Mood and Emotions in Small Groups and Work Teams

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Affective influences abound in groups. In this article we propose an organizing model for understanding these affective influences and their effects on group life. We begin with individual-level affective characteristics that members bring to their groups: moods, emotions, sentiments, and emotional intelligence. These affective characteristics then combine to form a group's affective composition. We discuss explicit and implicit processes through which this affective combination occurs by examining the research on emotional contagion, entrainment, modeling, and the manipulation of affect. We also explore how elements of the affective context, such as organizationwide emotion norms and the group's particular emotional history, may serve to constrain or amplify group members' emotions. The outcome, group emotion, results from the combination of the group's affective composition and the affective context in which the group is behaving. Last, we focus on the important interaction between nonaffective factors and affective factors in group life and suggest a possible agenda for future research. © 2001 Academic Press

During the past century, a tremendous amount of research attention has been devoted to understanding the structure and performance of small groups

(Levine & Moreland, 1990). While it has been historically noted that groups possess both task and social/emotional components (Bales, 1950), attention has primarily been directed toward understanding these tasks rather than emotional elements. This article is an attempt to delineate affective influences involved in group interaction and to explore the sharing of emotions among group members. We propose a dynamic organizing model of how affect operates in small groups. Through this model we discuss individual-level and contextual antecedents to group emotion, how the individual-level and contextual factors join together through emotional sharing processes to form group emotion, how group emotion influences group performance, and how group emotion feeds back into the group's affective system.

The construct of group emotion and shared emotion among group members has been broadened in recent years. In much of early group research, if affective components were mentioned at all, it was in the context of individual-level satisfaction, morale, or cohesion. More recently, the social nature of emotions has been emphasized (Parkinson, 1996), and affect has been explicitly recognized as an important stimulus in a group's environment (Hackman, 1992). This recognition has increased as the construct of affect within groups, and in the workplace in general, has been expanded and reformulated, offering a more complete understanding of its role in small groups and organizations.

While the concept of a group emotion has a long history, there is no one common definition. We define group emotion as the group's affective state that arises from the combination of its "bottom-up" components—*affective compositional effects*—and its "top-down" components—*affective context* (Barsade & Gibson, 1998). That is, group emotion results from both the combinations of individual-level affective factors that group members possess as well as from group- or contextual-level factors that define or shape the affective experience of the group. The concept of group emotion has been shown to be reliably recognized by group members and outside raters, both on-site and through video ratings (Barsade, 2000; Bartel & Saavedra, 2000; Totterdell, Kellet, Teuchmann, & Briner, 1998), and has been reliably measured through a variety of statistical techniques discussed later in the article. We specifically describe the posited processes behind these affective compositional and affective context effects and offer an organizing structure within which to examine these affective factors in small groups and work teams (see Fig. 1). The model we present suggests that affective influences in groups can be described in a general input, process, output form, where inputs refer to affective antecedents to the group experience, process refers to how affect is spread among other group members, and output refers to the resulting group emotion and its effects on group life.

Following our organizing model, affective compositional effects begin with the variety of individual-level affective components members bring with them into the group interaction. We follow Ashforth and Humphrey (1995) in defining affect broadly and inclusively as a "subjective feeling state" that can range from diffuse moods to intense emotions. Group members bring their individual-level emotional experiences, such as dispositional affect, moods, emotions, emotional intelligence, and sentiments, with them to a group interaction. We then
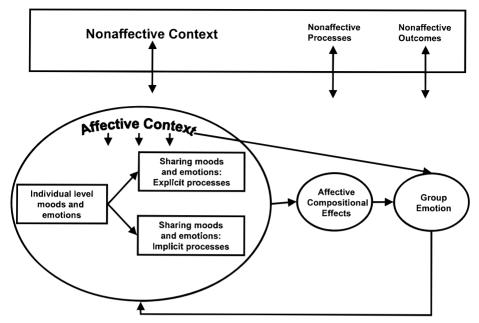
FIG. 1.   Moods and emotions in small groups and work teams.

suggest that through a variety of explicit and implicit processes, these affective inputs are communicated to other group members and form the affective compositional group effects. Explicitly conscious processes include various forms of socially induced affect, such as the deliberate creation or maintenance of emotional experience in group members through affective influence and what we term "affective impression management." Implicit processes include automatic affective transfer processes, such as emotional contagion, feeling affect vicariously, and behavioral entrainment, that lead to the spread of individual-level moods and emotions to other group members. Through these two types of emotional sharing processes, individual-level moods and emotions are spread and shared and form the "bottom-up" process of affective team composition (Barsade & Gibson, 1998).

We next discuss "top-down" factors in the group's affective context that may impose an affective tone on the group or amplify or constrain the ways in which a group experiences or expresses emotion. Specifically, we examine organizational emotion norms, local group norms, and the group's emotional history together as important context variables. We then suggest that the combination of the affective context and the group's affective composition leads to the group emotion at each given moment. Group emotion can refer to specific emotional states, such as group jealousy or envy, to more diffuse feeling states, such as pleasant or unpleasant group moods. The group emotion then feeds back into the affective antecedents and the affective context, leading to a dynamic affective system in the group.

We have also included the presence of nonaffective context, processes, and outcomes in our model. It is beyond the scope of this article to discuss explicitly how affective and nonaffective variables interact, but by including them in the

model we highlight that we expect a reciprocal relationship between affective and nonaffective factors. In the Discussion, we consider some areas of new research that examine how nonaffective context variables, such as intergroup relations, technology, and the physical context in which the group works, influence group emotion.

There is a major conceptual question as to whether emotion, and the individual-level components that we outline in our model, can be meaningfully characterized at the group level. That is, what does it mean for a group to have an emotion? What is the most appropriate way to measure this group emotion? Our article seeks to answer these questions through the explanatory model it presents. Our premise is that while emotion is not a construct exclusive to groups, as is, for instance, "group size," it is sufficiently collective to merit consideration as a group-level construct. Specifically, we show that it has conceptual meaning at the group level of analysis as well as statistical evidence for its existence. As our model illustrates, we posit that it is the sharing processes leading to affective composition, and the mutual exposure to the affective context, which can explain how and why group emotion is viable and meaningful.

INDIVIDUAL-LEVEL MOODS AND EMOTIONS

Our model suggests that an initial input into the group's affective experience involves the individual-level moods and emotions of group members. When people enter a group, they bring their affective personalities and individual affective experiences and skills with them. There are many types of affect that can comprise individual-level moods and emotions. Affect can range from very specific and acute emotions, such as anger or fear; to broader and longer term moods such as cheerfulness and depression; to still emotion-laden, but more cognitively mediated, affective appraisals (e.g., "sentiments"), such as valenced evaluations or assessments of the group (Frijda, 1994). At least five general affective factors can be identified that may form aspects of the affective composition of the group: dispositional affect, mood, acute emotions, emotional intelligence, and sentiments (affective evaluations of the group). Below we give a description of each along with representative group-level research exemplars, where possible, highlighting the importance of each factor.

Dispositional Affect

Dispositional affect consists of a person's affective predisposition toward perceiving the world around him- or herself positively or negatively (Lazarus, 1991; Staw, Bell, & Clausen, 1986). It is an individual difference variable reflecting the characteristic way basic emotions are experienced and expressed (Goldsmith & Campos, 1986). This affective disposition permeates all of one's experiences and serves as a background to consciousness (Watson & Clark, 1984). There has been much work examining the effects of dispositional affect on individual-level behavior (e.g., Staw & Barsade, 1993) and it has been shown

to have strong influences on individual-level behaviors in groups (see reviews by Isen & Baron, 1991, and Staw, Sutton, & Pelled, 1994) as well as on group-level processes and outcomes (Barsade, Ward, Turner, & Sonnenfeld, 2000; George, 1996).

Mood

Moods are low-intensity, diffuse feeling states that usually do not have a clear antecedent (Forgas, 1992) and can be characterized as relatively unstable short-term intraindividual changes (Tellegen, 1985). As described by Lazarus (1991), a mood "is a transient reaction to specific encounters with the environment, one that comes and goes depending on particular conditions" (p. 47). Moods can be evoked by both dispositional affect and emotions (Lazarus, 1991). Unlike emotions, people may not realize that they are experiencing a "mood" and may also not realize that moods are influencing their behavior (Forgas, 1992). This lack of awareness was observed in a laboratory study of emotional contagion conducted by Barsade (2000). She found that while group members' positive moods and mood contagion were positively related to their performance in the group, as perceived by themselves and others, group members did not attribute their success within the group to this factor. However, when the need to judge mood is made salient, there is much evidence that group members (and members outside the group) are able to judge the group mood accurately (Barsade, 2000; Bartel & Saavedra, 2000; Totterdell et al., 1998).

A laboratory experiment by Forgas (1990) illustrates how mood interacts with group discussion to influence group judgments. Forgas induced either negative or positive moods in subjects before they began a group discussion. He found that group discussion led to greater polarization of positive judgments in the positive mood induction condition, whereas group discussion inhibited the polarization of negative judgments in the negative mood induction condition. This differed from the results he found in the individual condition, where positive mood led to more positive judgments and negative moods led to more negative judgments. His study demonstrates how the social, versus individual, aspect of emotions can differentially change decision making and judgments.

