The Creative and Cross-Functional Benefits of Wearing Hearts on Sleeves: Authentic Affect Climate, Information Elaboration, and Team Creativity

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Abstract

Team creative processes of generating and elaborating ideas tend to be laden with emotional expressions and communication. Yet, there is a noticeable lack of theory on how differences in teams' management and support of affect expressions influence their ability to produce creative outcomes. We investigate why and when team authentic affect climates, which encourage members to share and respond to authentic affect, generate greater creativity compared to more constrained affect climates where members suppress or hide their genuine feelings. We propose that authentic affect climate enhances team creativity through greater information elaboration by the team, and that these informational and creative benefits are more likely in functionally diverse teams. Results from three complementary studies—one multi-source field study of management teams and two experiments—provide support for our predictions. In our experiments, we also examine the theorized affective mechanisms and find that authentic affect climate increases information elaboration and creativity through members' affect expressions (Study 2) and empathic responses to each other's expressed affect (Studies 2 and 3). We discuss the implications of our findings for the team creativity, diversity, and affect literatures.

Keywords: team creativity, affect climate, information elaboration, authenticity, diversity

The success of modern organizations largely depends on their capacity to achieve creative solutions and breakthroughs (Shalley et al. 2015). Organizations worldwide have shifted to using teams, rather than individuals, to generate this required creative output because teams can pool and integrate information from multiple members to produce greater creativity (van Knippenberg 2017). Thus, factors that enhance *team creativity*—the production of new and useful ideas by teams (Amabile and Pratt 2016)—has become a major focus for scholars (Goncalo and Staw 2006, Jang 2017, Perry-Smith and Shalley 2014). Importantly, this research shows that creative outcomes are much more likely when teams engage in *information elaboration*, in which members express unique knowledge, discuss ideas openly, and integrate across perspectives (Harvey 2014, van Knippenberg 2017).

Despite this progress, our understanding of team creative processing remains limited by the fact that most studies are dominated by a *cognitive* orientation; that is, most past work has investigated cognitive factors that either encourage members to share their knowledge or ideas, such as psychological safety or pro-diversity beliefs (e.g., van Ginkel and van Knippenberg 2008, Homan et al. 2007, Hu et al. 2018), or that help members achieve a shared understanding of their different thoughts or perspectives, such as shared mental models, perspective taking, and structured knowledge sharing (e.g., Aggarwal and Woolley 2019, Bechky 2003, Hoever et al. 2012). As a result, research has underspecified key *affective* processes involved in team creativity. This omission is a problem given that group creative processing is "often rife with emotional expressions" (Harrison and Dossinger 2017, p. 2056), which could alter creative outcomes. For example, not only do team members frequently express emotions about new ideas, such as excitement, interest, confusion, or doubt, but these emotional expressions can convey contextual information that deepens recipients' understanding of the verbal communication, such as the promise of an idea or the urgency of a problem (Grodal et al. 2015, Harrison and Rouse 2014). Additionally, elaboration of information in creative work can follow from elaboration of *affect* (i.e., the overarching concept referring to emotions, moods, and other feeling states; Barsade and Gibson 2007). This *affect elaboration* occurs when team members recognize and explore their intuitive or emotional reactions to ideas and solutions (Grodal et al. 2015). In short, although we know much about the cognitive factors that

influence team creativity, we know very little about whether and how affective processes—expressing, recognizing, and elaborating affective content such as emotional reactions, intuitions, or hunches—influence creative insights and breakthroughs.

We generate theory for why and when expressing and responding to affect influences team creative outcomes. To do so, we integrate theory on affect climate (Parke and Seo 2017), which helps explain how groups fundamentally differ in expressing and managing affect, with the social-functional approach to emotions (e.g., Van Kleef 2009). We propose that team *authentic affect climate*—i.e., team members' shared perception of the team environment (e.g., norms, rewards, routines) supporting members in expressing and responding to genuine affective states (Parke and Seo 2017)—enhances team creativity by increasing and enriching information elaboration through two affective pathways.

The first such pathway is an *affect as social information* effect in which authentic affect climate increases the amount of affective information (i.e., affect expressions) that team members use to gain (a) feedback even in the absence of verbal communication (e.g., facial expressions showing interest or doubt) and (b) contextual information that enhances or modifies the interpretation of verbal communication, such as the degree to which a new idea is good or still needs improvement (Keltner and Haidt 1999, Van Kleef 2009). The second pathway is an *affect elaboration* effect in which authentic affect climate enhances the extent to which team members communicate empathy to each other (e.g., acknowledging, validating, or exploring affect expressions), thereby providing the needed space and motivation for members to transform intuitive and emotional reactions to their work into a cognitive elaboration of their ideas and solutions (e.g., articulating why an idea is exciting or confusing).

In addition, we extend our theorizing to identify how authentic affect climate's informational and creative benefits are stronger in cross-functional teams, or those with greater *functional variety* in which members' functional roles differ from one another (Bunderson and Sutcliffe 2002). Organizations frequently use such teams to deliver creative outcomes (van Knippenberg 2017), and cross-functional teams face heightened ambiguity and uncertainty in their information processing—conditions that can help authentic affect climate's benefits to emerge—due to members' lack of common experiences and

knowledge (Leonardi 2011, Majchrzak et al. 2012, Mannucci 2017). Thus, authentic affect climate enhances information elaboration and creativity more so in teams with greater (vs. lesser) functional variety because they need (do not need) to rely on affective information and affect elaboration to better pool and integrate members' diverse knowledge sets. Figure 1 presents our theoretical model.

Our research contributes to knowledge on team creativity, diversity, and affect. We reveal an important but as yet unaddressed aspect of information processing in diverse and creative teams: such teams do not just use cognitive tools (e.g., mental models or structured knowledge sharing) to develop members' raw thoughts and information into better, more creative solutions; they also can rely on authentic affect expression and elaboration to transform raw emotions and feelings into thoughts and ideas to enhance creativity. We explicate this process of authentic affect climate increasing members' affect expressions and empathic responding to enable greater information elaboration. In doing so, we identify why, in addition to the cognitive content identified, team members' affect expressions and responses should be included as a critical informational resource that (functionally diverse) teams can use to generate creativity (van Knippenberg 2017).

We also offer a novel understanding of the role of affect in team creativity such that it may not necessarily be the types of moods or emotions *experienced* by team members that influence creativity (e.g., Emich and Vincent 2020, Pillay et al. 2020); rather, it is how members express and respond to affect that drives information elaboration and team creativity. Most studies on group affect and creativity theorize how the types of affect experienced by team members exerts a background influence (i.e., outside members' awareness) on their creative thinking and behaviors. That is, this work tends to ignore how affect expressions can be explicitly recognized and responded to by members in creative processing. This omission could be one reason for the equivocal findings regarding the effects of experienced positive and negative affect on team creativity (Barsade and Knight 2015, p. 34), and we offer authentic affect expression and responding as an alternative explanation for how group affect influences team creativity.

Finally, we challenge an implicit, and sometimes explicit, prescription for groups to suppress negative emotions and react primarily with positivity in group creative work (Jackson and Poole 2003,

Lingo and O'Mahony 2010, Sutton and Hargadon 1996). We contend that such an approach, if it lowers the team's authentic affect climate, may limit information elaboration and reduce overall creativity.

Theory and Hypotheses

The concept of climate helps explain how employees form consistent and shared perceptions about their organization or team in relation to expected and rewarded behaviors at work (Bowen and Ostroff 2004). In this way, an organization or team's *affect climate* informs employees about normative and promoted behaviors regarding affect, such as what types of affect expressions or experiences are desired and how should members respond to affect expressions (Parke and Seo 2017). A fundamental dimension that distinguishes affect climates types is their level of authenticity.

In affect climates with high levels of authenticity, referred to as "authentic affect climates" or "authentic experiential climates," members share a perception that expressing and responding to genuine emotions, both positive and negative, is encouraged, valued, and safe (Grandey et al. 2012, Parke and Seo 2017). That is, authentic affect climate encourages and promotes both *authentic affect expression* (i.e., members can and should express their true feelings) and *active responding to expressed affect* (i.e., if members express their feelings, it can and should be listened to, acknowledged, and/or discussed). Such responding to affect is often referred to as "empathic communication" or "empathic expressions," which is the intentional and explicit communication that conveys a person hears (e.g., acknowledges an expressed feeling), understands (e.g., validates an expressed feeling), or seeks to understand (e.g., inquires about an expressed feeling) another's feelings, emotions, or experiences (Bylund and Makoul 2005, Clark et al. 2019, Seehausen et al. 2016). An example of authentic affect climate is members being encouraged to raise their frustrations or excitements about their work in order to explore root causes of these emotions to develop better solutions or processes (e.g., Kegan et al. 2014). In contrast, low levels of authentic affect climate exist when members perceive the environment to discourage expressing and responding to affect (Parke and Seo 2017). That is, members perceive that they cannot or should not express their feelings, and if feelings are expressed, they may be ignored, discouraged, or punished. In such climates, emotions are restricted to only those that tend to be more socially acceptable, such as

neutral or mildly pleasant affect.

Notably, authentic affect climate is distinct from psychological safety and collective display rules. Team psychological safety is defined as "the shared belief that the team is safe for interpersonal risk taking" (Edmondson 1999, p. 354). Psychological safety conceptualizations tend not to include nor discuss affect expressions and responding as part of the construct (Edmondson and Lei 2014, Frazier et al. 2017, Newman et al. 2017). Also, psychological safety focuses on socially risky behavior (Edmondson and Lei 2014, p. 24), whereas expressing affect (e.g., interest) and responding to expressed affect (e.g., asking a question to understand an emotional reaction) is not necessarily socially risky. Likewise, collective display rules represent the shared belief among members regarding emotional prescriptions—that is, which emotions are appropriate or should be displayed in specific situations (e.g., express happiness with customers; Diefendorff et al. 2011, Morris and Feldman 1996). Contrastingly, authentic affect climate represents a general perception that it is acceptable to express genuine emotions across a range of emotions and situations. Furthermore, display rules focus mostly on emotional expression, while authentic affect climate incorporates both expression of and responding to affect.

The Creative Benefits of Team Authentic Affect Climate

We propose that team authentic affect climate increases team creativity through enhanced information elaboration. As a fundamental component of the creative process, information elaboration is essential for team creativity (Perry-Smith and Mannucci 2017) and improves team creative outcomes (Hoever et al. 2018). Importantly, studies have found that expressing and responding to authentic affect is often an inherent part of information elaboration in creative processing (e.g., Grodal et al. 2015, Harrison and Rouse 2015). This is not only because a high degree of ambiguity and uncertainty exists in creative work as members struggle to understand and articulate the value of novel ideas and solutions (Harrison and Dossinger 2017, Rindova and Petkova 2007), but also because members can experience emotional highs and lows throughout the creative process as others react positively and negatively to their ideas (Amabile et al. 2005). Creative work thus creates an emotionally charged context in which members have frequent and ranging emotional reactions to the problems and ideas they discuss without always fully

knowing why or being able to comfortably or comprehensibly explain it to others (e.g., Harrison and Rouse 2015). In this context, we argue that authentic affect climate can benefit information elaboration and team creativity via two affective explanations (for a visual illustration, see Figure 1).

