To Your Heart's Content: A Model of Affective Diversity in Top Management Teams

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In this study we develop a model of how diversity in positive affect (PA) among group members influences individual attitudes, group processes, and group performance. We test the model on a sample of 62 U.S. top management teams. Greater affective fit between a team member and his or her group is related to more positive attitudes about group relations and perceptions of greater influence within the group. Results also suggest there is a negative relationship between a team's diversity in trait positive affect and both the chief executive officers' use of participatory decision making and financial performance. Exploratory analyses reveal that affectively diverse, low mean trait PA groups experienced the greatest task and emotional conflict and the least cooperation. Analyses of diversity in trait negative affect produced no significant results. We discuss the implications of our study for the group emotion, team composition, group performance, and top management team literatures.●

The study of the costs and benefits of diversity in the workplace has been going on at a vigorous pace over the last two decades or more. This research has led to many theoretical and practical insights into the effects of diversity on organizational life (Jackson, 1991; Milliken and Martins, 1996). Rich as this research has been, its focus has been mainly on constantly observable forms of difference, primarily race and gender, with explanations for the crux of the difference based on cognitive factors such as perceived differences in attitudes or values. While these demographic and cognitive differences are certainly important, another type of diversity, based on potentially powerful psychological personality factors, also influences organizational functioning. This is trait positive affective diversity, or individual differences in positive affective personality—the degree to which a person is cheerful and energetic (high positive affect) versus subdued and reserved (low positive affect).

Employee affect has become an area of increasing focus in its own right in organization studies (for a review, see Isen and Baron, 1991; Weiss and Cropanzano, 1996). This interest has included a joint inquiry into employee affect and group dynamics (e.g., Smith and Crandell, 1984), a pairing that has been implicit in studies of group morale as "group spirit" (Muchinsky, 1983: 304), organizational climate defined as group affective tone (see Schneider and Reichers, 1983, for a review), and in the emphasis on the affective bonds between group members in the literature on groups and cohesiveness (Ashforth and Humphrey, 1995). Historically, what has been missing from much of this research is a systematic examination of how affect, clearly defined and carefully operationalized, influences individual and group processes and outcomes. Studies that have carefully measured and defined affect have now begun to demonstrate more explicitly the influence of group affect on individual and group-level behavior. Looking at the mean level of group affect, George (1990, 1995) found that positive affective work-group tone was associated with decreased absenteeism and better customer service. The emphasis on mean level of affect in the field is particularly relevant when groups are homogenous. As with other group composition variables, however, groups can vary

widely in their affective distribution, and thus, groups' diversity in positive affect can help us explain and understand other sources of work teams' feelings, attitudes, and behaviors. To date, a team's composition has been primarily studied through demographic variables such as age, gender, and race, or through organization-related characteristics such as tenure or functional background. These characteristics are used as operationalizations, or proxies, for deeper, generally cognitive or value-based differences between individuals, but they are based on cognitive, not affective, similarity-attraction arguments. Our study adds an affective and personality-based focus to this line of research, which has the potential to shed new light on the influence of team composition on group life by focusing on a group's diversity in positive affect.

POSITIVE AFFECTIVE DIVERSITY IN GROUPS

In considering affective diversity and its consequences, it is important to be clear about what type of affect is being studied. We focus here on a person's trait of positive affect (PA), which is his or her stable underlying affective personality (Staw, Bell, and Clausen, 1986; Watson, Clark, and Tellegen, 1988) and leads to relative consistency in affective reactions over time (Lazarus, 1991; Watson and Walker, 1996). Trait affect does not need a specific target; it is a generalized tendency toward having a particular level of positive and negative moods, which then permeate all of an individual's experiences (Lazarus, 1991). Extensive work by psychologists studying affect has focused on the trait of positive affect, the degree to which a person is high in enthusiasm, energy, mental alertness, and determination (Watson and Tellegen, 1985; Watson, Clark, and Tellegen, 1988), and on the trait of negative affect, the degree to which one feels subjective distress, such as irritability, anxiety, or nervousness (Watson and Clark, 1984). In our study, we focus on positive rather than negative trait affect. Although, semantically, positive and negative trait affect sound as if they are two sides of a bipolar scale, they are each in fact unipolar constructs that have been shown to be largely independent over time (e.g., Diener and Emmons, 1985; Goldstein and Strube, 1994), to operate according to different processes (e.g., Heller, 1990; Fredrickson, 1998), and to relate to different types of predictor and outcome variables (e.g., Watson et al., 1992). Researchers who have examined differences between the two constructs have found a significantly stronger link between trait positive affect and the social processes inherent in the group settings we examine.[1]