Emotions

Emotions differ from both dispositional affect and moods in that they have a clear cause or object, are shorter in duration, and are more focused and intense than either (Frijda, 1994). Emotions are more likely than moods to change beliefs (Schwarz, Bless, Bohner, Harlacher, & Kellerbenz, 1991) and are more likely to disrupt activity (Lazarus, 1991), both of which have interesting implications for group processes and outcomes. However, there has been virtually no empirical research examining the influence of intense emotions in work teams. This is most likely due to the methodological difficulties of being allowed into organizations to study such emotions. Also, even if researchers are allowed to study the emotions, measuring them is difficult, given their generally brief

nature. Emotion researchers may have also been daunted by the field's past view of emotions as only "noise" in the norm of organizational rationality. However, the little research that has been done has shown that strong emotions can influence group cohesion, commitment, and performance. For example, studying 143 student work teams, Duffy and Shaw (2000) found that intragroup envy led to overall diminished group effectiveness. Specifically, they also found that group envy led to greater social loafing and less cohesiveness and group potency, which was related to lessened group performance.

Thoits (1996) describes the effects of the intentional manipulation of both positive and negative emotions among participants of a psychodrama-based encounter group and the subsequent contagion and emotional identification among the group members. She suggests that these processes help participants deal with their problems and lead to at least temporary group solidarity and cohesion. She discusses two powerful techniques used in those groups for managing group emotion, the first being provocation (including confrontation and resentment) and the second being supporting and comforting (e.g., hugging/singing/dancing). She suggests that the sequence in which the emotion management is conducted can make a difference in how the techniques work. The provocation and supporting/comforting behaviors she discusses can be powerful, but tend to only be acceptable and to occur most often under the purview of more extreme or total institutions (Goffman, 1961), such as the military, drug treatment programs, or cults.

Emotional Intelligence

Emotional intelligence is a multifactor individual difference variable shown by Mayer, Caruso, and Salovey (1999) to meet the traditional standards of an intelligence. Being emotionally intelligent involves being actively able to identify, understand, process, and influence one's own emotions and those of others to guide feeling, thinking, and action (Mayer & Salovey, 1997). More specifically, emotional intelligence is composed of the following four factors (Mayer et al., 1999): (1) perception, appraisal, and expression of emotion—the ability to identify your own emotions and those of others as well as to accurately express your emotions to others; (2) emotional facilitation of thinking—understanding how emotions orient people toward important information and how different emotional states can induce varying approaches to problem solving; (3) understanding and analyzing emotions—understanding the meaning, progressions, and complexity among emotions; and (4) regulation of emotion in oneself and others to promote emotional and intellectual growth—the ability to stay open to feelings, to detach, and to manage one's own and others' emotions. Depending on the composition of a group on this dimension, each of these levels can lead to different group outcomes.

As the construct of emotional intelligence is fairly new, and thus has not been directly applied to the group level, there has as yet been no work examining the influence of a group's emotional intelligence composition on its work processes or outcomes. There is suggestive evidence, however, from constructs that

are very similar to those discussed above. For example, Williams and Sternberg (1988) examined a construct very similar to emotional intelligence and found that this variable significantly influenced group outcomes. They examined the influence of sociocognitive compositional variables, such as self-awareness, dominance, and social competence (the ability to evaluate socially appropriate responses to uncomfortable and socially demanding situations) as well as purely cognitive variables on group performance. They found an influence of each type of variable, with sociocognitive variables predicting group performance somewhat more strongly than the cognitive variables. Additionally, illustrating the importance of *group* interaction and emotion, the group's mean sociocognitive score was a stronger predictor of group performance than the score of either the highest or lowest sociocognitive person in the group, whereas for cognition, the group's maximum person score was the best predictor of group performance. This suggests the importance of having not only individual task-related knowledge, skill, and abilities when assembling teams, but individual social and affective skills that influence conscious affective sharing of moods and emotions that then help group-level functioning (Tesluk, Mathieu, Zaccaro, & Marks, 1997).

Sentiments

Sentiments are valenced appraisals of an object and involve evaluation of whether something is liked or disliked. They can be seen as evaluations evoked by phenomena and can come from previous experience with the object/situation or through social learning (Frijda, 1994). In a group context, sentiments about the group itself become very important and have been studied by researchers under several titles. The two most notable are cohesion and satisfaction. Satisfaction has been the most widely studied sentiment (but see Weiss, in press). Satisfaction is defined by Locke (1976) in his classic review of the satisfaction literature as ". . . a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1300). Most of the work conducted has focused on satisfaction as an individual-level variable, both as a result of workplace events and as a predictor of workplace outcomes (see reviews by Locke, 1976, and Staw, 1986). There has been some work, however, on group-level satisfaction. For example, using multilevel analyses in a study of 1670 staff members working in long-term mental health care settings, Jinnett and Alexander (1999) found that group-level job satisfaction influenced intention to quit, irrespective of employees' individual-level satisfaction with their jobs. The authors argue that group-level affective effects in work settings, such as that of group-level job satisfaction, have direct and interactive relationships with individual attitudes and behavior and that this effect is independent of individual job attitudes.

Cohesion is a more directly group-related sentiment and is defined as the group members' positive attraction to the group, that is, "their liking of the group" (Hogg, 1992; Mullen & Copper, 1994). Cohesion has also been related to constructs such as team spirit, morale, or "esprit de corps." Cohesion is often

investigated as an important contributor to effective group performance (see Mullen & Copper, 1994, for a review), making it perhaps the most prominent group-level affective construct in the group dynamics literature. Although a recent meta-analysis demonstrates an overall positive relationship between cohesiveness and performance (Mullen & Copper, 1994), the size of the relationship varies across types of groups (Mullen & Copper, 1994), definitions of cohesion (Mullen & Copper, 1994), and performance norms (Seashore, 1954).

Summary

The literature concerning the effects of affect on individual-level judgment and behavior is quite vast (see Forgas & George, this issue). The importance of affect at the individual level leads us to believe that it will be an important factor at the group level as well. We have reviewed five different types of individual affective factors—affective dispositions, moods, emotions, emotional intelligence, and sentiments—that may be important when investigating different elements of group composition. The processes whereby these individual-level affective experiences are combined to form affective group composition are described next.

SHARING AFFECT: EXPLICIT AND IMPLICIT PROCESSES

Our model suggests that individual-level affective experiences combine to form the affective composition of the group. We suggest that this combinatorial process occurs as individual-level affective experiences are shared, and therefore spread, among other group members. There are two major types of processes involved in this affective sharing. First, there are the implicit, or sometimes subconscious, processes of emotional contagion and behavioral entrainment and the vicarious experience of affect through modeling. In these processes, the individuals involved are not necessarily aware that the process of emotional sharing is occurring. Second, there are the more explicit, conscious processes of affective sharing that include people actively attempting to influence the affect of other group members and engaging in "affective impression management." Each of these processes is discussed in turn.

Implicit Emotional Sharing Processes

Emotional contagion.   Emotional contagion refers to the processes whereby the moods and emotions of one individual are transferred to nearby individuals. The notion of contagion has its theoretical origins in historic constructs, such as "hysterical contagion" and the "group mind" (Le Bon, 1895; McDougall, 1923). Research now focuses on less extreme, but rather the everyday phenomenon of "primitive emotional contagion" (Hatfield, Cacioppo, & Rapson, 1992; 1994), a relatively automatic and unconscious tendency to "mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally" (Hatfield et al., 1992, p. 151).

There is mounting evidence that we do automatically mimic and synchronize with the manifestations of emotional behavior in others (see Hatfield et al., 1994, for a review). For example, Bernieri, Reznick, and Rosenthal (1988) and Cappella (1981) find evidence for automatic and nonconscious synchrony between infant and parent pairs. Evidence for direct motor mimicry has also been reported in a study by Bavelas, Black, Lemery, and Mullett (1987). Furthermore, there is evidence that, as a result of physiological feedback from this mimicry, our own emotional state is shaped in a manner consistent with the model's affect. For example, laboratory studies examining the facial feedback hypothesis demonstrate that having subjects pose their faces in a manner that matches the normal expression of particular emotions (e.g., putting a pencil between teeth which leads to a smiling position related to happiness) influences the degree to which the subjects experience those same emotions. This occurs even though subjects believe that they are engaging in a motor-coordination experiment and thus are unaware of the relationship between their posed features and the emotional expression (Larsen & Kasimatis, 1990; Strack, Martin, & Stepper, 1988).

Many factors can influence the contagion process. Individuals differ in the degree to which they are good senders of emotion and the degree to which they are good receivers of emotion. For example, people who are high in nonverbal expressiveness tend to be better able to transfer their emotions to others (Sullins, 1989). The degree to which a good sender of emotions occupies an important, visible, or central position in a group may influence the degree to which a group experiences similar levels of affect. Similarly, the degree to which a group is composed of good receivers of emotion (Hatfield et al., 1994) may influence affective similarity among group members. Similarity in positive mood at the time of the contagion has also been found to lead to greater contagion (Barsade, 2000). Furthermore, there is some evidence that negative moods and emotions are more easily transferred than are positive moods (Joiner, 1994; Tickle-Degnan & Puccinelli, 1999).

While most of the work examining emotional contagion has been carried out in dyadic settings, emotional contagion has also been found to occur in groups settings and to influence group behavior. Using multiple, convergent measures of mood and group dynamics, Barsade (2000) examined the influence of emotional contagion on team dynamics. Barsade found that contagion occurred in both a laboratory study with mood induced by a trained confederate and a laboratory study in which contagion occurred naturally, with no confederate. In both settings this contagion influenced the groups' dynamics, with contagion of positive emotions leading to improved cooperation, decreased conflict, and increased perceptions of task performance (as rated by self, other group members, and outside video-coders). Contagion of unpleasant emotions led to the reverse.

