Affective Mechanisms Linking Dysfunctional Behavior to Performance in Work Teams: A Moderated Mediation Study

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The present study examines the association between dysfunctional team behavior and team performance. Data included measures of teams' dysfunctional behavior and negative affective tone as well as supervisors' ratings of teams' (nonverbal) negative emotional expressivity and performance. Utilizing a field sample of 61 work teams, the authors tested the proposed relationships with robust data analytic techniques. Results were consistent with the hypothesized conceptual scheme, in that negative team affective tone mediated the relationship between dysfunctional team behavior and performance when teams' nonverbal negative expressivity was high but not when nonverbal expressivity was low. On the basis of the findings, the authors conclude that the connection between dysfunctional behavior and performance in team situations is more complex than was previously believed—thereby yielding a pattern of moderated mediation. In sum, the findings demonstrated that team members' collective emotions and emotional processing represent key mechanisms in determining how dysfunctional team behavior is associated with team performance.

Keywords: work teams, dysfunctional behavior, emotion, emotion regulation, performance

A body of research has recently emerged with an emphasis on "bad" employee behavior (e.g., Dunlop & Lee, 2004; Felps, Mitchell, & Byington, 2006; Griffin & Lopez, 2005; Robinson & O'Leary-Kelly, 1998). According to Griffin and Lopez (2005), bad employee behavior refers to any form of intentional act that has the potential to adversely affect organizations and their employees. In other words, bad behavior reflects employee conduct that an organization would otherwise prefer not to have displayed by its employees. Exemplars of these behaviors can range from employee theft and sabotage to social undermining and antisocial activity.

In their review on employee "bad" behavior, Lawrence and Robinson (2007) remarked that the prevalence and costs of such misconduct "make its study imperative" (p. 378). In the present instance, we focus on bad behavior occurring within a team context (cf. Robinson & O'Leary-Kelly, 1998) and, as recommended by Griffin and Lopez (2005), dub these behaviors *dysfunctional team behavior*. As we suggested earlier, there is a range of possible forms that dysfunctional team behavior might take; however, we chose to focus on the readily observable but not illegal types. For our purposes, *dysfunctional team behavior* is defined as any observable, motivated (but not illegal) behavior by an employee or group of employees that is intended to impair team functioning. In accordance with this operational definition, dysfunctional behaviors within teams should encumber team processes and goals (Robinson & O'Leary-Kelly, 1998), violate norms that are necessary for effective team performance (Felps et al., 2006), and thus hold strong negative connotations for team members (Griffin & Lopez, 2005).

Whereas scholars have exerted considerable effort toward understanding the determinants of dysfunctional behavior (e.g., Diefendorff & Mehta, 2007; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006; Mitchell & Ambrose, 2007), they have not devoted much attention to the associated consequences. Further, researchers have conducted the majority of existing studies at the individual level of analysis. Nevertheless, with the increasing use of teams in organizations (Kozlowski & Ilgen, 2006), there is mounting interest in dysfunctional behavior as a team-level construct (e.g., Felps et al., 2006). Research on this issue, however, is generally limited to investigating how individuals' team context shapes their dysfunctional behavior (e.g., Robinson & O'Leary-Kelly, 1998). With the exception of Dunlop and Lee (2004), who found that dysfunctional behavior predicted 24% (averaged across three outcomes) of the variance in units' performance, no research has explored the possibility that dysfunctional behavior among team members may
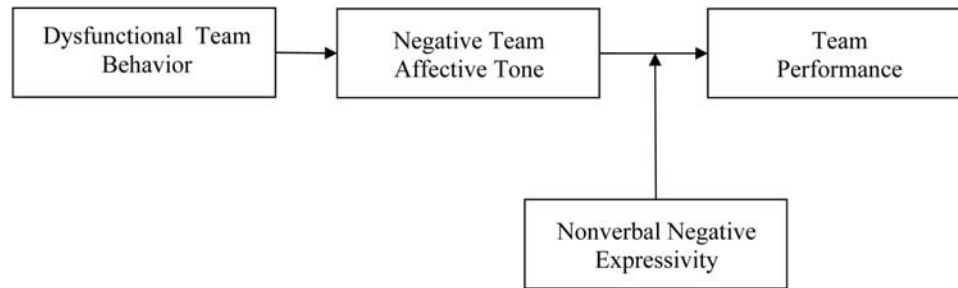
Figure 1. The proposed conceptual scheme (adapted from Brown et al., 2005, p. 793).

incite performance losses for the team as a whole. Thus, the connection between dysfunctional team behavior and performance is deserving of more attention, and we contend that team members' emotions and their emotion regulation strategies play a key role in understanding this association.

With this contention in mind, we focused the present study on investigating the affective mechanisms linking dysfunctional team behavior and team performance. In doing so, we found that affective events theory (AET; Weiss & Cropanzano, 1996) and emotion regulation research (e.g., Gross, 1998a; 1998b) provided a theoretical backdrop for the proposed "sequence of events" model depicted in Figure 1.[1] We posit that dysfunctional team behavior will increase what George (1990) labeled *teams' negative affective tone,* defined as teams' collective experience of negative emotions (i.e., team members' shared negative affect). In turn, we expect greater levels of negative team affective tone to diminish team performance. We further anticipate that "display rules" (Hochschild, 1979) capable of modulating the expression of negative emotions is critical to teams' goal-directed behavior and performance. Thus, we consider the consequences of team members' shared tendency to express negative emotions through behavioral (e.g., facial or postural) cues, or what we label as *nonverbal negative expressivity*. We argue this emotion regulation strategy will function as a boundary condition on the mediating effect of negative team affective tone in the dysfunctional team behavior–performance linkage. By simultaneously considering the roles of a team's emotional experiences and its emotion regulation strategies, we test an integrated model that may provide guidance in understanding why team performance declines as a result of dysfunctional team behavior.

Rationale for the Present Conceptual Scheme

Researchers widely recognize that individuals respond emotionally to events occurring within organizational settings (Weiss & Cropanzano, 1996). Unfavorable work episodes, in particular, are known to engender strong negative feelings (Rozin & Royzman, 2001) that, in turn, adversely influence work attitudes and behaviors (e.g., Hui, Law, & Chen, 1999; Kiefer, 2005). Thus, past research demonstrates that, in line with a key tenet of AET (Weiss & Cropanzano, 1996), negative affect can serve as an intervening mechanism between adverse work stimuli and performance-related outcomes (for a review, see Elfenbein, 2007). Individuals may, however, be able to curb such consequences by regulating their negative affective responses. In a study by Brown, Westbrook, and

Challagalla (2005), for example, employees' self-control buffered the injurious performance effects of their negative emotions, while the expression of negative feelings toward others augmented these effects.

Although illuminating, this type of research has typically focused on the event sequence linking negative workplace characteristics to *individuals'* emotional responses and job outcomes (Brief & Weiss, 2002). And yet Kozlowski and Hattrup (1992), among others, recognized that individuals working within bounded organizational contexts (e.g., teams) may encounter homogenous situational factors that lead to shared interpretations and collective response tendencies. Importantly, functional relationships at more than one level of analysis cannot be assumed equivalent (Kozlowski & Klein, 2000). Thus, the extent to which a similar event sequence can occur at the team level remains an important yet unanswered question.

We addressed this issue by testing the conceptual scheme depicted in Figure 1. In demonstrating the linkages proposed in the model, our results contribute to the literature in several important ways. First, we replicate much of the work reported in Brown et al. (2005), among conceptually similar constructs but at the team level of analysis. We also extend Brown et al. by exploring dysfunctional team behavior as an antecedent to negative team affective tone. Hence, the current research answers mounting calls for team-level studies on work events, affective tone, and performance within an integrated framework (Pirola-Merlo, Härtel, Mann, & Hirst, 2002). Second, because teams are often viewed as an effective method to facilitate goal attainment while also meeting employees' needs for a meaningful work environment (Manz, 1992), our findings may benefit both applied researchers and practitioners, as they reveal a previously unidentified boundary condition regarding the inverse relationship between dysfunctional team behavior and team performance.

