moderation are theoretically intertwined concepts (even though statistically mediation and moderation, please refer to Baron & Kenny, 1986, and to Spencer, Zanna, & Fong, 2005.

Inclination-based emotion convergence may happen at small, mid-size, and large group levels. Indeed, theory and research suggest that organizations (i.e., mid-sized groups) attract and select people with similar personality profiles and drive out those with dissimilar profiles (Schneider, 1987; Schneider, Smith, Taylor, & Fleenor, 1998). Thus there is a high likelihood that emotions converge to some degree at the organizational level as a function of the affective dispositions of employees. A group of any size that attracts and selects people with high positive affectivity and selects out people with other affectivity profiles should therefore be more likely to experience collective emotions of happiness and excitement than a group with a different attraction – selection – attrition pattern (Walter & Bruch, 2008).

Scholars rarely invoke inclination as a process for group emotion emergence (but see Arnaud & Schminke, 2012, for an exception). For groups to experience emotion convergence, similar group member inclinations might be conducive, but not sufficient. Indeed, people with similar personality traits may experience quite different emotions, depending on circumstances.

#### Interaction

The notion that social interaction between individuals is the fundamental process through which organizational phenomena emerge at collective levels is a pillar of organizational theory (Morgeson & Hofmann, 1999). It comes as no surprise, then, that most research in organizational science (and in organizational behavior in particular), relies on the proposition that emotions emerge at higher levels of analysis as a result of the social interaction between people (see Table 3). There are two primary processes by which emotions become shared in the course of these interactions: emotion contagion and sensemaking.

#### Emotion contagion.

Perhaps the most often considered process in interaction-based studies of group emotion is *emotion contagion* – the transfer of emotion from one person to another. Emotion contagion has been observed in laboratory and field studies across a range of interactions that include employee-customers (e.g., Barger & Grandey, 2006; Pugh, 2001), leader-followers (e.g., Bono & Ilies, 2006; Johnson, 2008; Sy & Choi, 2013; Sy et al., 2005), friend-to-friend (e.g., Fowler & Christakis, 2008; Kramer, Guillory, & Hancock, 2014), and among small work group members (e.g., Barsade, 2002; Bartel & Saavedra, 2000; Ilies, Wagner, & Morgeson, 2007; Totterdell, Kellett, Teuchmann, & Briner, 1998). The pattern observed is that people catch the emotions of others, often without being aware of it, and, as a result, converge in their emotions (Hatfield, Cacioppo, & Rapson, 1993).

How does emotion contagion work? Early research focused on mimicry: if people copy the vocal, facial, and gestural expressions of emotional others they consequently, through afferent feedback processes, experience the mimicked emotions themselves (Dimberg, Thunberg, & Elmehed, 2000; Hatfield et al., 1994; Hatfield, Carpenter, & Rapson, 2014). In much emotion research, mimicry remains the default explanation for how emotions become shared in groups. However, the conscious processing of others' emotional expressions may also account for the transmission of emotions. People take information concerning how others feel into account when determining how they themselves feel (Schachter & Singer, 1962). Thus, social comparison is a basic process by which people align their emotions with those of relevant others – i.e., those facing the same experience (Bartel & Saavedra, 2000). Emotion contagion may also occur through vicarious experiences or empathic transmission, processes during which people imagine being in the same situation as those with whom they interact (Maitlis, 2005). Furthermore, there is the possibility that the expression of upbeat emotions is an inherently pleasant and enjoyable

event, thus eliciting positive emotions in observers, whereas the expression of downbeat emotions is an unpleasant and depressing event that arouses negative emotions in observers (cf. Kramer et al., 2014). Overall, a recent article identified ten emotion contagion pathways through which emotions could be transmitted to others (Elfenbein, 2014). Although each pathway is different, the contagion effect tends to be the same.

The extent of influence on emotion contagion is likely to differ among group members. Several studies found that group leaders, in particular, held sway over group feelings (Erez et al., 2008; Sy, Choi, & Johnson, 2013; Visser et al., 2013), even though the evidence for emotion leader-follower mimicry is mixed (Cherulnik, Donley, Wiewel, & Miller, 2001; Hsee, Hatfield, Carlson, & Chemtob, 1990; Menges, Kilduff, Kern, & Bruch, 2014). Leaders also catch the moods of their followers and suffer performance decrements as a result of interacting with negative mood followers, particularly when leaders are high in neuroticism (Tee, Ashkanasy, & Paulsen, 2013). The convergence of emotions is facilitated to the extent that group members have a dispositional inclination to be susceptible to emotion contagion (Doherty, 1997). For example, a study of sports teams found that average team happiness positively predicted each individual's happiness, and that this effect was enhanced to the extent that the individual was older, felt committed to the team and was particularly susceptible to emotional contagion (Totterdell, 2000). Another study showed that people who have a natural inclination to be susceptible to emotion contagion, but also those with collectivistic rather than individualistic tendencies, were more likely to be affected by their teams' mood, independent of team performance (Ilies et al., 2007).

## Sensemaking.

A second way in which emotions become shared as a result of social interaction involves sensemaking – the process by which group members arrive at a collective interpretation of events that happen to and within their group (Maitlis, 2005; Weick, Sutcliffe, & Obstfeld, 2005; Wrzesniewski, Dutton, & Debebe, 2003). Although sensemaking has received considerable attention in organization science, it has rarely been directly connected with emotion convergence. What has been suggested is that those facing similar events are likely to encounter similar emotions (George, 1996). As the work environment tends to bring about relatively similar events, those sharing the same work environment should feel alike (Weiss & Cropanzano, 1996). Indeed, a quantitative study of more than a hundred different organizations found that positive emotions were similar in those organizations in which leaders throughout the organizational hierarchy produced work events targeted towards eliciting enthusiasm and excitement (Menges et al., 2011).

But that group members are exposed to similar or the same events is not sufficient for emotions to converge. A premise of appraisal theories of emotions is that identical events can elicit different emotions in different people as a result of diverging appraisals (i.e., interpretations of events), leading one person, for example, to feel angry and another one sad about the same event. Therefore, "it is possible that not every individual or group in a large organization feels the same type of emotion with the same intensity at the same time in response to the same event" (Huy, 1999: 334).

Indeed, people's emotions arise from their subjective interpretations of their circumstances rather than from any objective characteristics of their situation (Ellsworth & Scherer, 2003). When employees and managers across 81 branches of an insurance company were asked to implement an innovative practice to enhance employees' learning, not all felt similarly about the innovation. Instead, whether employees felt positive or negative about the innovation depended on the extent to which they cognitively appraised the new practice as useful and easy to use. The

cognitive appraisal, in turn, was shaped by the extent to which managers were committed to the innovation and the extent to which employees were trained to use the innovation. In those branches in which the innovation was appraised positively, employees felt collectively happy about it and consequently used the innovation in the branch. But in other branches that held less favorable views of the innovation, employees felt collectively distressed and did not use it (Choi et al., 2011).

Appraisal theories of emotions suggest that appraisals are malleable and evolve over time (Scherer, Schorr, & Johnstone, 2001). If new information about an event is processed, a reappraisal can occur, changing the initial emotional response to an event. This flexibility in the appraisal process implies that appraisals are likely to become increasingly similar as group members mingle, talk, and exchange information: "individuals interact, communicate perspectives, and iteratively construct a common interpretation. Variations in individual interpretations dissipate as a collective interpretation converges" (Kozlowski & Klein, 2000: 63). Social interaction amongst group members thus leads to sensemaking consensus, resulting in converging emotions.

At the group level, research suggests that "leaders may ... be important in managing the cognitive appraisal process that occurs in response to [an] event" (Pirola-Merlo et al., 2002: 566). Leaders' interpretations are privileged above those of others because leaders are seen as having access to relevant information and as possessing the skills and knowledge to evaluate information appropriately. A key task of leaders is, therefore, to make sense of events happening to and within organizations and to explain and interpret the concurrent state and the future goals of organizations (Gioia & Chittipeddi, 1991; Maitlis, 2005; Smircich & Morgan, 1982). For example, a study of jazz music groups and rowing crews shows that in ambiguous situations people turn to leaders to see how leaders interpret situations; consequently, people adopt leaders' interpretations for themselves (Pescosolido, 2002). Analogously, leaders of mid-sized and large groups may influence the appraisal patterns of members. These interpretations may trickle down through the group hierarchy, with leaders at lower levels adopting interpretations offered by leaders at higher levels thus securing similar appraisals at each level (cf. Waldman & Yammarino, 1999).

Research suggests that charismatic leaders are particularly successful in aligning people's appraisal of an event, especially in cases involving reappraisal of initially divergent understandings (Shamir, House, & Arthur, 1993; Wasielewski, 1985). Leaders' rhetorical skills play a key role in rousing the masses, as noted already by Aristotle. In his guide on rhetoric (see Barnes, 1985), Aristotle described how speakers lead listeners to collectively appraise events in ways that reliably arouse distinct emotions such as anger, shame, calmness, and confidence among the audience.<sup>6</sup> The more group members accept and adopt the group leader's

<sup>&</sup>lt;sup>6</sup> Scholars have acknowledged that Aristotle's work presaged much of contemporary emotion research. Indeed, Aristotle argued for the adaptive role of emotions in social life and decision-making, foreshadowing the notion of emotional intelligence (Mayer & Salovey, 1997), as well as for the unity of mind and body in the generation of emotions anticipating current thinking about the embodiment of emotion (Barrett & Lindquist, 2008). He also suggested that events trigger emotions (Weiss & Cropanzano, 1996) and that it is the appraisal of the event that shapes the specific emotional experience, along the same lines as the predominant appraisal theories of emotions of the 21<sup>st</sup> century (e.g., Lazarus, 1991; Roseman & Smith, 2001; Scherer, 1988). An aspect of Aristotle's theory of emotion that is often overlooked, however, is that it addresses *group emotions* in particular. Aristotle presented most of his emotion theory as part of his treatise on Rhetoric which deals with how speakers can exert influence on an audience (i.e., a *group* of people). Amongst other means of persuasion (i.e., logos and ethos), a speaker can employ pathos – the appeal to the listeners' group emotions. Aristotle outlines, for a variety of emotions, those

interpretations of events, the more group members' appraisals and thus their emotional experiences are likely to converge.

In summary, then, similarity in exposure to events contributes to the convergence of emotions only in so far as the events are similarly appraised by group members. Sensemaking is the process by which collective appraisals of events emerge. In this process, group members tend to look to others in their group to make sense of the events that happen around them. Shared appraisals give rise to the specific emotions that are felt and shared by the group.

#### Beyond the small group level.

Although interpersonal interaction facilitates the emergence of group emotions at the dyadic and small group level, is it plausible for such a micro-level process to explain the emergence of emotions at the mid-size group and large group levels? To the extent that emotion contagion and sensemaking travel from one person to the next, these processes, one might argue, are too slow and too easily interrupted to account for large scale emotional convergence. Sensemaking might have some lasting effects (because of the durable nature of memorizable interpretations), but emotion contagion seems to involve too short-lived effects (because of the ephemeral nature of emotions) to account for converging emotions in large groups. But, despite these doubts, there is evidence that the spread of emotions can, indeed, extend beyond the small group level.

Emotions disseminate in larger groups because emotions trigger secondary and tertiary social sharing (Rimé, 2009). When the individual experiences an emotion, the individual may feel an urge to seek out others to share the emotion with, and then those others, because of the emotion they caught, may again look for others to share their feelings. As a result of this cascading process, emotions can spread from small groups of people to large groups of people (Rimé, 2007b; Rimé & Christophe, 1997). For example, in a field study (Harber & Cohen, 2005), 33 students visited a hospital morgue. The extent to which each individual reacted emotionally to this event predicted whether the individual shared the experience with others. For those who did, it was found that their emotions were then again shared by their friends with others. Thus, after 10 days, nearly 900 people had shared the emotions triggered by the morgue visit. With every sharing of an emotion, the appraisal of the event that elicited the emotion is likely to be transmitted. As sensemaking proliferates, emotion contagion follows.

The process of propagating emotion expressions and emotion eliciting appraisals can be amplified to the extent that group members are collectively affected by events. Pertinent evidence stems from studies showing that events such as the March 11, 2004, train bombings in Madrid (Páez, Basabe, Ubillos, & González-Castro, 2007) or the Loma Prieta earthquake in San Francisco in 1989 (Pennebaker & Harber, 1993) were followed by intense periods of emotion-sharing among the local population. This process likely facilitated the convergence of emotions in

events that necessarily elicit appraisals leading to a relevant discrete emotion (e.g., anger is elicited by barring people from a desired outcome). He added that dispositions influence the ease with which specific emotions can be stirred (e.g., people are more likely to respond with anger if they tend to be angry – today, we would say: if they have a neurotic, disagreeable personality). Aristotle suggested that an audience will experience, and converge in, the intended emotion to the extent that it is composed of people with similar dispositions and that the speaker is able to present relevant events in ways that arouse those emotions. Furthermore, he added, foreshadowing the ingroup-outgroup dynamics of intergroup emotion research in psychology (Smith et al., 2007), that to the extent that the speaker is able to a distinct source (e.g., an opponent or outgroup), the listeners' collective emotions will be directed towards that source.

the affected populations, thus helping to coordinate the behaviors within the community, to enhance mutual understanding, and to foster social cohesion (cf. Anderson et al., 2003; Zinner & Williams, 1999). This social cohesion, in turn, helps the communities to cope with and overcome the tragedies inherent in disasters (Conejero & Etxebarria, 2007; Rimé, Páez, Basabe, & Martínez, 2010). The propagation of emotions has also been observed in the context of financial crises. A study on the emotional phases that accompany market crisis found that a manic phase of collective excitement creates a bubble in the market that bursts once doubt is cast on the collective excitement and distress is elicited. In the following panic phase, actors in the market regulation mechanisms (Abolafia & Kilduff, 1988).