Totterdell et al. (1998) found implicit evidence of emotional contagion through their study of mood linkages in nurse and accountant work groups. Totterdell et al. (1998) had nurses record their moods daily over a 3-week time period and found a significant concurrent mood association in nursing teams. This

association was stronger for older, more committed nurses who perceived better team climates and fewer problems with their teammates. Using a rigorous, several-times-a-day, signal-contingent experience sampling method, the authors also found collective team mood association in small accountant groups and in professional cricket reams (Totterdell, 2000). Similarly, a field study by Bartel and Saavedra (2000) also found evidence for the construct of group mood and the convergence, or association, of mood among group members. Across 2-h group meetings of 70 very diverse work teams, they found convergence of group mood that they attributed to contagion and emotional comparison processes. Examining the antecedents to shared group mood, they found that nonaffective aspects of the groups' environments, including membership stability and task and social interdependence, were positively related to mood convergence, highlighting the importance of examining the interplay between affective and nonaffective factors—something we also explore later in this article. The authors also developed an observer's instrument, based on the affective circumplex model, that can be used to measure group mood. In fact, all of the studies above developed and used differing methods with which to measure group emotion.

Vicarious affect.   People can also share emotions by vicariously experiencing others' emotions. For example, Bandura (1986) describes vicarious affective learning as a situation where "events become evocative through association with emotions aroused in observers by the affective expressions of others" (p. 186). Social learning theory has shown that modeling others is a powerful shared social process for both cognitions and emotional reactions, and Bandura discusses how vicarious emotional arousal is not fleeting but rather can have long-lasting effects. He notes that "social interactions commonly involve displays of emotion" and that "seeing models express emotional reactions tends to elicit emotional arousal in observers" that can then influence behavior (Bandura, 1986, p. 50). This type of associative, or classically conditioned, observational learning occurs when a person has identified and internalized the emotional display or approach. Such vicarious learning is a type of socialization (Lazarus, 1991). The feelings resulting from vicarious affect are real and are not, for example, a display to gain rewards (such as in affective impression management, discussed below).

Empathy is another type of vicarious affective experience (Hoffman, 1985), and it operates differently from the vicarious affective modeling discussed above. In the case of empathy one shares ". . . another's feelings by placing oneself psychologically in that person's circumstance" (Lazarus, 1991, p. 287). While there has been much discussion about the exact definition and nature of the empathic construct, there seems to be consensus that it is not a unitary factor. Rather, a multidimensional conceptualization has been suggested (e.g., Davis, 1983) that involves "social perspective taking, imaginative self-involvement, and emotional responsiveness, not all of which are that closely related to each other" (Bandura, 1986, p. 314). Thus, empathy has been recognized as

an ability or disposition to share others' emotions and the process through which this emotional sharing occurs (Lazarus, 1991).

An additional type of vicarious affect is a phenomenon studied by clinical psychologists known as transference (Freud, 1958) where ". . . representations of significant others, stored in memory, are activated and used in new social encounters on the basis of a new person's resemblance to a given significant other," particularly if the new person resembles the significant other in some way (Berk & Andersen, 2000, p. 546). There is a robust empirical literature by Andersen and colleagues showing that transference occurs and influences affect (Andersen, Reznik, & Manzella, 1996) as well as behaviors. For example, Berk and Andersen (2000) offer strong evidence, using outside judges and a yoked design, showing how transference can be activated. They demonstrated that affective confirmation of positive or negative feelings about a target person whom the subjects had never met was shown to be based on the subject's association of that target with a positive or negative past relationship—with this association manipulated by the researchers. That is, subjects had significantly more positive affect in their behavior if they associated the new person with a past person they felt positively about than if they associated the new person with a past person they felt negatively about—an effect which did not occur in the control condition, where no manipulation of association occurred. This type of transference, then, occurs when people bring their past emotional history with them to social encounters, which history is then evoked, transferred, and felt anew (for a review of this literature please see Andersen & Glassman, 1996). Transference may manifest itself in odd ways, such as in an instantaneous positive or negative affective reaction to another without having any prior knowledge or experience with that person (which would be happening on a subconscious level; e.g., "You vaguely remind me of that kid in elementary school who I hated, and I don't like you much either"). When people bring this vicarious affective transference into the group setting, it would be expected to affect the dynamics of the group—but in ways possibly puzzling to group members, as there is no clear cause for the dislike or affinity the group member is showing. Thus it may be incorrectly attributed and addressed as something else going on in the group.

Behavioral entrainment and interaction synchrony. Behavioral entrainment and interaction synchrony are an additional way group affect is created, albeit indirectly. Although the two terms are often used interchangeably, behavioral entrainment is one of the processes through which interaction synchrony can be achieved. In a general sense, behavioral entrainment (Condon & Ogston, 1967; Kelly, 1988; McGrath & Kelly, 1986) and interaction synchrony (Tickle-Degnen & Rosenthal, 1987) both refer to the completely nonconscious processes by which one individual's behavior is adjusted or modified in order to coordinate or synchronize with another. In the biological sense, behavioral entrainment is thought to occur when one cyclical process is captured by and set to oscillate in rhythm with another process (McGrath & Kelly, 1986), which by analogy

can occur for social rhythms as well. In terms of social phenomena, the synchrony that may occur through entrainment processes generally refers to the coordination of both micro and macro body movements or configurations as well as, in a broader sense, the coordination of affect and attitudes (Siegman & Reynolds, 1982) between interacting partners.

Research on entrainment and interaction synchrony suggests that smooth coordination between participants leads to a more positive interaction. Some researchers believe that this is because interaction synchrony leads to a smoother and more efficient verbal exchange (Dittmann & Lleywellyn, 1969; Duncan & Fiske, 1977). Synchrony can arise from both the mirroring of another's movements (Dabbs, 1969) and from a sequential coordination of speech and movement (e.g., turn taking) during an interaction (Condon & Ogston, 1966). Furthermore, such interpersonal coordination or synchrony can be observed at above-chance levels by trained observers (Bernieri et al., 1988).

When behavioral entrainment or interaction synchrony occurs, the outcome is positive affect (Chapple, 1970; Warner, 1982). Lack of synchrony is unpleasant. This positive affect can take the form of liking for the partner (Kelly, 1987), satisfaction with the interaction (Bernieri et al., 1988), or greater group rapport (Tickle-Degnen & Rosenthal, 1987). But note, however, that this positive or negative affect occurs as a by-product of a pleasant or unpleasant interaction rather than because of a contagion process. Thus, entrainment elicits the affective state. It should be noted, however, that some researchers argue that such social patterning is an index of social pathology (Gottman, 1979). In fact, a study by Warner, Malloy, Schneider, Knoth, and Wilder (1986) suggests that there might be a curvilinear relationship between synchronicity and affect, with moderately synchronous social interactions rated most positively.

Explicit Processes

While the previous section focuses on emotional sharing that occurs without deliberate intent on the part of either the sender or the receiver, our model recognizes that deliberate attempts to manipulate the affect of other group members may also occur. That is, group members can also more explicitly try to influence the emotions of specific group members or the group as a whole. The processes whereby affect in others may be manipulated include intentional affective induction/influence and affective impression management. Each is discussed below.

Intentional affective induction and affective influence. People can consciously and intentionally try to influence others' emotions through affective induction or affective influence. In order to do so, only the influencer need be conscious of the affective induction; the recipient of the affect may be either aware or unaware of the affective influence attempt. Gibson and Schroeder (1999), in their review of power and emotion, discuss the critical importance of using affect in successful influence attempts and how manipulation of affect can be used both strategically and authentically as a strong influence mechanism. While they focus on research primarily conducted with dyads, the logic of

their arguments directly applies to the group level, particularly when thinking about the role of leadership in groups. In fact, leaders may frequently use emotions to influence others' affective states. Emotion is an inherent part of the "charisma" construct (Wasielewski, 1985) as related to group or organizational leaders, particularly transformational leaders (e.g., Ashkanasy & Tse, 2000). For example, Friedman, Riggio, and Casella (1988) demonstrate that charisma involves being able to enhance group members' feelings of positive emotion while simultaneously reducing unpleasant feelings. Also, George (1995) found that leaders' positive moods had an influence on group performance in a customer service setting. However, it need not only be leaders who influence affect in other group members. Any group member can attempt to influence the mood of others in the groups to reach a goal. For example, group members may intentionally behave with great enthusiasm and cheer about an idea that they are trying to get others to accept, with the knowledge that they need to use emotional as well as cognitive strategies.

Sometimes affective induction can lead to effects opposite from those desired by the person sending the affect. For example, Druckman and Bjork (1994) cite research showing that while affective induction usually operates in a concordant fashion (that is, affect is transmitted in the same direction—positive to positive or negative to negative), there may also be discordant affect—a less common situation where the transmission of a type of affect leads to the opposite affective response (e.g., Aderman & Unterberger, 1977).

Another source of information about intentional affective induction comes from the vast mood induction literature (see Isen & Baron, 1991 for a review). While the point of these studies is not to examine the spread of emotion from person to person (as they rarely use direct social interaction as the basis of the induction), they offer a rich source of noninterpersonal mechanisms, such as music, surprise gifts and rewards, and movies, that can reliably induce moods in experimental subjects, highlighting the importance of nonaffective factors, such as those we discuss later in the article. One of the drawbacks of these types of noninterpersonal affect inductions is their short duration, 20 min or less (Isen & Gorgolione, 1983). This may be because the noninterpersonal stimuli do not have the continuously reinforcing, and reciprocal, properties that interpersonal stimuli offer. In fact, it has recently been suggested that inductions of group mood must necessarily involve group interaction (Kelly, 2001).

Affective impression management. "Affective impression management" involves engaging in surface-level emotional displays in order to achieve goals, fit in, or gain other rewards from the group. An example of this is when a group member sees that everyone else is smiling and enthusiastic about an idea and the member joins in on this affective behavior despite his or her own reservations about the idea. Conversely, a group member who feels positively about an idea may behave even more enthusiastically in order to enhance acceptance of the idea even further. We expect that this affective impression management would be particularly prevalent in cohesive groups with norms

for shared emotional expression. This same process could be an underlying affective rationale for "group think" phenomenon (Janis, 1972). Impression management may occur because of social presentation needs (Goffman, 1959) or because of social comparison needs (Festinger, 1954) in which people use information about others' reactions, including affective information (e.g., Schachter, 1959; Sullins, 1991), as a way of gauging the appropriateness of their responses.