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[1] In line with scholarly explanations (see Ilgen, Hollenbeck, Johnson, & Jundt, 2005), we adopt the theoretical position that teams exist in context as they perform across time. Accordingly, we view team performance as an output at Time t_n but recognize that team performance is also an input and part of the team process leading to performance output at Time t_{n+1} (Ilgen et al., 2005).

Dysfunctional Team Behavior: Conceptual Issues and Its Emergence Mechanisms

We envisage dysfunctional team behavior as originating from individuals' disruptive acts but materializing as a shared team property through members' mutual interactions (Kozlowski & Klein, 2000). Accordingly, dysfunctional team behavior differs in structure (but not function) from individual-level dysfunctional behavior (cf. Morgeson & Hofmann, 1999). Based on this logic, dysfunctional team behavior is argued to reflect the ambient levels of negative, disruptive behavior that pervade a team's context (cf. Hackman, 1992).

Felps et al. (2006) argue that even a single disruptive member can be the catalyst for team-level dysfunction (see also Keyton, 1999). This scenario most frequently occurs when team members lack power as compared with the dysfunctional member, thereby constraining the availability of constructive responses (e.g., reform or rejection of the dysfunctional individual; Felps et al.). In this situation, the most likely recourse by teammates is to act defensively. Nonetheless, defensive responses usually fail to resolve the dysfunctional behavior problem within the team. Rather, dysfunctional acts may intensify and spread throughout the team as members try to defend themselves and the team via enactments of retaliation or revenge (Bies, Tripp, & Kramer, 1997), potentially resulting in tit-for-tat spirals of dysfunctional behavior (Andersson & Pearson, 1999).

Team settings also provide ample opportunities to observe other members' behavior. Team members can learn to engage in dysfunctional behavior by observing other teammates and then unconsciously modeling these acts (Bandura, 1973). A comparable transmission mechanism is called *the spillover effect.* Research suggests, for example, that when individuals see teammates act disruptively, these behaviors become more mentally accessible, and individuals lower their inhibitions against behaving in a similar manner (Felps et al., 2006; Keyton, 1999). Likewise, the work group aggression literature describes spillover as "contagious aggression," where aggressive actions ricochet throughout a team as they set off one teammate after another (Folger & Skarlicki, 1998; Glomb & Liao, 2003).

And finally, social information processing theory argues that the social context influences individuals' conscious expectations regarding their own behavior (Salancik & Pfeffer, 1978). According to this perspective, team members use cues in their social environment to determine the extent to which dysfunctional behavior is appropriate. These cues may originate from team norms and expectations, as well as in the behavior of other team members. In addition, witnessing dysfunctional enactments may prompt the observer to seek out teammates' interpretations to help make sense of such behavior. This can lead to *secondary social sharing,* where those who have just learned about a dysfunctional act are themselves inclined to share with others what they have heard (Rimé, 2007). Over time, then, team members receive common social cues convincing them that dysfunctional behavior is an acceptable response to shared working conditions (Robinson & O'Leary-Kelly, 1998). Thus, one can conclude that team members' dysfunctional behavior can spread throughout the team in a variety of ways, both unconsciously and consciously. We contend it is through these mechanisms that dysfunctional team behavior emerges as an ambient team-level property.

Hypotheses Development

Dysfunctional Team Behavior and Negative Team Affective Tone

We propose that dysfunctional team behavior will positively associate with teams' negative affective tone because such behavior carries with it the potential to damage teams' reputations and to threaten the attainment of team goals (Felps et al., 2006). That is, dysfunctional team behavior may impair processes directly relevant to team functioning. Further, research has consistently demonstrated linkages between the appraisal of workplace stimuli as salient and harmful and the subsequent experience of negative emotions (Carver & Scheier, 1990; Lazarus, 1991). Thus, to the extent that team members appraise dysfunctional enactments as both relevant and harmful, we would expect these members to react emotionally and negatively. It seems logical, on the basis of prior research, to construe dysfunctional team behavior as an emotive stimulus that negatively influences all team members' work context and, by extension, increases members' shared negative feelings. In support of this notion, Elfenbein (2007) notes that an emotive stimulus "need not literally be an event that occurs, but can also be a stable feature of the work environment" (p. 6). She argues that any contact between individuals and their work environment can become an affective event, particularly when the environment involves coworkers.

Dysfunctional team behavior can also influence a team's shared affective experiences because dysfunctional members intentionally violate norms of appropriate social functioning (Felps et al., 2006) and, therefore, may evoke perceptions of inequity in their teammates. Research has shown that such inequity perceptions produce strong negative emotional reactions (Folger & Cropanzano, 2001; Weiss, Suckow, & Cropanzano, 1999). Further, the presence of dysfunctional behavior might weaken within-team relations because members will likely lose trust in their disruptive teammates (cf. Dutton & Heaphy, 2003). As a consequence, we expect a further increase in team members' negative feelings.

> *Hypothesis 1:* Dysfunctional team behavior will be positively associated with negative team affective tone.

Negative Team Affective Tone and Team Performance

We expect a team's negative affective tone will distract the team from focusing on its tasks and, thereby, diminish team performance (Ashton-James & Ashkanasy, 2005). As we noted earlier, negative team affective tone represents members' collective experience of negative emotions (George, 1990). Whereas emotional contagion is the primary mechanism through which negative team affective tone develops, other emergence mechanisms include team members' mutual interaction and common exposure to the same affective events (George, 1996).

A growing body of research indicates that negative emotions have harmful effects on individuals' motivation and behavior (Brown et al., 2005; Kiefer, 2005), including their persistence, effort, and task performance (Seo, Barrett, & Bartunek, 2004; Staw & Barsade, 1993). The rationale underlying these inverse relationships is that negative affective experiences serve as signals that something is amiss (Clore, Gasper, & Garvin, 2001), thereby activating individuals' cognitive processing in attempts to resolve

the problem and cope with their negative feelings (Lazarus, 1991). To the extent these cognitive efforts persist, the likelihood of task execution lessens as individuals become preoccupied with "fixing" their negative feelings and thus distracted from purposeful goal pursuit (Frijda, 1986).

Mirroring these individual-level effects, teams high in negative affective tone are anticipated to enact what Frijda (1986) referred to as "control precedence." These teams are in many ways controlled by their negative emotional state; for instance, they are more likely to narrow attention to specific-action tendencies (e.g., dealing with their negative tenor) and redirect behavior from goal pursuit to resolve their negative feelings. Consequently, team performance should diminish. Supporting these arguments are two studies. In a lab study, Grawitch, Munz, and Kramer (2003) found that teams manipulated to experience negative affective tone focused their activities on intragroup relations, whereas teams in the positive and neutral affective tone conditions focused more on team tasks. Furthermore, a field study by Losada and Heaphy (2004) suggests high-performance teams are characterized by substantially higher positive-to-negative emotion ratios, as compared to medium- or low-performance teams.

Hypothesis 2: Negative team affective tone will be inversely associated with team performance.

The Mediating Role of Negative Team Affective Tone

Hypothesis 1 predicts a positive relationship between teams' dysfunctional behavior and negative affective tone, and Hypothesis 2 predicts an inverse relationship between teams' negative affective tone and performance. Together, these hypotheses specify a model in which dysfunctional team behavior indirectly diminishes team performance by contributing to teams' negative affective experiences. This notion is in line with AET (Weiss & Cropanzano, 1996); that is, adverse working conditions elicit negative feelings, with these negative affective reactions, in turn, demotivating and distracting employees from job tasks (Elfenbein, 2007). Accordingly, we anticipate negative team affective tone to mediate the dysfunctional team behavior-team performance relationship.

Hypothesis 3: Negative team affective tone will mediate the relationship between dysfunctional team behavior and team performance.

The Moderating Role of Teams' Nonverbal Negative Expressivity

Teams' response-focused emotion regulation (i.e., their strategies for dealing with emotional responses; Pugh, 2002) might also influence team effectiveness by acting as a boundary condition on the predicted relationship between teams' negative affective tone and performance. We focused on the extent to which team members, as a whole, behaviorally express negative emotion (viz., nonverbal emotional expressivity). This type of emotion regulation refers to specific team norms (i.e., "informal standards developed through member interactions that reflect the expected emotional tenor of behavior"; Yang & Mossholder, 2004, p. 593). Teams frequently develop such emotion norms or display rules (Hochs-

child, 1979; Rafaeli & Sutton, 1987), with research indicating that emotion norms pertain most often to the expression of negative affect (Domagalski & Steelman, 2005). These ideas suggest that a team's members will deliberately withhold the display of negative emotion when explicit rules prohibit such expression (i.e., nonverbal negative expressivity is low), whereas members should be more behaviorally expressive when display rules do not constrain negatively charged response tendencies (i.e., nonverbal negative expressivity is high).