We chose to model the effects of trait positive affect because it is dispositional and therefore lies directly within the realm of "basic attributes" that Pfeffer (1983: 303) discussed in his classic description of the compositional effects of groups. Also, trait affect has already been shown to influence many aspects of organizational life, ranging from consistency in job attitudes and satisfaction to work performance (e.g., Staw, Bell, and Clausen, 1986; Brief et al., 1988; Cropanzano, James, and Konovsky, 1993). Although there has not been as much work examining the influence of trait affect on a group level, there is mounting evidence that it can

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McIntyre et al. (1991: 67) reviewed numerous studies showing that trait positive affect (PA), but not negative affect (NA), is related to "diverse indicators of social activity and interpersonal satisfaction," while NA, but not PA, is related to "somatic complaints, psychopathology, and self-reported stress." They tested this finding by examining the effects of two induced social interactions on positive and negative mood. They found that state positive affect (i.e., mood) was influenced significantly by social interaction, while state negative affect was not changed at all. Similarly, Watson et al. (1992) found no consistent relationship between either state or trait negative affect with measures of social activity, while finding a consistent significant relationship between positive state and trait positive affect with social activity. This is likely because negative affect has been strongly related to more internalized states such as stress reaction, alienation, and aggression, as compared with the more externally oriented states of social closeness and social potency with which trait positive affect is related (Almagor and Ehrlich, 1990).

be a useful explanatory construct in understanding workplace behavior (e.g., George, 1990, 1995).

Research has shown trait positive and negative affect to be classic personality factors, congruent with extraversion and neuroticism (John, 1990: 86), a result repeatedly demonstrated in the literature (see Parkinson et al., 1996: 61; reviews by Larsen and Diener, 1992; Meyer and Shack, 1989). We chose to focus on trait affect, however, rather than other personality variables, as trait affect is a more narrowly affectively defined construct, which leads to specifically affective manifestations (Tellegen, 1985; Watson and Clark, 1992; Parkinson et al., 1996: 61). This is by contrast, for example, to extroversion, which in addition to affective components such as cold and warm includes many other, less purely affectively related components, such as degree of sociability, talkativeness, spontaneity, and being a joiner versus being a loner (Costa and McCrae, 1992). Trait positive affect appears to be the best candidate for an initial study of how affective diversity relates to the interaction and performance of top management teams. While there is not as much prior research supporting a negative affective diversity model, we feel it is too soon to rule out negative affect in this context and thus conduct exploratory trait negative affectivity tests for all of our hypotheses as well.

Group Composition

Analyses of the effects of group composition have been used to explain a wide variety of group phenomena, such as turnover, interpersonal relations, innovation, and performance, in general work groups (for reviews, see Jackson, 1995; Williams and O'Reilly, 1999) and in top management teams (see Finkelstein and Hambrick, 1996). Here, we focus on the group's diversity in trait positive affect. As with other group composition variables, when a group is interacting, members should react to each other's trait positive affect. Although trait positive affect is not a demographic characteristic, it is still readily identifiable, perhaps more so than the underlying values demographic characteristics are meant to represent. Research by Ekman and colleagues (1982) has shown that internal emotional states are reliably observable and can "leak" even when people are trying to hide them (Ekman, 1992). Supporting this, strong correlations have been found between peers' ratings of trait positive affect and self-report ratings of trait positive affect, as well as among the peer raters themselves (Barsade, 1995), indicating the observability and reliability of trait positive affect.

Trait emotion can also influence group functioning through its effect on mood, or state affect. State and trait affect are so closely related that they have been described as the "former being provoked in a specific context, the latter (background) influencing this provocation" (Lazarus, 1991: 47). While state affect is a shorter-term reaction with greater fluctuation than trait affect (Tellegen, 1985), researchers have viewed their underlying processes as being very similar (see Allen and Potkay, 1981; Ekman and Davidson, 1994: 49–96), with trait affect at the personality level strongly helping to determine state affect (Lazarus, 1991: 47). Thus, a combination of indi-

viduals' mood states will reflect their overall trait affect, and other individuals with whom a given individual interacts regularly will perceive and characterize the person by his or her underlying trait affect moderated by short-term mood states. Because trait affect can be perceived, it is likely to be the basis for similarity-attraction effects similar to the cognitive similarity-attraction effects discussed by researchers studying diversity with demographics and underlying cognitive or value-related variables.