In their review of socially induced affect, Druckman and Bjork (1994) discuss several rationales for why people may intentionally mimic the affect shown by another. This can include appraising the consequences for one's well-being, imagining oneself in another's shoes, and engaging in cognitive consistency. That is, people may choose to model the emotion so that they can become better integrated or socialized into the group or explicitly to curry favor in the group. It is important to distinguish between Kelman's (1961) concept of "imitative compliance" commitment, the ". . . superficial adoption of an outlook for the purpose of creating an impression" (Lazarus, 1991, p. 330), and the identification or internalization of emotional commitment (Kelman, 1961) that we mentioned in our discussion of vicarious affective processes. A team member engaging in affective impression management does not really need to feel or internalize the emotions being expressed, although internalization could occur as a secondary process.

Companies may implicitly encourage affective impression management and comparison processes, depending on how strong their affective norms and socialization processes are. Companies may have an interest in actively encouraging employees to share affective behavioral cues so that they maintain a common emotional style (such as consistently happy and enthusiastic people wanted by such companies as Southwest Airlines). As with any type of social information or social comparison process, the change in the group member's emotions can be actual (i.e., the person really does feel what the other group members feel due to the vicarious emotional arousal), or it may occur only on the surface so as to fit in with the emotional norms of the group.

Summary

A number of processes have been suggested whereby individual-level affective experiences are shared with other group members. As pointed out, some of those processes, such as emotional contagion, can occur without conscious awareness on the part of the sender or the receiver of affect. Other processes, such as affective impression management, involve the deliberate attempt to influence or harmonize with the affect of others. Regardless of the level of awareness, these processes combine individual-level affective experiences of group members to form the affective composition of the group.

AFFECTIVE COMPOSITIONAL EFFECTS

The outcome of the sharing of individual-level moods and emotions is a group's affective group composition (Barsade et al.'s, 2000, Affective Diversity

Model). Affective group composition is the summary statement of the "bottom-up" approach to group affect and is composed of a group's affective mean, standard deviation, and minimum and maximum affective member (Barsade & Gibson, 1998). As pointed out in the organizational demography literature (Pfeffer, 1983), to get a complete picture of group dynamics one must take into account dispersion measures as well as mean levels of group variables.

Affective Mean

There is some preliminary support for being able to examine and measure affective team composition effectively. George (1990) led the way in examining affective compositional effects with field studies examining mean, homogeneous, group affect, coined as "Group Affective Tone" and defined as ". . . .consistent or homogeneous affective reactions within a group" (p. 108). Group Affective Tone can be either positive or negative and has been shown to influence various work outcomes such as organizational spontaneity (George & Brief, 1992) and absenteeism (George, 1989).

With regard to sentiments, the vast literature on cohesion implicitly shows that a group's composition, specifically its mean level, can influence important group outcomes (see Evans & Dion, 1991; Hogg, 1992; Mudrack, 1989; Mullen & Copper, 1994 for reviews). Although cohesion is often conceptualized as a group-level construct, most measurements of group cohesion use a mean aggregate score determined by averaging responses across individual members of the group. That is, most cohesion measures reflect a central tendency index of a group's cohesiveness composition. With respect to outcomes, a recent meta-analysis conducted by Mullen and Copper (1994) confirms a significant relationship between cohesion and group performance. This relationship is especially strong when cohesion is defined as task commitment, rather than interpersonal affective ties, although the relationship holds in the latter case as well. Other research has found that members of interpersonally cohesive groups are less likely to loaf and in fact may sometimes compensate for the poorer performance of other group members (Karau & Williams, 1997). Further, groups with higher mean cohesion are better able to put pressure on individual members to conform to group norms (Back, 1951) and are more likely to react to dissenters with eventual exclusion (Schachter, 1951). Finally, groups in which the mean cohesion level is high show group members reporting more satisfaction and enjoyment with the group (Hackman, 1992; Hogg, 1992) and less anxiety and nervousness (Seashore, 1954).

With regard to future work, it is important to move beyond an investigation of mean levels and to examine indices based on variance and dispersion as well. That is, while it is important to take into account the mean, groups do not necessarily have to have homogeneous affect to make group affect a meaningful construct. In fact, similar to other types of heterogeneity, a group's degree of "affective diversity" can make significant differences in how the group feels and behaves. To test this, Barsade et al. (2000) developed a model of group affective diversity. They found evidence that a group's dispositional affective

heterogeneity influenced group processes and outcomes. They did this by examining the influence of the dispositional affective team composition of 239 managers across 62 senior management teams of top U.S. corporations. Positive dispositional affective diversity in these teams was negatively related to the team's group dynamics, including perceived group conflict and cooperativeness, as well as group outcomes such as company financial performance.

THE AFFECTIVE CONTEXT OF GROUPS

Individual-level moods and emotions, emotion sharing processes, and group affective composition may all be modified by the affective context in which the group is situated. By affective context, we mean primarily the emotion norms that govern emotional expression in various group contexts. Affective expression can be augmented or constrained by norms concerning the appropriateness of emotional expression that develop within the group itself (e.g., local group norms or the group's emotional history) or in the systems within which the group is embedded (e.g., organizational emotion norms). Organizational emotion norms likely operate to limit the range of emotions that can be expressed or experienced by group members in a particular context, whereas the group's emotional history may actually broaden affective options if positive interactions have taken place. Alternatively, the group's emotional history may even impose an affective tone on a group. Although most of the research that has examined the effects of affective context has focused on its influence on individuals, it is likely that similar effects operate at the group level as well.

Organizational Emotion Norms

Norms for suitable emotions and their appropriate display may develop in the system in which the group is embedded. A great deal of research has been devoted to describing the operation of emotion norms in organizational culture (Fineman, 1996; Hochschild, 1983; Rafaeli & Sutton, 1989; Van Maanen & Kunda, 1989). These norms can take the form of "display rules" (Ekman, 1973), that concern expectations about which emotions ought to be expressed or hidden, or "feeling rules" (Hochschild, 1983), that concern expectations about what emotions ought to be experienced in a particular setting.

The demand for particular emotional expression in certain occupations has been termed emotion work or emotional labor. Hochschild (1983) defines emotional labor as "the management of feelings to create a publicly observable facial and bodily display" such that "emotional labor is sold for a wage and therefore has exchange value" (p. 7). Research on emotion norms and emotion management describes how people learn various emotion norms and display rules for particular settings and then actively assess and manage their emotions so as to be consistent with the demands of the situation.

Such norms may be explicit or implicit. For example, Mary Kay Cosmetics consultants must take a "vow of enthusiasm" (Rafaeli & Sutton, 1989). On the other hand, part of the implicit socialization of medical students is to be

"affectively neutral" and emotionally distant from their patients (Smith & Kleinman, 1989). Many groups or individuals tend to emphasize positive emotions when future interaction is anticipated. The extent to which expectations about emotional expression involve expectations for an individual actually to experience the particular emotion also varies from occupation to occupation (Hochschild, 1983).

Emotion norms tend to be especially important in service occupations. For example, flight attendants (Hochschild, 1983), Disney ride operators (Van Maanen & Kunda, 1989), and McDonald's counter workers (Leidner, 1993) must smile and try to act friendly at all times. Hochschild (1983) argues that emotion norms are particularly important in these service settings as they involve interactions between organizational members and customers. However, Ashforth and Humphrey (1995) suggest that emotion norms may develop for any organizational role involving interpersonal interaction. Van Maanen and Kunda (1989) also suggest that emotion norms and emotion management may also be particularly important in group or team settings for "interdependent tasks involving coordination, harmony, and perhaps group bonuses" (p. 56). One might also argue that in cohesive groups, emotion norms may be highly crystallized (Jackson, 1966), and adherence to these norms may be more strongly enforced.

Formal and informal norms about emotional expression are transmitted and maintained through socialization of new group or organizational members. Norms may be learned through instruction and feedback during training in emotional demeanor. For example, bank tellers are told to smile and act friendly toward customers (Rafaeli & Sutton, 1989). Other norms may be transmitted through more subtle forms, such as trial and error learning; or through observation and imitation through role models (Weiss, 1977); or through the emotional comparison processes discussed above. Once in place, groups or organizations may enforce these norms, again through means that are both explicit (e.g., offering incentives to those who best exemplify an emotion role) and implicit (e.g., inclusion in informal activities).

Local Group Norms

Through their interaction history, we expect that groups will develop idiosyncratic or local norms that govern emotional expression in addition to, or even instead of, the organizational norms discussed above. That is, a group's function, its developmental stage, type of task, and its implicit and explicit communication strategies will lead to the development of local, group-specific emotion norms that may operate in addition to the more universalistic emotion norms espoused by the organization. For example, therapy groups may explicitly develop norms for the openness of emotional expression thought to be necessary for therapeutic advancement (Stokes, 1983). Friendship groups may also develop norms that allow for a wide range of emotional disclosure and expression. Task-oriented groups, on the other hand, may often have at least implicit norms that limit emotional expression to mild, nondisruptive forms.

There is some evidence that organizational culture treats emotional expression as the opposite of rationality and productivity (Putnam & Mumby, 1993), and therefore tries to limit emotional expression. Similarly, although some theories of group task performance explicitly acknowledge the role of positive emotional expression as a means of furthering task progress (Bales, 1950; McGrath, 1991), others view emotional displays as time taken away from productive work. Group members may import these sorts of expectations into a work situation, thus influencing what sorts of emotion norms develop. Last, different types of work groups may develop idiosyncratic norms for emotional expression within differing intragroup contexts. For example, an advertising creativity team may develop norms for the expression of extremely positive emotions during brainstorming sessions, but for less extreme expressions during other forms of work.