When teams' nonverbal negative expressivity is low, we expect the relative likelihood of task accomplishment to increase (even when negative team affective tone is high). Teams capable of curbing negative expressions may limit the control precedence induced by members' negative feelings (Frijda, 1986), thereby altering the emotional tenor of the team and thus enabling its members to refocus on team tasks. By the same token, when team norms endorse negatively charged, nonverbal expressions, we expect performance losses to become even more prevalent. In such instances, teams will expend additional time and resources to repair the "vicious pattern" associated with the behavioral display of negative feelings (Pugh, 2002). In other words, we expect that teams whose emotive norms favor negative emotional expressions will induce a high level of control precedence and, by extension, find themselves constantly distracted from goal pursuit (Frijda, 1986). Accordingly, and in contrast to low nonverbal expressivity teams, we anticipate that high nonverbal expressivity teams will exhaust their cognitive and motivational resources as members persist in behaviors designed to deal with negative feelings, thereby exacerbating the adverse performance implications of negative team affective tone. Therefore, we hypothesize a weak inverse relationship between negative affective tone and performance for teams with low levels of nonverbal expressivity, whereas we predict a stronger inverse relationship between negative affective tone and performance for teams that endorse the overt display of negative emotion.

Hypothesis 4a: The inverse relationship between negative team affective tone and team performance will be weaker for teams low on nonverbal negative expressivity than for teams high on nonverbal negative expressivity.

Assuming teams' nonverbal negative expressivity moderates the association between negative team affective tone and performance, it is also likely that teams' nonverbal expressiveness will conditionally influence the strength of the indirect relationship between dysfunctional team behavior and team performance—thereby demonstrating a pattern of moderated mediation between the study variables, as depicted in Figure 1. Because we predict a weak (strong) relationship between teams' negative affective tone and performance when nonverbal negative expressivity is low (high), we expect the following:

Hypothesis 4b: Nonverbal negative expressivity will moderate the negative and indirect effect of dysfunctional team behavior on team performance (through negative team affective tone). Specifically, negative team affective tone will mediate the indirect effect when nonverbal negative expressivity is high but not when it is low.

Method

Participants and Procedures

Targeted respondents came from work teams of a multinational company involved in the manufacture of automotive components. A *work team* was defined as a supervisor (i.e., senior-, middle-, or first-line manager) and two or more team members (i.e., these supervisors' direct subordinates) who shared common objectives, performed interdependent tasks, and were jointly accountable for collective outcomes (Kozlowski & Bell, 2003).

In order to balance data requirements with management's concern to minimize time demands, we followed an informant sampling approach (Van de Ven & Ferry, 1980; see also Van der Vegt & Bunderson, 2005). This approach recognizes that many members of a team are qualified to provide ratings on team properties that they experience together. Accordingly, we relied on a limited number of members who were knowledgeable about the variables of interest rather than collecting data from all members of all teams. Because of an expected variability in informants' responses, this approach requires that interrater reliability be assessed. If team members demonstrate a convergence in responses, researchers can obtain a "balanced perspective" by averaging informants' perceptions (Van de Ven & Ferry, 1980). Using identical data-collection designs, we drew two samples (Sample 1 and Sample 2, separated by a temporal lag of one year) from the host organization.[2]

Human resource representatives from the firm's headquarters selected teams ($n = 207$) from Germany and the United States to participate in the present study. The vice president of human resources development sent an electronic message to all supervisors of the selected work teams. The message contained a short description of the company's interest in the research project and a link to a Web portal where a supervisor survey was posted. The message also explained that the supervisors would receive a second e-mail, which they should forward to five or more members of their teams. Similar to the initial e-mail, this second electronic message briefly described the company's interest in the project and provided a link to a Web portal where a team member survey was posted. Given that the German respondents varied in their ability to comprehend English, a professional translation service was charged with translating all study measures into German following a double-blind, back-translation strategy, with both language versions offered to participants.

We assigned each team a unique team code, enabling us to match supervisor and team member responses. To be included in the study, a work team had to satisfy two criteria (cf. Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Rubin, Munz, & Bommer, 2005): (a) the team's supervisor had to complete the measures assessed in the supervisor survey and (b) at least two team members had to provide data on the variables gauged in the team member survey. Of the 207 work teams identified, 77 teams (37%) met these requirements (35 teams in Sample 1; 42 teams in Sample 2). The exclusion of teams that were not unique in the combined sample reduced the number of work teams available for the analyses to 61 (i.e., 61 supervisors and 277 team members).[3] The number of member responses per team ranged from 2 to 14, with an average of 5 members ($SD = 2.5$) per work team (not including the supervisor) providing data. Given the average team size was 7 and teams ranged in size from 5 members to 18–20 members

(provided by human resource representative), the mean within-team response rate was estimated to approximate 70%. A breakdown of supervisors' hierarchical level is as follows: senior-level managers, 38%; middle-level managers, 39%; and first-line supervisors, 23%. Respondents were primarily (77%) men, 76% were between the ages of 31 and 55 years, and 78% reported organizational tenure of five years or more. The majority (75%) of teams were located in Germany, whereas the other 15 teams (25%) were located in the United States. The majority of respondents (56%) completed the German version of the surveys.

Measures

For our hypotheses tests, the level of analysis was a single team-level model. Concerning measurement, we employed referent–shift composition models (using the team as a referent) in the team member survey (Chan, 1998) and global team ratings in the supervisor survey. We examined the statistical adequacy of aggregating individual members' responses to the team level by calculating intermember reliability (ICC_1 and ICC_2) and by testing whether average scores differed significantly across teams, as indicated by one-way analyses of variance. For completeness, we also calculated the within-group agreement index (r_{wg}; James, Demaree, & Wolf, 1984); however, this index is prone to overestimation and should be interpreted cautiously (cf. Newman & Sin, in press). Further, no strict decision rules exist for the r_{wg} statistic (Lance, Butts, & Michels, 2006), but a common rule of thumb suggests that r_{wg} values should be greater than or equal to .70 (e.g., Chen, Mathieu, & Bliese, 2004).

Dysfunctional team behavior ($\alpha_{team} = .70$). We developed a four-item measure to assess the degree to which teams' members engaged in dysfunctional behavior. Development of these items relied on interview and observation data described by Bruch and Ghoshal (2004) and other research on bad employee behavior (e.g., Duffy, Shaw, Scott, & Tepper, 2006; Robinson & O'Leary-Kelly, 1998). These sources suggest that an omnibus measure designed with the intent of tapping the broadly defined content domain should include items that (a) assess different forms of dysfunctional behavior and (b) can be perceived by members as harmful to a team's well-being. A team's members rated the degree ($1 =$ *strongly disagree,* $5 =$ *strongly agree*) to which members of the team "actively hinder change and innovation," "take aggressive action against new strategies," "choose to work in isolation from others," and "engage in activities to weaken others." We obtained

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[2] Hypothesis testing on the two separate study samples yielded equivalent results. Therefore, we pooled both samples into one dataset to increase the statistical power of our analyses. Prior to combining the data, we confirmed that there were no significant differences between the two samples on any of the study variables.

[3] The remaining teams ($n = 16$) provided data in both samples. Given the overlap, it was necessary that we drop these teams from either Sample 1 or Sample 2. Omitting the teams in Sample 1 while retaining them in Sample 2 was judged to be the best alternative, as Sample 2 data were more current. The results we describe are therefore based on the combined data from a "restricted" Sample 1 (team $n = 19$) and Sample 2 (team $n = 42$). We also ran our substantive analyses on a combined sample that withheld these 16 work teams from Sample 2 while including all teams from Sample 1. There were no significant changes in our findings.

support for aggregating this variable to the team level ($ICC_1 = .12$, $ICC_2 = .38$), $F(60, 212) = 1.62$, $p < .01$. The median r_{wg} value using a uniform expected variance distribution was .91.