Another reason for the spread of emotion beyond the small group level is that the transmission of emotion is not limited to those who are collocated (Cheshin, Rafaeli, & Bos, 2011). Even in the absence of face-to-face interaction, people tend to catch the emotions of other group members through, for example, computer-mediated communication (Guillory, Spiegel, Drislane, Weiss, Donner, & Hancock, 2011). Therefore, emotions can spread through online social networks via text messages (and very likely even more so via photos and videos). A study of Facebook messages showed that people tended to express more negative emotions in posts on rainy days, compared to other days, and that those posts then tended to influence the emotions of recipients in geographically different regions, infusing the recipients' own messages with a downbeat tone even in the absence of rain (Coviello et al., 2014). Another experimental study showed that the extent to which people were exposed to negative (positive) emotional web feeds on Facebook increased the extent to which they themselves expressed negative (positive) emotions and inversely affected the positivity (negativity) of their messages (Kramer et al., 2014). Given that the exposure to text messages seems to suffice to induce emotion contagion, its effects can probably ripple through social networks and thus scale up to affect large groups. Similarly, the sharing of interpretations of events via media is likely to shape the collective appraisals of events. Furthermore, leaders are potentially powerful sources of large-scale emotion contagion, as leaders' expressions and interpretations of events can affect followers even in the absence of direct interaction. In one experimental study (Lewis, 2000), each participant was asked to view a video of a leader and to imagine that they were an employee of the company for which the leader was the CEO. In support of emotion contagion, the study found that participants' arousal increased when the leader was angry and decreased when the leader was sad. Another study showed that it was enough for participants to read an inaugural speech by a former US president to feel positive emotions (Naidoo & Lord, 2008). With the reach of leaders scaled up by media, organizational leaders are able to evoke emotions in all their staff, just as political leaders are able to imbue millions with their emotions. Notably, once a leader has evoked emotions amongst followers, the followers themselves then tend to propagate the emotion further via emotion contagion (Sy & Choi, 2013) in a process that has been compared to "wildfires" (Saavedra, 2008).

#### Institutionalization

Sociological theories mostly attribute the emergence of group emotions to processes of institutionalization that require individuals to blend in with collective demands that limit the extent to which individuals diverge from socially approved ranges of emotions (Heise & O'Brien, 1993; Turner & Stets, 2006). Emotional norms (Clark, 1990; Goffman, 1967; Hochschild, 1983) and emotionally evocative rituals and routines (Collins, 1990, 2004; Durkheim, 1912) are emphasized by sociologists as explanations for why people in groups come to feel alike – or, at least, pretend they do (Goffman, 1967).

#### Emotional norms.

Dramaturgical theories suggest that the experience and expression of emotions is mostly a function of emotional norms inherent in cultural scripts that for given contexts prescribe some emotions and proscribe others, thus producing considerable convergence in emotions displayed by those facing the same context (Clark, 1990; Goffman, 1967; Hochschild, 1983). Emotional group norms capture the appropriate range of emotions that can be expressed and shared within a group context. Some groups may demand the suppression of emotions (Kunze & Menges, 2014), others require the expression of specific emotions (Van Maanen & Kunda, 1989), and yet others may encourage the open expression of a restricted set of emotions (Martin, Knopoff, & Beckman, 1998). New group members learn about emotion norms either in the form of display rules that explicitly require them to express certain emotions (Diefendorff & Gosserand, 2003) or by the subtle ways of socialization (Gordon, 1989b; Saarni, 1993; Seymour, 2005).

Those who violate emotion norms face individual embarrassment and shame, and are typically forced to make apologies that reduce their power and impair their reputation (Goffman, 1969). Therefore, people make efforts to adhere to emotion norms, particularly when their spontaneous feelings are not in line with the social expectations of the group. These efforts can involve emotion work (Hochschild, 1979), namely the intentional adaptation of one's emotional appearance to the demands of a group either by way of deep acting (the regulation of felt emotions) or surface acting (the performance of an emotional expression) (Grandey, 2000). To the extent that people endorse emotion norms as part of their job, the emotion work associated with meeting emotion norms is considered "emotional labor" (Ashforth & Humphrey, 1993; Hochschild, 1979; Hochschild, 1983; Morris & Feldman, 1996; Wharton, 2009). In work environments, emotional labor may be required in transactions with customers, but may also be required in order to blend in with work groups (Mann, 1999). As a result of emotion regulation and emotional labor by group members, emotions within groups are likely to converge within a communally desired range. Indeed, studies show that emotion norms are collectively endorsed (Diefendorff, Erickson, Grandey, & Dahling, 2011) and effectively shape the emotions felt and displayed in work units (Barsade & O'Neill, 2014).

Notably, this norm-based emotion convergence process may involve a considerable degree of emotion suppression, particularly of discrepant emotions (Mann, 1999). This raises the question of whether the emotions that are apparently shared are actually experienced emotions (as opposed to merely enacted emotions; cf. Goffman, 1967). Perhaps shared emotions are more likely to be the ones that are suppressed? Could it be that the enforcement of emotional labor facilitates the sharing of suppressed emotions in private among group members? Sociologists tend to differentiate between "on-stage" public emotion expression and "off-stage" private emotion expression (Turner & Stets, 2006). And yet, there is the neglected possibility that private emotions that are hidden from less trusted members. These layers of group emotions have been unexplored thus far. The sharing of private emotions with trusted others might be an effective way of coping with emotional labor demands (cf. Grandey, Foo, Groth, & Goodwin, 2012).

From an institutional theory viewpoint, it is not events, people's inclinations, or spontaneous interpersonal interactions that shape group emotions, but rather more general social discourse and culturally bounded interactions. Beyond triggering the enactment of socially-mandated emotions, therefore, emotional norms serve as orientations for group members' interpretations of their own and their groups' circumstances, thus facilitating the construction of common emotional responses. For example, a study of people suffering from economic hardship in the UK found that the poor felt shame for not having lived up to the expectations of society. But they also

experienced being shamed (as a stigmatized group of free riders who could not be bothered to work) by societal institutions including the media, the welfare system, politicians and other representatives of the general public. This co-construction of shame involving both the shamed and the shamers is based on dominant cultural norms and values. It leads those living in poverty to feel alike (Chase & Walker, 2012). That the negative feelings experienced by the unemployed result not from objective circumstances but rather from social norms, is also evidenced in another study that examined differences in such feelings and norms across 28 OECD countries (Stavrova, Schlösser, & Fetchenhauer, 2011).

Social and emotional norms therefore serve to streamline appraisal patterns among group members. During the emotional socialization of medical students, for example, students are trained to reinterpret initially repellent events, such as cutting into cadavers, as instructive experiences (Hafferty, 1988). These cognitive and behavioral adaptation processes thus lead group members – newcomers and old-timers – to converge in the way they interpret events and, thus, in the emotions they share in response. Furthermore, managers actively intervene to change their subordinates' emotions to accord with group expectations (Toegel, Anand, & Kilduff, 2007). A qualitative study at a recruiting agency revealed that managers listened, provided empathy, and strengthened the self-confidence of subordinates, but also worked to transform subordinates' appraisal patterns through reframing and advising in line with group norms (Toegel, Kilduff, & Anand, 2013).

## Rituals and routines.

Interactions between people are bounded by rituals and routines that coordinate the interaction partners. Interaction ritual theory suggests that these rituals and routines infuse emotions among those who interact (Collins, 1990, 2004, 2014). The basic sequence of interaction rituals is always the same: ritualized encounters involve group members gathering in one place, greeting each other in distinct ways, and then falling into rhythmical patterns of synchronized talk and body movements (Collins, 2004). Whereas transient rituals such as initial greetings tend to arouse only weak levels of shared arousal, extended interactions can create positive emotional energy in individuals and collective "effervescence" (Durkheim, 1912) to the extent that they foster mutual awareness, a joint focus of attention, and high levels of coordination in conversations, body movements and activities. The common positive experiences can lead groups to create group symbols that become carriers of emotion, such that when these symbols become activated again at a later time, they can charge the group members again with positive emotional energy. When interaction rituals are violated and interaction sequences become disorganized, positive emotional energy fades and its negative counterpart sets in. But when group interaction episodes involve a mutual focus of attention, task-related artifacts, and barriers to prevent interference by outsiders, group engagement and shared emotions result (Metiu & Rothbard, 2013).

Although the sequences of interaction rituals are somewhat fixed, the specific ways of bearing collective emotions through routines and rituals vary greatly between settings. An interesting example of one particular way involves group chants and collective singing (Bensimon, 2012), emotion evoking practices characteristic of churches, stadiums, and parade grounds, but also of corporate organizations such as Wal-Mart. Through co-production and synchronization, communal singing moulds the feelings of those who sing along. For example, the participants of the Yesha movement, who protested against Israel's disengagement from the Gaza Strip, used collective singing to release their negative emotions, to mourn, to foster solidarity, and to encourage hope among their members (Bensimon, 2012). At Wal-Mart, the daily morning cheer – a ritual to induce positive emotions – is bound to the specific context in which it is enacted. Don

Sonderquist, former COO and Vice Chairman of Wal-Mart, noted: "People outside the company don't understand the relevance of a cheer in a business – it sounds like high school stuff. The cheer, however, is a way of having a little fun and at the same time bringing everyone together in a form of celebrating our company. It signifies unity and helps us begin each day and each meeting on a happy note" (Soderquist, 2005: 131).

Emotion eliciting routines and rituals tend to emerge in the course of group work. For example, one study (Parker & Hackett, 2012) described how a group of scientists came up with rituals to create collective emotions and emotional energy during collaborative meetings that were held at isolated locations – gatherings that the scientists referred to as "island time." During island time, the group came up with, and then continually engaged in, rituals, two of which always happened on the last evening, both serving to imbue the group with lasting group emotions of delight and joy. The first ritual involved the induction of the deserving into the Ralf Yorque Society, named after a fictional character whom scientists pretended was real (even listing him as a co-author on manuscripts by the group). The second ritual consisted of a limerick contest, for which the winner was determined by the intensity of the applause. These rituals were described as leading the group toward its "emotional crescendo" (Parker & Hackett, 2012: 31). Island time is an impressive example of how group culture can give rise to rituals that create collective emotional states among group members.

Sometimes, routines and values that were established for other reasons can come to facilitate collective emotional responses. One organizational case study of "compassionate organizing" described how a community of university business school members helped three students who had lost possessions in a fire (Dutton, Worline, Frost, & Lilius, 2006). As part of this process, the business school's pre-existing routines (e.g., customer service, harm notification), values (e.g., sense of family, holistic personhood) and networks (multiple subnetworks, strong ties among members) enabled the business school community to pay immediate attention to the affected students' pain, to share a heightened empathic concern for the students, and to engage in a coordinated, extensive, speedy and customized response to help the students. This case illustrates how collective feelings of compassion emerged neither directly from the event nor from practices deliberately established to deal with such events, but rather from organizational values, routines and structures that were formed for other purposes.

## Application across levels.

The constraints implied by emotional norms and the dynamics of rituals apply, in the view of sociologists, to small groups of employees (Metiu & Rothbard, 2013; Parker & Hackett, 2012), to mid-sized groups such as organizations (Albrow, 1997; Fineman, 2007; Voronov & Vince, 2012), and to large groups consisting of people with similar purposes (e.g., those advancing social protest movements – Jasper, 2011; see also Ehrenreich, 2007). These constraints can also apply to groups of people whose shared demographic characteristics (e.g., gender) expose them to societal norms concerning the expected quality of emotion experiences (Simon & Nath, 2004). Therefore, across all levels, emotion norms and ritualized interactions work to create convergence in group emotions.

## Identification

Psychological theories highlight the central importance of group members' identification with their group for the emergence of group emotions. Sigmund Freud (1922) pointed out that it is through identification with others in groups that group feelings develop. He traced the emotional convergence process to the dynamics in families, nurseries and schools. In these social contexts,

children's desires for love from parents, carers and teachers conflicted with the necessity of having to share that love with other children craving for the same attention. Freud suggested that children overcame rivalry by identifying with one another and striving together for the same targets. Thus children created a unity in feeling – a group emotion – that helped them resolve conflict and competition in favor of cohesion and collaboration. As children grew up, this identification process generalized, thus leading people to converge in their feelings with those with whom they form groups. Though there is little empirical evidence for Freud's theorizing, Freud's idea that identification was the key to group emotions does, indeed, resonate in contemporary non-psychoanalytical theories of group emotions.