The first is an affect as social information effect in which authentic affect climate generates a greater amount of, and access to, affective information for team members to use in developing creative ideas. Because authentic affect climate promotes and encourages expressing and considering emotions, it should increase the amount of both positive and negative authentic affect expressions. Such affect expressions communicate feedback about team members' work or ideas even in the absence of verbal communication (Elfenbein 2007, Van Kleef 2009). For instance, an excited head nod or a look of confusion can convey evaluative information about a proposed idea (Majchrzak et al. 2012, p. 967). Furthermore, the affect accompanying verbal messages can provide contextual information that enables a deeper understanding of the verbal communication such as the degree of an idea's promise, the extent of improvement required to find a viable solution, or the urgency of attention needed to address a problem (Grodal et al. 2015, Harrison and Rouse 2015, Van Kleef et al. 2009). Therefore, in high levels of authentic climate, members have potentially greater access to affective information that can be used to infer the quality of their current work and make the necessary adjustments.

Second, we suggest that authentic affect climate increases information elaboration through an affect elaboration effect in the form of empathic expressions. Team members can express empathy to one another in their creative work through behaviors such as acknowledging ("You seem confused"), validating ("I'm also excited about your idea"), or inquiring about the underlying reasons of affective expressions ("Can you say more about why you are excited?"). Such empathic expressions should enhance information elaboration by providing space and motivation for members to more deeply and explicitly process, understand, and/or explore their feelings about their creative work. For example, during a team discussion, a member may not be speaking but display frustration (or interest), which can be recognized and explored by another team member, motivating them to elaborate their emotional reaction and the thoughts they have (e.g., Grodal et al. 2015, p. 151, Harrison and Rouse 2014, p. 1269).

Hence, we argue that, especially due to the high ambiguity and uncertainty involved in creative work (Harrison and Dossinger 2017, Mueller et al. 2012), information elaboration often follows from elaboration of affect in which team members explore their intuitive, affective reactions to novel ideas and solutions to develop a more informed understanding and articulation of an idea or problem. Because authentic affect climate should increase the extent to which team members freely express and empathically respond to each other's authentic affect, it should help members more fully and collectively explore and make sense of their work and lead to improved elaboration of ideas. In contrast, in teams with low levels of authentic affect climate, members are more likely to hold back, suppress, or fake their true feelings, which could constrain these teams from freely and thoroughly elaborating ideas. Moreover, even if team members express genuine affect, but others respond by ignoring or denying the expression (i.e., low empathic responding), this could shut down the conversation and prevent further insights about the underlying reasons for the negative or positive emotional reactions. Relatedly, expressing authentic negative emotions (e.g., anger and fear) can sometimes be disruptive to information elaboration and creative solutions (e.g., Vuori and Huy 2016) if they are ignored, avoided, or punished (e.g., members get mad at someone expressing their anger). While these harmful effects may occur in teams with lower levels of authentic affect climate, they may be less likely in teams with higher levels of authentic affect climate that promotes enhanced awareness and empathic responding to such emotional expressions. Thus, we hypothesize:

Hypothesis 1: *Team authentic affect climate positively influences team information elaboration*.

Hypothesis 2: *Team authentic affect climate has a positive indirect effect on team creativity via team information elaboration.*

The Cross-Functional Benefits of Team Authentic Affect Climate

We suggest that team functional variety positively moderates the relationship between team authentic affect climate and team information elaboration. First, we propose that authentic affect climate's affect as social information effect on information elaboration is stronger in functionally diverse teams. Such teams can face information elaboration challenges, such as evaluating and selecting ideas for further

development, because they lack common technical criteria, reference points, or mental models for deciding which ideas are (or are not) promising (Harvey 2013, Majchrzak et al. 2012). By providing an intuitive and efficient understanding about the quality of the team's work, authentic affect expressions may directly address this need for commonality of language and criteria in functionally diverse teams. That is, affective cues about quality standards (e.g., positive or negative emotions) tend to be intuitively understood without technical explanation (e.g., Harrison and Rouse 2015, Van Kleef et al. 2009). For instance, some functionally diverse teams, who presumably have an authentic affect climate, use the combined level of expressed enthusiasm among members to determine which ideas to develop further, as opposed to using technical criteria, because the latter can create social divides and communication barriers among members based on their functions and function-based preferences (Majchrzak et al. 2012). Thus, greater access to and use of affective information (as occurs in an authentic affect climate) should be even more useful in functionally diverse teams to overcome such barriers to information elaboration.

Second, authentic affect climate's affect elaboration effect should also be stronger in teams with greater functional variety. Members of functionally diverse teams (compared to more homogenous teams) are more likely to face and experience greater ambiguity, uncertainty, and confusion caused by the difficulty in understanding and communicating with one another due to non-overlapping knowledge bases (Harvey 2013, Leonardi 2011, Lingo and O'Mahony 2010). We argue that authentic affect climate, through enhanced empathic responding, helps functionally diverse teams process such emotions, allowing members to bring their unique perspectives to the table and further elaborate information to resolve task problems, which is essential for team creativity. For example, some cross-functional teams at IDEO use emojis to indicate when feelings of ambiguity may arise in their creative process to help members socially validate these emotions, talk about why they occur, and discuss how to resolve them in order to improve their ideas and prototypes (Parke et al. 2019). Similarly, members in functionally diverse teams often feel enthusiasm about ideas resulting from first-hand knowledge of their functional domains, but other members on the team may lack the functional experience to share this enthusiasm, which could limit further elaboration of the ideas (Majchrzak et al. 2012, p. 963). However, instead of shutting down the

discussion, members in an authentic affect climate, which encourages empathic responding to expressed affect, likely still explore the enthusiasm in order to better understand the idea's promise or merit.

In contrast, teams with lower functional variety face less uncertainty or ambiguity when elaborating information because they already have a common set of work knowledge, experiences, and language. Such teams less likely need to rely on affective cues or signals to make sense of discussed concepts and information, and also are less likely to experience emotional barriers that prevent information elaboration. Thus, we argue the benefits of authentic affect climate on information elaboration (and creativity) are more likely to occur in teams with greater functional variety.

> **Hypothesis 3**: *Team functional variety moderates the relationship between team authentic affect climate and team information elaboration such that the relationship is more positive when teams have greater functional variety.*

> **Hypothesis 4**: *Team functional variety moderates the indirect effect of team authentic affect climate on team creativity via team information elaboration such that the indirect effect is more positive when teams have greater functional variety.*

Method

In Study 1, we used multi-source field data of management teams from different organizations to test our hypotheses. In two follow-up team experiments, we aimed to constructively replicate the findings from Study 1 and increase internal validity. Study 2 examined the unconditional model (H1 and H2), in which we manipulated authentic affect climate and used behavioral coding of team videos to examine our proposed affective and informational mechanisms. In Study 3, we manipulated authentic affect climate and team functional variety to test all hypotheses (H1–H4) and again examine the theorized mechanisms.

Study 1

Sample and Procedure

We recruited management teams from organizations in China across a range of industries (e.g., information technology, finance, software development, and manufacturing) that had a strong focus on creativity and innovation. With the help of a university alumni association, we contacted 57 company leaders. All 57 leaders agreed to participate, so we had data from 57 management teams, comprising a total of 225 members (32% female, 90.2% with at least a 4-year college degree, and average tenure on the

team of 4.7 years). Research assistants who were blind to the hypotheses visited each company where respondents completed a survey in private. All managers involved in this study spoke Chinese as their primary language. We therefore translated and back-translated between English and Chinese (Brislin 1980). Participants were assured of confidentiality of the study and were rewarded with small gifts in the amount of approximately $35. As described below, we separated the source of our independent variables and outcome variables (Podsakoff et al. 2003).

Measures

Unless otherwise specified, all measures were rated on a five-point Likert scale ranging from 1 = "*strongly disagree*" to 5 = "*strongly agree*."

Team authentic affect climate. Team members' reported their authentic affect climate using Grandey et al.'s (2012) seven-item scale (α = .61), which measures team members' shared perceptions that expressing and responding to authentic feelings are encouraged, valued, and safe in the team. Example items included "Working with members of this team, expressions of feelings are respected" and "It is safe to show how you really feel with this team." Aggregation statistics supported team authentic affect climate as a shared team property: ICC(1) = .23, $p < .001$; ICC(2) = .54; median $r_{wg(j)} = .77$.

Team functional variety. Each member of the team indicated their functional role among 10 common classifications for our study's context: management, marketing, manufacturing technology, research and development, finance and accounting, service, design, human resources management, and other. We used Blau's index to calculate the degree of team functional variety (Harrison and Klein 2007).

Team information elaboration. Team leaders reported their team's information elaboration using three items from Kearney et al.'s (2009) measure: "The members of this team complement each other by openly sharing their knowledge"; "The members of this team carefully consider all perspectives in an effort to generate optimal solutions"; and "The members of this team carefully consider the unique information provided by each individual team member" (α = .81).

Team creativity. The leaders also rated the creativity of their teams using the four-item team creativity scale developed by Shin and Zhou (2007) (α = .88). Sample items included "Compared with

other teams of similar function, my team is more creative" and "Compared with other teams of similar function, my team produces more new ideas."

Control variables. We examined the robustness of our hypothesized relationships by testing them while accounting for two antecedents of team creativity. The first was psychological safety, which is theoretically related to team information elaboration and creativity (van Ginkel and van Knippenberg 2008, Hu et al. 2018). Members reported their team's psychological safety using Edmondson's (1999) seven-item scale (e.g., "If you make a mistake on this team, it is often held against you" (reverse-scored); $\alpha = .68$). Second, our theoretical argument that authentic affect expressions can serve as informational cues that aid elaboration (inferential pathway) differs from the affective experience pathway (i.e., emotional displays influence emotional experiences) (Van Kleef 2009). Hence, to show that our proposed effects occur over and above the emotional experiences of team members, we controlled for team positive mood by asking team members to report how the team has felt in the past three months using three items: "enthusiastic," "excited," and "happy" (Barrett and Russell 1998; $\alpha = .72$). The results of our hypotheses tests are unchanged with and without control variables (Carlson and Wu 2012).

Analytical Strategy

Constructs were operationalized at the team level. Because each team in this sample came from a different company, there was no organizational-level nesting. Thus, we proceeded with single-level regression analyses in Mplus 8.3. To test our moderator hypothesis, we followed recommendations by Aiken and West (1991) to plot interactions and test simple slopes. We used a bias-corrected bootstrapping procedure in Mplus 8.3 involving 10,000 data draws with the use of linear regression with maximum likelihood estimates to test the unconditional and moderated indirect effects (Edwards and Lambert 2007).