Negative team affective tone ($\alpha_{team} = .87$). We gauged teams' negative affective tone by using members' ratings of five items from Van Katwyk, Fox, Spector, and Kelloway's (2000) Job-Related Affective Well-Being Scale (JAWS). The items used in the present study reflect negative high arousal emotions: "angry," "anxious," "disgusted," "frightened," and "furious." Team members indicated the extent to which members of their team experienced each emotion at work by using a 5-point response format (1 = *never*, 5 = *frequently, if not always*). We obtained support for aggregating this variable to the team level ($ICC_1 = .26$, $ICC_2 = .60$), $F(60, 203) = 2.51$, $p < .01$. The median r_{wg} value using a uniform expected variance distribution was .88.

Nonverbal negative expressivity ($\alpha = .60$). We assessed teams' nonverbal negative expressivity by using supervisors' ratings of three items taken from Gross and John's (1997) negative expressivity measure. Gross and John reported empirical evidence that suggested individuals' self-reports and peer ratings on the negative expressivity measure were substantially correlated, and they demonstrated both convergent and discriminant validity. We modified the items such that the items' referent referred to the team as a whole. The three items are as follows: "Whenever people in my team feel negative emotions, others can easily see exactly what they are feeling," "What people in my team are feeling is written on their faces," and "People often do not know what other people in my team are feeling (reverse-coded)." Supervisors indicated the degree of their agreement with these items by using a 5-point response format (1 = *strongly disagree,* 5 = *strongly agree*).

Team performance ($\alpha = .83$). Supervisors provided ratings of team performance by using a five-item measure developed by Conger, Kanungo, and Menon (2000). Supervisors were asked to rate the extent to which their teams "have high work performance," "accomplish most of their tasks quickly and efficiently," "set a high standard for work accomplishment," "achieve a high standard for task accomplishment," and "almost always beat their targets." Supervisors indicated the degree of their agreement with these items by using a 5-point response format (1 = *strongly disagree,* 5 = *strongly agree*).

Controls. Cultural differences (e.g., basic cultural values, shared historical/social backgrounds, and religion) were expected to influence the present study's focal variables (Schwartz, 1999). Peterson and Smith (1997) suggest that *country* is a useful culture delimiter. Therefore, we coded teams' country location as 0 = *United States* and 1 = *Germany*.

Potential Confound of Survey Translations

Because the study included respondents from Germany and the United States, we incorporated an array of previously identified best practices for conducting cross-cultural research (Schaffer & Riordan, 2003). During survey construction, we used professional linguists and internal company representatives to account for linguistic differences among the German and U.S. samples. Procedurally, we established consistency across samples in terms of survey formats, data collection, and survey timing. As recommended by Schaffer and Riordan (2003), we consistently provided

instructions and examples in our survey instruments. And finally, we empirically assessed the extent to which the cross-cultural nature of our samples impacted the reliability of the measures, because multinational research has found that internal consistency estimates often decline with translation (Spector et al., 2002). We computed Cronbach's alpha for each measure across the English and German language versions, and we tested the equality of these estimates (Duhachek & Iacobucci, 2004). Results indicated that there were no significant differences in terms of coefficient alpha for any of the study variables. On this basis, we suggest that the reliability of respondents' ratings was not confounded by translation.

Data Analyses

We tested our study hypotheses in two interlinked steps. First, we examined a simple mediation model (Hypotheses 1–3). Second, we integrated the proposed moderator variable into the model (Hypothesis 4a) and we empirically tested the overall moderated mediation hypothesis (Hypothesis 4b). Prior to the analyses, all continuous measures were mean-centered (Aiken & West, 1991).

Tests of mediation. Collectively, Hypotheses 1, 2, and 3 suggest an indirect effects model, whereby the relationship between dysfunctional team behavior and team performance is transmitted by teams' negative affective tone. Tests of such mediation hypotheses are often guided by the multistep approach proposed by Baron and Kenny (1986). Recently, however, methodologists have identified potential shortcomings in this approach (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). For example, Baron and Kenny suggested that to support mediation, the direct effect from the initial, independent variable X to the outcome Y must be significant (i.e., Step 1). As the mediational process becomes more distal or complex (as in the present instance), the size of the X to Y association typically gets smaller because it is more likely to be "(a) transmitted through additional links in a causal chain, (b) affected by competing causes, and (c) affected by random factors" (Shrout & Bolger, 2002, p. 429). Methodologists have, therefore, questioned whether it is necessary to demonstrate that the initial variable is correlated with the outcome (MacKinnon, Krull, & Lockwood, 2000; Shrout & Bolger, 2002). In fact, Kenny, Kashy, and Bolger (1998) presented an updated account of Baron and Kenny and noted that Step 1 is no longer essential in establishing mediation (p. 260).

Consequently, it is recommended that mediational analyses be based on formal significance tests of the indirect effect *ab,* of which the Sobel (1982) test is the best known. As argued by Preacher and Hayes (2004), this approach is more powerful than the stepwise procedure à la Baron and Kenny (1986) because it more directly addresses mediation. Although useful, the Sobel test rests on the assumption that the indirect effect *ab* is normally distributed. This assumption is tenuous, because the distribution of *ab* is known to be nonnormal, even when the variables constituting the product *ab* are normally distributed (Edwards & Lambert, 2007). Therefore, bootstrapping is recommended. Through the application of bootstrapped confidence intervals (CIs), it is possible to avoid power problems introduced by asymmetric and other nonnormal sampling distributions of an indirect effect (MacKinnon, Lockwood, & Williams, 2004). In accordance, we tested the mediation hypotheses (Hypotheses 1–3) using an application pro-

Table 1
Descriptive Statistics and Study Variable Intercorrelations

Variable	M	SD	1	2	3	4
1. Dysfunctional team behavior[a]	1.59	0.37	—			
2. Negative team affective tone[a]	2.34	0.53	.42**	—		
3. Nonverbal negative expressivity[b]	3.32	0.56	.03	.09	—	
4. Team performance[b]	3.82	0.52	.09	−.40**	−.16	—
5. Country	0.75	0.43	−.20	−.21	.12	.07

Note. ns = 60–61 teams. For country, the United States was coded 0, and Germany was coded 1.
[a] Rating provided by team members. [b] Rating provided by supervisor.
** $p < .01$.

vided by Preacher and Hayes (2004). Briefly, Preacher and Hayes developed an SPSS macro that facilitates estimation of the indirect effect *ab*, both with a normal theory approach (i.e., the Sobel test) and with a bootstrap approach to obtain CIs, and it also incorporates the stepwise procedure described by Baron and Kenny.

Tests of moderated mediation. Concerning Hypothesis 4a, we predicted that teams' nonverbal negative expressivity would moderate the inverse relationship between negative team affective tone and team performance. Further, assuming this moderation hypothesis receives support, it is plausible that the strength of the hypothesized indirect (mediation) effect is conditional on the value of the moderator (viz., nonverbal negative expressivity; see Hypothesis 4b), or what has been termed *conditional indirect effects* (Preacher, Rucker, & Hayes, 2007; alternatively known as moderated mediation). Accordingly, the procedures used to test Hypotheses 4a and 4b were integrated such that we fully considered the possibility of a statistically significant indirect effect being contingent on the value of the proposed moderator. To test Hypotheses 4a and 4b, we again utilized an SPSS macro designed by Preacher and his colleagues (2007). This macro facilitates the implementation of the recommended bootstrapping methods and provides a method for probing the significance of conditional indirect effects at different values of the moderator variable.

Results

Table 1 presents means, standard deviations, and intercorrelations for all team-level variables. An inspection of the correlations reveals that dysfunctional team behavior was positively related to negative team affective tone ($r = .42$, $p < .05$), whereas negative team affective tone was inversely related to team performance ($r = −.40$, $p < .05$). Results also indicated a relative lack of association between the possible country covariate and supervisors' ratings of team performance. On the basis of Becker's (2005) recommendations, we therefore excluded country from any further analyses. Becker's research suggests that the inclusion of unnecessary controls not only reduces statistical power but may also yield biased estimates.

