Group Affect

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Abstract

Over two decades of research has indicated that group affect is an important factor that shapes group processes and outcomes. We review and synthesize research on group affect, encompassing trait affect, moods, and emotions at a collective level in purposive teams. We begin by defining group affect and examining four major types of collective affective constructs: (*a*) convergence in group affect; (*b*) affective diversity, that is, divergence in group affect; (*c*) emotional culture; and (*d*) group affect as a dynamic process that changes over time. We describe the nomological network of group affect, examining both its group-level antecedents and group-level consequences. Antecedents include group leadership, group member attributes, and interactions between and relationships among group members. Consequences of group affect include attitudes about the group and group-level cooperation and conflict, creativity, decision making, and performance. We close by discussing current research knowns, research needs, and what lies on the conceptual and methodological frontiers of this domain.

INTRODUCTION

The body of research on group affect, which includes trait affect and collective moods and emotions, has developed significantly over the past 25 years. This development has led to an increased recognition not only that group affect exists, but that it is an essential piece of understanding group dynamics (Barsade & Gibson 1998; Collins et al. 2013; George 1990, 1996; Kelly & Barsade 2001; Knight & Eisenkraft 2014). Group affect no longer lives on the fringes of research on groups and teams; rather, it has become increasingly central to this domain. Scholars have developed conceptual models and conducted empirical studies in the field and in the lab to explore the antecedents, consequences, and mechanisms of group affect (Barsade & Gibson 2012, Collins et al. 2013). And yet, although there has been much progress, our understanding of this complex phenomenon is still incomplete, and there remains significant room for additional exploration.

We focus our review on theory and research involving affect, moods, and emotions at a collective level in purposive groups. By purposive group, we mean "an intact social system, complete with boundaries, interdependence for some shared purpose, and differentiated member roles" (Hackman & Katz 2010, p. 1210). Purposive groups are ubiquitous in contemporary organizations, charged with completing a broad range of tasks over diverse time horizons. A long-term manufacturing team, a team developing a new piece of software over the course of a year, or an action team of healthcare workers assembled to complete a surgical procedure in just a few hours—all of these are purposive groups in which group affect can be an intrinsic part of group functioning. Given the overlap between the literatures on work teams and purposive groups, we use the terms team and group interchangeably throughout our review, which covers research conducted in both the lab and the field.

We begin by first addressing the question, What is group affect? We then highlight four prominent types of affective constructs at the collective level. Next, we review how theorists and researchers have mapped the nomological network of group affect—that is, the web of relationships between group affect and other group-level antecedents and consequences. We conclude by summarizing a few particularly consistent findings of research on group affect, identifying areas in which additional research is most needed, and highlighting promising ideas on the frontiers of theory and research on collective affect.

WHAT IS GROUP AFFECT?

In their conceptualization of group affect and review of the literature, Barsade & Gibson (1998) characterized group affect in two basic ways. The first was what they termed a "top-down" approach, in which group affect was viewed as "a whole," with characteristics and properties of the group acting upon the emotions of the individuals within it. The second process, which they termed a "bottom-up" approach, manifested as group affect that emerged from the "sum of its parts" and was the result of the aggregate of individual group members' affective states and traits. Kelly & Barsade (2001) further developed this conceptualization, integrating several constructs into a comprehensive model of group affect that delineated the order and processes through which bottom-up and top-down forces work in concert to create emotion at a collective level. Importantly, their model identified both implicit and explicit affective transfer processes—including emotional contagion, behavioral entrainment, and vicarious affect—that can serve as conduits for transferring affect among group members. They also discussed how the group's context, such as technology, physical space, and intergroup relations, could also influence group affect and vice versa.

Combining these approaches, we review theory and research on a number of constructs and processes that are most relevant for scholars interested in studying the affect of a group. In much the same way that the term affect is an umbrella term that encompasses trait affect, state affect, and discrete emotion (Ashforth & Humphrey 1995, Barsade & Gibson 2007, Young 1961), throughout our review we use the term group affect broadly, as an umbrella term that encompasses several different forms of collective-level affective constructs.

GROUP AFFECT: COLLECTIVE-LEVEL AFFECTIVE CONSTRUCTS

Existing research has examined a range of affective constructs. We highlight the most prominent forms of group affect and review empirical studies that have examined these conceptualizations. Specifically, from the bottom-up, compositional perspective, group affect can manifest as (*a*) convergence and (*b*) affective diversity, that is, divergence in group members' individual affect. From the top-down perspective, group affect can manifest as (*c*) emotional culture and (*d*) group affect as a dynamic process that changes over the course of the group's life span. **Table 1** summarizes these different affective constructs.

Affective Group Constructs as Convergence in Individual Group Member Affect

The most well-studied form of group affect, by far, is as an affective experience that is shared, or held in common, by the members of a group or team. In this conceptualization, a collective positive or negative mood emerges in a group because each group member feels a similar level of individual positive or negative mood; that is, individual group members converge in their affective experiences at a given point in time. A conceptualization of group affect as a shared construct gained traction in organizational behavior with the work of George (1990, 1995, 1996). George's (1990, 1996) discussion of group affect, or group affective tone, specified convergence in individual feelings as a necessary precondition for conceptualizing collective group affect.

George (1990) emphasized the role of compositional effects to explain how and why individual group members' affective states converge. Specifically, George drew from Schneider's (1987) attraction-selection-attrition model to argue that (*a*) people seek out work groups composed of similar others with respect to affect, (*b*) organizations and work groups choose to bring aboard people who are similar in affect, and (*c*) those members of a work group most dissimilar in affect are most likely to turn over. Because of these selection effects, group composition becomes increasingly homogeneous over time with respect to affect (George 1996). George's (1990) findings regarding the relative homogeneity of state affect in work groups were consistent with the idea that long-standing groups are characterized by a unique, homogeneous collective affect.

The attraction-selection-attrition model is particularly useful in explaining why the members of long-term groups converge in affect. However, the majority of theory and research to date on homogeneous affect has focused on convergence in mood (i.e., state affective experience) rather than trait affect. Specifically, research on mood convergence has focused on the mechanisms involved in momentary affective transfer processes (e.g., Elfenbein 2014, Kelly & Barsade 2001), such as emotional contagion and similar group member reactions to shared events (Weiss & Cropanzano 1996). Drawing from theory and research on primitive emotional contagion (i.e., Hatfield et al. 1993, 1994), which involves the largely automatic and subconscious transfer of emotions from person to person, organizational researchers have examined the mechanisms that underlie affective transfer across a broad spectrum of groups working in a wide range of contexts (e.g., Barsade 2002, Bartel & Saavedra 2000, Totterdell et al. 1998). Emotional contagion occurs through automatic mimicry of the facial expressions, voice, and body movements of others (e.g.,

Table 1 Group affect: collective-level affective constructs

Collective-level affective constructs	Description
Affective convergence	Affect that is shared, or held in common, by the members of a group or team
Affective diversity/ divergence	The configuration of affect across group members that is not shared, nor held in common, by members of a group or team
Emotional (affective) culture	Behavioral norms, artifacts, and underlying values and assumptions reflecting the actual expression or suppression of the discrete emotions comprising the culture and the degree of perceived appropriateness of these emotions, transmitted through feeling and normative mechanisms within a group
Affective dynamism	The pattern of change over time in group affect owing to processes that lead collective affect to emerge and fluctuate

Dimberg et al. 2000, Hess & Fischer 2014, Lundqvist & Dimberg 1995). This mimicry then leads the perceiver to actually feel the emotion, effectively catching the emotion of the other person.