Study 1 Results

Table 1 displays the means, standard deviations, and correlations among variables. We conducted a set of confirmatory factor analyses (CFAs) to examine the empirical distinctiveness among our variables. We used item parceling to reduce the number of indicators to three for authentic affect climate and psychological safety as such parceling is often recommended when the purpose of the study is not

scale development because it produces more stable and interpretable results (Little et al. 2002, 2013). The three-factor model of member-rated variables (authentic affect climate, psychological safety, positive mood) had good fit ($\chi^2(24) = 37.52$, $p = .038$, CFI = .97, SRMR = .045, and RMSEA = .050 [.012, .080]). Next, we conducted Wald tests and found that setting the latent correlations at 1.0 led to significantly worse fit among authentic affect climate and psychological safety (χ^2 (1) = 10.77, $p = .001$) and authentic affect climate and team positive mood (χ^2 (1) = 47.15, $p < .001$). We further examined the distinction between authentic affect climate and psychological safety by running a CFA with a two-factor model ($\chi^2(8) = 9.46$, $p = .31$, CFI = .995, SRMR = .026, and RMSEA = .028 [.000, .086]), which had superior fit to a one-factor model ($\chi^2(9) = 22.98$, $p = .006$, CFI = .95, SRMR = .041, and RMSEA = .083 [.042, .126]). In addition, the two-factor model of leader-rated variables had acceptable fit ($\chi^2(13) = 39.59$, $p < .001$, CFI = .89, SRMR = .085, and RMSEA = .189 [.124, .258]), and a Wald test that set the correlation between information elaboration and creativity equal to 1.0 showed significantly worse fit (χ^2 (1) = 15.34, $p < .001$). Overall, the results indicated that the variables were empirically distinct.

Table 2 presents the results of our regression analyses. Hypothesis 1 was supported as authentic affect climate positively related to team information elaboration ($b = .64$ [SE = .28]; $p = .02$, Model 3). Further, information elaboration predicted team creativity ($b = .62$ [SE = .13], $p < .001$, Model 7), and indirect effects analysis supported Hypothesis 2 that authentic affect climate had an unconditional positive indirect effect on team creativity via information elaboration (estimate = .40; 95% CI [.06, .86]).

Results indicated that the interaction term of authentic affect climate and functional variety was significant ($b = 1.37$ [SE = .65], $p = .036$, Model 4). As illustrated in Figure 2, simple slope tests showed that authentic affect climate had a positive and significant effect on team information elaboration at high levels (+1 *SD*) of functional variety ($b = .82$ [SE = .23]; $p < .001$), but an insignificant effect at low levels (−1 SD) of functional variety ($b = .14$ [SE = .41]; $p = .74$), supporting Hypothesis 3. Finally, we tested Hypothesis 4 regarding the moderated indirect effects of authentic affect climate on team creativity. Authentic affect climate had a positive indirect effect on team creativity via information elaboration at high levels of functional variety (estimate = .51; 95% CI [.15, 1.03]), but no significant effect at low

levels of functional variety (estimate = .09; 95% CI [-.47, .63]). Moreover, the difference between these effects was significant (difference = .42; 95% CI [.02, 1.14]). Hence, Hypothesis 4 was supported.[1]

Study 1 Discussion

Results from our field study indicated that team authentic affect climate positively enhanced creativity through information elaboration. In addition, team functional variety moderated the effects of authentic climate such that authentic affect climate increased information elaboration directly, and creativity indirectly, when teams had greater functional variety. Although Study 1 provides preliminary evidence of our theoretical model in a field setting, we wanted to expand on the findings in two ways. First, as an observational study, Study 1 is limited in inferences of causality. Second, we did not examine the proposed affective mechanisms linking authentic affect climate and information elaboration. Specifically, we wanted to explore authentic affect climate's affect as social information effect (the amount of positive and negative affect expressions by members) and affect elaboration effect (the amount of empathic expressions by members) on information elaboration.

To do so, we conducted two laboratory team experiments in which we experimentally manipulated authentic affect climate and videotaped teams to enable behavioral coding of the distinct informational and affective processes. Such behavioral coding has been used in past research to operationalize interpersonal processes in creative collaborations (e.g., Chua and Jin 2020, Pillay et al. 2020). Through this procedure, we could empirically distinguish among authentic affect climate, the theorized affective mechanisms, and information elaboration. Furthermore, this approach enabled us to better differentiate expressed affect (observers coding affect expressions) from ratings of experienced affect (members reporting their experienced moods). Thus, examining the affective and informational processes in a team lab setting gave us a controlled environment to separate and model these finer-grained distinctions among constructs, which would be more difficult to achieve in a field setting.

[1] We explored whether the valence of affect that employees experienced and shared (i.e., more or less positive mood) impacted the pattern of results for authentic climate by examining the interaction of authentic affect climate and team positive mood on both information elaboration and creativity. Neither of these interaction effects were significant, and results of hypotheses tests remained unchanged while including this as an additional control.

Study 2

Sample and Procedure

We recruited 239 individuals from a behavioral lab participant pool at a European business school. Participants' average age was 28 (SD = 11.62), 58% were female, and 66% were students (34% were working adults). Participants received compensation of approximately $13 per hour for this 30-minute study. Participants signed up for a timeslot in which they were assigned to a three-member team, which was then randomly assigned to a high or low authentic affect climate condition. In total, we collected data on 86 teams (43 per condition), of which 67 were three-member teams and 19 were two-member teams. The latter occurred due to participants not showing up for their scheduled session.

The study was introduced as a collaboration between researchers and the school gift shop in order to study "crowdsourcing ideas." Participants were told that they would work in a team to generate creative ideas to market and increase sales of the gift shop's backpack (see Pearsall et al. 2008 for a similar task). As an extra incentive, we offered a cash prize ($125 to each member) to the team with the most creative ideas. We gave teams 15 minutes to develop "creative ideas" and defined the term as ideas that are both novel and useful (Baer et al. 2010, Pearsall et al. 2008). Moreover, we constrained teams to submit only their five best ideas (Tangirala and Alge 2006) to ensure that we created a task where groups would generate and elaborate ideas instead of simply listing all possible ideas without discussing.

As participants arrived at the lab, they were placed in isolated cubicles to provide their consent and read over the study and task details. All participants individually read the same description of the study and the group's creative task. Next, to manipulate authentic affect climate, we used a two-pronged approach. In the high [vs. low] authentic affect climate condition, participants read instructions that, as they work on their team task, to adopt the Gift Shop's climate, which emphasized the importance of being "authentic" and "sharing genuine feelings" [vs. being "professional" and "keeping feelings to themselves"]. The full script can be found in the online appendix that can be accessed in the "Supplementary Materials" link of this article on the journal's website. We chose "professional climate" for a low authentic affect climate because such climates are linked with professional environments that

desire affective neutrality in order to discuss facts and information related to tasks while avoiding emotional influences (e.g., Meyerson 1994, Parke and Seo 2017). The "professional" label also helped make this climate type believable and useful in the eyes of participants.

After participants finished reading these details, they assembled in a meeting room where the gift shop's assistant manager (who was actually a professional actor trained in workplace role-playing and enacting different leadership styles) was waiting. Because leaders represent one of the most visible and dominant sources of team climate (Schneider et al. 2005, Zohar and Luria 2005), we relied on this ostensible leader for our climate manipulation. After reminding participants about the task, the "assistant manager" emphasized the high [vs. low] authentic affect climate condition (see full script in online appendix). We also had the actor interject between the seventh and eighth minute of the task (at a natural pause in conversation) with a reminder to be "authentic" ["professional"] and "share your genuine feelings about the ideas being discussed" ["share only your thoughts and opinions, while keeping emotions out of the ideas being discussed"]. We instructed the actor to evoke an authentic, sincere tone for the high authentic affect climate and a professional, stoic tone for low authentic affect climate. She had previous experience enacting these two styles, and they are common leadership approaches (Gardner et al. 2011, Humphrey 2008). Participants were told, in written instructions as well as by the "assistant manager," that she was there simply to take notes of the discussion. To this end, she had a notepad and was instructed to write, "The team came up with idea X" for the first idea, and to repeat this sentence for every unique idea the team discussed. Finally, we instructed the actor to avoid facial feedback or gestures while the teams worked. Participants were emailed a full study debrief after data collection finished.

Measures

Team information elaboration. Consistent with past studies examining information elaboration in team experiments (van Ginkel and van Knippenberg 2008, Hoever et al. 2012), we video-recorded teams and had two coders blind to hypotheses rate their elaboration. Team videos that were coded excluded any speaking by the leader. Using items from existing measures of information elaboration (Homan et al. 2008, Kearney et al. 2009), we had the coders rate (from 1 = "*strongly disagree*" to 5 =

"*strongly agree*") each team on four items that best fit our study's focus: "The group members contributed unique information during the group task"; "The members of this team complemented each other by openly sharing their knowledge"; "The members of this team carefully considered all perspectives in an effort to generate optimal solutions"; and "The members of this team carefully considered the unique information provided by each individual team member" ($\alpha = .91$). Coders were initially trained and then used a random set of five teams to code and resolve any large discrepancies in their ratings; after this, each coder independently rated elaboration of all teams. The coders' ratings achieved adequate agreement and reliability: ICC(1) = .71, $p < .001$, ICC(2) = .83; median $r_{wg(j)} = .93$.

Team creativity. Following an established procedure (Baer et al. 2010), we trained two new coders blind to hypotheses on rating the overall creativity of an idea as being both novel and useful. Next, these coders rated a randomly selected subset of ideas (approximately 5%) using a scale ranging from 1 = "*not at all creative*" to 7 = "*extremely creative*." After this initial rating, the two coders discussed their ratings and resolved discrepancies. Then they independently rated the creativity of every idea from each team. Because the coders' ratings reached adequate levels of agreement and reliability (ICC(1) = .37, $p < .001$; ICC(2) = .54; median $r_{wg} = .75$) (LeBreton and Senter 2008), we averaged their scores for each idea and then averaged the five ideas of each team to create the team creativity measure.

Team positive and negative affect expressions. To explore the proposed affect as social information effect, we coded for the number of positive and negative affect expressions from team members during their task. We used existing procedures for coding affect expressions (Barsade 2002, Bartel and Saavedra 2000) as guidelines. We had two coders (different from those described above) who were blind to hypotheses watch one team member at a time for the entire duration of the video and tally each time a positive or negative affect expression occurred, which they then repeated for the other members. For positive expressions, we instructed them to count an occurrence if either a verbal (i.e., words that convey positive emotions) or a non-verbal (e.g., smile, laugh, arched eyebrows, exaggerated hand gestures, positive tone) marker occurred. For negative expressions, we instructed them to do the same but with negative verbal (i.e., words that convey negative emotions) or non-verbal (e.g., frown,

sneer, eyebrows lowered, orienting away from group, negative tone) markers. For the non-verbal markers, we used Bartel and Saavedra's (2000, pp. 230–231) list of different facial, verbal, and body markers for affect expressions. Coders were trained on capturing these different expressions. After training, coders rated a random subsample of five teams to code and resolve any large discrepancies in their ratings. Subsequently, the coders independently went through all videos to code the number of positive and negative affect expressions that occurred for each member on each team. The coders' ratings achieved good reliability for positive and negative emotion expressions for each team member: ICC(1) ranged between .86 and .92, and ICC(2) ranged between .92 and .96. Thus, we averaged the coders' ratings of positive affect and negative expressions of each team member and then averaged each team member's score to generate team positive affect expressions (ICC(1) = .92, $p < .001$, ICC(2) = .96) and team negative affect expressions (ICC(1) = .88, $p < .001$, ICC(2) = .94).