Tests of Mediation

Table 2 presents the results for Hypotheses 1–3. Supporting Hypothesis 1, dysfunctional team behavior was positively associated with negative team affective tone, as indicated by a significant unstandardized regression coefficient ($B = 0.62$, $t = 3.72$, $p < .05$). Also, in support of Hypothesis 2, the inverse relationship

between negative team affective tone and team performance, controlling for dysfunctional team behavior, was supported ($B = −0.53$, $t = −4.17$, $p < .05$). And finally, teams' dysfunctional behavior was found to have an indirect effect on team performance; this indirect effect was negative ($−0.33$), as we hypothesized (Hypothesis 3). The formal two-tailed significance test (assuming a normal distribution) demonstrated that the indirect effect was significant (Sobel $z = −2.73$, $p < .05$). Bootstrap results confirmed the Sobel test (see Table 2), with a bootstrapped 99% CI around the indirect effect not containing zero ($−.74$, $−.04$). Thus, Hypotheses 1–3 received support.[4]

Tests of Moderated Mediation

Table 3 presents the results for Hypotheses 4a and 4b. With regard to Hypothesis 4a, we predicted that the inverse relationship between negative team affective tone and team performance would be weaker for teams low on nonverbal negative expressivity than for teams high on nonverbal expressiveness. Results indicated that the cross-product term between negative team affective tone and nonverbal negative expressivity on team performance was significant ($B = −0.52$, $t = 2.17$, $p < .05$). To fully support Hypothesis 4a, the form of this interaction should conform to the hypothesized pattern. Therefore, we applied conventional procedures for plotting simple slopes (see Figure 2) at one standard deviation above and below the mean of the nonverbal negative expressivity measure. Consistent with our expectations (and supporting Hypothesis 4a), the slope of the relationship between negative team affective tone and team performance was relatively strong (and negative) for teams high in nonverbal negative expressivity (simple slope = $−0.63$, $t = −4.19$, $p < .05$), whereas the slope was relatively weak for teams low in nonverbal expressivity (simple slope = 0.02, $t = 0.12$, $p = ns$).

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[4] As shown in Table 2, the total relationship between dysfunctional team behavior and team performance ($B = 0.11$, $p = ns$) was closer to zero than the estimate controlling for negative team affective tone ($B = 0.43$, $p < .05$), and the indirect effect ($ab = −.33$) and direct effect controlling for negative affective tone ($B = 0.43$) were of opposite sign. This pattern of coefficient estimates indicates the presence of mediational suppression. Empirically speaking, the positive association between dysfunctional team behavior and performance (controlling for negative team affective tone) is capturing the part of dysfunctional behavior that is uncorrelated with negative affective tone. MacKinnon et al. (2000) and Shrout and Bolger (2002) provide excellent descriptions of empirical suppression within the context of mediation analysis.

Table 2
Regression Results for Simple Mediation

Variable		B	SE	t	p
Direct and total effects					
Team performance regressed on dysfunctional team behavior:		0.11	0.18	0.58	.559
Negative team affective tone regressed on dysfunctional team behavior:		0.62	0.17	3.72	.001
Team performance regressed on negative team affective tone, controlling for dysfunctional team behavior:		−0.53	0.13	−4.17	.001
Team performance regressed on dysfunctional team behavior, controlling for negative team affective tone:		0.43	0.18	2.42	.019
	Value	SE	LL 95% CI	UL 95% CI	z	p
Indirect effect and significance using normal distribution						
Sobel	−0.33	0.12	−.56	−.09	−2.73	.006
	M	SE	LL 99% CI	UL 99% CI		
Bootstrap results for indirect effect						
Effect	−0.32	0.14	−.74	−.04		

Note. n = 60 teams. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval; UL = upper limit.

Although the results show that nonverbal negative expressivity interacted with negative team affective tone to influence team performance, they do not directly assess the conditional indirect effects model depicted in Figure 1 (i.e., Hypothesis 4b). Therefore, we examined the conditional indirect effect of dysfunctional team behavior on team performance (through negative team affective tone) at three values of nonverbal negative expressivity (see middle of Table 3): the mean (−0.01), one standard deviation above the mean (0.54), and one standard deviation below the mean (−0.55). Normal-theory tests indicated two of the three conditional indirect effects (based on moderator values at the mean and at +1 standard deviation) were negative and significantly different from zero. Bootstrap CIs corroborated these results. Thus, Hypothesis 4b was supported, such that the indirect and negative effect of dysfunctional team behavior on team performance through negative team affective tone was observed when levels of nonverbal negative expressivity were moderate to high, but not when teams' negative expressiveness was low.

Preacher et al.'s (2007) moderated mediation macro also computes conditional indirect effects at various arbitrary values of the moderator that fall within the range of the data (see the lower half of Table 3). This output complements the more typical probing of the interaction using one standard deviation above and below the mean, and it allowed us to identify the values of nonverbal negative expressivity for which the conditional indirect effect was just statistically significant at alpha = .05 (termed the *regions of significance*).[5] Results demonstrated that the conditional indirect effect was significant at alpha = .05 for any value of negative expressivity greater than or equal to 0.10 on this standardized scale (i.e., M = 0.0, SD = 1.0).[6]

Possibility of Alternative Models

Because of the study's cross-sectional nature, it is possible that alternative model paths exist. Teams may perceive their poor performance as an aversive characteristic, which can lead to an

increase in negative team affective tone, and in turn, teams' negative affect might increase members' dysfunctional behavior. To investigate this issue, we estimated the indirect effects model and the conditional indirect effects model with team performance as the antecedent and dysfunctional team behavior as the outcome. Results showed that the indirect effect from team performance to dysfunctional behavior (through negative team affective tone) was different from zero (−0.16; 99% bootstrap CI = −0.29 to −0.03). Drawing on available research, which suggests the paths as illustrated in Figure 1, this finding indicates the possibility of a feedback loop (see, e.g., input-mediator-output-input [IMOI] model; Ilgen, Hollenbeck, Johnson, & Jundt, 2005). Potentially, teams' dysfunctional behavior may lower subsequent performance through negative affective tone, but in turn, this poor performance might also increase teams' bad behavior and their negative affective experiences. The present data, however, cannot test such a recursive model. Providing further support for the proposed causal ordering, nonverbal negative expressivity did not moderate the relationship between negative team affective tone and dysfunctional team behavior. Accordingly, reversing the order cannot fully explain the observed conditional indirect effect, and our study thus provides tentative evidence for the flow of causality suggested here.

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[5] The regions of significance output produces bootstrap p values assuming normality of the sampling distribution of the indirect effect; accordingly, these should be considered as approximations (Preacher, 2006).

[6] We also ran our conditional indirect effects model on "restricted" samples to examine the robustness of the study's findings. The general pattern of results did not change when omitting teams with (a) only two member responses, (b) two or three member responses, (c) more than five member responses, and (d) two member responses or more than five member responses.

Table 3
Regression Results for Conditional Indirect Effect

Predictor	B	SE	t	p
Negative team affective tone				
Constant	0.03	0.06	0.42	.675
Dysfunctional team behavior	0.62	0.17	3.71	.001
Team performance				
Constant	−0.01	0.06	−0.19	.846
Negative team affective tone (NAT)	−0.43	0.13	−3.33	.002
Nonverbal negative expressivity (N-exp)	−0.02	0.12	−0.16	.877
NAT × N-exp	−0.52	0.24	−2.17	.035

Nonverbal negative expressivity	Boot indirect effect	Boot SE	Boot z	Boot p
Conditional indirect effect at N-exp = $M \pm 1$ SD				
−1 SD (−0.55)	−0.07	0.15	−0.49	.626
M (−0.01)	−0.26	0.12	−2.17	.030
+1 SD (0.54)	−0.44	0.16	−2.74	.006

Nonverbal negative expressivity[a]	Boot indirect effect	Boot SE	Boot z	Boot p
Conditional indirect effect at range of values of N-exp				
−1.05	0.09	0.22	0.43	.670
−0.85	−0.02	0.19	0.13	.900
−0.53	−0.08	0.15	−0.55	.585
−0.22	−0.19	0.12	−1.52	.128
−0.11	−0.22	0.12	−1.87	.062
0.10	−0.29	0.12	−2.41	.016
0.31	−0.36	0.13	−2.68	.007
0.52	−0.43	0.16	−2.74	.006
0.72	−0.50	0.19	−2.71	.007
0.83	−0.53	0.20	−2.67	.008
0.93	−0.57	0.22	−2.64	.008

Note. $n = 60$ teams. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000.
[a] Range of values represent an abbreviated version of the output provided by the macro.