Among the most generative of current approaches is Intergroup Emotion Theory (Smith, 1993) that derives from both social identity and self-categorization theories (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and from appraisal theories of emotions (Ellsworth & Scherer, 2003; Scherer et al., 2001). Intergroup Emotion Theory suggests that individuals who see themselves in terms of group membership (rather than in terms of themselves as individuals) experience emotions on behalf of the group. These group-based emotions arise because of (a) individuals appraising group-relevant events in terms of their meaning to the group rather than in terms of their meaning to the group rather than in terms of their meaning to them individually; and (b) individuals holding emotional stereotypes concerning the feelings associated with a group. Notably, intergroup emotion theory posits that group emotions can emerge in the absence of interpersonal interaction and can even arise in isolation, as suggested in these examples

(Moons, Leonard, Mackie, & Smith, 2009: 760):

Imagine all of the new college students who wander across campuses and settle into dorm rooms at the beginning of their freshman semester. Despite geographic divides, these students may nevertheless feel very similar emotions when thinking about themselves as college freshmen. Or consider the business traveler, holed up alone in a foreign hotel room. Despite the absence of even a single compatriot, she may nevertheless feel the same surge of pride as she reads about her country's exploits at the summer Olympics that her fellow countrymen thousands of miles away do.

The experience of similar emotions in these instances is induced not by the presence of others, but through the cognitive and emotional mechanisms that derive from people's group memberships. What matters is whether people identify with and thus care about a group to which they belong. Indeed, group emotions depend on individuals' identification with a group: the more strongly people identify with a group to which they belong, the more strongly they respond emotionally on behalf of this group (McCoy & Major, 2003; Smith et al., 2007).

## Group-based appraisals.

When individuals think of themselves as group members, they tend to perceive and interpret events in terms of meanings relevant for the group rather than for individuals. Emotional responses reflect how the group as a whole is affected. Thus, individual group members tend to respond to the same events similarly. For example, the announcement of a raise in student fees triggered an angry response among all of those who categorized themselves as students (Gordijn et al., 2006). Individuals opposing equal rights for homosexual couples tended to react with the same anger to reports of events in support of equal rights (Mackie, Devos, & Smith, 2000).

Similar emotions also arise in response to the misfortunes of an outgroup that stands in competition with an ingroup. In several studies during the lead-up to presidential elections in the

US, Democrats who witnessed mishaps of Republicans responded with similar pleasure, just as Republicans felt the same schadenfreude about the failures of Democrats (Combs, Powell, Schurtz, & Smith, 2009). And when a group fails to live up to its members' expectations, those belonging to the group tend to feel similarly distressed (Bizman, Yinon, & Krotman, 2001). These studies show that when group membership is made salient, those categorizing themselves as group members experience similar emotions in response to group-relevant events.

This group-based emotional response is in principle independent of, and can thus be different from, the emotional response that reflects how an individual by him- or herself is affected by an event. For example, in a recent article about replication efforts in *Science*, a psychologist said that it "was certainly disappointing at a personal level" that an effect he found failed to replicate, but he also recognized from "a broader perspective" that learning from failed replications is something positive for the field (Bohannon, 2014: 789). Because events can affect the group in different ways than they affect group members as individuals, the appraisal at the group level can deviate from the appraisal at the individual level. Thus the emotions felt with the group in mind can be different than the emotions triggered when the focus is on the individual self.

Because people hold multiple group memberships simultaneously (Hogg & Terry, 2000; Turner et al., 1987), their emotional responses to events depend on the particular group membership that is salient to them *in the moment*. In an experiment participants from the Netherlands and Belgium reported their emotional reactions shortly after the September 11<sup>th</sup> World Trade Centre attacks. Those who were led to think of themselves as sharing a common identity with Americans ("Westerners") showed more fear when exposed to stimuli relating to the attack than those who thought of themselves as belonging to a different group ("Europeans") (Dumont, Yzerbyt, Wigboldus, & Gordijn, 2003). The experiment shows that emotional reactions to events are contingent upon the salience of group membership, but also suggests that social categorization is flexible and that people may have some discretion over which particular group memberships they bring up in their own minds and those of others. Group membership is triggered either consciously (Smith et al., 2007) or subconsciously (Seger, Smith, & Mackie, 2009) by salient cues in the environment.

When an event occurs that matters for more than one of the groups with which an individual identifies, then the event can elicit multiple and even discrepant emotional responses depending on which identity is momentarily salient. For example, an illustrative case (Smith & Crandell, 1984) describes a mixed-gender baseball team that had consistently won games the previous year but was losing game after game in the current year. In a change of tactics, the coach decided to play the next game with only the boys on the field, leading the girls to feel marginalized. When the team again lost, those who thought of themselves in terms of their baseball team membership felt disheartened about yet another loss, but the girls who thought of themselves in terms of their gender identity collectively felt relief, as the game had relieved them of the guilt that had implicitly been put on them for losing games repeatedly. Therefore, depending on whether team membership or gender group membership was salient in individuals' minds, the very same event – the lost game – brought up group emotions that considerably differed. These observations are concordant with underrepresented group theory (Mehra, Kilduff, & Brass, 1998) that explains more generally how identification to different groups can switch depending on the salience of group.

## Emotional self-stereotyping.

Even in the absence of any specific object or event, group members tend to report convergent general feelings when thinking of themselves in terms of their group membership. When people

categorize themselves as members of a group, they strive to adopt the features characteristic of that group as features of themselves, including the emotions stereotypically associated with that group. For instance, when students at a US university thought of themselves as Americans, they reported being more proud than when they thought of themselves as individuals (Seger, Smith, Kinias, et al., 2009).

As a result of social categorization, people also adjust their feelings to fit in with groups with which they identify. In one study, American undergraduates first reported their group emotions as Americans and then received false feedback (about how Americans in general felt) that deviated from their own reported group emotions. When later given another chance to report their group emotions as Americans, students adjusted their answers to be closer to the group mean for Americans that had been provided in the false feedback. In a follow-up experiment, it was found that participants not only shifted their reported group emotions toward the group mean, but also *felt* more like the group mean (Moons et al., 2009).<sup>7</sup> Thus, as people categorize themselves as members of a group, they espouse and experience the emotions generally common in that group.

## Application across levels.

The fact that people can simultaneously hold memberships in more than one group opens up the possibility that people can hold multiple group emotions at the same time, each being activated to the extent that the group membership is made salient. In organizations, group emotions may exist at all levels of identity - the proximal team, functional and occupational groups, the organization as a whole, and demographic groups that expand beyond the organizations, including those based on gender, race, and age (Hogg & Terry, 2000). For example, an employee, together with others across the workforce, may feel worried for the company about the announcement of a downsizing program to the extent that the employee identifies with the company and brings that identification to mind (cf. Rhee, 2007); but the same employee may also feel relaxed about the downsizing program together with others in his age group who will soon retire and will thus not be affected by the program. Depending on which group membership the employee brings to mind, the acute feeling switches, but on a latent level both emotions co-exist. It is a particular strength of intergroup emotion theory that it can explain the parallel existence of different group emotions at multiple levels of analysis. The theory holds for small work groups (Prieto-Garcia, Mackie, Tran, & Smith, 2007; Tanghe, Wisse, & Van Der Flier, 2010), mid-sized groups such as those based on university affiliations (Seger, Smith, & Mackie, 2009), and large social groups including those derived from political partisanship, nationality (Smith et al., 2007) and gender (Seger, Smith, Kinias, et al., 2009).

## Toward integration of the four l's

The four I's of group emotions – inclination, interaction, institutionalization, and identification – are not mutually exclusive processes. Indeed, they can be integrated into a comprehensive account of the emergence of group emotions, as depicted in Figure 1. The solid lines and boxes in the figure indicate the core model of group emotion emergence. The lines present pathways through which salience of group membership leads to group-based experiences of emotions and group-conforming expressions of emotions, as well as directly and indirectly (through group-based experiences of emotion) to group-shared

<sup>&</sup>lt;sup>7</sup> For further evidence that group-based emotions are actually experienced, not just perceived, see the work by Rydell and colleagues (2008).

emotions. The particular process of the four I that facilitates each stage of group emotion emergence is italicized.<sup>8</sup> Dashed lines and boxes refer to antecedents (group-relevant events) and consequences (group-relevant action tendencies and group-relevant action) of the group emotion process. As indicated on the left side of the figure, group-relevant events (including reminders of group membership; group meetings; and past, present, future, or imagined events that are internal or external to the group) are likely to make group membership salient and thus trigger the group emotion emergence process. Group-relevant action tendencies and group-relevant action, depicted on the right side of the figure, are likely to result from group-based and group-shared emotions, and constitute further group-relevant events, thus continuing the group emotion process.

## Group membership.

A prerequisite for emotion convergence through processes of identification, institutionalization, or interpersonal interaction is that individuals see themselves as members of the same group. Identification with one another presupposes a common linkage – a group membership – between people. Institutionalized emotion norms apply only to those who categorize themselves as group members (cf. Ashforth & Humphrey, 1993; Shields, 2005). And emotion contagion in interpersonal interaction fails between those who affiliate themselves with different groups. Thus in the absence of a common group membership people who belong to different races, competing sports clubs, or opposing parties do not mimic each other's emotions, but display contrasting emotions such as joy in the presence of fear (Weisbuch & Ambady, 2008). These responses are generated instantaneously and outside of people's awareness, implying that even automatic mimicry processes set in only for those with whom people hold a common group membership (Weisbuch & Ambady, 2008). Another study confirmed that outgroup anger evoked self-reported fear, and outgroup fear evoked self-reported aversion (van der Schalk et al., 2011). Further, mimicry is subdued unless people feel that they are in a situation that they need to address together (cf. Gump & Kulik, 1997).

In contrast, if people feel socially connected, they are likely to experience similar emotions when they identify with one another, and they are likely to conform to mutually established expression norms and rituals. Emotion contagion tends to be enhanced. For example, when people were led to believe that their interests grouped with those of a confederate (of the same gender and ethnicity as themselves), then participants exposed to a stressed confederate felt more stressed themselves. Demonstrating the deep-rooted biological underpinnings of the effect, a follow-up study examined contagion with physiological measures. The study involved participants watching a confederate run vigorously in place. Participants who perceived themselves as similar to the

<sup>&</sup>lt;sup>8</sup> In Figure 1 we depict the "four I" processes as moderators that affect how the different stages of group emotion emergence are linked. Note, however, that this moderation-based logic does not preclude the possibility that the processes mediate the flow of the group emotion process. Accordingly, group membership is likely to facilitate identification with the group, and identification, in turn, is likely to inculcate group-based emotions. Group membership may also trigger the institutionalized regulation of the emotional response, which, in turn, leads to group-norm conforming expressions of group emotions. Group membership, as well as group-based emotional experiences and group-conforming emotional expressions, may be the start of an interaction with other group members that, in turn, produces group-shared emotions. The experience of the group-shared emotions with others may prompt people to consider their dispositional inclination for such experiences and may thus lead them to start, continue or end their group membership. Therefore, moderation concerns whether and to what extent the processes set in (as described in the main text), whereas mediation tells us how the processes link the different stages of group emotion emergence once the processes have set in.

confederate had greater cardiovascular reactivity as measured by heart rate and blood pressure than those who felt dissimilar (Cwir, Carr, Walton, & Spencer, 2011).

Thus, as Freud (1922) noted, it is the coming-together as a group, as a unity of common fate, collaboration and cohesion, that creates converging group emotions, whereas competitive dynamics disrupt them. But to the extent that disruptions yield predictable emotional divergence, such disruptions also proffer evidence of emotion influence based on group membership (Tiedens et al., 2004). Indeed, it is possible that events *within* a group lead to group emotions and events *outside* a group also trigger emotions within a group. The group emotional response may have as much to do with people's membership with their own group as it has to do with forging people together in opposition to the actions of another group. Irrespective of whether groups arise through common bonds within an ingroup or through solidarity toward an outgroup, we postulate that a common group membership is essential for group emotions to emerge.

# *From group-membership through group-based experiences of emotions to group-shared emotions – via* identification *and* interaction.

Research in social psychology shows that the more group members identify with their group, the more likely they are to experience group-based emotions and the more intense their group emotions are likely to be (Smith et al., 2007). Identification increases the chances that group members appraise events that matter for the group from the group's perspective rather than from their individual perspective. Identification also makes it more likely that group members will endorse and feel the emotions that are stereotypically associated with their group.

Group-based emotions do not require the presence of others (Smith et al., 2007). And yet, we suggest, the experience of group-based emotions is likely to compel group members to seek out other group members with whom to share their group-based emotion. Extant theory and research show that the urge to share emotions, both positive and negative, is prompted by the experience of emotions (Rimé, Mesquita, Philippot, & Boca, 1991) and that this urge is presumably even more enhanced for group-based emotions (Rimé, 2009). Therefore, the individual, asynchronous, non-interactive experience of group-based emotions likely leads group members to contact other group members with whom they can share their group-based emotions through social interaction. Thus the extent to which group-based emotions lead to group-shared emotions depends on the extent to which group members interact with each other: if group members interact, group-based emotions likely become shared in a group.

#### From group-membership through group-conforming expressions of emotions to groupshared emotions – via institutionalization and interaction.

Sociological theory emphasizes that the more group members are bound to institutionalized norms and rituals, the more likely members are to conform their expression of emotions to those of the group (Collins, 2004; Goffman, 1967; Hochschild, 1983). Institutionalization enhances the chances that group members restrict spontaneous emotion expression in favor of normatively expected expression. Institutionalization also makes it more likely for group members to emotionally blend in with culturally scripted rituals and routines, and to be absorbed in the emotion of the group. Given institutionalized emotion norms and rituals, group membership salience elicits expectations concerning appropriate expression of emotions.