Team empathic expressions. To explore our affect elaboration mechanism, we coded for team empathic expressions. We adapted procedures established in capturing observed empathic communication by physicians to patients (Bylund and Makoul 2005), which is a common setting to examine expressed empathy (Clark et al. 2019). Two new coders, who were blind to hypotheses, independently rated the overall empathy expressed by each team member. Coders were given our definition of empathic expressions as well as a list of common empathic expressions (Bylund and Makoul 2005, Clark et al. 2019). The list included acknowledging the expressed affect occurred (e.g., "You seem hesitant" or expressions like "I see" or "mm-hmm" in response to expressed affect), confirming or validating that a team members' expressed affect is legitimate or valid (e.g., "It makes sense that you are confused"; "I'm also excited"), or pursuing expressed affect by asking questions or further discussing it. We also included the ways that members fail to communicate empathy such as ignoring or denying an expressed emotion or experience. The coders watched the team videos and indicated on a scale from 1 = "*not at all/to no extent*" to 5 = "*very often/to a very great extent*" how much each member engaged in behavioral empathy. Coders were initially trained and then coded a random set of five teams to discuss and resolve any discrepancies. Next, coders independently rated the empathic expression of each member for all teams.

The coders' ratings achieved adequate agreement and reliability for each member on the team: ICC(1) ranged between .49 and .57, ICC(2) ranged between .66 and .73, and median r_{wg} ranged between .75 and 1.00. Thus, we averaged the two coders' scores for each member and then averaged the empathy expression scores of each team member to generate the team empathic expressions measure (ICC(1) = .46, $p < .001$, ICC(2) = .63; median r_{wg} = .97).

Control variables. For the same reasons outlined in Study 1, we tested our hypothesized relationships while accounting for psychological safety (Edmondson's 1999 scale; 1 = "*strongly disagree*"; 5 = "*strongly agree*"; α = .78) and participants' reporting of their experienced positive mood and experienced negative mood. We asked participants to self-report (1 = "*not at all*"; 5 = "*to a very great extent*") their own individual mood (as opposed to the team's mood, which conflates experienced and expressed affect) using the three positive mood states — "enthusiastic," "excited," and "interested" (α = .88)—and three negative mood states —"stressed," "frustrated," and "upset" (α = .68). We averaged across members to create team positive and negative mood variables. Additionally, approximately 22% of teams had only two members instead of the intended three. Thus, we examined team size as an artifact control to rule out any possible differences from this unintended contamination (Carlson and Wu 2012). We note that results of our hypotheses tests are unaffected by inclusion or exclusion of these variables.

Study 2 Results

We examined the efficacy of our manipulation by asking participants to report the level of authentic affect climate (1 = "*strongly disagree*"; 5 = "*strongly agree*") in their team using an adapted version of Grandey et al.'s (2012) scale (α = .86). Items were: "Working with members of this team, expressions of feelings are respected"; "No one on this team would deliberately act in a way that disrespects another member's feelings"; "It is safe to show how you really feel with this team"; "It is uncomfortable for team members to show their true emotions with each other" (reversed); "If you show your genuine feelings with this team, it is held against you" (reversed); "People in this team reject others for showing their true feelings in the team" (reversed); and "Members of this team are able to discuss how they feel about problems and issues." Aggregation statistics supported authentic affect climate as a team

property: ICC(1) = .22, p = .001; ICC(2) = .43; median $r_{wg(j)}$ = .72. The manipulation worked as teams in the high authentic affect climate condition reported greater levels (M = 4.22, SD = .39) than teams in the low condition (M = 3.36, SD = .45); difference = .86, SE = .091, $t(84) = 9.49$, $p < .001$, $\eta_p^2 = .52$.

Table 3 presents the means, standard deviations, and correlations among variables. We conducted a CFA on the participant-rated variables (authentic climate, psychological safety, positive mood, and negative mood). As in Study 1, we used item parceling to reduce the number of indicators to three for authentic affect climate and psychological safety. The four-factor model showed good fit ($\chi^2(48) = 94.95$, $p < .001$, CFI = .97, SRMR = .042, and RMSEA = .064 [.045, .083]) and was a better fit than all alternative models. For example, we set authentic affect climate and psychological safety factors to correlate at 1.0, and a Wald test indicated this model fit the data worse (χ^2 (1) = 25.34, $p < .001$).

Hypotheses tests. Hypothesis 1 was supported as an ANOVA showed a significant main effect of authentic affect climate on information elaboration, $F(1, 84) = 9.14$, p = .003, η_p^2 = .10. Teams in the high authentic affect climate condition had higher elaboration (M = 3.50, SD = .65) than teams in the low condition (M = 3.05, SD = .75; difference = .46, SE = .15, t[84] = 3.02; p = .003). Table 4 presents results from our regression analyses in Mplus 8.3. With controls included, authentic affect climate had a significant positive effect on information elaboration (b = .314 [SE = .157], p = .045, Model 2), and information elaboration positively predicted team creativity (b = .31 [SE = .11], p = .004, Model 5). Thus, we proceeded to test Hypothesis 2, using the same bootstrapping procedure described in Study 1, that proposed an indirect effect of authentic affect climate on team creativity via information elaboration, which results supported (estimate = .10; 95% CI = [.01, .25]).

Exploration of affective mechanisms. We theorized that authentic affect climate influences information elaboration and downstream creativity via two affective explanations: enhanced affective information in the form of increased positive and negative affect expressions and enhanced empathic responding (i.e., increased empathic expressions). Supplemental Table A (see online appendix) presents the results of our model tests including these affective mechanisms. First, results indicated that authentic

affect climate positively predicted team positive affect expressions (b = 12.50 [SE = 1.88], p < .001), team negative affect expressions (b = 2.98 [SE = .99], p = .003), and team empathic expressions (b = .52 [SE = .12], p < .001). Thus, consistent with our theoretical arguments, we find evidence that authentic affect climate increases affect expressions and empathic responding. Second, results also indicated that positive affect expressions (b = .019 [SE = .009], p = .044) and empathic expressions (b = .37 [SE = .14], p = .007) are positively related to information elaboration, but the link from negative affect expressions to information elaboration is not significant (b = -.02 [SE = .02], p = .28). Next, we examined whether team affect expressions and team empathic expressions serially mediate the relationship between authentic affect climate and team creativity. Indirect effects analyses indicated that authentic affect climate had a serially mediated indirect effect on creativity via empathic expressions and information elaboration (estimate = .06; 95% CI = [.01, .18]) and via positive affect expressions and information elaboration (estimate = .07; 95% CI = [.003, .20]), but not via negative affect expressions. [2]

Study 2 Discussion

The results from Study 2 replicated that teams with higher levels of authentic affect climate realized greater creativity as a result of enhanced information elaboration. Additionally, we found support for our theorized affect elaboration mechanism that authentic affect climate increases information elaboration and team creativity through enhanced team empathic expressions. We also found partial support for our affect as social information effect as authentic affect climate increased information elaboration and creativity through positive affect expressions but not through negative affect expressions.

To recap, results from Study 1 suggested that authentic affect climate directly enhances information elaboration (and indirectly enhances team creativity), and these effects are stronger in teams with greater functional variety. Our Study 2 experiment provides additional evidence of the unconditional theoretical model, increasing confidence in the causal order of our predictions, and finds support for the

[2] To explore whether authentic affect climate's effects depend on the type of emotions expressed (positive or negative), we also tested the interactions of authentic affect climate with positive affect expressions and with negative affect expressions on information elaboration, and neither of these interactions were significant.

proposed affective mechanisms in that team empathic expressions and positive affect expressions mediated the effects of authentic affect climate on information elaboration and downstream creativity. However, Study 2 did not test whether authentic affect climate's effects on information elaboration (and creativity) would depend on the team's functional variety (i.e., H3 and H4). That is, in Study 2, we found that, on average, authentic affect climate positively enhanced information elaboration and team creativity among teams that had naturally varying functional variety among team members (i.e., students pursuing different degrees and staff from different departments). Therefore, in Study 3, we examined the full theoretical model (see Figure 1) that includes tests of our moderator hypotheses as well as exploration of whether team affect expressions and team empathic expressions mediate the interactive effects of authentic affect climate and functional variety on team information elaboration and creativity.

Study 3

Sample and Procedure

We used a 2 (authentic affect climate: high vs. low) × 2 (variety of functional roles: diverse vs. homogenous) between-groups design. A total of 294 new participants were recruited using the same behavioral lab as Study 2. Participants' average age was 30 (SD = 12.07), 58% were female, and 57% were students (43% were working adults). In return for their participation in this one-hour study, participants received compensation of approximately $13. Because this experimental task required three-person teams, we only ran teams with the full three members. Participants signed up for a timeslot in which they were assigned to one of the 98 teams, which then were randomly assigned to one of the four experimental conditions. As in Study 2, teams were video-recorded to allow for behavioral coding. We used a creative task from existing research that involved participants taking on the hypothetical roles of management team members of a theater in order to generate creative ideas for the theater's future success (Hoever et al. 2012, 2018). We chose this paradigm because it was developed with the goal of coding information elaboration and because it provided a way to manipulate functional variety.

To start, participants arrived at the lab and were placed in separate cubicles and given 20 minutes to study their information packet, which contained role instructions and information about the theater.

They were asked to write down at the end of the information packet any information they considered important to generating creative solutions when working with their team. Individuals were then grouped into their teams of three members, whereupon they worked together for 20 minutes to develop creative ideas (this term was defined the same way as in Study 2) for an action plan for the theater. Furthermore, to elicit both generation and elaboration of ideas, teams were asked to submit an integrated plan of creative ideas (Hoever et al. 2018). As an extra incentive, the three teams with plans containing the most creative ideas were awarded a cash prize of roughly $195 to be split evenly among members.

Authentic affect climate manipulation. We used a modified version of the manipulation from Study 2. For Study 3, we used only the climate manipulation that came from the leader, which we adapted to this new task. To do so, we had a professional actor serve as a research assistant who guided members through the team phase of the task. After participants finished the individual portion of the task, they assembled into a group room where the "research assistant" awaited. After welcoming participants and reminding them about the task, the "research assistant" gave similar instructions as in Study 2 to create the high and [low] affect climate manipulations (see script in online appendix). The "research assistant" also provided the same interjection described in Study 2 at the half-way point (between minute 10 and 11) that re-emphasized the climate condition. All other procedures (e.g., the "research assistant" explaining to teams that she is there to take notes), coaching of the two roles the actor played (authentic vs. professional), and the rationale for these manipulations, were identical to those outlined in Study 2.