Initial research on affective convergence in work groups focused on documenting the existence of the phenomenon and exploring some of the antecedents and consequences of mood at a collective level. For example, using an experience sampling approach, Totterdell et al. (1998) found emotional convergence in field settings, with a significant, positive relationship between individual mood and group mood over time in nursing and accounting teams, controlling for shared problems that group members faced together. In an experimental study of emotional contagion among business student groups engaging in a group managerial negotiation, Barsade (2002) manipulated the mood expressed by a trained confederate, tracking emotional contagion in the group with minute-by-minute video-coder ratings, showing how one group member's mood can infect the moods of other group members and lead to a shared group mood. Several additional studies support the basic idea that individuals tend to converge in their affective experiences during group interactions. For example, in a field study of 70 work teams, Bartel & Saavedra (2000) documented convergence in group members' moods. And more recent research has extended this idea by showing how other variables, such as individual differences or attitudes toward the group, may strengthen or weaken the tendency for affect to transfer among group members (e.g., Ilies et al. 2007), a topic we discuss in greater detail below.

Affective Group Constructs as Affective Diversity: Divergence in Individual Group Member Affect

Convergence in individual group member affect has been the most widely studied conceptualization of an affective construct at the collective level; however, it is not the only manifestation of group affect. Although George's (1990, 1996) conceptualization emphasized consistency and similarity in affective experiences among work group members, other early conceptual models of the emergence of group affect noted that, even though groups do have a natural tendency to converge, a range of forces acts upon them, which can lead group members to feel differently from one another at any given point in time (e.g., Barsade & Gibson 1998, Kelly & Barsade 2001). Relative to theory and research on affective convergence in groups, however, there has been less research on affective diversity, or divergence, in groups. This is surprising, given the amount of attention that organizational scholars have paid to diversity in other individual attributes (van Knippenberg & Schippers 2007, Williams & O'Reilly 1998).

Barsade et al.'s (2000) field study of affective diversity in top management teams of large and prominent organizations (i.e., Fortune 500 companies) stands as an exception to the heavy focus on convergence in the group affect literature. Also grounding their predictions in similarity-attraction theory (i.e., Byrne 1971), the authors proposed competing hypotheses about the influence of affective diversity on group functioning. They examined the consequences of diversity in team members' trait positive affectivity and found that positive affective diversity was significantly related to team processes (i.e., related positively to top management team conflict and negatively to team cooperativeness) and marginally negatively related to the top management team outcome of corporate financial performance. Barsade et al.'s analysis further indicated that the impact of diversity on team processes and outcomes was moderated by the average trait positive affectivity of the team (although, as predicted, negative trait affectivity had no influence on these outcomes). In a study of nuclear power plant crews performing a crisis simulation, Kaplan et al. (2013) found effects similar to those reported by Barsade et al. (2000). Specifically, Kaplan et al. found that diversity in trait positive affectivity hindered group effectiveness. A mediating mechanism that connected affective diversity to performance was the degree to which participants experienced negative emotion during the crisis simulation, with greater diversity in trait positive affectivity leading to greater negative emotion and, ultimately, to poorer performance.

Recent lab-based research has opened additional promising directions for understanding the meaning and effects of affective diversity or divergence in affect within groups. In a series of studies that manipulated the degree of affective diversity in pictures of group members, Magee & Tiedens (2006) found that external observers judged groups in which there was greater diversity in emotion among the group members as sharing less of a common fate and holding less shared responsibility for group outcomes. Their study suggested that the degree of affective diversity among people is an indicator that people use when judging the "groupiness" of a group. Weisbuch & Ambady (2008) took a different approach to studying affective diversity, focusing on the explanatory process of emotional contagion. They proposed and found that when focusing on an out-group member, the process of contagion can lead to affective divergence, rather than affective convergence. In a similar vein, Van Kleef and colleagues' (Van Kleef 2009, Van Kleef et al. 2010) model of emotions as social information highlights the idea that contextual factors, such as whether individuals encounter one another in a cooperative or a competitive context, shape whether they will converge to a common affective experience or diverge in their feeling states. Last, Elfenbein's (2014) model of affective linkage highlights, among other effects, the nuanced interplay of affect and group categorization that can lead to affective convergence or divergence.

In contrast to models grounded in similarity-attraction theory and divergent emotional contagion, which suggest that affective diversity will impede group functioning, a few theoretical articles have proposed that divergence in group member affect could enhance group performance on tasks that require divergent thinking and creativity. Tiedens et al. (2004) proposed a conceptual model of the antecedents and consequences of group affective diversity, which they referred to as "emotional variation." Adopting a top-down and bottom-up perspective of group affect that is similar to Barsade and colleagues' models of group affect (i.e., Barsade & Gibson 1998, Kelly & Barsade 2001), Tiedens et al. highlighted that compositional and contextual forces can yield diversity in group members' affect in certain situations related, for example, to social hierarchies and differentiated role structures.

More generally, scholars are just beginning to explore divergent group affect, a topic essential to understanding behavior in teams. Notwithstanding theoretical arguments regarding the benefits of diversity in affect (e.g., George & King 2007, Tiedens et al. 2004), the little empirical research that scholars have published to date (i.e., Barsade et al. 2000, Magee & Tiedens 2006)

indicates that differences in group member affect likely disrupt the functioning of purposive groups, adversely impacting group effectiveness.

Emotional (Affective) Culture

A key top-down force that drives group affect is emotional culture (based on normative group forces; also called affective culture) (Barsade & Gibson 1998, 2007, 2012; Kelly & Barsade 2001). The most comprehensive definition of the construct is the "behavioral norms, artifacts and underlying values and assumptions reflecting the actual expression or suppression of (the discrete emotions comprising the culture[1]) and the degree of perceived appropriateness of these emotions, transmitted through feeling and normative mechanisms within a social unit" (Barsade & O'Neill 2014, p. 558).

Drawing from the literature on affect management, Barsade & Gibson (1998) and Kelly & Barsade (2001) highlighted the role of normative processes in groups that are inherent to the emotional culture definition. The study of these normative processes began with Hochschild's (1983) classic study of the emotional labor of flight attendants, and the idea that emotional culture is the set of shared norms, sometimes prescribed by management, that governs how organizational members express affect. A related concept of emotional display norms or rules (Ekman 1973) in groups was explored in a variety of contexts, including bank tellers and salespeople (Rafaeli & Sutton 1989), bill collectors (Sutton 1991), Disney employees (Van Maanen & Kunda 1989), McDonald's counter employees (Leidner 1993), nurses (Diefendorff et al. 2011), and physicians (Smith & Kleinman 1989). Emotional display norms constitute one manifestation of emotional culture, and the intersection of an individual's emotional experiences and expressions with emotion norms prescribed by the group resonated strongly in the field (Ashforth & Humphrey 1995).