Discussion

This study examined the influence of dysfunctional behavior within a team context. We developed an integrated conceptual scheme that proposed that the relationship between dysfunctional team behavior and team performance is more complex than prior research has indicated (e.g., Dunlop & Lee, 2004). Initially, we predicted teams' negative affective tone to operate as a mediating mechanism between their dysfunctional behavior and performance. We then determined if teams' emotion regulation (viz., nonverbal expressiveness) can amplify or attenuate the indirect relationship between dysfunctional team behavior and team performance. Study results supported the hypothesized moderated mediation model, demonstrating that the magnitude of the indirect effect was contingent upon teams' level of nonverbal negative expressivity. This finding demonstrates the presence of a heretofore unidentified boundary condition influencing the impact of dysfunctional team behavior on team performance.

We believe our results contribute to the literature by corroborating and extending prior findings in several ways. Past research has devoted little attention to the relationship between dysfunctional team behavior and team performance, and to our knowledge, no previous study has investigated the mechanisms connecting these constructs. The present study is the first to broaden the focus of dysfunctional behavior research and present a more complex

scenario of how dysfunctional behavior influences performance in team situations. On the basis of the current results, teams whose members tend to withhold displays of negative emotionality seem to be in a better position to curb the detrimental performance implications of dysfunctional behavior and of the resulting negative affective tone. This finding is important because it suggests that in spite of a strong relationship between dysfunctional behavior and negative affective reactions in teams, the all-important second linkage between negative team affective tone and performance is diminished when team members' nonverbal negative expressivity is low.

Our findings also contribute to research on emotions in organizations. In their review of the literature, Brief and Weiss (2002) stated, "Many important questions about the production and consequences of moods and emotions in the workplace have yet to be addressed. The opportunity (the challenge) is in front of us" (p. 300). The current research addresses this challenge by investigating both antecedents and consequences of negative team affective tone. Our results highlight dysfunctional behavior as a salient team characteristic that fosters members' negative affective reactions. The results also show that negative team affective tone is inversely related to team performance. These findings are in line with affective events theory, which states that individuals' affective reactions are a crucial mediating mechanism linking work events
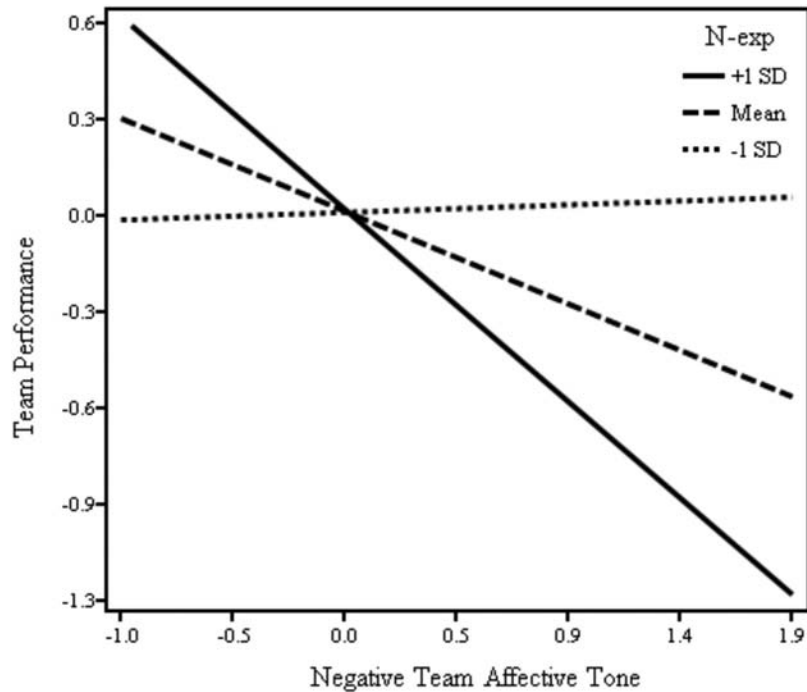
Figure 2. Team performance predicted by negative team affective tone moderated by nonverbal negative expressivity (N-exp). +1 *SD* = one standard deviation above the mean; –1 *SD* = one standard deviation below the mean.

to work outcomes (Weiss & Cropanzano, 1996). When considered together with the present team-level results, the "affect as a mediator" framework may advance research on emotions at multiple levels of analysis. Thus, we echo Pirola-Merlo et al.'s (2002) view that "extending AET to the group level is a worthwhile endeavor and one that can be furthered in subsequent research" (p. 575).

Finally, our team-level findings contribute to theory advancement by constructively replicating the individual-level interaction effects reported by Brown et al. (2005). Notably, the interaction depicted in Figure 2 closely mirrors the results reported in Brown et al. (see Figures 2A and 2B, p. 796). Hence, both individuals' and teams' performances appear to suffer less when the display of negative feelings is withheld. This is a unique contribution, as our findings provide some of the first evidence to suggest a similar interactive relationship occurs at the team level, implying functional similarity across multiple levels of analysis (Morgeson & Hofmann, 1999).

Practical Implications

Assuming team performance will continue to be a critical component of organizational success, our results have several implications for practice. First, the findings highlight the importance of reducing socially undesirable, dysfunctional behaviors. In spite of the low base rate of occurrence (*M* = 1.59 on a 5-point scale), teams with members who engaged in dysfunctional acts experienced more negative feelings and, subsequently, poorer performance. Managers should, therefore, take the necessary steps to prevent the occurrence of dysfunctional behavior in their work teams (see, e.g., Lawrence & Robinson, 2007). Preventive actions

might include communicating strong behavioral norms, proactively managing team conflicts, and eliminating negative role models. Managers may also wish to focus on strengthening team cohesiveness or raising team members' awareness of the importance of organizational and team goals. Organizations could offer training programs to provide managers with the skills needed to effectively intervene when dysfunctional behavior appears within team contexts.

Regarding teams' nonverbal negative expressivity, managers are faced with a dilemma. On the one hand, our results show that teams' expression of negative affect is detrimental to team performance. On the other hand, the suppression of negative emotional impulses has been associated with numerous physiological and psychological consequences, including the impairment of individuals' cognitive functioning and loss of motivational resources (Gross & John, 2003; Richards, 2004). This raises interesting questions: "What should a team do when its members experience negative feelings? Should members 'bottle it up' or should they be allowed to 'blow off steam'?" To resolve these questions, two strategies seem viable. Managers may try to influence the extent to which negative emotional responses are activated among team members, a process that has been termed *reappraisal* (Gross, 1998a). Reappraisal often takes the form of interpreting negative stimuli in unemotional or positive terms. Managers might accomplish this process by labeling stressful events as opportunities rather than threats (e.g., Dutton & Jackson, 1987). Compared with the suppression of negative emotional reactions, such reappraisal has the benefits of (a) modulating the launch of negatively charged response tendencies, (b) preventing expressions of negative affect,

and (c) demanding less of individuals' cognitive resources (Pugh, 2002). Alternatively, once negative affective reactions have occurred in their teams, managers may try to redirect the expression of these negative emotions in a productive manner. Geddes and Callister (2007) suggested that the expression of negative emotions can have positive consequences if it occurs in a socially acceptable manner and is directed at individuals capable of influencing the emotion-inducing condition. Notably, research has demonstrated that emotion regulation training is effective and reasonably easy to conduct (Pugh, 2002; Totterdell & Parkinson, 1999).

Limitations and Future Research

In spite of our having collected data from two sources and thereby avoiding issues of same-source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), this investigation has some limitations. An initial concern is that the internal consistency estimate for the three-item nonverbal negative expressivity measure was low ($\alpha = .60$). It is well known, however, that coefficient alpha is a conservative estimate of reliability and is influenced by the number of items (Cortina, 1993). Consequently, we followed procedures outlined by Drewes (2000), estimating the maximal reliability of the three-item measure to be .92. We then omitted the "poorest" performing item and recomputed our moderated mediation analysis. The results mirrored those reported with the three-item measure. Thus, on the whole it appears that the low internal consistency estimate did not adversely influence our findings.