Affective Similarity-Attraction

Affective diversity is a result of the cumulative affective fit or misfit among group members. This fit is important because, as with other value or demographic differences, people care about how similar they are to others on a variety of dimensions. The finding that people consciously and unconsciously prefer others who are similar to them is one of the most robust and reliable social psychological findings (see Berscheid, 1985, for a review). This phenomenon has also been strongly supported in the small group and organizational context (see Williams and O'Reilly, 1999, for a review), and in sociological research on homophily, defined as "the tendency for persons who affiliate with each other to be similar on various attributes" (Hogue and Steinberg, 1995: 897). The general finding in these literatures is that people prefer to interact with other individuals or groups who have (or are perceived to have) attitudes and values similar to their own (e.g., Byrne, 1971; Berscheid, 1985; Schneider, 1987; McPherson and Smith-Lovin, 1987). While the research in similarity-attraction has not traditionally sought a source of affective similarity and difference, there is evidence that these processes operate similarly and that emotions can be a fruitful area in which to examine similarity-attraction effects (Berscheid, 1985: 424).

A theoretical base for the similarity-attraction effect is the concept of reinforcement and the reinforcing value of similar attitudes or values (see McGuire, 1985, for a review). While reinforcement effects have classically been studied with regard to cognition, much of the logic behind this research in attraction (e.g., Newcomb, 1961; Byrne, 1971; Lott and Lott, 1985) can be applied to emotions as well. Although they studied cognition, not affect, Clore and Byrne's (1974) description of the similarity-attraction process helps our understanding of how reciprocal reinforcement could also occur affectively. Clore and Byrne's cognitive argument can be summarized as follows: "I *think* the same way you do, which I find reinforcing, which makes me feel good, which then makes me attracted to you, which is then reciprocated by you." As affect can be a type of reinforcer in its own right (Lott and Lott, 1974), their argument could be modified to describe similarity-attraction in terms of positive affect. Imagine a situation in which an employee who has high trait positive affect (cheerful and energetic) meets another employee who is also this way. The reciprocal emotional information would be conveyed as follows: "I *feel* the same way you do (i.e., upbeat and energetic), which I find reinforcing, which makes me feel good, which then makes me attracted to you, which is then reciprocated by you." In this way, positive

affect can serve as information, affective similarity confirms the appropriateness of emotions, and this reinforcement then leads to attraction. The reinforcing properties should occur for people at all levels of positive affect. Thus, one can also imagine a situation in which a subdued and reserved (low positive affect) employee interacts with the cheerful and energetic (high positive affect) employee described above: "I *do not feel* the same way you do, so I do not feel your emotional response is reinforcing, which makes me feel bad, which does not lead me to be attracted to you, and this lack of attraction is then reciprocated by you."

Another rationale for the cognitive similarity-attraction effect is Davis's (1981) consensual validation model. He stated that attitudinal similarity is reinforcing in its own right because it gives desired consonance and constancy and serves as confirmation that one's view of the world is correct. Psychological research in perception, memory and learning, and self-verification would support a view that people have a desire for affective consonance that is similar to their desire for cognitive consonance or their dislike for cognitive dissonance (Festinger, 1957). For example, the findings of self-verification research (e.g., Swann et al., 1990; Swann, Stein-Serroussi, and Giesler, 1992) demonstrate the importance of consonance, that having one's own feelings validated can be more important than a positive evaluation when the other's evaluation is in conflict with one's own evaluation. Also, affective congruence is posited to offer a necessary conceptual coherence (Niedenthal and Halberstadt, 1995), similar to the coherence gained from the cognitive consistency discussed by Newcomb (1961).

There is also direct evidence for affective-similarity attraction effects, particularly in studies of the similarity-attraction effects of being in a very low positive affect state, or depressed mood (e.g., Rosenblatt and Greenberg, 1991). Locke and Horowitz (1990) showed that similarity in dysphoria (similar to low positive affect), irrespective of actual dysphoria, is the critical determinant of satisfaction with a dyadic interaction and that this satisfaction increases as the length of the interaction increases. Lastly, Davis (1981) also proposed a "rewards of interaction model," which states that value/cognitive similarity is attractive because it leads to future expectations of rewarding interpersonal interaction (e.g., behavior, activities, and communication). The same processes and rewards should occur with affective similarity: "If I enjoy being with you affectively, I will be more likely to give you other rewards, including interacting with you more."