A recent longitudinal field study at a large long-term care facility was one of the first to explicitly examine the construct of emotional culture as more formally and broadly defined (Barsade & O'Neill 2014). In this study, the authors predicted and found that a stronger culture of companionate love—the behavioral norms, artifacts, and underlying values and assumptions reflecting the actual expression or suppression of affection, caring, compassion, and tenderness—predicted greater employee teamwork and satisfaction and reduced employee emotional exhaustion and absenteeism. Furthermore, they found that this culture of love among employees rippled out to influence patients and their families as well. In units with a stronger culture of companionate love, patients experienced more positive moods, reported a higher quality of life, had more satisfied family members, and required fewer trips to the emergency room. Another recent study examined the impact of emotional culture on both work and nonwork outcomes in fire stations, finding that an emotional culture of joviality and an emotional culture of companionate love complemented one another, relating to less employee risk-taking behavior outside of work (O'Neill & Rothbard 2014). An emotional culture of joviality also had an independent effect on team performance and was associated with increased coordination and also increased risk taking on the job.

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[1]Barsade & O'Neill (2014) examined and defined the emotional culture of companionate love, and we have extrapolated from their definition to emotional culture more broadly.

Dynamic Views: The Ebb and Flow of Affect in Groups over Time

Although the majority of empirical research has focused on static group affect, Kelly & Barsade (2001) emphasized dynamic affective emergence—how, over time, the nature of collective affect can change. They integrated the effects of affective (emotional) culture and composition, suggesting that group affect, over time, is dynamic and a product of these bottom-up and top-down forces. Specifically, they posited that momentary affective experiences feed back into the group's history, shaping the appraisals that group members make of future events and experiences. In recent years, theorists have further expanded upon the idea that momentary experiences of group affect become inputs into future group affective experiences (Hareli & Rafaeli 2008, Walter & Bruch 2008), and some, although not much, empirical research has examined the dynamic interplay of affect and group member experiences.

Walter & Bruch (2008), for example, proposed a cyclical conceptual model of group positive affect in which similarity of positive affect (i.e., the extent to which group members converge in positive affect) is reciprocally related to the quality of interpersonal relationships among group members. High-quality relationships, Walter & Bruch (2008) posited, facilitate emotional contagion and convergence in group positive affect, and convergence in group positive affect further enhances the quality of interpersonal relationships among group members. Through these reciprocal relationships, group positive affect and group relationship quality are embedded in a virtuous cycle. In a related conceptualization of cyclical group affect, Hareli & Rafaeli (2008) argued that individual moods and emotions influence the members of a group, sparking emotional reactions and responses that may be consistent with either convergence (i.e., through contagion) or divergence (i.e., through reactivity) in mood. These reactions to an initial emotional expression then further perpetuate and spiral through the group, contributing to an ebb and flow of affective responses across group members over time.

Last, although there has been very limited empirical research on affective dynamics in groups and teams, several authors have suggested that affect may play a role in how groups and teams change over time (e.g., Barsade & Gibson 2007, George 2002, Gersick 1991, Knight 2015, Moreland 1987, Tuckman 1965). Knight (2015), for example, argued that group affect influences how group members regulate their activity over time when facing a deadline. In a field study of military teams facing a deadline in a prestigious physical and tactical competition, Knight found that shared positive mood at the temporal midpoint of the project prompted a decline in team members' focus on an exploration of new strategies, thus facilitating an effective developmental trajectory and enhanced team performance. Shared negative mood at the midpoint, in contrast, sustained team members' exploratory efforts even as their deadline drew near and thus hindered team performance.

The dearth of empirical research on patterns of affective dynamics over time in teams is a significant limitation of existing theory and research on group affect. Existing conceptualizations of group affect all highlight that affect and group processes are dynamically intertwined as groups move through time (e.g., De Dreu et al. 2001, George 2002, Kelly & Barsade 2001). Furthermore, theorists have speculated that feedback loops play a prominent role in understanding the role that group affect plays in group functioning (e.g., Hareli & Rafaeli 2008, Walter & Bruch 2008). Without empirical research on group affect over time, however, the temporal dynamics of group affect and group processes remain relatively unknown. More research is needed to explore how a group's affective history is built over time and how momentary affective experiences in groups shape subsequent affective experiences.

Summary

Above we review four different constructs of affect at the collective level, two of which focus on group affect stemming from aspects of group composition and two of which focus on group affect as a contextual factor that influences group members (and summarize these four constructs in **Table 1**). The convergence of individual dispositions or moods has been the most heavily studied manifestation of group affect to date. Compelling theoretical models and some empirical evidence suggest, however, that other group-level affective constructs meaningfully influence group processes and outcomes. In particular, affective diversity should receive further empirical attention in the future. From a top-down perspective, a greater focus on the affective values, norms, and deep underlying assumptions of differing types of emotional culture will add an important perspective to the group affect (and culture) literatures. Last, the least developed aspect of group affect, understanding the dynamic interplay of group affect and other group characteristics, in which each influences the other, is absolutely critical to gaining a complete understanding of the nature of affect in groups and teams.

THE NOMOLOGICAL NETWORK OF AFFECTIVE GROUP CONSTRUCTS: ANTECEDENTS

As described above, one primary focus of early theory and research on affect in groups was explaining and documenting how and why affect emerges at a collective level. We review here three antecedents of the emergence of collective-level affective constructs that have garnered the most attention from researchers to date: (*a*) group leadership, (*b*) attributes and attitudes of group members, and (*c*) relationships and interactions among group members.

Group Leadership

Several studies suggest that formal leaders have a disproportionate impact on the nature of affect that emerges in a group or team. By occupying a position of high visibility in the group and holding formal power, which may dictate patterns of group interactions, group leaders are likely to infect the members of a group with their individual affective states. Furthermore, through their roles, leaders may shape the group's emotional culture with respect to if, when, and how group members should express their experienced moods and emotions during group interactions. For these reasons, leadership theorists and researchers suggest that management of the group's affective dynamics is a key function that group leaders fulfill (e.g., Humphrey 2002, Pescosolido 2002).

In support of the idea that leaders influence the development of group affect, George (1995) found in an early field study of sales managers that leader positive mood was positively and significantly related to the collective positive mood of the sales group. Furthermore, both leader positive mood and the positive mood of the group were positively associated with sales group performance. Relatedly, Sy et al. (2005) used an experimental design in which they manipulated group leader mood to investigate the influence of leader affect on group affect, processes, and outcomes. Consistent with George's (1995) findings and prior research on emotional contagion (i.e., Barsade 2002), Sy et al. (2005) found that leader mood significantly influenced the shared, collective mood of the group and also was related to group processes and outcomes. Other studies have replicated these results, showing that leaders infect the members of their groups with their affective states, driving the nature of group affect that emerges (e.g., Chi et al. 2011, Johnson 2009, Seong & Choi 2014). To organize and extend these findings, Sy & Choi (2013) recently proposed the leader activation and member propagation model, in which leaders spark processes of mood

contagion, which then ripple out and propagate among the members of the group. Sy & Choi's model accounts for compositional aspects of the group (e.g., group diversity, the similarity of the leader and group members) and personal attributes of team members (e.g., susceptibility to emotional contagion) to explain the nuances of when and how shared group mood emerges.