Group-conforming expressions of emotions, in turn, lead to group-shared emotions during the interaction with other group members. Because emotion norms specify a range of acceptable emotions, they provide group members with discretion over which emotions to experience and

express, and some limits concerning emotions that fall outside the tolerable range. That the sharing of emotions is thus bounded by emotional norms and enacted in scripted, ritualized ways increases the likelihood that distinct patterns of group-shared emotions emerge in the course of interactions. Furthermore, if group members come together based merely on their group membership and in the absence of specific emotion-eliciting events, their sharing of emotions is likely to be facilitated by rituals that invoke the emotional symbols of the group (according to sociological research) and thus activate the emotional stereotype of the group (according to psychological research). These rituals induce group-shared emotions through eliciting group-conforming expressions of emotions. For example, Wal-Mart employees gather for their daily morning cheer routinely, without the need for any specific event. The cheer works to induce shared positive emotions among employees.

#### The bidirectional effects of group-based experiences and group-conforming expressions.

The experience of group-based emotion is likely to affect the group-conforming expression of emotions, and vice versa. Indeed, those who respond to group membership salience with group-based emotions might feel bound in their subsequent expression of those group-based emotions to emotional norms (Ashforth & Humphrey, 1993; Shields, 2005). Thus the effect of group-based emotions on group-shared emotions can be channeled through group-conforming expressions. In turn, those who respond to group membership salience with group-conforming emotion expressions in the absence of relevant feelings may find themselves affected by those expressions. There is evidence that the mere expression of an emotion can induce emotion experience through afferent feedback (Adelmann & Zajonc, 1989; Ekman, Levenson, & Friesen, 1983; Strack, Martin, & Stepper, 1988). Thus exhibiting an emotion expected by the group can facilitate the experience of the emotion, and so the effect of group-based emotions.

But there is also the potential for conflict to the extent that group-based experiences and groupconforming expressions are misaligned. These conflicts resemble the well-known tensions at the individual level between deep acting and surface acting in emotional labor research (Grandey, 2000, 2003). For examples, among trainers of a recreation center, management enforced group norms demanded the expression of happiness and fun, but for a number of trainers the pressure to adhere to these norms led to group-based emotions of unhappiness (Haman & Putnam, 2008). Even if group-based emotions are aligned with group norms, some group members may find the expression of those emotions through rituals awkward. Some employees at Wal-Mart reportedly hid in the toilets to escape the morning cheer (Economist, 2001). In the context of group emotions, the potential tension between group-based (rather than self-based) experiences and group-conforming expressions deserve further investigation in future research.

## From group membership to group-shared emotions – via interaction.

In the course of social interactions, group membership directly facilitates group-shared emotions (as well as indirectly through group-conforming expressions of group-based emotions). While interacting, group members tend to engage in sensemaking processes that calibrate their appraisals of group-relevant events to bring them in line with the appraisals proffered by other group members. For strong situations that are bounded by unambiguous cultural scripts, the calibration is likely to be minimal. For example, the death of Apple founder Steve Jobs in October 2011 caused similar instantaneous emotions of sadness and grief amongst Apple employees (LaGanga, 2011). The event needed no collective interpretation, the emotions to be felt were clear. For uncertain, weak situations that do not offer a straightforward appraisal, however, group members are likely to rely on other group members to determine how to collectively feel. For

example, when software giant Microsoft made an unsolicited bid for Yahoo! in 2008, some employees of the then-struggling internet company responded with hope and others with fear. For most employees, it was just not clear how to best interpret the event (Allison, 2008). Group members' interpretations of an event tend to converge in the course of social interactions, and so does their group emotion.<sup>9</sup> Further, within the constraints of institutionalized norms, interacting group members are likely to mirror the group-shared emotions that others display in emotion contagion processes. Group members thus validate and affirm the emotions of one another, giving legitimacy to their displays of the group-shared emotion.

#### From group-shared emotions to group membership – via inclination.

The sharing of emotions gives group members a feeling of unitedness with other members that both derives from and reinforces common group membership.<sup>10</sup> Thus, group-shared emotions may attract people with compatible affective inclinations to join the group; and may induce people with discrepant affective inclinations to leave the group. Empirical research shows that when individuals are unable to share a group emotion, they infer that they do not belong to the group (Livingstone, Spears, Manstead, Bruder, & Shepherd, 2011). Further, when a subgroup of individuals within a larger group feels that their group identity has been subverted, then the negative emotions they experience in the subgroup can cause them to separate from the large group (Sani, 2005). Thus, in line with inclination-based accounts, the emotional dynamics within a group can cause attraction-selection-attrition cycles among group members that enhance the homogeneity of emotions that this group experiences: the more the shared emotion fits with individuals' own affectivity, the more likely individuals will form, join, or remain in the group.

## Dynamics.

So where does this group emotion process, as depicted in Figure 1, start? The inherent feedback loop indicates that the process can start at any of the described stages. For example, a person could be drawn into a group-shared emotion such as a sudden mass panic. The mass panic survivors could form a victim group whose members, bequeathed with group-based feelings of anxiety, might establish norms to express those emotions to one another. The process can also begin with an individual displaying group-conforming emotional expressions. Thus, a nonbeliever who participates in a church service can be affected by the solemnity of the group experience to the point of conversion. The group emotion process, therefore, can start at any stage.

It can also unfold slowly or swiftly. The process is slow in cases in which an individual is separated from the group and has to first make an effort to seek out others. Thus, a sports fan who watches a game alone on TV in a remote hotel may have to wait to share her delight about the win until she returns home for celebrations with other fans. The process may also unfold rapidly if group members are in close proximity, as when sports fans in the stadium watch their

<sup>&</sup>lt;sup>9</sup> The question of which group members' emotional reaction or interpretation of the event becomes the institutionally accepted one, has not been answered. Furthermore, there may be more communication, more sharing, under the condition of uncertainty rather than certainty, but the evidence for such an imbalance is limited.

<sup>&</sup>lt;sup>10</sup> Note that this blend of emotion and solidarity is missing in cases that feature only synchrony in emotional experience and the presence of others, but neither group membership nor interaction. For example, in a movie theatre people also tend to simultaneously experience similar emotions, but these emotions lack the collective quality of group emotions, because people are not joined by a common identification and the interactive sharing of the emotion is prevented by the set-up and dimming of the room.

team score and immediately turn their group-based emotion into a ritualized expression of collective exuberance.

## Application across levels.

Can this group emotion process account for emotions at the levels of mid-sized and large groups? Given that the overall density of social interaction among group members reduces exponentially as group size increases (Bossard, 1945), local subcultures of interaction are likely to develop (cf. Krackhardt & Kilduff, 1990) within large groups. But those who locally interact may hold the same overarching social identity as other group members who interact elsewhere. And local interactions are likely to be governed by the same institutionalized group rules and rituals no matter where they happen. Emotions also travel across large networks through proximal connections in much the same way that characterizes the spread of infectious disease (Hill, Rand, Nowak, & Christakis, 2010). Therefore, the emotions that are collectively experienced in local pockets of interaction may be relatively homogenous across the larger group. To the extent that subcultures remain connected with the overarching group, the process depicted in Figure 1 is likely to account for group emotion convergence at all levels of analysis. But if local groupings develop subcultures that produce differences or variations in group emotions, then social network brokers may play an important role in moving emotions from one pocket to another, a process as yet unstudied.<sup>11</sup>

## Blending in with and separating out from group emotions.

The group emotion process depicted in Figure 1 suggests that individuals can blend in with and separate out from group emotions. When group membership is salient, the individual is likely to blend in with the group emotion; for example, in the course of group work or because of reminders of group membership. When membership is not salient, however, the individual is likely to separate out from the group emotion; for example, when the individual is away from the group or when the individual is mentally prioritizing other group memberships. The blending-in-and-separating-out process switches individuals from one group emotion to another. When individuals blend in, the group emotion becomes activated. And when individuals separate out, the group emotion becomes latent. Different latent group emotions simultaneously co-exist at multiple levels. The group emotions do not overwrite each other; instead their co-existence reflects the multiplicity and complexity of group life and relates to emotional tensions within and across groups. Whereas blending in leads group members to converge in their feelings, separating out leads them to diverge.

Indeed, group emotions subtly shift and rearrange as the individual moves in and out of situations. For example, the events in the course of a day may make many different group memberships salient. When a father drops off his children at nursery in the morning, he may blend in emotionally with the other parents that he meets on his way in and out of nursery. When he arrives at work, the building he enters may prime his organizational identity infusing him with pride he can share throughout the day with other employees. And when he meets with his team,

<sup>&</sup>lt;sup>11</sup> There may be rare conditions when even in mid-size and large groups the interaction part of the group emotion emergence process is enacted by all members simultaneously. For example, above we mentioned Microsoft's annual employee meetings in Safeco Field Stadium in Seattle. These meetings brought tens of thousands of employees together in one place as well as several thousand others who joined in via web-cast. The meetings thus involved a group of considerable size – and yet, the meetings were reportedly infused with intense group-shared emotions, based on a common group membership and ritualized interaction.

the common worry about the slow progress of the team's project may unite him with the other team members. Thus, as the day moves on, he blends in with and separates out from different group emotions as different group memberships get activated by the course of events.

It is also the case that individuals can experience different group emotions about the same event when they mentally switch from one group identity to another. For example, when an individual switches from seeing an event from the perspective of her organizational group membership to seeing the event through the lens of her gender group membership, her group-based emotional response to a marketing campaign featuring traditional stereotypes of women may switch as well. As a result of switching from her organizational to her gender group membership, she may feel a different group-based emotion about the same campaign, she may express those emotions in line with gender norms but not organizational norms, and she may seek out women to share her emotion with, rather than other organizational members.

In summary, then, it is not the case that group emotions necessarily imply complete synchronization of all group members along one uniform emotional experience. Group-shared emotions derive from common group membership and a concern for group-relevant events, and involve temporary convergence in feelings among those who interact and who endorse the same emotional norms.

## CONSEQUENCES OF GROUP EMOTIONS

Why do group emotions matter? Extant theory and research suggest that group emotions have important effects both for individual group members and for groups as a whole. We first review the effects found for group-based emotions experienced in the absence of other group members, and then examine the effects of group-shared emotions experienced in settings of interacting group members.

## **Consequences of group-based emotions**

Group-based emotions fill those belonging to and identifying with the group with a desire to engage in collective action with other group members. Among those experiencing group-based disadvantage, group-based anger increased their desire to engage in action to overcome the collective disadvantage (van Zomeren, Spears, Fischer, & Leach, 2004). When group members were angry (as opposed to afraid) about an outgroup, they were more willing to engage in aggressive behaviors toward the outgroup, especially if they perceived their ingroup as strong (Mackie et al., 2000).

But anger does not necessarily jolt a group into aggression. Although anger could facilitate support for military action, in protracted conflicts it could also provide impetus for reconciliatory diplomacy and peaceful resolution (Tagar, Federico, & Halperin, 2011). When individuals felt angry (or guilty) about an unfair advantage of their own group over another group, their group-based anger (more so than group-based guilt) compelled them into political action to overcome inequality (Leach, Iyer, & Pedersen, 2006). And if group-based anger (or contempt) was expressed by an outgroup member, anger (but not contempt) triggered feelings of empathy among ingroup members that reduced ingroup members' destructive conflict intentions toward the outgroup (de Vos, van Zomeren, Gordijn, & Postmes, 2013). Thus, anger as a group-based emotion is a powerful motivator for group action, one that is relatively general and allows action to be shaped by contextual factors (van Zomeren, Leach, & Spears, 2012).

Group-based guilt is another group emotion with potent effects on action tendencies (Wohl, Branscombe, & Klar, 2006). Individuals identifying with their group tended to feel guilty for their own group's wrongdoing, even if they had not personally been involved in any transgression. These group guilt feelings enhanced support for reparations (Brown & Cehajic, 2008; Brown, González, Zagefka, Manzi, & Čehajić, 2008; Imhoff, Bilewicz, & Erb, 2012) and increased commitment to apology (McGarty, Pedersen, Wayne Leach, Mansell, Waller, & Bliuc, 2005). Group-based guilt is a powerful source of action motivation in response not only to past events, but also to future events. When group members anticipated that their group would commit an offense, then the extent to which they experienced group-based guilt, shame and anger predicted their desire to engage in collective action to prevent the transgression (Shepherd, Spears, & Manstead, 2013b). When German students learned about the decision of a large German company to outsource their production to a Bangladeshi supplier with cruel working conditions, the students reported collective guilt and were willing to pay compensations, particularly when the outsourcing was reported as taking place in the future (rather than the past) (Caouette et al., 2012). When individuals brought to mind historical incidents of their group being victimized, their group-based guilt for current transgressions was reduced (Wohl & Branscombe, 2008). Similarly, when individuals felt afraid for their group, they were willing to forgive their own group for current harm doing (Wohl & Branscombe, 2009).