The stage of development of a group may also partially determine whether emotion norms exist and whether those norms are salient to group members. Many researchers have found that groups tend to pass through a fairly regular series of stages as they progress from a newly formed group to a more permanent group. These stages tend to follow a "forming, storming, norming, performing" progression (Tuckman, 1965; Wheelan, 1994). The second stage, "storming," is marked by struggles among group members for status and roles within the group and thus is characterized by conflict and a high degree of negative emotions. The norming stage that follows is characterized by the development of norms for group performance, including, presumably, the development of emotion norms. Other researchers have rejected this stage model of group development (e.g., Arrow, 1997). Gersick (1989), for example, has identified "jumps," or periods of punctuated equilibrium in a group's development, in which social and task processes can change markedly. Gersick (1991) views emotions as an inherent part and indicator of this change process. Thus it seems likely that these times of transition in work teams would also be times in which local emotion norms would be more likely to be revised.

Some small group-level interventions have been developed that explicitly encourage or discourage forms of emotional expression in order to improve group performance. For example, Hall's (1971) Communication Strategies training teaches group members to value disagreements in order to improve group decision making. Other techniques, such as the Nominal Group Technique (Van De Ven & Delbecq, 1971), limit evaluative comments in an attempt to eliminate disruptive interpersonal processes. Prior experience with this type of training may have an impact on local group norms.

Group Emotional History

Every emotional experience felt by a group, whether it is intense or mild in nature, adds to and becomes part of the group's particular emotional history. This history then influences expectations for emotional expression in future group interactions as well as behaviors in those interactions. For example, if a product development group has an angry exchange about a part of a design,

this experience will in all likelihood affect the emotional tenor of the group the next time they meet. As emotions have been found to lead to reinforcing emotional cycles (Raush, 1965; Kemper, 1984), the group's emotional history could lead to self-reinforcing spirals of negativity or positivity. However, if group emotional norms are strong enough, a single aberrant emotional episode, while still a part of the group's emotional history, should be less likely to lead to this type of spiral. In fact, members of a group with a strong emotional history involving positive emotions may trust one another such that a broader range of emotional expression is possible, in essence, the creation of emotional "idiosyncrasy credits" (similar to the influence idiosyncrasy credits discussed by Hollander, 1964). Although this is speculative, it is also possible that expectations formed through the group's emotional history may actually serve to impose a self-fulfilling affective tone or emotion on the group. For example, looking forward to another pleasant interaction in a group may lead group members to actually feel happy as they begin the group interaction. Alternatively, dreading another negative interaction may lead groups to already begin in a negative mood that then escalates toward greater negativity.

Group Emotion

The final component of our model, group emotion, is the group's affective state arising from the combination of its "bottom-up" affective compositional effects and its "top-down" affective context (Barsade & Gibson, 1998). We use the review of research on affect and groups just completed to argue for the conceptual reality of group emotion. This review strongly indicates that group emotions are phenomenologically experienced as real by group members. Group emotions also make nomological sense, as the construct of group emotion helps to make sense of certain complex group phenomena. Furthermore, group emotions are real in that they have real effects.

Group emotions can also be identified through experimental and statistical procedures. We have previously mentioned the observation instrument developed by Bartel and Saavedra (2000) as well as the experience sampling method used by Totterdell (2000) and colleagues (Totterdell et al., 1998). With regard to statistical techniques, there are several ways in which group-level affect can be confirmed. First, the intraclass correlation coefficient compares between- and within-group variance. If the within-group variance is smaller relative to the between-group variance, there is significant similarity among group members, offering statistical support for a group-level affect (Bliese, 2000; Kenny & LaVoie, 1985). Alternative techniques exist for assessing group-level affects (e.g., Multilevel Random Coefficient Modeling, IRR, and eta-squared) each with specific benefits and drawbacks (Klein & Kozlowski, 2000).

The term "group emotion" implies a fairly strong affective experience and may involve the experience of discrete emotions (anger and euphoria). However, as our model outlines, group emotion can be composed of many types of affect, ranging from low-level moods to intense emotions. Interestingly, as we have seen from our review of the literature, there has been very little work on intense

group emotion. For example, emotions that may come from the affective context, such as envy or jealousy arising from intergroup conflict situations, have been largely ignored in the literature. In general, the lack of work on strong emotions may be due to the combination of real constraints of the affective context present in many business settings, coupled with researchers' inability to "catch" the times the emotions occur. However, these "flashes" of anger or rage or euphoria and love (that may occur, for example, under great environmental stress or in a particularly successful situation) could greatly influence the group's emotional history and the group's future affective and nonaffective behavior. For example, a new accountant coming into a marketing group may be warned not to mention a particular budgeting issue because it is a "hot button" that has elicited powerful emotional responses in the past.

Our model indicates that after a group collectively experiences a group emotion, this emotion will then feed back into the group's affective context and its affective composition through influence on individual-level moods and emotions as well as on emotional sharing processes. Thus the affective outcome of group emotion is a direct link back to the initial, contextual, bottom-up, and top-down antecedent variables. We have also seen in our review that group emotion has direct influences on quasi-affective group outcomes, such as group cooperativeness and other sociocognitive processes, as well as on directly nonaffective outcomes, such as group performance and financial status. As indicated in our model, these nonaffective outcomes in turn can influence the entire system of group affective process that can then influence the nonaffective factors in a continuous, reciprocal, but open-system, loop.

INTERRELATIONSHIP BETWEEN NONAFFECTIVE AND AFFECTIVE FACTORS IN SMALL GROUPS

While our model deals with affective processes, we conclude with a brief discussion of nonaffective processes to remind the reader that they are important—both in their own right and in their integration with affective processes in creating a complete model of group behavior. The integration and reciprocal relationships between the nonaffective and affective factors in groups is a very important area for future research, and some interesting recent research has begun to examine this area. For example, Weiss and Cropanzano's (1996) Affective Events Theory explicitly discusses how environmental events can trigger emotional responses. The authors define "events" broadly to include both socially and nonsocially mediated factors and suggest that group affect levels fluctuate over time as a function of both endogenous and exogenous factors. While endogenous factors include such elements as affective dispositions or affective team composition, exogenous factors refer to any "affective event" that serves to disrupt the regularity of underlying affect patterns. We offer below some social and physical context variables (perhaps "events," in some cases) that have recently begun to receive attention as they relate to group affect and that we think are promising areas for future research: the

intergroup context, the affect brought on by a group's physical environment, and the affective influences of technology.

Intergroup Context

There is a foundation of research showing that the intergroup context—that is, the relationship the group has with its surroundings, particularly other groups in its surrounding—can be a very powerful variable influencing a group's affective life. This variable may have a great influence in organizations, with their strong intergroup contexts, particularly as organizations increasingly move to more team structures.

The intergroup context, especially when conflict or competition is involved, sets the stage for the emergence and escalation of negative emotions (Forsyth, 2000). Intergroup conflict, even when simply anticipated, can spark hostility toward the opposing group (Blake & Mouton, 1984; Bornstein, Budescu, & Zamir, 1997). In fact, even "minimal group" conditions can lead to processes such as in-group favoritism and out-group discrimination and the consequent affective reactions that accompany such evaluations (Miller & Brewer, 1986).

Realistic Conflict Theory suggests that intergroup conflict is caused by competition between groups over scarce resources and that such conflict leads to feelings of frustration and anger (Sherif, 1966). Relationships between groups deteriorate as they vie against each other for money, power, time, and so on. Research by Insko and Schopler (see Insko & Schopler, 1998, for a review) shows that the competition–conflict relationship is even stronger at the group level than at the individual level. The fact that the competitiveness of groups is out of proportion to the competitiveness of individuals is referred to as the "discontinuity effect" (Insko & Schopler, 1998). Although the discontinuity effect was originally established in laboratory settings, recent research has shown that even in naturally occurring social interactions, group activities are characterized by more competition than are individual activities (Pemberton, Insko, & Schopler, 1996).

Affect has been examined as both a cause and an effect of intergroup bias. For example, studies that have examined the effect of manipulated affective states have shown that happy moods, and perhaps anger and anxiety as well, lead to more out-group stereotyping and consequently more extreme out-group evaluations, but sad moods have little effect on these judgments (Wilder & Simon, 2001). With respect to the affective consequences of out-group bias, recipients of bias respond with intense negative reactions, such as anger and hostility (Wilder & Simon, 2001). More specifically, Smith (1993) identifies five specific emotions that are most likely to be aroused in an intergroup context: fear, disgust, contempt, anger, and jealousy. Thus, the intergroup context may have an important impact on a group's affective experiences.

The Physical Context

Recent research suggests that our moods and emotions may be affected by even subtle manipulations of environmental factors (Isen, 1984; Isen & Baron,

1991). Baron (1993) and Isen and Baron (1991) have described how a variety of environmental factors can affect workers' moods in organizations. For example, an uncomfortably hot or noisy environment can lead to negative affect, while pleasant aromas and a cooler environment can lead to more positive affect. These positive and negative mood shifts have consequences for a variety of behaviors important to organizational functioning (Isen & Baron, 1991). For example, Baron (1993) describes how subjects who were exposed to lighting of low illumination, that induced positive moods, gave more positive performance appraisals, while those exposed to warm white light reported stronger preferences for resolving interpersonal conflict through collaboration. These context factors may operate to shape group level emotions as well.