One notable area in which group leadership and affect seem to be particularly tightly intertwined is research on charismatic leadership. Recent studies of leader charisma have found that affect is a key mechanism through which charismatic leaders influence group performance (e.g., Bono & Ilies 2006, Erez et al. 2008, Pastor et al. 2007, Sy et al. 2013). Erez et al. (2008), for example, argued that the characteristics of charismatic leaders lead them to both experience and express vivid, positive, high-arousal emotions, which are easily transferred to followers and lead followers to experience shared positive moods. Specifically focused on groups, Sy et al. (2013) proposed and found reciprocal relationships among leader charisma and group positive and negative mood; specifically, emotionally expressive leaders cultivated shared group mood and were perceived as charismatic. Additionally, group positive mood enhanced immediate judgments about leader effectiveness, which contributed to subsequent perceptions of leader charisma. Negative mood largely had the opposite effects, decreasing followers' perceptions of leader effectiveness and charisma. Together, these studies suggest that moods and emotions may be the medium through which charisma influences the attitudes, motivation, and behaviors of group members.

Last, there have been some interesting preliminary investigations of moderators of the relationship between a leader's mood and the characteristics of a team. For example, Van Kleef et al. (2009) found that leader anger led to better team performance for teams with lower average levels of agreeableness, whereas leader happiness led to better team performance for teams with higher average levels of agreeableness. As Sy & Choi's (2013) model similarly suggested, the relationship between the leader's affective displays and group composition is one promising direction for research on the intersection of group affect and leadership.

Personality Traits and Demographic Characteristics of Individual Group Members

In addition to documenting a tendency for the members of groups to converge in affect during group interactions, researchers have also shown that the extent to which there is group convergence or divergence depends in part on individual group member personality traits and demographic characteristics. With respect to personality characteristics, researchers have drawn from Doherty's (1997) conceptualization of individual differences in susceptibility to emotional contagion to argue that individuals highly susceptible to contagion are more likely to share affective experiences with their teammates than are individuals who are less susceptible (i.e., Ilies et al. 2007, Sy & Choi 2013). Ilies et al. (2007) also proposed that collectivistic tendencies—a relatively stable individual difference—moderate the link between individual and group affect. In a field study of teams, these authors found support for their predictions that greater collectivistic tendencies would lead to more contagion. In an experimental study, Barsade (1995) explored how additional personality characteristics (specifically, self-monitoring) influenced the extent to which group members converged toward the mood of the group. She found that high self-monitors were more likely to become infected with the mood displayed by a confederate than were low self-monitors. Most recently, Sy & Choi (2013) found that group diversity in extraversion and neuroticism, personality characteristics that have affective components within them (Watson 2000), inhibits convergence in group member affective states.

Although several studies have examined how personality differences shape the emergence of group affect, research on the intersection of individual demographic attributes and the emergence

of group affect is more limited. Totterdell and colleagues (i.e., Totterdell 2000, Totterdell et al. 1998) showed that the demographic attributes of group members moderate the link between individual affect and the collective affect that emerges in a group. Specifically, Totterdell and colleagues' studies found that group member age is related to the linkage between the individual and the group, with older group members more likely to be prone to emotional contagion from the group. Taking a different approach, Hentschel and colleagues (2013) examined perceptions of team diversity as an antecedent to group affect, proposing and finding that when group members see their team as highly diverse, they experience more shared negative feelings. These findings are in line with more general social-functional perspectives on affect in groups (e.g., Fischer & Manstead 2008, Keltner & Haidt 1999), which highlight that sharing affective states may have enabled early humans to more readily identify in-group from out-group members. If individuals differ on salient demographic attributes, a resulting categorization of one another as out-group members might inhibit convergence in their affective states. Some research on the mimicry of emotional states provides support for these ideas (e.g., van der Schalk et al. 2011, Weisbuch & Ambady 2008). However, the findings of Magee & Tiedens (2006) suggest that similarity in affect can override prominent demographic characteristics (i.e., gender, race) in shaping individuals' perceptions of group boundaries. Further research is needed to tease apart the links between demographic differences, personality differences, and collective affect.

Aside from individual demographic and personality characteristics, research also suggests that individual attitudes toward the group—specifically, the extent to which a group member feels positively about or is committed to his or her group—may moderate the link between an individual group member's affect and the collective-level affect of the group. Totterdell et al. (1998) found that team members who were more committed to their team and perceived their team environment more positively had greater affective convergence. In a study of cricket teams during a competition, Totterdell (2000) replicated the finding that group members who are highly committed to the group are more likely to share affective experiences with other group members. In addition, Tanghe et al. (2010) found in two studies, one survey based and another scenario based, that group identification is positively related to the convergence of group member affect.

Existing research thus suggests that there is meaningful variation in the extent to which group members are influenced by the affective experiences of others in the group. Individual characteristics—including personality attributes, demographic attributes, and individual attitudes toward the group—moderate the relationship between an individual group member's affect and the collective-level affect of the group.

Relationship Structure and Frequency of Interactions Among Group Members

Foundational theories of emotional contagion (e.g., Hatfield et al. 1994) describe how several mechanisms, including facial mimicry, emotional comparison, and empathy, contribute to convergence in affect in groups. Extending these ideas, researchers have found that variant types and structural patterns of interactions between and relationships among group members influence the extent to which group members converge in affect at a given point in time.

In their study of affective convergence in work groups, Bartel & Saavedra (2000) found that convergence in mood among group members is associated with both task and social interdependence: the more interdependent the group, the more convergence in group members' moods. Furthermore, these authors found that membership stability and mood regulation norms predicted mood convergence. In his study of cricket teams, Totterdell (2000) also examined the underlying assumption of interdependence among group members, which is key to most explicit mechanisms of emotional contagion. He found that during times of interdependent, collective

action throughout the course of the cricket match, convergence in team members' affect was greatest. In experimental work that provides further support for these ideas, Klep et al. (2011, 2013) showed that manipulations of affect in which group members interacted interdependently yielded stronger effects on group processes than did manipulations of affect that individual group members experienced in isolation.

Reflecting the importance of interdependence for emotional contagion, Totterdell et al. (2004) theorized that interpersonal relationships among group members act as conduits through which affect flows in groups. These authors found support for the importance of social network ties for affective convergence in work groups in data from workers in a vehicle manufacturing company. In particular, employees' work ties and their structural equivalence were positively related to similarity of mood. Furthermore, the overall structure of the network, in terms of size and density, was related to the moods that workers experienced. Moving beyond face-to-face interaction patterns, Cheshin et al. (2011) examined the emergence of shared group mood among group members working together virtually in a computer-based negotiation task and found that both text-based and behavior-based cues lead to emotional contagion (even in the absence of direct, in-person interactions).

Thus, there is support for within-group variation in how tightly connected an individual group member's affect is to the collective group's affect based on the patterns of interactions within the group and the structure of relationships among group members. The more interconnected a group member is with others in the group, the more likely it is that he or she will share affective experiences with others.

THE NOMOLOGICAL NETWORK OF AFFECTIVE GROUP CONSTRUCTS: CONSEQUENCES

There is a growing literature on the consequences of group affective constructs. To date, however, there are some consistent and some contested findings regarding how specific forms of group affect relate to group processes and outcomes (Collins et al. 2013, Kozlowski & Ilgen 2006). Below we review research on how group affective constructs influence four broad categories of group processes and outcomes: (*a*) attitudes, cognitions, and behavior toward the group; (*b*) member interactions, cooperation, and conflict; (*c*) group creativity and decision making; and (*d*) group effectiveness and performance.