Functional variety manipulation. We used Hoever et al.'s (2018) manipulation of functional variety via the instructions and information packets participants were given. In cross-functional teams (high functional variety), members were assigned to one of three roles: artistic manager, event manager, and financial manager. Each individual instruction sheet was slightly varied to emphasize what was critical to accomplish for that manager's role and what each role should ensure was realized in the team's plan of creative ideas. The artistic manager was told to ensure the creative reputation of the theater, the event manager was told to focus on service quality and community involvement, and the financial manager was instructed to improve the theater's financial performance. In addition, we varied the

information that members received. Some of this information was shared across all members (location plan, ticket sales by target audiences), while other information was unique to each role: calendar of plays (artistic), plan of theatre facilities (event), and financial statement (financial). By contrast, in the homogenous condition (low functional variety), all team members were given the role of general manager, and all instruction packets included all perspectives and goals as well as all pieces of information. Importantly, at the team level, all information and goals were the same across both conditions. This manipulation effectively created "functional assignment diversity in that different views and information arise from functional accountabilities" (Hoever et al. 2018, p. 2167).

Measures

Team information elaboration. We followed the procedure outlined in Hoever et al. (2012) to generate an information elaboration score for each team. Two coders blind to hypotheses watched each team's video (which excluded any speaking by the "research assistant") for the set of interrelated behaviors that constitute information elaboration. Raters then assigned an overall information elaboration score that ranged from 1 to 7 (1 = "little or no systematic discussion of the different perspectives or information"; 4 = "members acknowledge the information and perspectives shared by their team members, but no attempts were made to jointly discuss or elaborate on this information"; and 7 = "all perspectives and information were mentioned and fully discussed by members, different information and perspectives were used to build on each other's suggestions, and team members attempted to integrate different information and perspectives" (Hoever et al. 2012, pp. 988 and 996). Coders were initially trained and then used a random subsample of five teams to code, discuss, and resolve any large discrepancies in their ratings. After this, each coder independently rated elaboration of all 98 teams. Their ratings achieved adequate agreement and reliability (ICC(1) = .85, $p < .001$; ICC(2) = .92; median r_{wg} = 1.00) and were averaged for each team.

Team creativity. Each team submitted an action plan consisting of multiple creative ideas. Thus, we isolated the ideas in each plan so that coders could rate each idea separately (Hoever et al. 2018). Two new coders blind to hypotheses rated the overall creativity of each idea for its joint novelty and usefulness

on a scale from 1 = "*not at all creative*" to 5 = "*extremely creative*." As part of their training for this task, we told coders that novelty represented how much the idea was new and diverged from what the theater is currently doing and that usefulness was how much the idea accomplished the specified goals for each team (Hoever et al. 2012, 2018). As in Study 2, coders rated a random subset of ideas (5%), discussed their ratings and resolved discrepancies, and then independently rated the creativity of every idea from each team. The coders' ratings achieved adequate agreement and reliability (ICC(1) = .63, $p < .001$; ICC(2) = .77; median r_{wg} = .75) and were averaged for each idea. Finally, the creativity of the ideas for each team's plan was averaged to create the team creativity measure. An example of a highly creative idea was "Enable pay for viewing online live streaming of the theatre performances to reach a larger audience in sync with the current technology trends," and an example of an idea low in creativity was "give discounts for ticket sales."

Team positive and negative affect expressions. We followed the same procedure as Study 2 to generate our team affect expressions variables. We also used the same coders as Study 2. Their ratings for Study 3's affect expression variables achieved good reliability for positive and negative expressions of each team member: ICC(1) ranged between .86 and .95 and ICC(2) ranged between .92 and .97. Therefore, we averaged the raters' positive affect and negative expressions scores for each team member, and then averaged each team member's scores to generate team positive expressions (ICC(1) = .93, $p <$ .001, ICC(2) = .96) and team negative affect expressions (ICC(1) = .86, $p < .001$, ICC(2) = .92).

Team empathic expressions. We again followed the same procedure as Study 2 to generate our team empathic expressions variable. The two new coders' (different from all other coders) ratings achieved adequate agreement and reliability for each team member: ICC(1) ranged between .36 and .55, ICC(2) ranged between .53 and .71, and median r_{wg} ranged between .75 and 1.00. Thus, we averaged the overall empathy expression scores of each team member and averaged all members' scores to generate the team empathic expressions measure (ICC(1) = .41, $p < .001$, ICC(2) = .58; median r_{wg} = .97).

Control variables. For the reasons outlined in Study 2, and using the same measures, participants reported their psychological safety (α = .81), positive mood (α = .89), and negative mood (α = .69). The

results of our hypotheses tests are unaffected by inclusion or exclusion of these variables.

Analytical Strategy

We used ANOVAs to examine Hypotheses 1 and 3. We also reported single-level regression analyses results conducted in Mplus 8.3. In addition, we used the same bootstrapping procedure described in Study 1 to test Hypotheses 2 and 4 regarding the unconditional and moderated indirect effects.

Study 3 Results

We measured authentic affect climate using the same scale as in Study 2 ($\alpha = .85$) for a manipulation check. Aggregation statistics provide support for authentic affect climate as a team property: ICC(1) = .14, $p = .01$; ICC(2) = .31; median $r_{wg(j)} = .70$. Teams in the high condition reported higher levels of authentic affect climate ($M = 4.20$, $SD = .37$) than teams in the low condition ($M = 3.65$, $SD = .47$), $t(96) = 6.45$, SE = .085, $p < .001$, $\eta_p^2 = .30$. For the functional variety manipulation check, we followed the procedure outlined in Hoever et al. (2018, p. 2169). We had two coders (different from all other coders) independently rate members' individual answers on their information packets (see above) in terms of whether or not these statements referred to each of the three functional roles (artistic: $\kappa = .78$; event: $\kappa = .88$; finance: $\kappa = .92$). We then calculated a Blau's coefficient of heterogeneity for each role to indicate the extent to which team members differed in its endorsement. In the functionally diverse teams, members were more likely to differ in their adoption of each role. To create a team-level score, we averaged the three Blau coefficients across members, whereby higher values represent greater functional variety. Teams in the functional variety condition reflected significantly higher functional variety ($M = .34$, $SD = .09$) than teams in the homogenous condition ($M = .20$, $SD = .12$), difference = .14, SE = .02 $t(96) = 6.67$, $p < .001$, $\eta_p^2 = .32$.

Means, standard deviations, and correlations among variables are found in Table 5. We conducted a CFA examining the four participant-rated variables (affect climate, psychological safety, team positive mood, and team negative mood). In line with Studies 1 and 2, we used item parceling to reduce the number of indicators to three for authentic affect climate and psychological safety. The four-factor model

showed good fit ($\chi^2(48) = 136.47$, $p < .001$, CFI = .95, SRMR = .044, and RMSEA = .079 [.064, .095]). This measurement model also had superior fit compared to alternative models: e.g., Wald tests that set the correlation between authentic affect climate and psychological safety factors to correlate at 1.0 ($\chi^2(1) = 24.46$, $p < .001$) indicated worse fit.

Hypotheses tests. Hypothesis 1 was supported as a factorial ANOVA showed a significant main effect of authentic affect climate on information elaboration, $F(1, 94) = 6.90$, $p = .01$, $\eta_p^2 = .07$; high authentic affect climate teams had greater elaboration ($M = 4.52$, $SD = 1.09$) than teams low in authentic affect climate ($M = 3.99$, $SD = 1.03$). This main effects was qualified by a significant authentic affect climate × functional variety interaction, $F(1, 94) = 5.46$, $p = .022$, $\eta_p^2 = .06$. As illustrated in Figure 3, planned comparisons revealed a stronger positive effect of authentic affect climate in the functionally diverse condition ($F(1, 94) = 12.07$, $p = .001$, $\eta_p^2 = .11$): diverse teams showed greater elaboration in the high authentic affect climate condition ($M = 5.00$, $SD = .83$) than in the low climate condition ($M = 3.98$, $SD = 1.17$). Contrastingly, for functionally homogenous teams, there was no difference across high ($M = 4.06$, $SD = 1.12$) and low authentic affect climate ($M = 4.00$, $SD = .91$), $F(1, 94) = .04$, $p = .84$, $\eta_p^2 = .00$). These results supported Hypothesis 3.

Table 6 presents results from our regression analysis, which mirrored the findings above. With controls included, authentic affect climate had a main effect on information elaboration ($b = .43$ [SE = .20], $p = .028$, Model 3), and its interaction with functional variety also predicted information elaboration ($b = .85$ [SE = .39], $p = .027$, Model 4). Moreover, results showed that information elaboration positively predicted team creativity ($b = .28$ [SE = .06], $p < .001$, Model 7). Indirect effects analysis (including controls), supported Hypothesis 2—that is, authentic affect climate had an unconditional indirect effect on creativity via information elaboration (estimate = .12, 95% CI [.02, .29]). Hypothesis 4 was also supported: authentic affect climate had a positive indirect effect on team creativity via team information elaboration for functionally diverse teams (estimate = .24; 95% CI = [.08, .48]) and no indirect effect for functionally homogenous teams (estimate = .01; 95% CI = [-.13, .17]), and the difference in these effects

was significant (difference = .24, 95% CI = [.03, .51]).

Exploration of affective mechanisms. Supplemental Table B (see online appendix) reports the regression results of our expanded model that includes the theorized affective mechanisms. Results indicated that authentic affect climate enhanced positive affect expressions (b = 3.88 [SE = 1.63], p = .017), negative affect expressions (b = 2.43 [SE = .81], p = .003), and empathic expressions (b = .24 [SE = .08], p = .004). Moreover, empathic expressions significantly predicted information elaboration (b = 1.42 [SE = .20], p < .001), whereas positive (b = -.01 [SE = .01], p = .30) and negative affect expressions (b = -.002 [SE = .02], p = .90) did not. Further, indirect effects analyses indicated that authentic affect climate had a serially mediated indirect effect on creativity through empathic expressions and information elaboration (estimate = .08; 95% CI = [.02, .19]), but not through positive or negative affect expressions.

Next, we examined whether the affective mechanisms interacted with functional variety to predict information elaboration (see Model 5 of Supplemental Table B). As shown, the interaction term of team empathic expressions and functional variety significantly predicted information elaboration (b = 1.04 [SE = .46], p = .023), but the interaction terms with the affect expression variables were not significant (p > .05). Probing the empathic expressions and functional variety interaction further, tests of simple slopes (see Figure 4) indicated that empathic expressions more strongly related to information elaboration when functional variety was high (b = 1.63 [SE = .27], p < .001), compared to when functional variety was low (b = .60 [SE = .37], p = .11). Furthermore, in this same model, the interaction effect of authentic affect climate and functional variety on information elaboration dropped in significance (p = .075), suggesting that team empathic expressions may mediate authentic affect climate's moderated indirect effects. We explored this possibility, and indirect effects analyses suggested that authentic affect climate had a positive indirect effect on information elaboration via team empathic expressions when functional variety was high (estimate = .39; 95% CI = [.11, .73]) and no indirect effect when functional variety was low (estimate = .14; 95% CI = [-.05, .46]). The difference between these effects was significant (difference = .25, 95% CI = [.01, .68]). Finally, we examined authentic affect climate's serial indirect effects on creativity (i.e., authentic affect climate → empathic expressions → information elaboration → creativity)

in which the empathic expressions-information elaboration link was conditioned upon functional variety. Results indicated that authentic affect climate had a serial indirect effect on creativity at high functional variety (estimate = .09; 95% CI = [.02, .23]), no indirect effect at low functional variety (estimate = .03; 95% CI = [-.004, .13]), and the difference was significant (estimate = .06; 95% CI = [.003, .20]).[3]

Study 3 Discussion

The results of Study 3 constructively replicated and extended the findings of Studies 1 and 2. Team authentic affect climate enhanced team information elaboration, which subsequently increased the team's creative output. Additionally, through experimental manipulation of team functional variety, we found that these positive effects of authentic affect climate are stronger for teams with greater functional variety compared to functionally homogenous teams. Moreover, Study 3 also examined the theorized affective mechanisms. We found further evidence that team empathic expressions mediate the effects of authentic affect climate on information elaboration and creativity, and that functional variety strengthens these positive effects. However, Study 3 failed to find support for the affect as social information effect as neither positive nor negative affect expressions predicted information elaboration.