The physical layout of an environmental space can also influence how affect is experienced. In his work examining the relationship between architecture and work within organizations, Fineman (1996) describes how organizations are made up of various "emotionalized zones," or settings, where different types of emotional expression are "permitted." Such zones are not distributed in a random manner, but rather in complementary or counterbalancing fashion (Fineman, 1996). For example, the water cooler may be a setting in which organization members are allowed to "take off their masks" and drop the emotional "face" that they wear in other physical settings. Rafaeli and Kluger (2000) explicitly examine the affective nature of the physical work environment. That is, within a service context, they look at how pleasantness and energy dimensions of an organization's physical environment influence the quality of the service interaction. They hypothesize that the greater fit between the affective physical environment and the appropriate affective context for the service will lead to the best service outcomes, thus raising the idea that there are better or worse affective physical contexts for each type of business or business goal.

Technological Conditions

There has been an increase in research attention concerning the effects of technology on group process and performance (McGrath & Hollingshead, 1993). While much of this research has focused on the effects of technology on performance outcomes, it is likely that technology would also impact the emotional life of the group and affective consequences.

McGrath and Hollingshead (1993) suggest that technologies, as they have been applied to groups, can be ordered along a dimension of increasing and decreasing richness of social cues. Face-to-face groups have access to a rich variety of social cues that they can then use to determine the preferences and positions of other group members. For example, face-to-face groups have access to nonverbal cues that are important in determining the underlying emotional experiences of other group members in addition to the verbal and paralinguistic cues provided by audio-only technologies. Other technologies provide a much more restricted set of social cues. Computer-mediated groups, for example, do

not have access to any nonverbal or paralinguistic cues and must rely simply on the written word.

It is quite plausible that many of the processes thought to underlie the spread of affect through group members would be unable to operate in computer-mediated groups. Processes such as emotional contagion and behavioral entrainment are heavily dependent on the matching or mimicking of nonverbal behaviors. Because computer-mediation eliminates these cues, emotional contagion would be unlikely to occur and hence affective homogeneity would be an unlikely outcome. One might argue that, in general, technologies that eliminate visual and auditory cues would interfere with contagion processes. However, users of technologies sometimes strive to add emotional communication back into the impoverished environment provided by computer-based interaction. For example, Kiesler and Sproull (1992) describe how e-mail interactants use capital letters to emphasize or stress important concepts. The development of "emoticons" (punctuation-based symbols used to denote emotions, e.g., ":{" or ":-)") illustrates people's attempts to add emotion back into a more emotionally sterile context. With regard to the Internet, researchers are starting to investigate how the affective feel of a site influences viewers. For example, Menon and Kahn (1997) have investigated how the affective tenor of a Web site influences simulated buying behavior, and some current Web sites offer users the ability to customize the site in aesthetics and tones that best suit them. Given their gaining presence in work life, the phenomenon of electronic communication and the field of e-commerce offer an importance and rich area for future research.

SUMMARY AND IMPLICATIONS

In this article, we have offered an organizing model for understanding the work that has been conducted on affect in small groups and work teams and have reviewed literature relevant to each of the model's components. In conducting this review, we were very encouraged by certain advances in our knowledge about affective phenomena that have direct implications for the emotional life of groups. However, the lack of research conducted in other parts of our organizing framework points to certain gaps in the study of important conceptual relationships between affective constructs. Thus, there is both good and bad news for the state of affective research in small groups and work teams, and from this come our recommendations for future directions in this field.

The Good News

Emotions are alive, well, and living in groups. They are being studied in many and varied social science fields. The recent renaissance of interest in group research has coincided with a similar renaissance and interest in the field of affect. As can be seen by the research pertaining to each of the components of our model, the intertwining of the two areas is yielding rich new findings. The rapidly advancing knowledge in psychology relating to affect, both theoretical

and methodological, has greatly expanded our perspective about the construct of affect and offered new options for our ability to measure it.

In our review, we also attempted to catalog and broaden the traditional notions of how people share emotions, both the consciously felt and the less conscious. Our review of the research on the affective context drew heavily from individual-level research conducted in organizational settings, but we broadened how emotion norms are applied to groups by including local group emotion norms and a group's emotional history as contextual influences on affect.

Last, we also pointed out how affect influences the outcomes of small group behavior and considered some likely relationships between affective and nonaffective factors. Although our model was not focused on task outcomes per se, knowledge of the relationship between affect and those outcomes is very important.

The Bad News

We have identified several major voids in the literature on affect in groups: (1) more *group level* research on the operation of affective influences in groups is needed, (2) more work is needed on specific group emotion states and their outcomes, (3) the dynamic and reciprocal nature of group affect outlined in the model needs to be tested, and (4) the relationship between affective and nonaffective group variables needs to be explored. Each of these areas is discussed in turn below.

In many areas of this review, we were forced to extrapolate from individual-level research to the group level. Although we feel that these inferences were warranted, group researchers in general would benefit from more direct empirical investigation of the role of affect in groups. Investigating affect at the group level is made difficult by a number of different factors. For example, the sheer logistical problem of recruiting and assembling the number of research participants necessary to fill a sufficiently powerful group design prohibits many from attempting a group-level investigation. Second, although advances have been made in measuring affective constructs at the group level, more work needs to be directed toward developing instruments for studying group emotion, particularly across different types of group contexts. Last, while there are more methodological and statistical options open to group researchers now than there were previously (Forsyth, 1998), only recently has there been an increasing clarification of these concepts and techniques (e.g., Klein & Kozlowsi, 2000), with concurrent advances in statistical package accessibility. Multilevel Random Coefficient Models (de Leeuw & Kreft, 1995), most commonly known through Hierarchical Linear Modeling (Bryk & Raudenbush, 1992), offer the most promising way to separate out group- and individual-level influences (Nezlek & Zyzniewski, 1998) to best determine whether bottom-up group-level affect exist and how to best control for top-down group-level affect.

A second void concerns the lack of research attention directed toward identifying different types of group emotion and their consequences. There is little

known about the antecedents to more discrete emotional experiences (e.g., surprise, fear, and sorrow). Do groups go through the same sorts of emotion generation processes as do individuals, including a group appraisal of an event with a discrete group emotional experience as the outcome of this assessment. For example, do group members collectively decide whether a rival group is a threat or a challenge? We also know little about even general group mood states (e.g., irritable groups or cheerful groups). Whereas the field has greatly expanded the affective construct on the independent variable side (at least at the individual level), there has been no parallel broadening on the consequences or dependent variable side. Better understanding of how affective group dynamics lead to and influence specific group emotions such as anger, jealousy, or euphoria would give us a richer insight into group life overall.

Third, attention needs to be directed toward the dynamic and reciprocal nature of group affect. Our model makes these relationships explicit by including a feedback loop from group emotion to affective antecedents of group emotion. One implication of this is that group emotion researchers may find it particularly important to study variability in group affect over time. However, we more generally feel that attention to the dynamic and reciprocal nature of affect is especially important in a group context, as certain emotions can be defined only relationally (Berscheid, 1983; Wallbott & Sherer, 1986) and involve interaction with others over time. Thus, the dynamic influences of affect are of special importance in groups and dyads and should be pursued in investigations of group affect.

Finally, we also need to focus on the interplay between the affective and nonaffective aspects of our models. While we have focused on affective processes, we strongly feel that nonaffective processes are important, both in their own right and in their integration and interaction with affective processes in creating a complete model of group behavior. To this end, we have discussed some important nonaffective variables (intergroup relations, technology, and physical space) that can influence the affective processes we have outlined. Although challenging, it will none the less be important to integrate and understand the interrelationship of all aspects of group life—affective and nonaffective.

CONCLUSION

The operation of emotion in small groups is an exciting new area of theory and research. The advances in theory and method of affect research should help to broaden and complete much of the small group research performed to date. While we have organized and discussed much research that is relevant to this area, there is much more research ahead and our suggestions are only a small part of the work that is left to be performed. It is our hope that this article, by providing a framework for thinking about emotional influences in small groups and work teams and by providing some suggestions for fruitful areas to examine, will serve as a stimulus to new research on this crucial topic in organizational life.

REFERENCES

Aderman, D., & Unterberger, G. L. (1977). Contrast empathy and observer modeling behavior. *Journal of Personality*, 45, 267–280.

Andersen, S. M., & Glassman, N. S. (1996). Responding to significant others when they are not there: Effects on interpersonal inference, motivation, and affect. In R. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (Vol. 3, pp. 272–331). New York: Guilford Press.

Andersen, S. M., Reznik, I., & Manzella, L. M. (1996). Eliciting facial affect, motivation, and expectancies in transference: Significant-other representations in social relations. *Journal of Personality and Social Psychology*, 71, 1108–1129.

Arrow, H. (1997). Stability, bistability, and instability in small group influence patterns. *Journal of Personality and Social Psychology*, 72, 75–85.

Ashforth, B. E., & Humphrey, R. H. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 48, 97–125.

Ashkanasy, N. M., & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N. M. Ashkanasy, C. E. Haertel, & W. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 221–235). Westport, CT: Quorum Books/Greenwood.

Back, K. W. (1951). Influence through social communication. *Journal of Abnormal and Social Psychology*, 46, 9–23.

Bales, R. F. (1950). *Interaction process analysis: A method for the study of small groups*. Reading, MA: Addison–Wesley.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Baron, R. A. (1993). Affect and organizational behavior: When and why feeling good (or bad) matters. In J. K. Murnighan (Ed.), *Social psychology in organizations: Advances in theory and research* (pp. 63–88). Englewood Cliffs, NJ: Prentice Hall.

Barsade, S. G. (2000). *The ripple effect: Emotional contagion in groups*. Working Paper 98, Yale School of Management, Yale University, New Haven, CT.

Barsade, S. G., & Gibson, D. E. (1998). Group emotion: A view from top and bottom. In D. Gruenfeld, E. Mannix, & M. Neale (Eds.), *Research on managing groups and teams* (pp. 81–102). Stamford, CT: JAI Press.