Group Member Attitudes, Cognitions, and Behavior Toward the Group

Given the close conceptual and empirical associations between affect and satisfaction at the individual level (i.e., Brief & Weiss 2002, Locke 1976), it is not surprising that group researchers have similarly examined the relationship between group affect and outcomes such as group morale, satisfaction, and commitment. Much like the findings at the individual level, researchers studying groups have found a positive relationship between positively valenced affective constructs and the positive attitudes that members hold toward their groups. For example, in a study of leadership and teams, Chi et al. (2011) found that team members who shared positive affective experiences together (i.e., teams high in team positive mood) were more satisfied with their teams, more committed to their teams, and engaged in a greater degree of helping behavior than members of teams who did not share common positive affective experiences. As described above, Barsade & O'Neill (2014) found that a stronger emotional culture of companionate love among staff members in long-term care units predicted greater employee satisfaction and teamwork. Similarly reflecting the behavioral manifestations of these attitudes, a few studies (George 1990, Mason &

Griffin 2003) have shown that shared positive feelings among group members decrease withdrawal behaviors, such as absenteeism (Barsade & O'Neill 2014). Somewhat differently, Gibson (2003, p. 2153) examined the relationship between shared group positive affect and the formation of group efficacy, "a group's collective belief in its capacity to perform a task." In a lab-based simulation and a field study, Gibson (2003) found support for the idea that shared positive affect in groups, which promotes optimism and activates positive cognitions about group experiences in the past, increases group efficacy.

Relative to studies of collective positive affective constructs, there has been less evidence of the influence of negative collective affective constructs on group member attitudes, cognitions, and behavior toward the group. However, in one study of negative discrete group emotion, Duffy & Shaw (2000) found that mean group envy—that is, the degree to which each group member felt envy toward other members of the group—had a negative influence on group cohesiveness and group potency, which in turn were positively related to group member satisfaction and performance.

Member Interactions: Cooperation, Conflict, and Coordination

Group affect has been found to influence group dynamics, including group cooperation, conflict, and coordination. Drawing from theory and research on the influence of positive affect on interpersonal relations, Barsade et al. (2000) found that the top management team's trait positive affect and the diversity in the team's trait positive affect interacted to shape intrateam interactions, including team conflict and cooperativeness. The form of the interaction indicated that highly diverse teams low in average trait positive affect experienced the most significant adverse outcomes. In an experimental study of emotional contagion in groups, Barsade (2002) also found that positive emotional contagion was positively related to multiple measures—self-report ratings, video-coder ratings, and team member cooperative allocation of funds—of intragroup cooperativeness and negatively related to intragroup conflict in a leaderless group negotiation task. Negative emotional contagion had the opposite result. Providing further support for the association of group affect and group conflict, Choi & Cho (2011) proposed and found that group negative affect serves a critical bridging role between task conflict and relationship conflict in work groups.

Grawitch et al. (2003b) used a mood-induction approach in a laboratory study to examine the differential impact on group processes and outcomes of shared positive, shared negative, and neutral moods. The results of this study suggested that the members of groups in a positive mood condition were more involved in the task and engaged in a greater degree of consensus-seeking behavior, relative to the members of groups in a negative or neutral mood condition. Relatedly, in the lab-based study mentioned above, Sy et al. (2005) found that groups led by an individual for whom a positive mood had been induced showed higher shared positive group mood and were better coordinated, compared to groups led by an individual for whom a negative mood had been induced. Interestingly, the authors found that groups experiencing shared negative feelings expended more effort on the task than did groups experiencing shared positive feelings.

In general, the positive findings reported above are consistent with Kelly & Barsade's (2001) model of group affect, which posited that the way in which group members interact with one another and their affective experiences are reciprocally related. In groups in which members share positive affective experiences, group interaction patterns are likely to be positive and cooperative. Negative affect, however, has led to more varied results. Although there are some effects of negative emotional contagion on group dynamics (e.g., Barsade 2002, Sy et al. 2005), positive affect generally has a more direct influence on group processes and outcomes when examining

group convergence or divergence. This comports with the evidence that there is a minimal significant relationship between trait negative affectivity and interpersonal outcomes, and trait negative affectivity instead influences more intrapersonal variables, such as stress (e.g., Barsade et al. 2000, Grawitch et al. 2003b, McIntyre et al. 1991, Watson & Pennebaker 1989, Watson et al. 1992). Indeed, McIntyre et al.'s (1991, p. 67) review indicated that trait positive affect, but not trait negative affect, is related to "diverse indicators of social activity and interpersonal satisfaction," whereas trait negative affect, but not trait positive affect, is related to "somatic complaints, psychopathology, and self-reported stress."

Knight & Eisenkraft's (2014) meta-analysis of research on group positive and negative affect provides additional explanation for mixed findings regarding the effects of group affect on interpersonal dynamics and performance. Grounded in a social-functional perspective, Knight & Eisenkraft (2014) found that positive affect has consistent positive effects on group social integration and task performance; in general, groups that share positive feelings are cohesive and perform at a high level. In contrast, the effects of negative affect on social integration and task performance are sensitive to contextual factors, including the source of affect (external or internal to the group) and the life span of the group (one-shot or ongoing). Shared negative feelings that stem from external sources or occur in one-shot groups promote social integration and task performance, whereas shared negative feelings that stem from internal sources or occur in ongoing groups undermine social integration and task performance. The results of this meta-analysis indicate that group positive affect has broad and diffuse benefits for social integration in groups, whereas the effects of negative affect are more sensitive to situational contingencies.

Group Creativity and Decision Making

Mirroring the significant interest in how affective experiences influence cognition and creativity in individuals (e.g., Damasio 1994, George 2007, Isen & Baron 1991, Lazarus 1982, Zajonc 1980), group theorists and researchers have examined how different forms and types of collective affect drive group creativity and decision making. And, mirroring the disagreements in the individual-level literature on affective influences on cognition, creativity, and decision making, group-level research has mostly revolved around the question of whether positively or negatively valenced group affect enhances group performance on tasks requiring group decision making or creativity.

The theorizing behind group creativity and decision-making research has been grounded in individual-level theoretical arguments about affect and creativity. That is, positive affect promotes enhanced cognitive flexibility in choosing the best way to problem solve, innovate, and make decisions to fit the problem at hand (Isen 2000). It also increases variety-seeking behavior and broadens cognition (e.g., Fredrickson 1998). Starting with creativity, in an experimental study of groups engaged in a brainstorming task, Grawitch et al. (2003a) found that group positive mood directly positively influenced the originality of group ideas, relative to neutral group mood. They also found that groups in which members were induced to share a positive affective experience outperformed groups in either a negative or neutral mood condition on a creativity task. However, there are occasional studies showing that negative group mood can positively influence creativity (Jones & Kelly 2009). For example, in a survey-based study of 68 Chinese R&D teams, Tsai et al. (2012) argued that both shared team positive mood and shared team negative mood impact group creativity and found a complex set of relationships between positive and negative mood and group creativity, in which team trust served as a boundary condition. Focusing on a different dimension of group affect, Knight & Baer (2014) found that group arousal promoted higher creative performance in brainstorming groups by increasing the degree to which group members built upon and extended one another's ideas.