As in much of the team research (e.g., Chen et al., 2007), a second concern is that we assessed team performance by means of supervisor ratings. Although supervisory ratings are associated with unique benefits (Bommer, Johnson, Rich, Podsakoff, & MacKenzie, 1995), one could argue that different results might be obtained for other performance measures (e.g., peer ratings). Further, we are unable to demonstrate that our perceptual measure is a valid predictor of "objective" team performance. Whereas this does not invalidate the current research, future studies that include additional, more objective performance measures would provide confidence in the robustness of our findings. Also, because the present data were cross-sectional, it is impossible to unambiguously interpret the results as indicating causality. Even though our use of the term *effects* does imply causal relationships, we acknowledge the need for more evidence based on longitudinal or experimental research before the suggested pattern of causation is defendable.

Another potential limitation is that when within-team response rates fall below 100% (as in the present case), estimation of team-level properties can be complicated by missing data (Newman & Sin, in press); for example, a team's respondents may differ systematically from nonrespondents. If such systematic effects are present, one would expect limited variability in team members' ratings. The descriptive statistics for the member-rated variables in our study (viz., teams' dysfunctional behavior and negative affective tone) closely approximated previous research and demonstrated sufficient variability. Thus, systematic biases were not likely present. In addition, Timmerman (2005) examined relationships between team-level variables with various patterns of member nonresponse. His results demonstrated that both random and nonrandom missing data attenuated team-level relationships.

A final concern involves the possibility of unmeasured variables, which leaves interesting questions for future research. For example, an anonymous referee suggested that the inverse relation between negative team affective tone and team performance might be due to teams' overall talent. High-talent teams may have more experienced members, and by extension, they might excel at both performing effectively and keeping incivility to a minimum. Indeed, future researchers interested in developing a dynamic model of team effectiveness might account for the changing levels of team talent as members move in and out of work teams.

Beyond addressing study limitations, the present analysis suggests other interesting directions for future research. For example, our conceptual scheme is not exhaustive in considering all possible moderator variables. We focused on the amplification of teams' emotional expressions, but there are other forms of response-focused emotion regulation (e.g., strategies that deliberately control emotive displays) that need investigation (e.g., Gross, 1998a; 1998b). Further, we did not consider antecedent-focused emotion regulation mechanisms (e.g., hardiness; Maddi, 1999) that may buffer the adverse impact of dysfunctional team behavior on negative team affective tone. Future research that expands the proposed model to include moderated effects from teams' dysfunctional behavior to negative affective tone would make for an interesting contribution.

It would also be worthwhile to consider aversive work conditions and/or events apart from team members' dysfunctional behavior as antecedents of negative team affective tone and, subsequently, of team performance. Research suggests that supervisor or customer behavior may be relevant in this respect (Duffy, Ganster, et al., 2006; Sy, Côté, & Saavedra, 2005). By simultaneously investigating the affective consequences of varied types of negative workplace characteristics, scholars could provide a more detailed picture of teams' emotional context and contribute to an improved explanation of work team performance. Finally, other studies should replicate our research by collecting data in different samples (e.g., other industries and organizations) and from other team types (e.g., cross-functional) to investigate the generalizability of our findings. In sum, we hope this study provides a foundation from which future research can build in order to address these and other team-level issues.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Andersson, L. M., & Pearson, C. M. (1999). Tit for tat? The spiraling effect of incivility in the workplace. *Academy of Management Review, 24,* 452–471.

Ashton-James, C. E., & Ashkanasy, N. M. (2005). What lies beneath? A process analysis of affective events theory. In N. M. Ashkanasy, W. J. Zerbe, & C. E. J. Härtel (Eds.), *Research on emotions in organizations* (Vol. 1, pp. 23–46). Amsterdam: Elsevier.

Bandura, A. (1973). Aggression: A social learning analysis. Englewood Cliffs, NJ: Prentice Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182.

Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods, 8,* 274–289.

Bies, R. J., Tripp, T. M., & Kramer, R. M. (1997). At the breaking point: Cognitive and social dynamics of revenge in organizations. In R. A. Giacalone & J. Greenberg (Eds.), *Antisocial behavior in organizations* (pp. 18–36). Thousand Oaks, CA: Sage.

Bommer, W. H., Johnson, J. L., Rich, G. A., Podsakoff, P. M., & MacKenzie, S. B. (1995). On the interchangeability of objective and subjective measures of employee performance: A meta-analysis. *Personnel Psychology, 48,* 587–605.

Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology, 53,* 279–307.

Brown, S. P., Westbrook, R. A., & Challagalla, G. (2005). Good cope, bad cope: Adaptive and maladaptive coping strategies following a critical negative work event. *Journal of Applied Psychology, 90,* 792–798.

Bruch, H., & Ghoshal, S. (2004). *A bias for action.* Boston: Harvard Business Press.

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97,* 19–35.

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology, 83,* 234–246.

Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. (2007). A multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology, 92,* 331–346.

Chen, G., Mathieu, J. E., & Bliese, P. D. (2004). A framework for conducting multilevel construct validation. In F. J. Yammarino & F. Dansereau (Eds.), *Research in multilevel issues: Multilevel issues in organizational behavior and processes,* (Vol. 3, pp. 273–303). Oxford, United Kingdom: Elsevier.

Clore, G. L., Gasper, K., & Garvin, E. (2001). Affect as information. In J. P. Forgas (Ed.), *Handbook of affect and social cognition* (pp. 121–144). Mahwah, NJ: Erlbaum.

Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior, 21,* 747–767.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78,* 98–104.

Diefendorff, J. M., & Mehta, K. (2007). The relations of motivational traits with workplace deviance. *Journal of Applied Psychology, 92,* 967–977.

Domagalski, T. A., & Steelman, L. A. (2005). The impact of work events and disposition on the experience and expression of employee anger. *Organizational Analysis, 13,* 31–52.

Drewes, D. W. (2000). Beyond the Spearman-Brown: A structural approach to maximal reliability. *Psychological Methods, 5,* 214–277.

Duffy, M. K., Ganster, D. C., Shaw, J. D., Johnson, J. L., & Pagon, M. (2006). The social context of undermining behavior at work. *Organizational Behavior and Human Decision Processes, 101,* 105–126.

Duffy, M. K., Shaw, J. D., Scott, K. L., & Tepper, B. J. (2006). The moderating roles of self-esteem and neuroticism in the relationship between group and individual undermining behavior. *Journal of Applied Psychology, 91,* 1066–1077.

Duhachek, A., & Iacobucci, D. (2004). Alpha's standard error (ASE): An accurate and precise confidence interval estimate. *Journal of Applied Psychology, 89,* 792–808.

Dunlop, P. D., & Lee, K. (2004). Workplace deviance, organizational citizenship behavior, and business unit performance: The bad apples do spoil the whole barrel. *Journal of Organizational Behavior, 25,* 67–80.

Dutton, J. E., & Heaphy, E. D. (2003). The power of high-quality connections. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 263–278). San Francisco: Berrett–Koehler.

Dutton, J. E., & Jackson, S. E. (1987). Categorizing strategic issues: Links to organizational action. *Academy of Management Review, 12,* 76–90.

Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12,* 1–22.

Elfenbein, H. A. (2007). Emotion in organizations: A review in stages. In A. Brief & J. Walsh (Eds.), *Annals of the Academy of Management* (Vol. 1, pp. 315–386). Amsterdam: Elsevier.

Felps, W., Mitchell, T. R., & Byington, E. (2006). How, when, and why bad apples spoil the barrel: Negative group members and dysfunctional groups. In B. M. Staw (Ed.), *Research in organizational behavior* (Vol. 27, pp. 175–222). Amsterdam: Elsevier.

Folger, R., & Cropanzano, R. (2001). Fairness theory: Justice as accountability. In J. Greenberg & R. Cropanzano (Eds.), *Advances in organizational justice* (pp. 1–55). Stanford, CA: Stanford University Press.

Folger, R., & Skarlicki, D. P. (1998). A popcorn metaphor for workplace violence: In R. W. Griffin, A. O'Leary-Kelly, & J. Collins (Eds.), *Dysfunctional behavior in organizations: Violent and deviant behavior* (Vol. 23, pp. 43–81) [Monographs in organizational behavior and relations]. Greenwich, CT: JAI Press.