Barsade, S. G., Ward, A. J., Turner, J. D. F., & Sonnenfeld, J. A. (2000). To your heart's content: The influence of affective diversity in top management teams. *Administrative Science Quarterly*, 45, 802–836.

Bartel, C., & Saavedra, R. (2000). The collective construction of work group moods. *Administrative Science Quarterly*, 45, 197–231.

Bavelas, J. B., Black, A., Lemery, C. R., & Mullett, J. (1987). Motor mimicry as primitive empathy. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development: Cambridge studies in social and emotional development* (pp. 317–338). New York: Cambridge Univ. Press.

Berk, M. S., & Andersen, S. M. (2000). The impact of past relationships on interpersonal behavior: Behavioral confirmation in the social-cognitive process of transference. *Journal of Personality and Social Psychology*, 79, 546–562.

Bernieri, F., Reznick, J. S., & Rosenthal, R. (1988). Synchrony, pseudosynchrony, and dissynchrony: Measuring the entrainment process in mother–infant dyads. *Journal of Personality and Social Psychology*, 54, 243–253.

Berscheid, E. (1983). Emotion. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. R. Peterson (Eds.), *Close relationships* (pp. 110–168). New York: Freeman.

Blake, R. R., & Mouton, J. S. (1984). *Solving costly organizational conflicts: Achieving intergroup trust, cooperation, and teamwork*. San Francisco: Jossey–Bass.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco: Jossey–Bass.

Bornstein, G., Budescu, D., & Zamir, S. (1997). Cooperation in intergroup, N-person, and two-person games of chicken. *Journal of Conflict Resolution*, 41, 384–406.

Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Newbury Park, CA: Sage.

Cappella, J. N. (1981). Mutual influence in expressive behavior: Adult–adult and infant–adult dyadic interaction. *Psychological Bulletin*, 89, 101–132.

Chapple, E. D. (1970). *Culture and biological man: Explorations in behavioral anthropology.* New York: Holt, Rinehart, & Winston.

Condon, W. S., & Ogston, W. D. (1966). Sound film analysis of normal and pathological behavior patterns. *Journal of Nervous and Mental Diseases*, 143, 338–347.

Condon, W. S., & Ogston, W. D. (1967). A segmentation of behavior. *Journal of Psychiatric Research*, 5, 221–235.

Dabbs, J. M. (1969). Similarity of gestures and interpersonal influence. *Proceedings of the annual convention of the American Psychological Association*, 4, 337–338.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113–126.

De Leeuw, J., & Kreft, I. G. G. (1995). Questioning multilevel models. *Journal of Educational and Behavioral Statistics*, 20, 171–189.

Dittmann, A. T., & Llewellyn, L. G. (1969). Body movement and speech rhythm in social conversation. *Journal of Personality and Social Psychology*, 11, 98–106.

Druckman, D., & Bjork, R. (1994). *Learning, remembering, believing: Enhancing human performance*. Washington, DC: National Academy Press.

Duffy, M. K., & Shaw, J. D. (2000). The Salieri syndrome: Consequences of envy in groups. *Small Group Research*, 31, 3–23.

Duncan, S. D., & Fiske, D. W. (1977). *Face-to-face interactions: Research, methods, and theory.* Hillsdale, NJ: Erlbaum.

Ekman, P. (1973). Cross culture studies of facial expression. In P. Ekman (Ed.), *Darwin and facial expression: A century of research in review* (pp. 169–222). New York: Academic Press.

Evans, C. R., & Dion, K. L. (1991). Group cohesion and performance: A meta-analysis. *Small Group Research*, 22, 175–186.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–141.

Fineman, S. (1996). Emotion and organizing. In S. R. Clegg, C. Hardy, & W. R. Nord (Eds.), *Handbook of organization studies* (pp. 543–564). London: Sage.

Forgas, J. P. (1990). Affective influences on individual and group judgments. *European Journal of Social Psychology*, 20, 441–453.

Forgas, J. P. (1992). Affect in social judgments and decisions: A multiprocess model. *Advances in Experimental Social Psychology*, 25, 227–275.

Forgas, J. P., & George, J. M. (in press). Affective influences on judgments and behavior in organizations: An information processing perspective. *Organizational Behavior and Human Decision Processes*.

Forsyth, D. R. (1998). Methodological advances in the study of group dynamics. *Group Dynamics*, 2, 211–212.

Forsyth, D. R. (2000). *Group dynamics* (3rd edition). Belmont, CA: Wadsworth.

Freud, S. (1958). *Therapy and techniques* (pp. 105–115). New York: Macmillian.

Friedman, H. S., Riggio, R. E., & Casella, D. F. (1988). Nonverbal skill, personal charisma, and initial attraction. *Personality and Social Psychology Bulletin*, 14, 203–211.

Frijda, N. H. (1994). Varieties of affect: Emotions and episodes, moods, and sentiments. In P. Ekman & R. J. Davidson (Eds.), *The nature emotion: Fundamental questions* (pp. 59–67). Oxford, UK: Oxford Univ. Press.

George, J. M. (1989). Mood and absence. *Journal of Applied Psychology*, 74, 317–324.

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

George, J. M. (1995). Leader positive mood and group performance: The case of customer service. *Journal of Applied Social Psychology*, 25, 778–794.

George, J. M. (1996). Group affective tone. In M. A. West (Ed.), *Handbook of work group psychology* (pp. 77–93). Chichester, UK: Wiley.

George, J. M., & Brief, A. P. (1992). Feeling good–doing good: A conceptual analysis of the mood at work–organizational spontaneity relationship. *Psychological Bulletin*, 112, 310–329.

Gersick, C. J. (1989). Marking time: Predictable transitions in task groups. *Academy of Management Journal*, 32, 274–309.

Gersick, C. J. (1991). Revolutionary change theories: A multilevel exploration of the punctuated equilibrium paradigm. *Academy of Management Review*, 16, 10–36.

Gibson, D. E., & Schroeder, S. J. (1999). *Power and affect: The agent's view.* Yale School of Management Working Paper A92, New Haven, CT.

Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, NY: Doubleday.

Goffman, E. (1961). *Asylums*. Garden City, NY: Doubleday.

Goldsmith, H. H., & Campos, J. J. (1986). Fundamental issues in the study of early temperament: The Denver twin temperament study. In M. Lamb, A. Brown, & B. Rogoff (Eds.), *Advances in infant behavior and development*. Hillsdale, NJ: Erlbaum.

Gottman, J. M. (1979). *Marital interaction: Experimental investigations.* New York: Academic Press.

Hackman, R. J. (1992). Group influences on individuals in organizations. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., pp. 199–267). Palo Alto, CA: Consulting Psychologists Press.

Hall, J. (1991). Decisions, decisions, decisions. *Psychology Today*, November, 51–54.

Hatfield, E., Cacioppo, J., & Rapson, R. L. (1992). Primitive emotional contagion. In M. S. Clark (Eds), *Emotion and social behavior: Vol. 14. Review of personality and social psychology*, (pp. 151–177). Newbury Park, CA: Sage.

Hatfield, E., Cacioppo, J., & Rapson, R. L. (1994). *Emotional contagion*. New York: Cambridge Univ. Press.

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feelings*. Berkeley: University of California Press.

Hoffman, M. L. (1985). Interaction of affect and cognition in empathy. In C. E. Izard, J. Kagan, & R. B. Zajonc (Eds.), *Emotions, cognition, and behavior* (pp. 103–131). New York: Cambridge Univ. Press.

Hogg, M. A. (1992). *The social psychology of group cohesiveness: From attraction to social identity.* New York: Harvester Wheatsheaf.

Hollander, E. P. (1964). *Leaders, groups, and influence.* New York: Oxford Univ. Press.

Insko, C. A., & Schopler, J. (1998). Differential distrust of groups and individuals. In C. Sedikides, J. Schopler, & C. A. Insko (Eds.), *Intergroup cognition and intergroup behavior* (pp. 75–107). Mahwah, NJ: Erlbaum.

Isen, A. M. (1984). Toward understanding the role of affect in cognition. In R. S. Wyer & T. Srull (Eds.), *Handbook of social cognition* (pp. 179–236). Hillsdale, NJ: Erlbaum.

Isen, A. M., & Baron, R. A. (1991). Positive affect as a factor in organizational behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (pp. 1–53). Greenwich, CT: JAI Press.

Isen, A. M., & Gorgolione, J. M. (1983). Some specific effects of four affect-induction procedures. *Personality and Social Psychology Bulletin*, 9, 136–143.

Jackson, J. (1966). A conceptual and measurement model for norms and roles. *Pacific Sociological Review*, 9, 35–47.

Janis, I. L. (1972). *Victims of groupthink*. Boston, MA: Houghton Mifflin.

Jinnett, K., & Alexander, J. A. (1999). The influence of organizational context on quitting intention: An examination of treatment staff in long-term mental health care settings. *Research on Aging*, 21, 176–204.

Joiner, T. E. (1994). Contagious depression: Existence, specificity to depressed symptoms, and the role of reassurance seeking. *Journal of Personality and Social Psychology*, 67, 287–296.

Karau, S. J., & Williams, K. D. (1997). The effects of group cohesiveness on social loafing and social compensation. *Group Dynamics*, 1, 156–168.

Kelly, J. R. (1987). *Mood and interaction*. Unpublished dissertation, University of Illinois, Urbana–Champaign.

Kelly, J. R. (1988). Entrainment in individual and group behavior. In J. E. McGrath (Ed.), *The social psychology of time: New perspectives* (pp. 89–110). Newbury Park, CA: Sage.