When group members are afraid that their group will lose its distinctiveness, it is the experience of group-based angst that brings them to support action to strengthen their group. Thus, Canadians who were told that the creation of a cross-national security agency with the US would lead to a potential loss of national sovereignty felt more group-based angst than did those who were told the cross-national agency would facilitate the sharing of information. This angst-producing effect was pronounced for those who held a strong identification with Canada. Group-based angst in turn led to the desire to take action to preserve Canadian sovereignty (Wohl, Giguère, Branscombe, & McVicar, 2011). This effect of group-extinction threat on group-protection behaviors through group-based angst holds implications for organizational research, particularly with respect to mergers and acquisitions. If groups are afraid of losing their group distinctiveness in the course of a merger, the group-based angst of group members might compel them to take action against the merger that may jeopardize its success.

## Consequences of group-shared emotions and moods

Group-shared emotions affect the participation in and composition of groups. Prior work has shown a significant negative association between the positive affective tone of a group and group members' absenteeism (George, 1990) – a finding replicated in a longitudinal study (Mason & Griffin, 2003). The more group members converge on a common emotion, the higher is the membership stability of the group (Bartel & Saavedra, 2000). But to the extent that individual dissatisfactions about the organization become shared in a group, members of the group are more likely to leave the organization (Bartunek, Huang, & Walsh, 2008).

Group-shared emotions have effects on the performance of groups, at the levels of both small and large groups. In student work groups, the sharing of positive emotions facilitated cooperation, reduced conflict, and increased group members' perceived task performance (Barsade, 2002). In work teams of a multinational corporation, negative team affective tone mediated the relationship between dysfunctional team behavior and performance when teams' nonverbal negative expressivity was high but not when nonverbal expressivity was low (Cole, Walter, & Bruch, 2008). In organizations, widespread positive emotions were associated with enhanced levels of productivity and high levels of employees' aggregate task performance, if employees trusted one another within the organization, but not if trust was lacking. Widespread positive emotions also related to employees' aggregate organizational citizenship behavior, independent of trust (Menges et al., 2011).

Other performance-related outcomes affected by group-shared emotions include decision quality and creativity. An experimental study showed, for example, that positive mood groups engaged in lower levels of elaboration of distributed information and thus arrived at lower quality decisions than negative or neutral mood groups. However, these detrimental effects of positive mood occurred only when group members were low in trait negative affectivity, but not when group members were high in trait negative affectivity (van Knippenberg, Kooij-de Bode, & van Ginkel, 2010). Furthermore, a field study of research and development teams showed that the effects of positive affective tone on creativity depended on negative affective tone and on the extent to which team members trusted each other. Specifically, positive affective tone only facilitated creativity when team trust was low and negative affective tone was high. Thus the co-presence of both positive and negative emotions in groups appears to be beneficial for creativity in teams in which team members do not have trusting relationships with one another (Tsai, Chi, Grandey, & Fung, 2012). Another study showed that creative tasks benefitted from groups' positive moods, and analytical tasks from groups' negative moods, if those moods were shared in interactions among group members (Klep, Wisse, & Van der Flier, 2011).

Together these studies suggest that it is not necessarily the case that positive group emotions enhance, and negative group emotions impair, group performance, but rather that the effects of group-shared emotions on performance are complex and contingent upon boundary conditions such as task type or trust within the group (for further theorizing on trust and emotions, see Williams, 2001, 2007). Further, the effects of group-shared emotions on group performance may depend on the life stage of the group. For example, research on team moods suggests that positive team mood stimulated, and negative team mood suppressed, exploratory search behaviors at the outset of team work. However, at the mid-point in team work this relationship switched so that positive team mood suppressed, but negative team mood stimulated, exploratory search behaviors. Team performance was best when teams engaged in high exploratory search behaviors at the beginning of team work, and then reduced exploratory search during the second half of the team's work (Knight, 2013).

Finally, group-shared emotions also play an important role in the success of change processes and the implementation of innovations. Change processes in organizations have a higher chance of success if middle managers not only attend to and thus reduce subordinates' negative emotions, but also enthusiastically commit to the change process and thus increase subordinates' positive emotions (Huy, 2002). Further, as shown in a quantitative field study of branches of an insurance company, positive group emotions facilitate, and negative group emotions impede, the implementation of innovations within groups (Choi et al., 2011).

#### All happy? A note on divergence

Group emotion research tends to extol emotion convergence, often with the underlying notion that if every member of a group is happy, good things will follow. For example, a recent review of emotions in small groups concluded upon considering the existing state of research that "differences in group member affect likely disrupt the functioning of purposive groups, adversely impacting group effectiveness" (Barsade & Knight, 2015: 14.6). Indeed, a study of top management teams showed that divergence in team members affectivity impaired company performance (Barsade et al., 2000). But scholars also point out that, in theory, divergence can benefit groups in terms of, for example, creativity and decision quality (Tiedens et al., 2004). If group members differ in their feelings, they are likely to have divergent views that can potentially

offer informational benefits fostering group performance (Walter et al., 2013). We have been warned about the potential for "unrealistic euphoria, optimism, and group-think" in groups with homogeneously positive people (Barsade & Gibson, 1998: 93).

Divergence may be important to interrupt both positive and negative spirals in groups (Hareli & Rafaeli, 2008; Walter & Bruch, 2008) that could conceivably lead to dangerous emotional similarity among group members over time. Just as a skeptical voice may prevent an all-positive group from venturing into risky waters, an optimistic, cheerful voice may rescue an all-negative group from self-destruction. Questioning prevailing emotions may thus be important in resisting conformity pressures that we know are likely to emerge in, and negatively affect, groups (Asch & Guetzkow, 1951). Although empirical evidence is largely missing, it is also important to highlight that just as emotion convergence may facilitate collective action, divergence can prevent such action – and that, in turn, might at times be to the benefit of the group.

Even though there is this need for divergence, then, we know little about those who dare to speak up and wonder aloud whether how a group *is* feeling is how the group *should be* feeling. Indeed, those who fail to blend in with the prevailing emotion risk being labeled deviant or risk being seen as failing to understand the emotion norms of the group (Shields, 2005). We know that management openness can encourage employees, particularly high performing employees, to speak up rather than keep silent about organizational problems (Detert & Burris, 2007). Thus an organizational climate in which individuals feel free to express their fears and worries concerning organizational issues (rather than be silent about them, cf. Morrison & Milliken, 2000) may be vital for emotional divergence. We also know that a leader can try to strike a different chord with a group of followers, in an effort to shift the group's prevailing emotion.

A charismatic leader, in particular, goes through a process of first affirming the prevailing shared emotions of the group. But once having established a community of feeling and thus having gained legitimacy to speak on behalf of the group, the charismatic leader is likely to question prevailing shared emotions, thereby infusing divergence into the emotionally homogeneous group. The confusion thus triggered among the listeners opens up a window for the charismatic leader to reinterpret the group's situation and to imbue the group with new emotion norms. Thus charismatic leaders can shift the group-shared emotions of those they inspire (Wasielewski, 1985), be it for the better or the worse (Kilduff, Chiaburu, & Menges, 2010).

But, apart from managers encouraging employees to express themselves and charismatic leaders challenging prevailing emotions, we know little about how members of groups come to negotiate and balance out the positive and negative emotions they share, particularly in a dynamic process in which those shared emotions unfold and change over time.

## **BEYOND GROUP EMOTIONS**

Now that we have extensively covered group emotional *responses*, we return to the other group affect constructs listed in Table 2 and discuss the *recognition*, *regulation*, and *reiteration* of group emotions.

## Recognition

The recognition of group emotions concerns perceptions of how a group is feeling. The recognition of group emotions is likely to result from individuals' exposure either to emotionally expressive members of a group or to stereotypes or events that matter for a group. When individuals perceive or interact with group members, they are likely to attend to group members'

emotional expressions – both verbal and nonverbal – in an effort to detect, decode, and infer emotional information about the group, independent of whether individuals themselves are group members or not. Individuals may take this information from single group members who are representative for the group, or from multiple members who together represent their group. For example, emotions expressed by CEOs affect financial analysts' predictions of how a company *as a whole* will perform in the future (Milovac, Menges, Saar-Tsechansky, & Graeber, 2014).

Individuals can also infer the emotions of a group from the events with which a group has been confronted or from the stereotypes associated with a group. Thus, in one study, researchers asked participants identifying themselves as Democrats to report how they thought Republicans felt, and vice versa (Seger, Smith, Kinias, et al., 2009). Participants' estimates of the outgroup's emotion correlated significantly with the group emotion reported by ingroup members, thus indicating some accuracy in group emotion recognition. But the researchers also found two biases that systematically affected participants' estimates of the outgroup's emotion. First, participants' estimates tended to be affected by their own ingroup's emotion such that participants' overestimated the similarity between their group's negative emotion and underpredict the outgroup's positive emotion – a finding that is consistent with many other studies showing that people evaluate their own groups more positively than other groups (Brewer, 1979; Dovidio & Gaertner, 1993).

People differ in the extent to which they are able to recognize the emotions of groups. Just as some people are better able than others to detect and decipher emotional expressions of individuals (Elfenbein & Ambady, 2002; Momm, Blickle, Liu, Wihler, Kholin, & Menges, 2015), some people are better able than others to recognize group emotions based on the expressions of group members. When individuals interact with multiple group members, they have to attend to multiple expressions of emotions. The expressions of group members may or may not be consistent, depending on the level of convergence of the group emotion. The ability to extract emotional information about a group from multiple group members' simultaneous expression of emotion has been labeled *emotional aperture* and is thought to be important for leaders, particularly, in strategic change processes (Sanchez-Burks & Huy, 2009).

Individuals and groups also differ in the extent to which they are empathic with other groups. The capability of individuals to sense the emotions that prevail in outgroups is referred to as *intergroup empathy* (Chiao & Mathur, 2010; Cikara, Bruneau, & Saxe, 2011). Scholars have theorized that the perception of others' emotions can also induce *collective empathy* (i.e., a group emotional response on behalf of an outgroup). Collective empathy among ingroup members can, in the case of outgroup suffering, induce philanthropic behavior to help the outgroup (Muller, Pfarrer, & Little, 2013).

The recognition of group emotions carries consequences for the feelings of individual group members and for inferences outsiders make about a group. A study showed that the perception of emotional expressions of other group members affected how an individual group member felt in relation to the group. If a group displayed anger toward one of its members, then the perception of such anger made the affected group member feel rejected. But if a group expressed happiness toward one of its members, then the affected group member felt accepted (Heerdink, Van Kleef, Homan, & Fischer, 2013). Another study demonstrated that outsiders inferred from group members' emotional expressions whether the group was cohesive and had a common fate. Positive emotions, compared to negative emotions, enhanced perceptions of cohesiveness; and converging emotions, as opposed to diverging emotions, fostered perceptions of common fate of group members (Magee & Tiedens, 2006). These findings suggest that the

recognition of group emotions is vital both for the dynamics within groups and for the assessment of, and interaction with, others groups.

## Regulation

Groups differ in how well group members collectively deal with the emotions that prevail in their group. Some groups may reap the beneficial effects of emotion (Barsade & Gibson, 2007), whereas others may ignore group emotions or, worse, become entangled in toxic emotional spirals (Härtel, 2008; Maitlis & Ozcelik, 2004). Although we know that groups tend to control shared emotions through institutionalized emotion norms, we know relatively little about how groups come to effectively regulate their emotions once those emotions have set in. Some norms may guide group members' emotion regulation in adaptive ways and facilitate group effectiveness, whereas other norms may lead to maladaptive regulation and interfere with group functions. More research is needed to understand how exactly groups come to regulate their inherent capacity for emotion regulation. Like individuals (Côté, 2014; Mayer & Salovey, 1997; Salovey & Mayer, 1990), groups are thought to possess and differ in emotional intelligence (Druskat & Wolff, 2001).

Conceptualizations about *group emotional intelligence* exist both at the small group level (Côté, 2007; Elfenbein, 2005) and at the organizational level (Huy, 1999; Menges, 2012). At the small group level, team emotional intelligence can be seen either from a resource perspective, thus involving team members individual emotional skills and abilities, or from a social interaction perspective, thus focusing on the emotional norms and feeling patterns that prevail in the group (Elfenbein, 2005). Although reliable empirical data are rare, theory and preliminary evidence suggest, somewhat predictably, that group emotional intelligence (or dimensions of it) benefits the group: it enhances group performance (Feyerherm & Rice, 2002; Jordan, Ashkanasy, Härtel, & Hooper, 2002; Quoidbach & Hansenne, 2009) and decreases group conflict (Ayoko, Callan, & Härtel, 2008; Yang & Mossholder, 2004).

At the organizational level, theorizing suggests that organizations differ in emotional capability, defined as "an organization's ability to acknowledge, recognize, monitor, discriminate, and attend to its members' emotions," and manifested in the "organization's norms and routines related to feeling" (Huy, 1999: 325). This organizational emotional capability is theorized to be independent of organizational members' individual emotional intelligence, and to be particularly important for organizations in times of radical change. The extent to which organizations are able to process emotions adaptively (i.e., organizational emotional intelligence) has been suggested as depending both on the extent to which an organization has emotionally intelligent employees and on the extent to which these employees then use their emotional intelligence for the benefit of the organization (Menges, 2012). If employees' emotional intelligence is evident in the behaviors employees display, in the procedures the employees establish, and in the norms employees share, then over time "emotional intelligence gets woven into the fabric of the organization and thus begins to characterize the organization as a whole" (Menges, 2012: 360). Relevant research found that organizations with high levels of emotional intelligence fared better in terms of operational, financial and innovation performance, and had lower absence rates, than organizations with low levels of emotional intelligence (Menges & Bruch, 2009).