General Discussion

Across three studies (see Table 7 for summary of results), we document how authentic affect climate significantly increases team creativity through information elaboration, especially for functionally diverse teams. As such, we make meaningful contributions to creativity, diversity, and affect research.

Theoretical Contributions and Practical Implications

Affect expression and responding in team creative processing. To date, studies on team creativity have been mostly dominated by a cognitive perspective (e.g., Aggarwal and Woolley 2019, Hoever et al. 2012, van Knippenberg 2017, Lee et al. 2018, Miron-Spektor et al. 2011). While these studies have identified essential cognitive and information processes that teams engage in to achieve higher creativity, they tend to depict such information processing as largely void of affective

[3] Similar to Study 2, we examined the interactions of authentic affect climate with positive affect expressions and with negative affect expressions on information elaboration, and neither of these interactions were significant.

communication. Yet, several studies of work teams demonstrate how affect is an inherent part of creative processing: individuals in creative collaborations express and respond to a wide range of emotions around their work when trying to develop novel and useful ideas (Grodal et al. 2015, Harrison and Rouse 2015). We address this theoretical gap, conceptualizing affect expression and responding in creative work, in order to provide an integrative account of the interpersonal affective and informational processes of team creativity. We show how authentic affect climate enables teams (especially those with greater functional variety) to realize enhanced creative outcomes when they share, respond to, and elaborate genuine feelings and emotions because doing so promotes greater information elaboration. Identifying these affective processes are important not only because they are largely missing from discussions on how to promote information elaboration and creativity in teams, but also because such affective processes are often implicit and not directly managed at work (Ashforth and Humphrey 1995, Parke and Seo 2017).

Furthermore, we demonstrate these effects of authentic affect climate over and above psychological safety. These findings are crucial because without an authentic affect climate, team members are more likely to remain silent about their intuitive and emotional reactions rather than explore or discuss them, as research has shown that employees often assume they should withhold such half-baked ideas and insights until they are more fully developed, even if they feel safe sharing them (Detert and Edmondson 2011). Further, without a high level of authentic affect climate, the presumed norm of workplaces is that emotional or intuitive communication is devalued and inferior to logic and rational communication (Mumby and Putnam 1992, Toegel et al. 2013). Therefore, our findings help to establish why teams should encourage sharing and responding to affect as key processes for information elaboration and creativity, which extends the literature beyond current prescriptions to make team members feel psychologically safe to share information (Edmondson and Lei 2014, Hu et al. 2018, Lee et al. 2018) or to establish shared mental models, engage in perspective taking, and use structured knowledge sharing (Aggarwal and Woolley 2019, Bechky 2003, Hoever et al. 2012).

Moreover, the results of our two team experiments show consistent support for the proposed affect elaboration mechanism: authentic affect climate helps creative and cross-functional teams better

elaborate information through enhanced empathic responding. Such increased empathic expressions generated by authentic affect climate can enable members to more confidently and collectively explore their feelings about their creative work, helping them transform emotional or intuitive reactions to ideas (e.g., "that confuses me" or "that excites me") to a deeper understanding and integration of the information being discussed. These findings add an important perspective to existing research examining the relationship between group affect and team creativity. Specifically, our findings suggest that how team members *manage and respond* to each other's affect matters to team creative outcomes in addition to the affect that is *experienced* in the team (see Parke et al. 2015 for a similar argument made at the individual level). Past research on group affect and creativity investigates teams' experience of different types of affective states and their effects on team creative processes and outcomes (e.g., Emich and Vincent 2020, Knight 2015, Pillay et al. 2020). However, most of this past work has not investigated interpersonal responding to affect by members—instead, team members are often treated as passive observers or receivers of others' affect, which then influences their thinking and actions. Not accounting for how members deliberately respond to the affect of their teammates could be a reason why "research thus currently paints an ambiguous picture of how group affect influences group…creativity" (Barsade and Knight 2015, p. 34). Indeed, while authentic affect climate and empathic expressions enhanced information elaboration and creativity across our studies, team experienced positive and negative mood had no significant effects. Therefore, in addition to team affective experiences, scholars should consider how teams manage and respond to affect as a critical team process.

By contrast, we find limited support for the proposed affect as social information mechanism as only positive affect expressions mediated authentic affect climate's effects on information elaboration and team creativity in Study 2, but not in Study 3. One possible reason for this difference across the studies is the primary source of knowledge used for each creative task. In Study 2, participants relied solely on their own knowledge and experience to generate creative ideas, whereas participants in Study 3 used their own knowledge plus new information they received (i.e., the information sheets about the theater) to accomplish the task. It is possible that in creative tasks that rely mostly on members' existing knowledge

and experience, expressing positive emotions may signal important affective information that team members incorporate into their elaboration of ideas. However, for tasks in which members must analyze and use new information during discussions, they may rely less on affective information directly received from positive emotional expressions. Another possibility for the lack of results of affect expressions is that our team lab experiments did not produce enough emotional expressions for the effects to emerge. For example, the mean values of team negative mood and team negative expressions across both experiments indicate these types of affect were rare in the majority of teams, which could create a restriction of range issue. However, in the workplace, such low occurrences of affect and expression is less likely to be the case for creative and cross-functional teams who work together over longer time periods, face more significant consequences for the work they produce, and likely experience more of the emotionally charged context of creative environments that has been documented in existing studies (e.g., Amabile et al. 2005, Grodal et al. 2015, Harrison and Rouse 2015). Thus, a key boundary condition of the benefits of authentic affect climate through affect expressions may be the amount and range of emotional reactions team members experience and express, which could be determined by factors such as team membership or the broader work context.

Cross-functional benefits of authentic affect climate. The creative potential of functionally diverse teams is more likely to be realized when members elaborate and combine their diverse knowledge sets (van Knippenberg et al. 2004). However, information elaboration can be difficult for functionally diverse teams to achieve. Hence, they often require enabling factors or processes to help them elaborate to produce greater creativity. To date, most research on functionally varied teams has focused on cognitive or linguistic factors—such as diversity beliefs (Homan et al. 2007), shared mental models (Resick et al. 2014), structured knowledge sharing processes (Hargadon and Bechky 2006), metaphors (Biscaro and Comacchio 2018), and boundary objects (Carlile 2002)—and has largely ignored the role that affective processes play in helping (or hindering) these teams' generation and development of new and useful ideas. In this way, we address a need in diversity research by showing how sharing and empathically responding to affect enable cross-functional teams to elaborate knowledge to achieve greater creativity.

Authentic affect management in creative work. Our work helps shift the belief that team members should promote expressing positive emotions but refrain from expressing negative emotions in creative work, to one that suggests they should welcome and respond with empathy to both positive and negative emotions in creative work. Research documents how there is an implicit, and sometimes explicit, prescription for groups to suppress negative emotions and react primarily with positivity in group creative work (Harvey 2014, Harvey and Kou 2013, Jackson and Poole 2003, Lingo and O'Mahony 2010, Sutton and Hargadon 1996). The logic of this advice builds from Osborn's (1957) original brainstorming rule of "avoid criticism" to suggest that this practice helps expand openness of thought, leads to diverging ideas and insights, and helps generate a greater number of ideas because negative reactions (and emotions) may shut down or limit generation and elaboration processes, especially at the early stages of creativity. Despite the mixed empirical support of its ability to improve creative outcomes (see Litchfield 2008, p. 652–653), the belief in the superiority of positive emotional environments continues to persist in theory (e.g., for a review, see Barsade and Knight 2015, p. 33–34) and in practice (e.g., Jackson and Poole 2003, Sutton and Hargadon 1996). In this context, our research provides an alternative viewpoint (see also Harvey and Kou 2013, Rouse 2020) to suggest that avoiding or suppressing emotions (regardless of their valence), if it lowers the team's authentic affect climate, it may in fact harm information elaboration and reduce overall creativity because teams do not elaborate their emotional and intuitive reactions to ideas before more fully comprehending their merit, or because they may falsely support bad ideas due to positive or professional emotion display norms. Instead, we demonstrate that if team members feel supported to express their authentic negative and positive emotions such that members respond with empathy, this environment can enable members to more effectively elaborate information and develop higher levels of creativity.

Practical implications. Our work provides a strong impetus for managers, especially those leading cross-functional teams, to support authentic affect expression and empathic responding among team members. To this end, our manipulations of authentic affect climate in Studies 2 and 3 provide scripts and precise messages leaders can use in their own teams to enhance their authentic emotion

climates. For instance, leaders can use messages such as "I want us to work together in a completely authentic way such that you share how you genuinely feel" and "Know that it is safe and encouraged to discuss ideas and your feelings about them, as opposed to you keeping these to yourself." In addition, by identifying empathic expressions as a key linking mechanism that explains the effects of authentic affect climate on information elaboration and team creativity, we also identify specific behaviors leaders and team members can use to improve these outcomes. In particular, team leaders and members can engage in behaviors that explicitly recognize, validate, and/or explore others' expressed emotions. Finally, we provide practical guidance on making expressing and responding to authentic affect, which are often counter-normative or implicit processes not directly managed at work, a more explicit part of the team climate. For example, teams can ensure that norms, routines, and rewards support members in (a) sharing genuine feelings, (b) considering the affect of other members when developing and evaluating ideas, and (c) engaging in empathic reactions to expressed affect.

Limitations and Future Research

There are several limitations to our current studies that offer avenues for future research. First, our arguments mostly focus on affect expressions and responding related to the team's work. However, it is possible that members' affect could derive from non-work sources (e.g., Rothbard and Wilk 2011). Although we would expect authentic affect climate to also help members resolve non-work-related emotions so that they can maintain focus and engagement in their work, future research can test our hypothesized relationships across different sources of affect. Second, the measure of authentic affect climate used in our field study (Study 1), and as a basis for our manipulation checks in Studies 2 and 3, is somewhat limited. That is, although authentic affect climate encourages members to express and respond to authentic affect, the measure we used (originally created by adapting items from Edmondson's (1999) psychological safety measure), contains items that focus more on the safety aspect of expressing and responding to emotions. This may explain the relatively high correlations (range = .64 – .71) between the measures of authentic affect climate and psychological safety across studies. Even so, we note that the content of authentic affect climate items (expressing and responding to affect) aligns with our definition

and differs from the content of psychological safety's measure (Edmondson 1999). More importantly, the manipulations we use for authentic affect climate in our two team experiments more precisely align with our conceptualization of how authentic affect climate encourages members to share, respond to, and discuss their authentic emotions. Nevertheless, future research should seek to develop an improved measure of authentic affect climate that more directly captures the encouragement of expressing and responding to authentic affect.