With regard to decision making, the results are even more complex—with much of the research conducted within the paradigm of the distributed information task (i.e., group members possess unique information) that requires group members to combine their uniquely held information to solve a murder mystery. Using this type of task, Bramesfeld & Gasper (2008) found across two experiments that group positive mood was positively related to decision-making quality. However, using the same type of task, Kooij-de Bode et al. (2010) found that groups induced to feel negatively performed better on a decision-making task when information was distributed across group members, compared to groups in a positive mood condition. They determined that information elaboration explains the influence of group negative mood on decision-making quality. Similarly, van Knippenberg et al. (2010) found that groups induced to experience a negative mood in this distributed information task engaged in greater information elaboration, relative to groups induced to experience a positive mood, which led to enhanced decision making. There was also an interaction between the mean trait negative affect of the group and the mood of the group, predicting information elaboration. The authors interpreted the interaction as evidence for the idea that trait affect can override the effects of state affect in groups. Some studies using a non-distributed information paradigm have found an influence of group mood on decision making around the allocations of group resources (Barsade 2002), but to more fully understand the phenomenon of affect and group decision making as a whole, researchers need to adopt additional and more varied stimuli and types of decisions.

Research thus currently paints an ambiguous picture of how group affect influences group decision making and creativity. One stream of research, grounded in individual-level theory and research showing the more established beneficial effects of people engaged in decision-making and creativity tasks (Lyubomirsky et al. 2005), suggests that positive group affective experiences yield enhanced group performance on such tasks. A second stream of research, grounded in individual-level theory and research suggesting that negative affect can promote persistence and critical thinking, indicates that negative group affective experiences can promote the sharing of unique information among group members, leading to better outcomes. It is likely that the influence of group affect on decision making and creativity is not straightforward and direct; rather, how group affect influences decision making and creativity likely depends on contextual factors (George 2011). As evidence of how context can influence the effects of group affect, Knight (2015) found that the relationship between group affect and strategic exploration in teams changed over the course of time as teams approached a deadline. Positive affect early in a team's life span promoted exploration, with team members seeking alternative ways of completing team tasks. As teams approached the deadline, however, positive affect inhibited exploratory search as teams turned their focus to implementation. Additional research, both in the field and in the lab, is needed to tease apart the nuanced effects of group affect on group decision making and creativity. This is particularly so given the importance of groups as information processors in organizations (Hinsz et al. 1997); further investigation of the influence of positive and negative affect on collective cognition in groups is sorely needed.

Group Effectiveness and Performance

In addition to research on how collective-level affective constructs influence group effectiveness on decision-making and creativity tasks, group researchers have also proposed and found that group affect influences how well groups perform on other types of tasks. For example, George (1990) gathered survey data from 26 work groups and found that the mean trait negative affect of the group was positively related to the shared negative group mood that group members experienced. This shared group negative mood was related to less prosocial behavior toward customers and

greater employee absenteeism (with some evidence of shared group positive mood being negatively related to absenteeism). In an examination of how leader and group affect influence sales performance in a similar retail setting, George (1995) also found a significant relationship between the shared group positive mood of sales groups and better sales performance. On the sports field, among professional cricket players, Totterdell (2000) found that team-level positive mood positively related to individual-level performance as mediated by the players' individual moods. In the lab, positive collective mood resulting from emotional contagion led to greater ratings of effective performance on the part of the other members in the group, with the opposite results for negative collective mood (Barsade 2002). Sy et al. (2005) found that leaders who transmitted positive mood also had groups with more successful coordination (but less expended effort), as mediated by group positive mood (Sy et al. 2005).

With respect to negative affect, in a study of 61 work teams in a multinational automotive component manufacturer, Cole et al. (2008) found that mean negative affective tone (measured by a more general measure of asking employees about their negative affect at work) directly negatively influenced team performance, as rated by team supervisors. Team negative affective tone mediated the relationship between dysfunctional team behavior and team performance, and the relationship between negative affective tone and performance was moderated by nonverbal expressivity. When team members showed what they were feeling, the relationship was stronger between negative affective tone and performance than when they did not show their feelings.

At the organizational level, in a study of leadership, team affect, and team performance, Hmieleski et al. (2012) proposed that shared authentic leadership indirectly influences team performance by eliciting shared positive emotions among team members. Using survey data gathered from the leaders of small businesses, the authors found a positive, significant relationship between team positive affect, defined as converged positive affective experiences among team members, and the performance of new ventures (i.e., revenue, employment growth). Barsade et al. (2000) also found an influence on organizational outcomes, with greater trait positive affective diversity among senior management teams in major organizations marginally related to less successful firm financial performance.

Several scholars have suggested that group affect indirectly influences group performance through some of the mechanisms described above, such as intragroup interactions and group attitudes and beliefs. For example, Chi et al. (2011) found that team positive mood indirectly influenced team performance through team goal commitment, team satisfaction, and team helping behaviors. Knight (2015) found that shared team positive mood at the temporal midpoint of the team's life span indirectly influenced team performance by shaping how teams paced their focus on coming up with alternative approaches to their tasks. Knight also reported that the mean trait positive affect of the team was significantly positively related to objective team performance above and beyond a range of team characteristics, including team ability, team experience, and early planning activities. In their meta-analysis of the effects of group affect, Knight & Eisenkraft (2014) found that social integration partially mediates the effects of group positive affect and group negative affect on group task performance, with group positive affect promoting task performance through social integration and group negative affect having nuanced, moderated effects on task performance through social integration. Last, in a laboratory study of brainstorming groups, Knight & Baer (2014) found that information elaboration mediated the effects of group arousal on group performance.

In a study of the impact of a specific, positive discrete emotion shared by team members on performance, Rhee (2006) experimentally examined the role of shared group joy in team functioning. Drawing from Fredrickson's (1998) broaden-and-build model of positive emotions, Rhee predicted and found that teams induced to experience joy were more effective, in part because of

interactions characterized by broaden-and-build behaviors. Additionally, Barsade & O'Neill (2014) found that the emotional culture of companionate love among staff members predicted a critical set of performance metrics for the organization—companionate love was associated with increased patient positive mood, improved patient quality of life, fewer unnecessary emergency room visits for residents, and enhanced satisfaction of patients' families.

In summary, existing research on the relationship between group affective constructs and group effectiveness suggests that group affect—and, specifically, shared group positive affect—is directly and indirectly related to general group effectiveness. The effects of group negative affect, however, are more ambiguous and seem to be dependent on situational contingencies (Knight & Eisenkraft 2014). In a narrow range of situations, group negative affect might enhance group performance; however, in general, group negative affect seems to hinder group task performance. Significantly more research is needed, however, to understand how different forms and types of collective-level affect influence group effectiveness across a range of tasks and group contexts.

KNOWNS AND NEEDS IN THEORY AND RESEARCH ON GROUP AFFECT

Although much has been learned, there is still much unknown. Below we highlight those predictions or assertions for which our knowledge is relatively clear—what we call the research knowns. Then we underscore several key predictions, assertions, or types of empirical research that are most needed to further advance theory and research on group affect—what we call the research needs. The sidebar summarizes these research knowns and research needs.