Notably, the regulation of emotions within groups in emotionally intelligent ways may be a key element of the overall collective intelligence of groups, just as emotional intelligence is an element of the general intelligence of individuals (MacCann, Joseph, Newman, & Roberts, 2014). Indeed, a recent discovery suggests that groups with high levels of overall collective intelligence

tend to be the ones in which group members display behavioral patterns indicative of effective emotional norms within the group (Druskat & Wolff, 2001): group members tend to be socially sensitive to one another and give each other equal opportunity to contribute to group conversations (Woolley, Chabris, Pentland, Hashmi, & Malone, 2010). These emotionally intelligent ways of interacting within the group, in turn, affected the performance of a group across a number of different tasks (Woolley et al., 2010). It is important to note, then, that beyond the direct benefits of group emotional intelligence, emotionally intelligent ways of interacting within groups are also an essential element of a groups' overall collective intelligence.

Apart from the relatively generic concept of group emotional intelligence, we would like to point to the more concrete concept of *emotional capital*. Although the term has been used in different ways (Gratton & Ghoshal, 2003; Menges, Ebersbach, & Welling, 2008; Thomson, 1998), we refer to emotional capital as defined in a recent study at the dyadic relationship level (Feeney & Lemay, 2012). Applied to the group level, emotional capital consists of the accumulated positive, shared emotional experiences of group members that serve as a resource for a group's development and success. Emotional capital builds up when group members laugh together, celebrate together, succeed together, provide comfort for one another during stressful times, or otherwise come to share positive experiences. Negative emotional experiences deduct emotional capital from a group's emotional "bank account." If a group has built up and deposited enough emotional capital, the account is unlikely to become "overdrawn" when the group is faced with disappointment or threat. Emotional capital thus acts as a buffer against negative group events, decreasing the likelihood that the group will dissolve as a result of aversive events.

Finally, *emotional carrying capacity* refers to a group's capacity to be emotionally expressive in a constructive manner (Dutton & Heaphy, 2003; Stephens, Heaphy, Carmeli, Spreitzer, & Dutton, 2013). Groups with high emotional carrying capacity tend to share more positive and negative emotions, and they do so in ways that benefit the group, whereas groups with low emotional carrying capacity tend to subdue emotion expressions or release emotions in ways that impair group functioning. A study of 82 top management teams of Israeli firms found that emotional carrying capacity was positively associated with team resilience – the ability of a team to deal with tough times – and that emotional carrying capacity mediated the positive linkages between team trust and team resilience (Stephens et al., 2013). Other studies also suggest that the ability of group members to regulate their emotional expressivity in adaptive ways is essential for team functioning, even though these studies do not explicitly refer to emotional carrying capacity (Cole et al., 2008; Kunze & Menges, 2014).

## Reiteration

In their seminal book on the social psychology of organizations, Katz and Kahn noted that "social organizations possess distinctive patterns of collective feeling" (1966: 66). Several constructs address these patterns or regularities in group emotions that emerge over the course of a given time period as a result of reiterating group emotions.

Scholars have pointed out that *emotional culture* is a key construct that can account for regularities and frequencies of distinct emotions within groups. Both sociologists and psychologists have recognized that groups, as they develop and evolve over time, come to create and tend to fulfill certain expectations concerning the emotions that are shared within the group. For example, psychologists noted that "culture not only creates the social world, it guides people in the affective reactions needed to function in that world" (Keltner & Haidt, 2001: 513). Although basic aspects of emotions are universal (Ekman et al., 1987; Scherer, 1997), culture still tends to shape emotional experiences and expressions in distinct ways, thus galvanizing

those within a culture into patterns of common emotions (Boiger & Mesquita, 2012; Mesquita, 2001; Mesquita & Frijda, 1992). Sociologist have focused specifically on emotional culture as in this example (Gordon, 1989a: 115):

...the concept of emotional culture ... refer[s] to the patterns of meanings embodied in symbols, by which people communicate, perpetuate, and develop their knowledge about and attitudes toward emotions (Geertz 1973, p. 89). Emotional culture is conveyed through language, rituals, art forms, and other publicly available, symbolic vehicles of meaning (Keesing 1974, Swidler 1986). It provides accounts for the origin and nature of the various emotions, scripting the events which typically precede or follow each emotions, and explaining how emotions may be expressed, concealed, and modified...

In organizational science, an ethnographic exploration of Disney gave insights into a strong emotional culture directed toward the constant expression of intense positive emotions such as excitement and enthusiasm (Van Maanen & Kunda, 1989). More recently, an examination of the workings of an emotional culture of companionate love focused on 13 units of a long-term healthcare facility in the US, and found a generally beneficial effect of a unit-level culture of companionate love on employee outcomes, client outcomes, and clients' family outcomes (Barsade & O'Neill, 2014).

A construct that parallels emotional culture is emotional climate.<sup>12</sup> The idea of emotion-infused climates dates back to early group research (Cartwright & Zander, 1968; Lewin, Lippitt, & White, 1939; Vraa, 1974). A recent article summarized the contemporary understanding of emotional climate as follows: "an accumulation of repeated group emotional responses to societal events or sociopolitical conditions can produce a general and lasting emotional tone of the nation or society as well as the likely emotional responses to events" (Niedenthal & Brauer, 2012: 227). Emotional climates have been examined at multiple levels, ranging from entire nations and societies (De Rivera, 1992; De Rivera, Kurrien, & Olsen, 2007; De Rivera & Páez, 2007) all the way down to small work groups (Dasborough, Ashkanasy, Tee, & Tse, 2009; Tse, Dasborough, & Ashkanasy, 2008), and in a variety of contexts, ranging from classrooms (Reves, Brackett, Rivers, White, & Salovey, 2012) to health care institutions (Brown & Brooks, 2002; Olsson & Ingvad, 2001), and from restaurants (Ashkanasy & Nicholson, 2003) to prisons (Ruiz, 2007). So what creates emotional climates? According to one study, leaders play a key role. To the extent that leaders suppress the expression of negative emotions in groups, they create an emotional climate of fear, anger and distrust (Maitlis & Ozcelik, 2004). But certainly many other, as yet unstudied, factors contribute to the emergence and perpetuation of emotional climate. Thus there is a need for further research on emotional climate (Ashkanasy, 2008: 1030).

<sup>&</sup>lt;sup>12</sup> Some see emotional climate and emotional culture as distinct constructs (Ashkanasy, 2003; Ashkanasy, Wilderom, & Peterson, 2011). Our reading of extant research is that emotional culture tends to be defined more in *prescriptive* terms, specifying how group members ought to feel and which emotions they are implicitly expected to express or suppress, whereas emotional climate appears to be defined as a more *descriptive* construct, capturing explicit perceptions of how group members have been feeling over a defined period of time. Otherwise, however, there is so much variance, and so much overlap, in explanations of emotional culture and emotional climate that it is difficult to clearly distinguish between the two constructs. In part this is because the general constructs of organizational culture and organizational climate are so difficult to discern (Denison, 1996; Schneider, Ehrhart, & Macey, 2013). We cannot resolve this debate here. We hold that both emotional culture and emotional climate are in principle useful constructs and we recommend that researchers, when examining these constructs, define clearly how they understand emotional culture and emotional climate, respectively.

*Emotional fields*, also called affective fields or fields of feeling, are sometimes equated with emotional climates, even though emotional fields may be more accurately seen as "seasons" within an emotional climate. (Group emotions, within this meteorological metaphor, would be the weather.) Emotional fields characterize predefined recurring time periods or events that are charged with distinct, shared emotions. Christmas, for example, is a time of the year that is steeped in feelings and expressions of joy, warmth, love, and excitement. Even though individually this time period may also bring annoyance, nervousness, or depression to some, at the group level (in countries celebrating Christmas) people tend to blend in with the "Christmas spirit" (De Rivera & Páez, 2007). Similarly, organizations may create and maintain emotional fields. Some universities, for example, mark the summer as a tranquil, calm time of the year, freed of the frenzy and excitement of students' presence. IT companies like Apple and Google tend to create fields of tension and surprise around their annual developer conferences.

In summary, regularities in group emotions form emotional cultures, climates, and fields. What is less known is how group emotions accrue to form emotional patterns, and under which conditions such patterns change. For example, do organizations exhibit baseline emotional climates to which they return after the effects of specific group emotions wear out? Whether a specific group emotion changes the existing emotional climate, and how guickly, may depend on how much the event that elicited the emotion affected the group. If an event is low in impact, it may have no instant effect on emotional climate; instead, it might change an emotional climate over the course of an extended time period depending on how frequently and consistently the event occurs. In contrast, if an event is high in impact, the group emotion it elicits may transform the emotional climate fairly rapidly. Take, for example, a successful company confronted with a sudden disaster that is not easily fixed. Such a disaster is a high-impact event to the extent that it affects the organization's operation and performance. In the course of events related to the disaster, the emotional climate of pride that might have existed at the company prior to the disaster is likely to be dampened in a short time period and overwritten by a newly emerging group emotion of frustration, anger, or disappointment. If frequent and consistent events change the emotional climate slowly and high-impact events change the group emotion guickly, then it is plausible for an organization to return to a baseline emotional climate after the effect of a specific high-impact event has worn out if certain frequent and consistent events work to restore the baseline. In the example above of the company hit by disaster, a climate of pride might return over time among employees if the events that initially created this climate continue to occur frequently and consistently in the aftermath of the disaster. In light of the disaster, the prideevoking events might be irrelevant to the appraisal of the company's situations but over time, these events might regain significance and thus facilitate the company's baseline emotional climate.

## THE FUTURE OF GROUP EMOTION RESEARCH

Although our understanding of group emotions has much advanced in the past three decades, as evidenced in this review, several questions concerning the nature of group emotions, the consequences of group emotions, and the role of group emotions in organizational life need further attention. Here we sketch out important directions for future research concerning these questions.

## The nature of group emotions

Research on individual experiences of group-based emotions often focuses on discrete emotions such as anger, guilt, anxiety and pride, whereas research on shared experiences of group

emotions mostly relies on a dimensional, valence-based approach to emotions that examines the effects of groups' collective positive or negative feelings. This raises the question of whether scholars have neglected to study specific shared emotions (cf. Jasper, 2011) or whether, at the group level, nuances in emotions beyond mere valence are difficult to discern. It is not sufficient to simply assume that group emotions mirror the nature and structure of individual emotions. Empirical studies that examine discrete emotions shared among group members are needed.

Further research is needed to examine how emotions at multiple levels and in multiple groups affect each other. A puzzling question is how people reconcile the multiple and potentially contradicting emotions they may feel at different levels within an organization. Despite early theoretical multi-level accounts of group emotions (Staw, Sandelands, & Dutton, 1981), there is still almost no research and rarely any theory on linkages between emotions at different levels of analysis (Weiss, 2003). How do group emotions at lower levels affect group emotions at higher levels and vice versa? How do individual emotions affect group emotions and vice versa? In this context, of particular interest are what we call meta-emotions - the emotions people individually feel about the emotions that are shared in groups to which they belong. Why is it that some feel elated about the pride that prevails in their group whereas others feel skeptical, concerned or annoved about group pride? Furthermore, the meta-emotions that arise in the course of sharing group emotions deserve attention. Why do people experience the sharing of negative emotions as something positive (Rimé, 2007a)? Research suggests that the social bonds and connectedness that arise when people suffer together infuse people with positive emotions - a phenomenon captured in the phrase: misery loves company (Gray, Ishii, & Ambady, 2011; Yu, Sengul, & Lester, 2008). Further work is needed on this phenomenon.

Besides multi-level considerations of group emotions, another important question is how the composition of groups affects group emotion regulation. For example, there is evidence that members of mix-gender groups tend to be more socially sensitive to one another than members of one-gender groups (Woolley et al., 2010). There is also some evidence that the demographic composition of groups affects the extent to which group members engage in individual emotion regulation. Specifically, age and racial diversity in workgroups affects group members' individual emotion regulation (Kim, Bhave, & Glomb, 2013). These studies suggest that we need a better understanding of how group composition relates to group emotion responses, recognition, regulation and reiteration.

It is also likely the case that the configuration of relationships (i.e., the network pattern) within groups may have a considerable, yet thus far ignored, effect on group emotions. There is the possibility that groups may derive their group emotions not only from events that matter for the group, as much extant research suggests (Weiss & Cropanzano, 1996), but also from the social network structure through which the relationships within the group are organized. For example, cohesive, dense networks may carry a positive group emotion, because these network structures fulfill group members' basic needs including reciprocity, attachment and communication. This *structure-instilled emotion* is bound to the group level, as it depends on the relational configuration of the group, and it is independent of *event-instilled emotions* that group members experience as a result of the events that happen to the group. Social network research is uniquely positioned to examine the effects of relational patterns in groups on group emotions.