Kelly, J. R. (2001). Mood and emotion in groups. In M. Hogg & S. Tindale (Eds.), *Blackwell handbook in social psychology. Vol. 3: Group processes* (pp. 164–181). Oxford, UK: Blackwell.

Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, 25, 57–58.

Kemper, T. D. (1984). Power, status and emotions: A sociological contribution to a psychophysiological domain. In K. R. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 377–378). Hillsdale, NJ: Erlbaum.

Kenny, D. A., & La Voie, L. (1985). Separating individual and group effects. *Journal of Personality and Social Psychology*, 48, 339–348.

Kiesler, S., & Sproull, L. (1992). Group decision making and communication technology. *Organizational Behavior and Human Decision Processes*, 52, 96–123.

Klein, K., & Kozlowski, S. W. (2000). *Multilevel theory, research, and methods in organizations*. San Francisco: Jossey–Bass.

Larsen, R. J., & Kasimatis, M. (1990). Individual differences in entrainment of mood to the weekly calendar. *Journal of Personality and Social Psychology*, 58, 164–171.

Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford Univ. Press.

Le Bon, G. (1895). *The crowd: A study of the popular mind*. London: Ernest Benn.

Leidner, R. (1993). *Fast food, fast talk: Service work and the routinization of everyday life*. Berkeley: Univ. of California Press.

Levine, J. M., & Moreland, R. L. (1990). Progress in small group research. *Annual Review of Psychology*, 41, 585–634.

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *The handbook of industrial and organizational psychology*. Chicago: Rand McNally.

Mayer, J. D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267–298.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York: Basic Books.

McDougall, W. (1923). *Outline of psychology*. New York: Scribner.

McGrath, J. E. (1991). Time, interaction, and performance (TIP): A theory of groups. *Small Group Research*, 22, 147–174.

McGrath, J. E., & Hollingshead, A. B. (1993). Putting the "group" back in group support systems: Some theoretical issues about dynamic processes in groups with technological enhancements. In L. M. Jessup & J. S. Valacich (Eds.), *Group support systems: New perspectives* (pp. 78–96). New York: Macmillan.

McGrath, J. E., & Kelly, J. R. (1986). *Time and human interaction: Toward a social psychology of time*. New York: The Guilford Press.

Menon, S., & Kahn, B. E. (1997). *Cross-category effects of stimulation on the shopping experience: An application to internet shopping*. Working Paper 97-006, Wharton, University of Pennsylvania, College Station.

Miller, N., & Brewer, M. B. (1986). Categorization effects on ingroup and outgroup perception. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 209–230). Orlando, FL: Academic Press.

Mudrack, P. E. (1989). Defining group cohesiveness: A legacy of confusion? *Small Group Research*, 20, 37–49.

Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin*, 115, 210–227.

Nezlek, J. B., & Zyzniewski, L. E. (1998). Using hierarchical linear modeling to analyze grouped data. *Group Dynamics*, 2, 313–320.

Parkinson, R. (1996). Emotions are social. *British Journal of Psychology*, 87, 663–683.

Pemberton, M. B., Insko, C. A., & Schopler, J. (1996). Memory for and experience of differential competitive behavior of individuals and groups. *Journal of Personality and Social Psychology*, 71, 953–966.

Pfeffer, J. (1983). Organizational demography. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (pp. 299–357). Greenwich, CT: JAI Press.

Putnam, L., & Mumby, D. K. (1993). Organizations, emotion and the myth of rationality. In S. Fineman (Ed.), *Emotion in organizations* (pp. 36–57). London: Sage.

Rafaeli, A., & Kluger, A. (2000). Affective reactions to physical appearance. In N. M. Ashkanasy, C. E. Haertel, & W. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 141–155). Westport, CT: Quorum Books/Greenwood.

Rafaeli, A., & Sutton, R. I. (1989). The expression of emotion in organizational life. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (pp. 1–42). Greenwich, CT: JAI Press.

Raush, H. L. (1965). Interaction sequences. *Journal of Personality and Social Psychology*, 2, 487–499.

Schachter, S. (1951). Deviation, rejection, and communication. *Journal of Abnormal and Social Psychology*, 46, 190–207.

Schachter, S. (1959). *The psychology of affiliation*. Stanford, CA: Stanford Univ. Press.

Schwarz, N., Bless, H., Bohner, G., Harlacher, U., & Kellerbenz, M. (1991). Response scales as frames of reference: The impact of frequency range on diagnostic judgments. *Applied Cognitive Psychology*, 5, 37–49.

Seashore, S. E. (1954). *Group cohesiveness in the industrial work group*. Ann Arbor: University of Michigan, Survey Research Center, Institute for Social Research.

Sherif, M. (1966). *In common predicament: Social psychology of intergroup conflict and cooperation*. Boston: Houghton Mifflin.

Siegman, A. W., & Reynolds, M. (1982). Interviewer-interviewee nonverbal communications: An interactional approach. In M. Davis (Ed.), *Interaction rhythms: Periodicity in communicative behavior* (pp. 249–277). New York: Human Sciences Press.

Smith, A. C., & Kleinman, S. K. (1989). Managing emotions in medical school: Students' contacts with the living and dead. *Social Psychology Quarterly*, 52, 56–69.

Smith, E. R. (1993). Social identity and social emotions: Toward new conceptualizations of prejudice. In D. Mackie & D. Hamilton (Eds.), *Affect, cognition, and stereotyping* (pp. 297–315). San Diego, CA: Academic Press.

Staw, B. M. (1986). Organizational psychology and the pursuit of the happy/productive worker. *California Management Review*, 28, 40–53.

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

Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly,* 31, 56–77.

Staw, B. M., Sutton, R. I., & Pelled, L. H. (1994) Employee positive emotion and favorable outcomes at the workplace. *Organization Science,* 5, 51–71.

Stokes, J. P. (1983). Components of group cohesion: Intermember attraction, instrumental value, and risk taking. *Small Group Behavior,* 14, 163–173.

Strack, F., Martin, L. L., & Stepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobtrusive test of the facial feedback hypothesis. *Journal of Personality and Social Psychology,* 54, 768–776.

Sullins, E. S. (1991). Emotional contagion revisited: Effects of social comparison and expressive style on mood convergence. *Personality and Social Psychology Bulletin,* 17, 166–174.

Sullins, E. S. (1989). Perceptual salience as a function of nonverbal expressiveness. *Personality and Social Psychology Bulletin,* 15, 584–595.

Tellegen, A. (1985). Structure of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681–706). Hillsdale, NJ: Erlbaum.

Tesluk, P., Mathieu, J. E., Zaccaro, S. J., & Marks, M. (1997). Task and aggregation issues in the analysis and assessment of team performance. In M. T. Brannick, E. Salas, & C. Prince (Eds.), *Team performance assessment and measurement: Theory, methods, and applications* (pp. 197–224). Mahwah, NJ: Erlbaum.

Thoits, P. A. (1996). Managing the emotions of others. *Symbolic Interaction,* 19, 85–109.

Tickle-Degnan, L., & Puccinelli, N. M. (1999). The nonverbal expression of negative emotions: Peer and supervisor responses to occupational therapy students' emotional attributes. *The Occupational Therapy Journal of Research,* 19, 18–39.

Tickle-Degnen, L., & Rosenthal, R. (1987). Group rapport and nonverbal behavior. *Review of Personality and Social Psychology,* 9, 113–136.

Totterdell, P. (2000). Catching moods and hitting runs: Mood linkage and subjective performance in professional sport teams. *Journal of Applied Psychology,* 85(6), 848–859.

Totterdell, P., Kellet, S., Teuchmann, K., & Briner, R. B. (1998). Evidence of mood linkage in work groups. *Journal of Personality and Social Psychology,* 74, 1504–1515.

Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin,* 63, 384–399.

Van De Ven, A. H., & Delbecq, A. L. (1971). Nominal vs. interacting group processes for committee decision-making effectiveness. *Academy of Management Journal,* 14, 203–212.

Van Maanen, J., & Kunda, G. (1989). Real feelings: Emotional expression and organizational culture. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (pp. 43–103). Greenwich, CT: JAI Press.

Wallbott, H. G., & Sherer, K. R. (1986). The antecedents of emotional experiences. In K. R. Scherer, H. G. Wallbott, & A. B. Summerfield (Eds.), *Experiencing emotion: A cross-cultural study* (pp. 69–97). Cambridge, UK: Cambridge Univ. Press.

Warner, R. M. (1982). The psychologist as social systems consultant. In T. Millon, C. Green, & R. Meagher (Eds.), *Handbook of clinical health psychology.* New York: Plenum.

Warner, R. M., Malloy, D., Schneider, K., Knoth, R., & Wilder, B. (1986). Rhythmic organization of social interaction and observer ratings of positive affect and involvement. *Journal of Nonverbal Behavior,* 11, 57–74.

Wasielewski, P. L. (1985). The emotional basis of charisma. *Symbolic Interaction,* 8, 207–222.

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin,* 96, 465–490.

Weiss, H. M. (1977). Subordinate imitation of supervisor behavior: The role of modeling in organizational socialization. *Organizational Behavior and Human Performance*, 19, 89–105.

Weiss, H. M. (in press). Deconstructing job satisfaction: Separating evaluations, beliefs and affective experiences. *Human Resource Management Review.*

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (pp. 1–74). Greenwich, CT: JAI Press.

Wheelan, S. A. (1994). *Group processes: A developmental perspective*. Needham Heights, MA: Allyn & Bacon.

Wilder, D., & Simon, A. F. (2001). Affect and intergroup bias. In *Blackwell handbook in social psychology. Vol. 4; Intergroup processes*. Oxford, UK: Blackwell.

Williams, W. M., & Sternberg, R. (1988). Group intelligence: Why some groups are better than others. *Intelligence*, 12, 351–377.