Research Knowns

Over the past 25 years of research, one key finding has emerged consistently—affect in groups develops toward homogeneity. When a group of people work together with one another, research suggests that it is likely that individual group members will converge in their affective states, leading to shared collective-level affect. This tendency has been supported by research both in the field (e.g., Bartel & Saavedra 2000, George 1990, Totterdell 2000, Totterdell et al. 1998) and in the lab (Barsade 2002, Sy & Choi 2013). These studies have relied on self-reports of affect (e.g., Barsade 2002, George 1990, Knight 2015, Totterdell et al. 1998), as well as observer ratings of affect (e.g., Barsade 2002, Barsade & O'Neill 2014, Bartel & Saavedra 2000), and have included both newly formed groups (e.g., Barsade 2002, Sy et al. 2005) and groups with a long prior history (e.g., Bartel & Saavedra 2000, George 1990, Totterdell et al. 1998).

As reviewed by a number of authors, there are several forces that pull group members toward homogeneity in affective experiences (Barsade & Gibson 1998, 2012; George 1996; Kelly & Barsade 2001; Parkinson et al. 2005). First, because mood is interpersonally contagious, team members may infect one another with their mood (Barsade 2002, Totterdell 2000, Totterdell et al. 1998), contributing to a convergence in mood. Second, owing to attraction-selection-attrition processes in long-standing groups or departments, the members of a team may have similar trait affective dispositions, leading them to react and interact in similar ways (Barsade et al. 2000, George 1996, Kelly & Barsade 2001). Third, team members may feel similarly at a given point in time because, during the course of their work, they encounter similar external stimuli (Weiss & Cropanzano 1996) or are governed by the same emotional culture regarding affective expression (Barsade & Gibson 1998, 2007; Barsade & O'Neill 2014; Kelly & Barsade 2001). In summary, convergence in affect may be akin to affective homeostasis in groups. In the short term, exposure to common events and the forces of emotional contagion pull group members' affective states toward

one another. In the long term, the forces of attraction-selection-attrition in addition to behavioral norms further unify group affect.

Another research known emerging from empirical research on group affect is that shared positively valenced group affect facilitates the development of positive group attitudes and processes, such as commitment, satisfaction, and viability (e.g., Barsade & O'Neill 2014, Chi et al. 2011, Grawitch et al. 2003b), as well as cooperative group behavior and social integration (e.g., Barsade 2002, Barsade et al. 2000, Grawitch et al. 2003b, Knight & Eisenkraft 2014). Shared negatively valenced group affect, alternatively, seems to have no simple, main effect (Grawitch et al. 2003b, McIntyre et al. 1991, Watson et al. 1992) or, when there is a main effect, seems to impede these same group attitudes and processes (e.g., Barsade 2002, George 1990). The influence of negative affect on these group attitudes and processes seems to be more sensitive to situational contingencies (Knight & Eisenkraft 2014). Furthermore, with the exception of decision-making or creativity tasks, for which extant research is more ambiguous regarding the influence of group affect, positively valenced group affect seems to be consistently positively associated with group performance (e.g., Barsade 2002, Barsade & O'Neill 2014, Barsade et al. 2000, Chi et al. 2011, Knight 2015, Knight & Eisenkraft 2014, Rhee 2006). The broad conceptual model underlying these findings is generally consistent with the input-process-output framework that has dominated the literature on groups and teams (Hackman & Katz 2010, Kozlowski & Ilgen 2006). Positive moods and emotions, theorists and researchers have suggested, indirectly influence group and team outputs through their relationships with positive attitudes and coordinated, cooperative group behavior.

Additionally, current research suggests that there is a tight link between group leadership and the nature and valence of group affect that emerges (Sy & Choi 2013). Displayed group leader moods and emotions have been shown to influence the experienced moods and emotions of group members (e.g., George 1995, Hmieleski et al. 2012, Sy & Choi 2013, Sy et al. 2005), consequently influencing group attitudes, processes, and outcomes. Especially of note, charismatic leadership seems tightly linked to affective processes in teams, so much so that scholars have suggested that affect is a primary conduit through which charismatic leaders influence their followers and their groups (e.g., Bono & Ilies 2006, Erez et al. 2008, Pastor et al. 2007, Sy et al. 2013). Despite these consistent findings, quantitative evidence nevertheless is needed to substantiate and help explain why leaders have a disproportionate impact on the affect that emerges in groups as compared to other, nonleader, members of the group.

Research Needs

Below we highlight three research needs that, if addressed, would significantly advance scholars' understanding of affect in groups. First, more research is needed about the causes and consequences of affective diversity in group members' dispositional (trait) affect, moods, and emotions. Despite growing theoretical attention to affective diversity in groups and teams, empirical evidence to validate, challenge, and extend conceptual models remains more limited. There is some empirical evidence indicating that affective diversity in group members' affective traits and states can interfere with positive group functioning (e.g., Barsade et al. 2000, Kaplan et al. 2013). This finding may relate to the new line of research examining divergence in emotional contagion (e.g., Elfenbein 2014, Hess & Fischer 2014, Moody et al. 2007, van der Schalk et al. 2011, Weisbuch & Ambady 2008). Yet some authors have suggested in theoretical models that affective diversity may benefit groups engaged in decision-making tasks requiring complex thinking, minority influence, and creativity (i.e., George & King 2007, Tiedens et al. 2004). Reasoning that divergence in group member mood states might provoke or stimulate divergence in cognition,

GROUP AFFECT: RESEARCH KNOWNS AND NEEDS

Research Knowns

- Affect in groups develops toward homogeneity. When a group of people work together, it is likely that individual group members will converge in their affective states, leading to shared collective-level affect. This can be due to

    - Emotional contagion,
    - Attraction-similarity-attrition, or
    - Shared affective experiences.

- With regard to workplace outcomes, such as commitment, satisfaction, and viability, as well as cooperative group behavior and social integration, creativity, decision making, and performance,

    - Shared, positively valenced group affect generally facilitates the positive development of all of the above.
    - Shared negatively valenced group affect generally facilitates the negative development of all of the above; however, it is sensitive to situational contingencies that can then in combination lead to positive outcomes on the processes listed above.

- There is a tight link between a group leader's affect and the affect of group members.

Research Needs

- More research is needed about the causes and consequences of affective diversity—divergence in group members' dispositional (trait) affect, moods, and emotions.
- Real-time, process-oriented research is needed on the ebb and flow of affect, moods, and emotions within groups and teams over time. Though difficult to do, a variety of methodological techniques (e.g., experience sampling in the field, video coding, and computer applications) can be helpful with this.
- A more multicultural orientation is needed, with greater investigation of how overarching societal factors, such as culture, can influence the nature and influence of affect within and between groups.

these authors suggested that convergence in affect may lead groups to reach premature conclusions. However, empirical research is needed to explore these predictions and better understand how affective diversity influences processes and outcomes in groups engaged in a variety of tasks. It is possible that, similar to other forms of diversity (i.e., Milliken & Martins 1996), affective diversity is a double-edged sword—the benefits of divergent thinking may come at the cost of group social integration.

Second, real-time, process-oriented research is needed on the ebb and flow of affect, moods, and emotions within groups and teams over time. The individual-level empirical research on affect is beginning to shift toward more dynamic research, using, in particular, experience sampling techniques to capture how individuals' affective states change over time and how changing affective states influence individual and workplace outcomes (e.g., Alliger & Williams 1993, Amabile et al. 2005, Ilies & Judge 2005, Rothbard & Wilk 2011). This process-focused research approach has enabled scholars to test predictions about how affective dynamics evolve over time and also to examine the causal relationships that link affect to workplace outcomes, such as motivation and creativity. Although these types of reciprocal models based on feedback loops are

often discussed theoretically (e.g., Hareli & Rafaeli 2008, Kelly & Barsade 2001, Walter & Bruch 2008), there is little process-oriented, longitudinal research to validate core theoretical predictions regarding group affect. Although it is methodologically challenging, understanding how group-level affect changes over time, reciprocally influencing other group-level constructs, is critical for advancing theory and research on affect in groups.