Frijda, N. H. (1986). *The emotions.* Cambridge, United Kingdom: Cambridge University Press.

Geddes, D., & Callister, R. R. (2007). Crossing the line(s): A dual threshold model of anger in organizations. *Academy of Management Review, 32,* 721–746.

George, J. M. (1990). Personality, affect, and behavior in groups. *Journal of Applied Psychology, 75,* 107–116.

George, J. M. (1996). Trait and state affect. In K. R. Murphy (Ed.), *Individual differences and behavior in organizations* (pp. 145–171). San Francisco: Jossey–Bass.

Glomb, T. M., & Liao, H. (2003). Interpersonal aggression in work groups: Social influence, reciprocal, and individual effects. *Academy of Management Journal, 46,* 486–496.

Grawitch, M. J., Munz, D. C., & Kramer, T. J. (2003). Effects of member mood states on creative performance in temporary workgroups. *Group Dynamics: Theory, Research, and Practice, 7,* 41–54.

Griffin, R. W., & Lopez, Y. P. (2005). "Bad behavior" in organizations: A review and typology for future research. *Journal of Management, 31,* 988–1005.

Gross, J. J. (1998a). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74,* 224–237.

Gross, J. J. (1998b). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2,* 271–299.

Gross, J. J., & John, O. P. (1997). Revealing feelings: Facets of emotional expressivity in self-reports, peer ratings, and behavior. *Journal of Personality and Social Psychology, 72,* 435–448.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85,* 348–362.

Hackman, J. R. (1992). Group influences on individuals in organizations. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 3, pp. 199–267). Palo Alto, CA: Consulting Psychologists Press.

Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology, 85,* 551–575.

Hui, C., Law, K. S., & Chen, Z. X. (1999). A structural equation model of the effects of negative affectivity, leader-member exchange, and perceived job mobility on in-role and extra-role performance: A Chinese case. *Organizational Behavior and Human Decision Processes, 77,* 3–21.

Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology, 56,* 517–543.

James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology, 69,* 85–98.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 1, pp. 233–265). New York: McGraw–Hill.

Keyton, J. (1999). Analyzing interaction patterns in dysfunctional teams. *Small Group Research, 30,* 491–518.

Kiefer, T. (2005). Feeling bad: Antecedents and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior, 26,* 875–897.

Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology* (Vol. 12, pp. 333–375). London: Wiley.

Kozlowski, S. W. J., & Hattrup, K. (1992). A disagreement about within-group agreement: Disentangling issues of consistency versus consensus. *Journal of Applied Psychology, 77,* 161–167.

Kozlowski, S. W. J., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest, 7,* 77–124.

Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90). San Francisco: Jossey–Bass.

Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods, 9,* 202–220.

Lawrence, T. B., & Robinson, S. L. (2007). Ain't misbehavin: Workplace deviance as organizational resistance. *Journal of Management, 33,* 378–394.

Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist, 46,* 352–367.

Losada, M., & Heaphy, E. (2004). The role of positivity and connectivity in the performance of business teams: A nonlinear dynamics model. *American Behavioral Scientist, 47,* 740–765.

MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding, and suppression effect. *Prevention Science, 1,* 173–181.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of the methods to test mediation and other intervening variable effects. *Psychological Methods, 7,* 83–104.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the produce and resampling methods. *Multivariate Behavioral Research, 39,* 99–128.

Maddi, S. R. (1999). The personality construct of hardiness: I. Effects on experiencing, coping, and strain. *Consulting Psychology Journal: Practice and Research, 51,* 83–94.

Manz, C. C. (1992). Self-leading work teams: Moving beyond self-management myths. *Human Relations, 45,* 1119–1140.

Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology, 92,* 1159–1168.

Morgeson, F. P., & Hofmann, D. A. (1999). The structure and function of collective constructs. *Academy of Management Review, 24,* 249–265.

Newman, D. A., & Sin, H. P. (in press). How do missing data bias estimates of within-group agreement? Sensitivity to SD_{wg}, CV_{wg}, $r_{wg(j)}$, $r_{wg(j)*}$, and ICC to systematic nonresponse. *Organizational Research Methods.*

Peterson, M. F., & Smith, P. B. (1997). Does national culture or ambient temperature explain cross-national differences in role stress? No Sweat! *Academy of Management Journal, 40,* 930–946.

Pirola-Merlo, A., Härtel, C., Mann, L., & Hirst, G. (2002). How leaders influence the impact of affective events on team climate and performance in R&D teams. *Leadership Quarterly, 13,* 561–581.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88,* 879–903.

Preacher, K. J. (2006). SPSS macro to accompany Preacher, Rucker, & Hayes (2007): On moderated mediation models. Retrieved October 19, 2006, from http://www.psych.ku.edu/preacher/

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers, 36,* 717–731.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42,* 185–227.

Pugh, D. S. (2002). Emotional regulation in individuals and dyads: Causes, costs, and consequences. In R. G. Lord, R. J. Klimoski, & R. Kanfer (Eds.), *Emotions in the workplace: Understanding the structure and role of emotions in organizational behavior* (pp. 147–182). San Francisco: Jossey–Bass.

Rafaeli, A., & Sutton, R. I. (1987). Expression of emotion as part of the work role. *Academy of Management Review, 12,* 23–37.

Richards, J. M. (2004). The cognitive consequences of concealing feelings. *Current Directions in Psychological Science, 13,* 131–134.

Rimé, B. (2007). The social sharing of emotion as an interface between individual and collective processes in the construction of emotional climates. *Journal of Social Issues, 63,* 307–322.

Robinson, S. L., & O'Leary-Kelly, A. M. (1998). Monkey see, monkey do: The influence of work groups on the antisocial behavior of employees. *Academy of Management Journal, 41,* 658–672.

Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review, 5,* 296–320.

Rubin, R. S., Munz, D., & Bommer, W. H. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal, 48,* 845–858.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly, 23,* 224–253.

Schaffer, B. S., & Riordan, C. M. (2003). A review of cross-cultural methodologies for organizational research: A best-practices approach. *Organizational Research Methods, 6,* 169–215.

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review, 48,* 23–47.

Seo, M.-G., Barrett, L. F., & Bartunek, J. M. (2004). The role of affective experience in work motivation. *Academy of Management Review, 29,* 423–439.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and non-experimental studies: New procedures and recommendations. *Psychological Methods, 7,* 422–445.

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological methodology* (pp. 290–312). San Francisco: Jossey–Bass.

Spector, P. E., Cooper, C. L., Sanchez, J. I., O'Driscoll, M., Sparks, K., Bernin, P., et al. (2002). Locus of control and well-being at work: How generalizable are Western findings? *Academy of Management Journal, 45,* 453–466.

Staw, B. M., & Barsade, S. G. (1993). Affect and managerial performance: A test of the sadder-but-wiser vs. happier-and-smarter hypothesis. *Administrative Science Quarterly, 38,* 304–331.

Sy, T., Côté, S., & Saavedra, R. (2005). The contagious leader: Impact of the leader's mood on the mood of group members, group affective tone, and group processes. *Journal of Applied Psychology, 90,* 295–305.

Timmerman, T. A. (2005). Missing persons in the study of groups. *Journal of Organizational Behavior, 26,* 21–36.

Totterdell, P., & Parkinson, B. (1999). Use and effectiveness of self-

regulation strategies for improving mood in a group of trainee teachers. *Journal of Occupational Health Psychology, 4,* 219–232.

Van de Ven, A. H., & Ferry, D. L. (1980). *Measuring and assessing organizations.* New York: Wiley.

Van der Vegt, G. S., & Bunderson, J. S. (2005). Learning and performance in multidisciplinary teams: The importance of collective team identification. *Academy of Management Journal, 48,* 532–547.

Van Katwyk, P. T., Fox, S., Spector, P. E., & Kelloway, E. K. (2000). Using the Job-Related Affective Well-Being Scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology, 5,* 219–230.

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18,* 1–74.

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

Yang, J., & Mossholder, K. W. (2004). Decoupling task and relationship conflict: The role of intragroup emotional processing. *Journal of Organizational Behavior, 25,* 589–605.

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