Third, authentic affect climate is a shared, collective construct; however, our studies showed variability ($r_{wg(j)}$ values) in the extent to which members agreed with one another about their authentic affect climate (i.e., climate strength). This suggests that authentic affect climate strength (Bowen and Ostroff, 2004) may be an interesting variable to explore in future work in terms of whether heterogeneity in members' perceptions of their authentic affect climate (i.e., low climate strength) leads to breakdowns in informational processes or other outcomes (e.g., conflict). Fourth, some research investigating the role of affect in thinking shows that it can bias information processing and lead to worse judgements and decisions (Elfenbein 2007, Forgas 1995). In relation to our arguments, this raises a question of whether authentic affect climate, at times, could mislead information elaboration and harm team creativity. However, such biasing effects of affect tend to occur when the affective state is outside of people's awareness (Forgas 1995, Seo and Barrett 2007). Instead, awareness and acknowledgement of affect, which is more likely in authentic affect climates, can reduce biasing effects and also enable affect to be considered as relevant or irrelevant information (Schwarz and Clore 2003). That said, future research could investigate if and when authentic affect climate may negatively impact information processing.

Our work also offers several other future research directions. First, the popular advice to suppress negative emotions in favor of positive displays may work when the goal is to brainstorm many ideas (i.e., quantity goal) or if the team can effectively segment ideation and elaboration phases (e.g., IDEO, Sutton & Hargadon 1996). Providing some support for this idea, in our Study 2, we found that positive affect expressions, but not negative affect expressions, positively influenced information elaboration and creativity in a team task that may have skewed toward idea generation. However, in many work contexts,

teams typically cycle through these creative phases and alternate between quantity vs. quality goals in a continuous process (Harvey and Kou 2013). Given this discussion, future research should more directly investigate how an authentic affect climate influences team creativity compared to a positive emotion climate as well as examine whether the effects of authentic affect climate differ in the generation and elaboration phases of creativity or differ when teams pursue different creative goals in terms of quantity versus quality of ideas (Litchfield 2008).

Second, while we found no strong evidence in our studies, future research can more directly examine the valence of affect climate and how it impacts team processes and creativity. For example, authentic affect climates that skew more towards negative affect expressions may find it more difficult to collaborate and engage in effective information elaboration than teams with a balance of positive and negative authentic affect expressions (Parke and Seo, 2017). Furthermore, future studies can consider other moderating conditions to our proposed relationships. For example, team members may differ in their preference, comfort, or ability to express their authentic emotions and engage in empathic responding, such that the information and creative benefits are greater (weaker) for members with beliefs/abilities (e.g., emotional intelligence) that orient them to engage in more (less) emotion authenticity and openness (Van Kleef 2009). Finally, our work focused on the outcomes of authentic affect climate and so future research can investigate its antecedents, such as team power differentials and relationships among member that may reduce or enhance the team's authentic affect climate.

Conclusion

To generate creativity, scholars have long recognized the importance of team environments that support elaborating information. In this article, we show the importance of a climate that supports elaborating emotions and feelings. Differences in expressing and responding to genuine affect impact teams' creative outcomes, especially in cross-functional teams. We encourage future research to continue investigating why and when authentic affect climate can help teams realize their creative potential.

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Table 1: Means, Standard Deviations, and Correlations among Variables (Study 1)

Variable	Mean	SD	1	2	3	4	5	6
1. Team Creativity	3.94	.74	(.88)					
2. Team Information Elaboration	4.37	.61	.52*	(.81)				
3. Team Authentic Affect Climate	3.87	.38	.17	.29*	(.61)			
4. Team Functional Variety	.40	.25	-.18	.07	.06	-		
5. Team Psychological Safety	3.82	.39	.10	.12	.71*	.04	(.68)	
6. Team Positive Mood	3.60	.51	.03	-.06	.08	-.05	.25	(.72)

Note: $N = 57$ teams; internal consistency reliabilities appear in parentheses along the diagonal.
* $p < .05$

Table 2: Regression Analyses (Study 1)

	Team Information Elaboration *Model 1*	Team Information Elaboration *Model 2*	Team Information Elaboration *Model 3*	Team Information Elaboration *Model 4*	Team Creativity *Model 5*	Team Creativity *Model 6*	Team Creativity *Model 7*
Intercept	4.37 (.08)**	4.36 (.08)**	4.37 (.08)**	4.36 (.07)**	3.94 (.10)**	3.94 (.08)**	3.94 (.08)**
Team Authentic Affect Climate	.46 (.21)*	.39 (.20)†	.64 (.28)*	.48 (.29)†	.33 (.30)	.05 (.24)	.01 (.37)
Team Functional Variety	.14 (.26)	.10 (.26)	.13 (.25)	.09 (.25)			
Authentic Affect Climate × Functional Variety		1.35 (.60)*		1.37 (.65)*			
Team Information Elaboration						.61 (.12)**	.62 (.13)**
Team Psychological Safety			-.24 (.26)	-.10 (.27)			.04 (.36)
Team Positive Mood			-.06 (.13)	-.11 (.13)			.07 (.19)
R^2	.09	.13	.10	.14	.03	.27	.27

Note: $N = 57$ teams; unstandardized estimates provided. Standard errors reported in parentheses. All predictor variables centered at sample mean values.
† $p < .10$ * $p < .05$ ** $p < .01$

Table 3: Means, Standard Deviations, and Correlations among Variables (Study 2)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Team Creativity	2.93	.68	-								
2. Team Information Elaboration	3.27	.73	.23*	(.91)							
3. Team Authentic Affect Climate Condition (1 = high; 0 = low)	.50	.50	-.07	.31*	-						
4. Team Size	2.78	.42	-.14	.22*	.03	-					
5. Psychological Safety	3.85	.38	-.004	.30*	.37*	.17	(.78)				
6. Team Positive Mood	3.07	.61	-.01	.34*	.39*	.24*	.54*	(.88)			
7. Team Negative Mood	1.39	.33	-.03	-.20	-.07	-.07	-.39*	-.19	(.68)		
8. Team Empathic Expressions	3.31	.59	.07	.45*	.49*	-.04	.31*	.22*	-.08	-	
9. Team Positive Affect Expressions	24.77	10.48	.05	.41*	.62*	.01	.26*	.31*	-.27*	.49*	-
10. Team Negative Affect Expressions	10.94	4.54	.01	-.04	.32*	-.23*	.02	.08	.07	.02	.41*

Note: $N = 86$ teams; internal consistency reliabilities appear in parentheses along the diagonal. Team size coded 1 = 3 members; 0 = 2 members.
* $p < .05$

Table 4. Regression Analyses (Study 2)

	Team Information Elaboration *Model 1*	Team Information Elaboration *Model 2*	Team Creativity *Model 3*	Team Creativity *Model 4*	Team Creativity *Model 5*
Intercept	3.05 (.11)**	2.90 (.18)**	2.98 (.10)**	3.03 (.10)**	3.31 (.18)**
Team Authentic Affect Climate Condition (1 = high; 0 = low)	.46 (.15)**	.314 (.157)*	-.09 (.15)	-.21 (.15)	-.22 (.16)
Team Information Elaboration				.26 (.10)*	.31 (.11)**
Team Size		.28 (.18)			-.34 (.17)*
Team Psychological Safety		.11 (.24)			-.01 (.23)
Team Positive Mood		.19 (.14)			-.002 (.14)
Team Negative Mood		-.26 (.23)			.01 (.23)
R^2	.10	.20	.004	.07	.12

Note: $N = 86$ teams; unstandardized estimates provided. Standard errors reported in parentheses. All non-binary predictor variables were centered at sample mean values. Team size coded 1 = 3 members; 0 = 2 members.
* $p < .05$ ** $p < .01$

Table 5: Means, Standard Deviations, and Correlations among Variables (Study 3)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Team Creativity	3.12	.71	-								
2. Team Information Elaboration	4.26	1.09	.46*	-							
3. Team Authentic Affect Climate[a]	.50	.50	.15	.25*	-						
4. Team Functional Variety[b]	.49	.50	.19	.21*	.00	-					
5. Team Psychological Safety	3.91	.41	.20*	.32*	.14	-.02	(.81)				
6. Team Positive Mood	3.31	.61	.16	.28*	.09	.00	.43*	(.89)			
7. Team Negative Mood	1.55	.40	-.18	-.21*	-.11	-.01	-.67*	-.26*	(.69)		
8. Team Empathic Expressions	3.10	.47	.40*	.66*	.31*	.09	.39*	.32*	-.20*	-	
9. Team Positive Affect Expressions	26.04	9.49	.23*	.23*	.26*	.00	.38*	.44*	-.19	.40*	-
10. Team Negative Affect Expressions	12.22	4.27	.02	.09	.29*	.07	.07	.10	.07	.15	.31*

Note: $N = 98$ teams; [a] authentic affect climate coded 1 = high, 0 = low; [b] team functional variety coded as 1 = functionally diverse roles, 0 = functionally homogenous roles. Internal consistency reliabilities appear in parentheses along the diagonal. * $p < .05$

Table 6: Regression Analyses (Study 3)

Variable	Team Information Elaboration *Model 1*	Team Information Elaboration *Model 2*	Team Information Elaboration *Model 3*	Team Information Elaboration *Model 4*	Team Creativity *Model 5*	Team Creativity *Model 6*	Team Creativity *Model 7*
Intercept	3.77 (.18)**	4.00 (.20)**	3.81 (.17)**	4.02 (.19)**	3.01 (.10)**	3.09 (.09)**	3.09 (.09)**
Team Authentic Affect Climate[a]	.53 (.21)*	.06 (.28)	.43 (.20)*	.02 (.27)	.22 (.14)	.06 (.13)	.06 (.13)
Team Functional Variety[b]	.46 (.21)*	-.02 (.29)	.47 (.20)*	.04 (.27)			
Authentic Affect Climate × Functional Variety		.96 (.40)*		.85 (.39)*			
Team Information Elaboration						.29 (.06)**	.28 (.06)**
Team Psychological Safety			.62 (.35)	.54 (.34)			.01 (.23)
Team Positive Mood			.29 (.18)	.33 (.18)			.02 (.12)
Team Negative Mood			.03 (.33)	.07 (.32)			-.14 (.21)
R^2	.11	.15	.21	.25	.02	.21	.22