Third, research is needed to understand how overarching societal factors, such as societal culture, might influence the nature and effects of group affect. Although group affect research has been conducted with samples from a variety of nations (e.g., the United States, South Korea), and researchers have used samples from different societies to test the generalizability of findings (e.g., Gibson 2003), there are, to our knowledge, no direct cross-cultural examinations that explore how the nature and effects of group affect might vary across cultures. Ilies et al. (2007) examined how individualism and collectivism shape individuals' tendencies to converge toward the mood of their teammates; however, the authors examined these factors as individual differences. Given that groups are always embedded within a cultural context—and that the effects of group affect are likely context dependent (e.g., Elfenbein 2007)—the dearth of cross-cultural theory and research on group affect is a significant limitation of the existing literature. Theoretical hypotheses and empirical examinations about these cultural contexts are much needed to ensure that this literature is relevant to organizations operating across the globe.

PRACTICAL IMPLICATIONS

The research knowns articulated above suggest a few recommendations for managers involved in creating and leading groups and teams. First, existing research has shown that group composition, specifically composition with respect to group member trait affectivity, is a significant driver of the shared feelings that emerge in a group over time. This suggests that, when creating groups and teams, managers should be attentive to group members' affective dispositions. Second, existing research has shown that the affective states that group leaders express significantly shape the experienced affective states of group members. Thus, in addition to shaping group affect through personnel selection, group leaders also can shape group affect and, indirectly, group functioning through their own emotional expressions. Several studies have demonstrated the power of subtle manipulations of leader expressions of affect in altering group dynamics (e.g., Sy et al. 2005, Van Kleef et al. 2009). A practical implication that emerges from existing research is thus that leaders can use their own affective expressions to influence the dynamics of their groups.

But what kind of group affect should leaders and managers try to cultivate in groups and teams? For many types of tasks, all else equal, cultivating shared positive feelings among group members is likely to benefit group functioning and group performance. Although existing research is less clear regarding the effects of group affect on group performance for decision-making tasks, it is noteworthy that Knight & Eisenkraft's (2014) meta-analysis of group affect research found overall positive effects of group positive affect on group performance, across tasks. Thus, the state of existing research suggests that promoting positive affective states in groups may be beneficial for group dynamics and performance. This is not to say that shared negative feelings are not functional for groups. Indeed, for a group that has just lost out on a big contract to a competitor, anger could be a useful short-term energizing emotion for the team. However, the current literature suggests that shared negative feelings promote healthy group functioning in a narrower range of situations than do shared positive feelings.

ON THE FRONTIERS

At the frontiers of the group affect literature, there are exciting conceptual and methodological developments. First, an emerging area is the conceptualization of affective skills, also known as emotional intelligence, as collective, group constructs. Although research to date is limited, a few conceptual and empirical articles suggest that groups themselves can vary with respect to emotional monitoring, regulation, and other affective competencies or skills. Druskat & Wolff (2001, p. 133) offered an early conceptualization of group emotional intelligence, which they defined as "the ability to develop a set of norms that manage emotional processes so as to cultivate trust, group identity, and group efficacy." As evidenced by their definition, they viewed group emotional intelligence as instrumental for enabling group members to develop and sustain collective beliefs—specifically, trust, identity, and efficacy—that theory and research suggest are critical drivers of group effectiveness. Elfenbein (2006) and Côté (2007) further elaborated on the construct of group emotional intelligence, exploring both the nature of the construct and its antecedents and consequences. Elfenbein (2006), for example, argued that group emotional intelligence can emerge in different compositional forms, such as through convergence or diversity in group members' individual emotional intelligence. Different forms of group emotional intelligence, Elfenbein suggested, influence group processes and outcomes in different ways.

Group-level conceptualizations of affective skills and competencies are currently empirically limited to group emotional intelligence. The field also needs to examine other types of skills related to collective-level affective competencies, such as team emotion recognition accuracy (Elfenbein et al. 2007) or emotional aperture, the ability of individuals to read collective emotions (Sanchez-Burks & Huy 2009).

Second, technological and statistical developments present group researchers with novel and effective tools to examine affective dynamics in groups and teams over time. In the growing field of affective computing—an area of theory, research, and practice dedicated to enhancing the capacity for computers to read and express emotions (Picard 2000)—scholars from a range of disciplines, including computer science and engineering, machine learning, biology, and psychology, are collaborating to design and implement novel methods for measuring individuals' moods and emotions and for analyzing how these moods and emotions change over time. For example, Picard and colleagues (i.e., Picard et al. 2001, Poh et al. 2010) have developed wireless, unobtrusive sensors that measure activation of the sympathetic nervous system, which group researchers might use to understand how group members' activation influences group processes and outcomes (e.g., Knight & Baer 2014). There are systems that code filmed facial expressions (D'Arcey 2013) in ways similar to Ekman & Friesen's (2003) well-known FACS rubric (although these systems currently focus only on one face at a time). Researchers have also developed software solutions to code text-based communications, such as instant messages, for affective constructs (e.g., Bollen et al. 2011). Because these measures leverage technology, they often enable real-time and continuous recording of affective states, which might facilitate examinations of affective dynamics at work. And, because they are often less obtrusive than existing measurement approaches, these emerging technologies might be helpful in examining the role of implicit affect that is "activated or processed outside of conscious awareness that [influences] ongoing thought, behavior and conscious emotional experience" (Barsade et al. 2009, p. 139). As Barsade et al. (2009) reviewed, implicit affect is a growing area in psychology in understanding the basis of people's cognition, motivation, and behavior. Although it is a nascent field within organizational behavior, sub-conscious affective group processes could have powerful implications for the group-level consequences, such as performance, that we discuss above.

Last, because we focus our review on collective-level affective constructs in purposive groups, we have not incorporated into this article the stream of theory and research on intergroup emotion (e.g., Mackie et al. 2000), which examines the antecedents and consequences of individually experienced emotions that are activated as a function of group-based identities (Niedenthal & Brauer 2012). However, one could posit that the same psychological processes that occur when group-based identities are activated intrapsychically also occur, and perhaps more strongly (e.g., Shteynberg et al. 2014a,b), when individuals are actually faced with others in their group who have differing group-based identities. As such, it could be useful to have more cross integration among these two research streams.

CONCLUSION

As the affective revolution in organizational behavior continues (Barsade et al. 2003), theory and research on collective-level affect in groups and teams are gaining attention. As shown in this review, despite extensive theoretical conceptualizations of group affect, empirical studies have taken a relatively more narrow course, with empirical research focusing predominantly on a conceptualization of group affect as the homogeneity of affective experiences across group members. Although important, we see a singular focus on homogeneity in group members' affect as limiting to our understanding of the collective affective experience that occurs in groups. We encourage researchers to rigorously test the diverse conceptualizations of collective constructs—such as affective diversity, affective dynamics, and emotional culture—that scholars have proposed, so as to deepen our understanding of this important phenomenon within organizational behavior.

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