Finally, we need to know more about the inherent ingroup-outgroup dynamics that shape group emotions in organizational settings. Such dynamics are likely to be prevalent in the competitive arenas of the corporate world, but largely neglected in organizational research on group emotions. There is a flourishing research stream on organizational identity and identification that relates to ingroup-outgroup dynamics (Ashforth & Mael, 1989; Hogg & Terry, 2000; Ingram &

Qingyuan Yue, 2008; Mehra et al., 1998). We encourage scholars in that stream to further incorporate emotion research and expand on how organizational identify affects the way employees collectively feel.

#### The effects of group emotions

We need more research about how group emotion affects group functioning. From extant theory and research on emotions at the individual and group level, one can infer that group emotions have both informational and motivational effects. First, group emotions are likely to contain information about how the group, as a whole, is doing. The affect-as-information model (Clore, Gasper, & Garvin, 2001; Schwarz & Clore, 1983) proposes that "one's affective state can serve as a simple but highly salient indicator of the nature of the situation one is in" (Schwarz, 1990: 543). Accordingly, a group emotion may be an informative indicator of the group situation. A positive group emotion, for example, might reflect group members' collective perception of events signaling that the group is meeting or expecting to meet its goals; in contrast, a negative group emotion might suggest that a group is seen as not meeting or struggling to meet its goals (Frijda, 1988).

Research suggests that such emotional information may infiltrate group members' thinking. Relevant studies conducted at the individual level show that emotions infuse thinking by triggering cognitive strategies (Fiedler, 1988; Forgas & George, 2001; Schwarz & Clore, 2003). Positive emotions facilitate an open, flexible, and generative way of thinking and thus have a "loosening" (Fiedler, 1988) or "broadening" (Fredrickson, 2001) effect on thought processes. People actively seek information, try out new procedures, and are willing to take some risk because their positive feelings signal to them that they are in a safe situation (Schwarz, 1990). In contrast, negative emotions are linked to effortful, detail-oriented, and risk-averse cognitive strategies and have a "tightening" effect on thought processes (Fiedler, 1988). People carefully analyze a situation, stick to the facts, favor conservative behavior, and are "unlikely to take risk in a situation that is already considered problematic" (Schwarz, 1990: 544).

There is some evidence that group emotions may have analogous effects. Groups do better on creative tasks in positive moods, and on analytical tasks in negative moods, if those moods were shared in interactions among group members (Klep et al., 2011). More generally, a positive group emotion may signal to group members that their group is in a secure position. Therefore, a general loosening effect may occur in groups in which members perceive themselves as experiencing positive emotions. This effect may involve group members engaging with each other in flexible, rule-relaxing and creative ways. People may dare to explore new opportunities because the positive group emotion signals to them that they can do so without putting the group at risk. Consequently, a positive group emotion might facilitate non-bureaucratic collaboration and high levels of innovation in a group (cf. Forgas & George, 2001; Fredrickson, 2003). By contrast, a negative group emotion may signal to group members that their group is in a difficult situation, which may yield a tightening effect throughout the group. In such instances, group members may be keen on keeping to the rules and avoiding mistakes. They might carefully analyze situations and deliberate over each of their actions, attempting not to stir up trouble or put the group at further risk. Thus organizations faced with fear-inducing threat are theorized to restrict information processing (Staw et al., 1981). Such group-emotion induced effects on group members' cognition and behavior, as well as the boundary conditions for these effects (Tsai et al., 2012; Van Knippenberg et al., 2010) deserve more attention.

In addition, more research is needed on how group emotions motivate group members' behavior. The *valence* of group emotions, for example, may influence individuals' decisions about group membership. Generally, positive emotions trigger approach tendencies and negative emotions avoidance tendencies (Nissen, 1952; Roth & Cohen, 1986). Does this imply that positive group emotions encourage and negative group emotions discourage group members' engagement in group activities? Indeed, positive group emotions may be powerful attraction mechanisms because they promise positive emotions through mere membership (cf. Bartel & Saavedra, 2000; George, 1990; Mason & Griffin, 2003). Many companies cast their workplace as one steeped in positive group emotions. For example, the recruiting website of Apple<sup>13</sup> promises applicants irrespective of the type of job for which they apply, "You'll be inspired. And you'll be proud." There is the possibility, then, that positive group emotions may motivate outsiders to join the group and may motivate insiders to engage in approach behaviors that reduce turnover.<sup>14</sup> In contrast, negative group emotions may instill avoidance behaviors that drive people out of and away from the group. Group members in groups with negative group emotions may thus be inclined to terminate their membership in an effort to free themselves from the negative emotions with which the group surrounds them.

Group contexts intensify emotions and prompt actions that are more extreme than those experienced by non-interacting individuals (Shteynberg, Hirsh, Apfelbaum, Larsen, Galinsky, & Roese, 2014). The perception of the intensity inherent in strong group emotions is likely to motivate group members to devote active effort to attain or avoid a particular outcome for the group (Seo, Barrett, & Bartunek, 2004). The intensity of positive group emotions in companies positively relates to the time and effort that employees invest into task accomplishment as well as the degree to which employees help each other (Menges et al., 2011). And research shows that organization members' intense negative emotions, coupled with collective belief in the organization's ability to deal with the crisis that elicited those emotions, motivates organization members to exert extra effort to overcome the crisis (Bruch, Shamir, & Eilam-Shamir, 2007). Hence, group emotions may motivate individuals to invest time and effort on behalf of the group. Thus group emotions may inform group members about the situation of the group and may motivate them to engage or disengage in behaviors in support of the group. An important question in this context is under which conditions the informational and motivational effects of group emotions on group members' action tendencies lead to collective action (cf. Maitner, Mackie, & Smith, 2006). Some groups, despite widely shared frustration and anger, do not turn their emotions into actions, whereas others do (van Zomeren et al., 2012). The facilitating or inhibiting conditions explaining such differences demand attention. Under which conditions, in Figure 1, do group action tendencies lead to group action? Furthermore, there is the question about whether and when group emotions, as opposed to individual emotions, predict the behavior of individual group members? A tentative answer is that group members' behavior is likely driven by factors that are salient to them at a given point in time. If their group membership and identity is currently of importance to them, then the group emotion may be a key determinant of their behavior. However, when the individual self, or another group, is in focus, then the emotions group members personally experience may be better predictors of their behavior.

The consequences of group emotions should be studied and compared in group versus individual settings in order to dissect the effect of group-based emotions from those of group-shared emotions. Extant research suggests that the effects of group-shared emotions go beyond effects of group-based emotions. Group performance on creative and analytic tasks improves

<sup>&</sup>lt;sup>13</sup> https://www.apple.com/jobs/us/, accessed on January 6, 2015

<sup>&</sup>lt;sup>14</sup> There is also the possibility of disillusionment when an outsider joins a group expecting to experience specific group emotions and then finds out that the anticipated emotion is, in fact, not shared by insiders. The phenomenon of group emotion impression management at the interface between the ingroup and outgroups is currently understudied.

when groups are in positive and negative moods respectively, *but only* when these moods are shared throughout the group via social interaction (Klep et al., 2011). Furthermore, recent discoveries showed that individuals were more angry about dishonest behaviors of others, and more willing to bear the costs of punishing dishonest behaviors, when they learned about those behaviors in groups as opposed to as individuals (Keck, 2014). This indicates an amplifying effect of groups on emotional reactions that is reminiscent of group polarization (Isenberg, 1986) or groupshift (Clark, 1971).

Similarly, whether group emotions are elicited as a result of mere group membership or as a result of active contribution to the group is likely to affect individuals' reactions. This difference between membership and contribution is sometimes labeled as I-mode vs. we-mode group emotions (Salmela, 2012; Tuomela, 1995), as in the following examples (von Scheve & Ismer, 2013: 410):

As a shareholder of Apple Inc., I am happy – together with thousands of other stakeholders – about the company's announcement to pay dividends again, because it increases individual wealth. This "I-mode" happiness is clearly different from the "We-mode" happiness I will experience when the start-up I founded together with a couple of friends finally yields profit.

Given the prevalence of I-mode and we-mode settings in organizational science, the difference between consequences of I-mode versus we-mode group emotions deserves further attention. Group emotions should not only be examined as bringing about effects directly, but also as boundary conditions (i.e., moderators) that facilitate some, and impede other effects within groups (Tse et al., 2008). Research located at the organizational level found that linkages between ethical climate and ethical behavior were shaped both by collective beliefs about ethical efficacy and by levels of collective moral emotions (Arnaud & Schminke, 2012).

Finally, the role of group emotion divergence needs much more attention (Tiedens et al., 2004; Walter et al., 2013), and the dynamic processes that change the effects of group emotions at different stages of a group's life need to be better understood (Knight, 2013).

### The role of group emotions in organizational life

In organizational science, group emotion research has extensively focused at the small group level, but neglected the examination of group emotions at higher levels of analysis, such as the organizational level and the industry level. In part, the neglect results from an overemphasis on micro-processes involving interpersonal interaction, and an underemphasis on macro-processes such as inclination, institutionalization and identification. With this review, we hope to redress the balance and open up avenues for research on group emotions beyond the small group level. Given that outcomes are likely to be more pronounced to the extent that emotions are shared by many employees rather than few, the study of group emotions at the organizational level holds both promise and potential for expanding our understanding of organizational performance, particularly in light of evidence in psychology and sociology that group emotions are at the heart of collective action (van Zomeren et al., 2012) and drivers of entire social movements (Goodwin, Jasper, & Polletta, 2001).

To understand the workings of group emotions in the complex, often hierarchically segmented and geographically dispersed settings of modern organizations, we also need a better understanding of how emotions disseminate through social networks in organizations. Despite pertinent calls (Casciaro, 2014) and some relevant theorizing and empirical work (Cacioppo, Fowler, & Christakis, 2009; Coviello et al., 2014; Fowler & Christakis, 2008; Kramer et al., 2014; Lawler, Thye, & Yoon, 2000; Lawler, Thye, & Yoon, 2008; Lawler & Yoon, 1998; Toegel et al., 2007; Totterdell, Wall, Holman, Diamond, & Epitropaki, 2004), our knowledge of the role of networks in group emotion emergence within organizations has remained underdeveloped. We do know that social networks are arenas in which intense, emotionally charged rivalries can develop among people with similar patterns of connections to others (cf. Burt, 1987). And networks can convey both positive and negative affect (cf. Homans, 1950; Roethlisberger & Dickson, 1939) with consequences for how groups are perceived in terms of the presence or absence of conflict (Labianca, Brass, & Gray, 1998). But we need to know more about how organizational structures and social networks affect the group emotions that prevail in organizations. The literature concerning multinational corporations, for example, highlights the tension between centralized power and subsidiary autonomy, but issues of emotion control across boundaries in such settings have yet to be addressed (Ghoshal & Westney, 2005). The extent to which group emotions are shaped by and shared throughout organizations is likely to be a function of both micro interaction patterns and larger scale social network structures (Tasselli, Kilduff, & Menges, 2015).

More research is needed on how different dimensions of group affect – the four Rs of group emotion research – play out and influence each other in organizational life. Whereas our knowledge about group emotion responses and the recognition of group emotions is relatively advanced, research on group emotion regulation and reiteration is still in its infancy. We need to understand differences in the effectiveness with which groups regulate their group-shared emotions. And we need to know the costs and gains of emotion regulation at the group level. For example, recent research suggests an interesting asymmetry between individual- and group-level emotion regulation. At the individual level, emotion suppression is an effortful, socially costly and mostly detrimental self-regulation strategy (Gross & John, 2003). But at the group level, emotion suppression appears, under certain circumstances, to be beneficial for the group's performance (Kunze & Menges, 2014).

Furthermore, more research is needed to understand emotional patterns in organizations – be it the emotional culture, the emotional climate, or the emotional fields of organizations. Corporate leaders have emphasized for guite some time that it is important to leverage such patterns to place their organization in competitively advantageous positions. For example, at a time when British Airways was facing difficulties, the then-new managing director, Robert Ayling, said that, to meet the competitive pressure, "the challenge is to create a climate of enthusiasm" (Financial Times, 1993). The founder of the watches and jewelry producing Swatch Group, Nicolas Hayek, explained the success of the company with these words: "The Swatch Group has a very special emotional culture. We produce beauty, sensuality, emotionality in watches - and we also produce high-tech on your wrists. Both, emotionality or poetry and high-tech are part of what we feel towards our customers. We love them genuinely."<sup>15</sup> There is also the possibility that emotional patterns in organizations may have adverse effect. For example, in the wake of the financial crises in the banking industry, journalists reported about a "culture of fear" (Moore, 2012) or a "climate of fear" (Luyendijk, 2012) at Barclays bank that presumably facilitated unethical and fraudulent behavior. Despite the apparent importance of emotional patterns for corporations, organizational researchers have just begun to pioneer research on the workings of emotional culture (Barsade & O'Neill, 2014). We need to better understand how emotional cultures/climates facilitate or interfere with organizational strategy and performance. Of particular importance in this context is the examination of cultures through perspectives that can

<sup>&</sup>lt;sup>15</sup> http://www.swatchgroup.com/group\_profile/nicolas\_g\_hayek\_message\_from\_the\_founder, accessed on January 6, 2015

accommodate both convergence and divergence of emotion, such as integration, differentiation and fragmentation perspectives that are featured within broader organizational culture research (Martin, 1992).