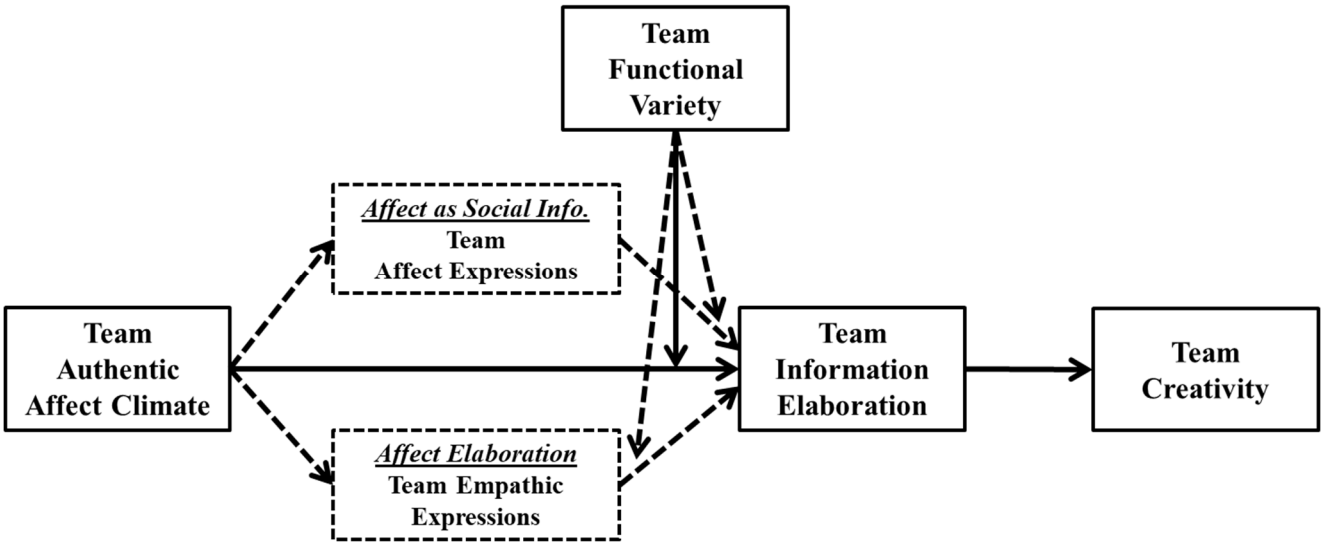
Note: $N = 98$ teams; unstandardized estimates provided. Standard errors reported in parentheses. All predictor variables (excluding the experimental conditions) centered at sample mean values. [a] Authentic affect climate coded 1 = high, 0 = low; [b] team functional variety coded as 1 = team members with functionally diverse roles, 0 = team members with homogenous roles. * $p < .05$ ** $p < .01$

Table 7: Summary of Results Across Studies

Theoretical Relationship (see also Figure 1)	Study	Support
Hypotheses		
Auth. affect climate → Info. Elaboration (H1)	Studies 1, 2, and 3	Yes
Auth. affect climate → Info. Elaboration → Creativity (H2)	Studies 1, 2, and 3	Yes
Auth. affect climate → Info. Elaboration (more so in teams with greater Functional Variety: H3)	Studies 1 and 3	Yes
Auth. affect climate → Info. Elaboration → Creativity (more so in teams with greater Functional Variety: H4)	Studies 1 and 3	Yes
Exploration of Affective Mechanisms		
Auth. affect climate → Positive Affect Expressions	Studies 2 and 3	Yes
Auth. affect climate → Negative Affect Expressions	Studies 2 and 3	Yes
Auth. affect climate → Empathic Expressions	Studies 2 and 3	Yes
Positive Affect Expressions → Information Elaboration	Studies 2 and 3	Yes (Study 2); No (Study 3)
Negative Affect Expressions → Information Elaboration	Studies 2 and 3	No
Empathic Expressions → Information Elaboration	Studies 2 and 3	Yes
Auth. affect climate → Positive Expressions → Info. Elaboration → Creativity	Studies 2 and 3	Yes (Study 2); No (Study 3)
Auth. affect climate → Negative Expressions → Info. Elaboration → Creativity	Studies 2 and 3	No
Auth. affect climate → Empathic Expressions → Info. Elaboration → Creativity	Studies 2 and 3	Yes
Positive Affect Expressions → Info. Elaboration (more so in teams with greater Functional Variety)	Study 3	No
Negative Affect Expressions → Info. Elaboration (more so in teams with greater Functional Variety)	Study 3	No
Auth. affect climate → Positive/Negative Expressions → Info. Elaboration → Creativity (more so in teams with greater Functional Variety)	Study 3	No
Empathic Expressions → Info. Elaboration (more so in teams with greater Functional Variety)	Study 3	Yes
Auth. affect climate → Empathic Expressions → Info. Elaboration → Creativity (more so in teams with greater Functional Variety)	Study 3	Yes

Note: All arrows indicate positive relationships, and all relationships are at the team level. When a row has more than one arrow (i.e., more than one relationship), it indicates an indirect (i.e., mediated) effect of the first variable listed on the last variable listed through the intervening variable(s).

Figure 1: Theoretical Model



Note: Dotted boxes and arrows are theoretical affective mechanisms explored in Studies 2 and 3.

Figure 2: The Interactive Effects of Team Authentic Affect Climate and Functional Variety on Team Information Elaboration (Study 1)

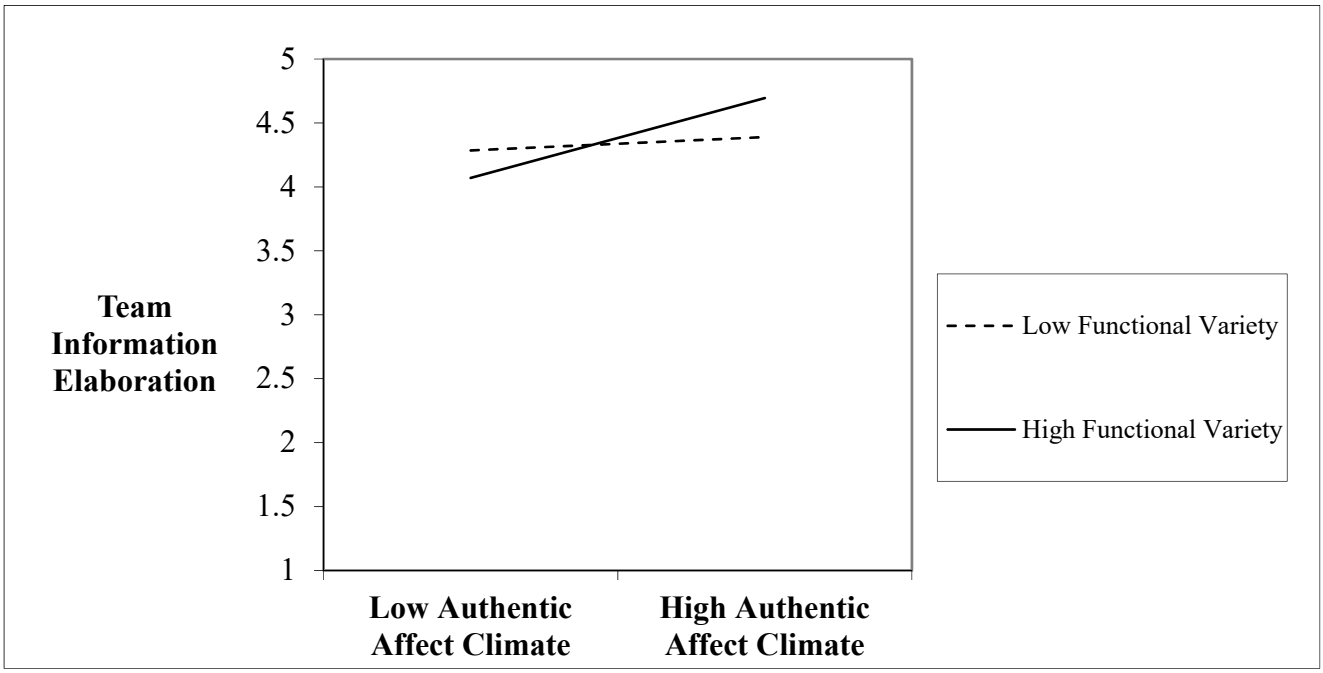
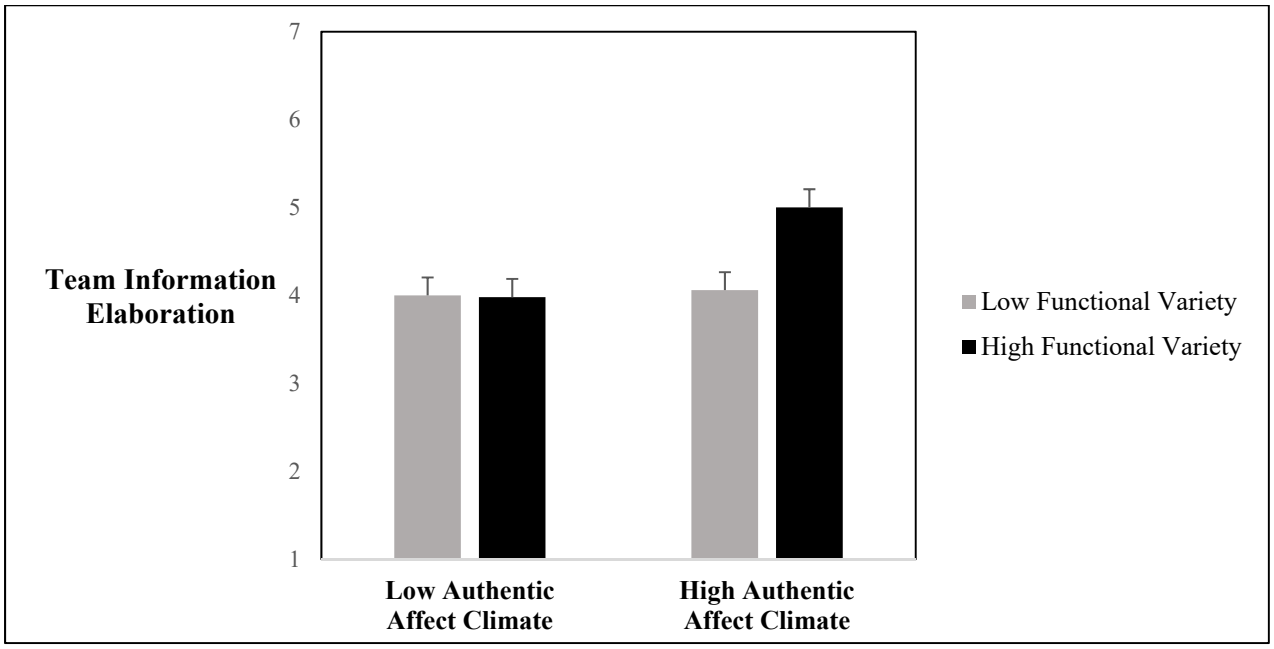


Figure 3: The Interactive Effects of Team Authentic Affect Climate and Functional Variety on Team Information Elaboration (Study 3)



Note: Error bars represent standard errors.

Figure 4: The Interactive Effects of Team Empathic Expressions and Functional Variety on Team Information Elaboration (Study 3)