Finally, it is essential to raise the question of how scholarship across the different management research areas can benefit from and contribute to a better understanding of group emotions. For example, scholars of human resource management have generally neglected emotions, although there have been attempts to introduce emotions into this research field (e.g., Arvey, Renz, & Watson, 1998; Fox & Spector, 2002). Examinations of the role of human resource management practices in the convergence of group emotions are due. Furthermore, given the critical importance of emotions in marketing (Bagozzi, Gopinath, & Nyer, 1999), it is very likely that marketing scholars can benefit from the consideration of group emotions. Indeed, there is a need to examine how marketing, both internal and external, as well as public relations and the press in general affect the emotions that converge in groups. Finally, strategy research may benefit from the consideration of group emotions that arise, for example, in change processes (Kiefer, 2005) and during mergers and acquisitions, and, in turn, affect innovation and strategic agility (Huy, 2005, 2008). Group emotions may be key elements in overcoming inertia and creating momentum to propel organizations forward in their pursuit of competitive advantage (Dutton & Duncan, 1987; Jansen, 2004; Kelly & Amburgey, 1991; Seidel & O'Mahony, 2014). Hence, as emotion research expands beyond the small group level, the consideration of emotions is likely to gain importance for all realms of organizational science. Thus we anticipate that the affective revolution that has shaken up organizational behavior research (Barsade, Brief, & Spataro, 2003) will soon extend to issues relevant to other areas of organizational science.

### Conclusion

Group emotion research holds promise for advancing our understanding of a range of processes and outcomes of interest to those studying organizations. But the field has become entangled in Gordian knots concerning terms, levels of analysis, and processes of group emotions. By drawing from research across organizational science, psychology and sociology, we have endeavored to cut those knots, clearing the way for more research on group emotions, particularly at higher levels of analyses. With this review, we have clarified group emotion terminology, we have segmented group emotion research (the four R's), we have extended group emotions to higher levels of analysis, we have integrated different accounts of group emotion emergence (the four I's), and we have synthesized findings on the consequences of group emotions. We hope that this review will inspire readers to share a group emotion of enthusiasm for future group emotion research.

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## TABLE 1Organizational Group Emotion Research Primarily Focuses on Small Groups

Level of analysis	Organizational analogs (examples)	Recent studies about group emotions in organization science
Dyad	Peer relationships Supervisor-subordinate dyads Leader-follower dyads Frontline worker-customer dyads	Bono & Ilies (2006) Eberly & Fong (2013) Johnson (2009) Johnson (2008) Lewis (2000) Visser, van Kippenberg, van Kleef & Wisse (2013)
Small Group	Purposive groups Work groups Teams	Barsade (2002) Barsade, Ward, Turner & Sonnenfeld (2000) Bartel & Saavedra (2000) Bartunek, Huang & Walsh (2008) Cheshin, Rafaeli & Bos (2011) Cole, Walter & Bruch (2008) Huy (2002) Ilies, Wagner & Morgeson (2007) Keck (2014) Knight (2013) Mason & Griffin (2003) Metiu & Rothbard (2013) Pirola-Merlo, Hartel, Mann & Hirst (2002) Scott, Colquitt, Paddock & Judge (2010) Sy & Choi (2013) Sy, Choi & Johnson (2013) Sy, Cote & Saavedra (2005) Tee, Ashkanasy & Paulsen (2013) Totterdell (2000)

Level of analysis Organizational analogs (examples)

Recent studies about group emotions in organization science

		Totterdell, Wall, Holman, Diamond & Epitropaki (2004) Tsai, Chi, Grandey & Fung (2012) Tse, Dasborough & Ashkanasy (2008) van Kippenberg, Kooij-de Bode & van Ginkel (2010)
Mid-Size Group	Branches Units / departments Organizations	Arnaud & Schminke (2012) Barsade & O'Neill (2014) Choi, Sung, Lee & Cho (2011) Dutton, Worline, Frost & Lilius (2006) Maltis & Ozcelik (2004) Menges, Walter, Vogel & Bruch (2011)
Large Group	Industries Alliances Belief groups (social movements, political parties, religious groups,) Demographic groups (age, gender, race, nationality)	None

Note. Papers included in this table were obtained as a result of the literature analysis described in footnote 1.

### TABLE 2Selected Constructs in the Conceptual Space of Group Affect

Response	Recognition	Regulation	Reiteration
affective tone group emotion shared emotion collective emotion widespread emotion group-based emotion group mood collective mood shared mood emotional atmosphere emotional energy effervescence	emotional aperture intergroup empathy collective empathy	group emotional intelligence organizational emotional intelligence emotional capability emotional capital emotion carrying capability	emotional culture affective culture emotional climate affective climate emotional field affective field field of feeling emotional orientation

*Note.* Response, recognition, regulation and reiteration are the four R dimensions along which group emotion research can be sorted.

# TABLE 3Different Disciplines Provide Different Processes for the Emergence of Group Emotion

Academic discipline	Publication	Inclination	Interaction	Institutionalization	Identification
Organization	Arnaud & Schminke (2012)	Х			
Science /	Barsade (2002)		Х		
Organizational	Barsade & O'Neill (2014)	Ň	Х	Х	
Behavior	Barsade, Ward, Turner & Sonnenfeld (2000)	Х	х		
	Bartel & Saavedra (2000) Bartunek, Huang & Walsh (2008)		X		
	Bono & Ilies (2006)		X		
	Cheshin, Rafaeli & Bos (2011)		X		
	Choi, Sung, Lee & Cho (2011)		X		
	Cole, Walter & Bruch (2008)		Х		
	Dutton, Worline, Frost & Lilius (2006)			Х	
	Eberly & Fong (2013)		Х		
	Huy (2002)		Х		
	Ilies, Wagner & Morgeson (2007)		Х		
	Johnson (2008)		X X		
	Johnson (2009) Keck (2014)		X		
	Knight (2013)		X		
	Lewis (2000)		X		
	Maltis & Ozcelik (2004)		X	Х	
	Mason & Griffin (2003)		Х		
	Menges, Walter, Vogel & Bruch (2011)		Х		
	Metiu & Rothbard (2013)		Х	Х	
	Pirola-Merlo, Hartel, Mann & Hirst (2002)		Х		
	Scott, Colquitt, Paddock & Judge (2010)		Х		
	Sy & Choi (2013)		X		
	Sy, Choi & Johnson (2013)		X X		
	Sy, Cote & Saavedra (2005) Tee, Ashkanasy & Paulsen (2013)		X		
	Totterdell (2000)		X		
	Totterdell, Wall, Holman, et al. (2004)		X		
	Tsai, Chi, Grandey & Fung (2012)				
	Tse, Dasborough & Ashkanasy (2008)		Х		
	van Kippenberg, Kooij-de Bode & van Ginkel				
	(2010)				
Table 3 continu	ed				

Table 3 continued

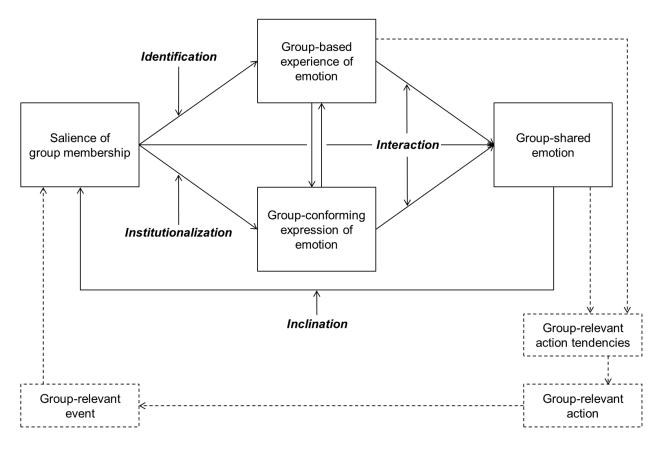
Academic Discipline Publication	Inclination	Interaction	Institutionalization	Identification
Visser, van Kippenberg, van Kleef & Wisse (2013)		Х		
Sociology Bensimon (2012) Chase & Walker (2013)		Х	X X	
Collett & Lizardo (2010)			x	
Lawler, Thye & Yoon (2008)		Х	X	
Lawler, Thye & Yoon (2000)		Х	Х	
Lively & Heise (2004)			Х	
Parker & Hackett (2012)			Х	
Simon & Nath (2004)			Х	
Stavrova, Fetchenhauer & Schlösser			Х	v
<i>Psychology</i> Bernache-Assolant, Laurin, Bouchet, et al. (2010) Bernsden & McGarty (2010)				X X
Bizman, Yinon & Krotman (2001)				X
Brown & Cehajic (2008)				X
Brown, Gonzalez, Zagefka, Manzi & Cehajic				
(2008)				Х
Caouette, Wohl & Peetz (2012)				Х
Cehajic, Brown & Gonzalez (2009)				Х
Combs, Powell, Schurtz & Smith (2009)				Х
Costarelli (2007) Crian, Hauston, Forr & Turner (2007)				X X
Crisp, Heuston, Farr & Turner (2007) Cwir, Carr, Walton & Spencer (2011)		Х		^
de Vos, van Zomeren, Gordijn & Postmes (2013)		Λ		Х
Doosje, Branscombe, Spears & Manstead (1998)				X
Doosje, Branscombe, Spears & Manstead (2006)				Х
Dumont, Yzerbyt, Wigboldus & Gordijn (2003)				Х
Gordijn, Yzerbyt, Wigboldus & Dumont (2006)				Х
Gunn & Wilson (2011)				Х
Harth, Hornsey & Barlow (2011) Harth, Kessler & Leach (2008)				X X
Heerdink, van Kleef, Homan & Fischer (2013)		Х		^
Imhoff, Bilewicz & Erb (2012)		Λ		Х
lyer, Leach & Crosby (2003)				Х
Kamans, Otten & Gordijn (2011)				Х
Kenworthy & Jones (2009)				Х
Kessler & Hollbach (2005)				Х
Kessler, Mummendey, Funke et al. (2010)		v		Х
Klep, Wisse & van der Flier (2011) Table 3 continued		Х		

Academic Discipline	Publication	Inclination	Interaction	Institutionalization	Identification
Discipline		5	2	2	
	Laham, Tam, Lalljee, Hewstone & Voci (2009) Leach, Iyer & Pederson (2006) Leonard, Mackie & Smith (2011)				X X X
	Leonard, Moons, Mackie & Smith (2011)				X
	Levin, Pratto, Matthews, Sidanius & Kteily (2012)				Х
	Livingstone, Spears, Manstead, et al. (2011)				Х
	Lücken & Simon (2005) Mackie, Devos & Smith (2000)				X X
	Maitner, Mackie & Smith (2006)				x
	Mallett & Swim (2007)				X
	McCoy & Major (2003)				Х
	McGarty, Pedersen, Leach et al. (2005)				X X
	Miller, Smith & Mackie (2004) Miron, Branscombe & Schmitt (2006)				X
	Moons, Leonard, Mackie & Smith (2009)				X
	Musgrove & McGarty (2008)				Х
	Pennekamp, Doosje, Zebel & Fischer (2007)				Х
	Petrocelli & Smith (2005) Ray, Mackie, Rydell & Smith (2008)				X X
	Rime, Paez, Basabe & Martinez (2010)		Х		Λ
	Roccas, Klar & Liviatan (2006)				Х
	Rotella & Richeson (2013a)				Х
	Rotella & Richeson (2013b)				Х
	Rothschild, Landau, Molina, Branscomb, et al. (2013)				Х
	Rydell, Mackie, Maitner, et al. (2008)				Х
	Sani (2005)				X
	Schmitt, Miller, Branscombe & Brehm (2008)				Х
	Seger, Smith & Mackie (2009)				Х
	Seger, Smith, Kinias & Mackie (2009)				X X
	Shepard, Spears & Manstead (2013a) Shepard, Spears & Manstead (2013b)				X
	Smith, Seger & Mackie (2007)				X
	Tagar, Federico & Halerpin (2011)				Х
	Tam, Hewstone, Cairns, et al. (2007)				Х
	Tapias, Glaser, Keltner, Vasquez & Wickens				Х
	(2007) Tarrant, Dazeley & Cottom (2009)				Х
	Tausch, Becker, Spears, et al. (2011)				X
	Tropp (2003)				Х
Table 3 continue	ed				

Academic Discipline	Publication	Inclination	Interaction	Institutionalization	Identification
	van der Schalk, Fischer, Doosje et al. (2011) van Leeuwen, van Dijk & Kaynak (2013)		Х		х
	van Zomeren, Fischer & Spears (2007)				Х
	van Zomeren, Spears, Fischer & Leach (2004)				Х
	Wang, Minervino & Cheryan (2012) Weisbuch & Ambady (2008)				X X
	Weisbuch & Ambady (2006) Wohl & Branscomb (2005)				X
	Wohl & Branscombe (2008)				X
	Wohl & Branscombe (2009)				X
	Wohl, Branscombe & Reysen (2010)				Х
	Wohl, Giguere, Branscombe & Mcvicar (2011)				Х
	Ysseldyk, Haslam, Matheson & Anisman (2011)				Х
	Zebel et al. (2007)				Х

*Note.* Inclination, interaction, institutionalization, and identification are the four I processes of group emotion emergence. Papers included in this table were obtained as a result of the literature analysis described in footnote 1.

FIGURE 1 A Model of Group Emotion Emergence



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