Individual-level Attitudes and Self-Perception

Satisfaction. Affective diversity should influence individual levels of satisfaction with the group. The more similar a group member is to others in the group in positive affective personality, the more satisfied that group member should be with the group's interpersonal relations (e.g., Locke and Horowitz, 1990). Researchers have found demographic similarity to be associated with greater satisfaction and commitment (Meglino, Ravlin, and Adkins, 1989; Verkuyten, de Jong, and Masson, 1993), more trusting relationships between

negotiation partners (Valley, Mannix, and Neale, 1995), more supportive relationships (Ibarra, 1992), and greater empathy toward similar people in need and thus putting higher value on their welfare (Batson et al., 1995). As homogeneity has been shown to lead to greater personal attraction and satisfaction with relationships, and similarity within work teams has been shown to lead to more positive feelings about people in the group, we hypothesize the following:

Hypothesis 1: Individual group members who are more similar to others in their group in trait positive affect will be more satisfied with the interpersonal nature of their group experience than those who are more affectively dissimilar.

Perceptions of individual influence. Another expected outcome of being affectively similar to others is a high self-perception of one's influence level in the group. While the social psychology literature has long established the presence of individuals' tendency to assume that others will perceive the world as they do, even when there is evidence to the contrary (Ross, 1977; Ross, Green, and House, 1977), this effect of projecting our own opinions and attitudes onto others has been shown to be even greater when we like others or believe that they are similar to us (Vroom, 1959). Research has also shown that similarity, or perceived similarity, also leads people to be more willing to be influenced by similar others (e.g., Cialdini, 1993). For example, Enz (1988) found that perceived value congruity between senior managers and department members led to greater departmental power, as perceived by both the department members and the senior management. Thus, we hypothesize:

Hypothesis 2: Individual group members who are more similar to others in their group in trait positive affect will perceive themselves as having greater influence within the group than those who are more affectively dissimilar.

Group Level Social Processes

Cooperation and conflict. Following from the argument for satisfaction on the individual level, affectively homogeneous groups should be more cooperative and have less conflict than affectively heterogeneous groups because of the greater feelings of familiarity, attraction, and trust that are engendered from affective similarity-attraction processes. These reinforcing effects of similarity in affect will then be associated with more cooperative and cohesive group processes. There is ample support in the diversity literature for this process occurring. A team's demographic heterogeneity, on a variety of factors, has been found to be related negatively to team rapport (O'Reilly, Snyder, and Boothe, 1993) and informal communication among team members (Smith et al., 1994). Similarly, a group's demographic heterogeneity has been found to impede teamwork and to lead to difficult information exchange (Ancona and Caldwell, 1992).

With regard to intragroup conflict, there is evidence that differences in demography (Alagna, Reddy, and Collins, 1982; Pelled, 1996b; O'Reilly, Williams, and Barsade, 1998) and personality (Haythorn et al., 1956) lead to increased conflict. The construct of conflict has often been divided into two areas,

relationship conflict, pertaining to interpersonal incompatibility among team members, and task conflict, pertaining to disagreement about how the group tasks should be performed (Pinkley, 1990; Jehn, 1995). Jehn and her colleagues have found relationships between demographic variables and both types of conflict (e.g., Jehn, Northcraft, and Neale, 1996; Jehn, Chadwick, and Thatcher, 1997). We therefore propose:

Hypothesis 3: Affectively homogeneous groups will have greater cooperation and less task and relationship conflict than will affectively diverse teams.

Participative leadership style. Leaders are expected to be participative in leading their groups when they perceive them as being affectively similar to themselves. Pfeffer (1983) discussed how perceived homogeneity in demographic characteristics, particularly length of time employed in the organization, can lead to less reliance on formal, bureaucratic controls in organizations than on informal, more value-based control (e.g., Ouchi, 1981). The rationale is that the attraction, comfort, and reinforcement that comes from feeling similar will assure members that the appropriate group behaviors will be followed without the need for formal rules or controls. A psychological parallel to this can be found in a study by Gruenfeld et al. (1996), who found that groups of people who are comfortable and familiar with each other perform better than groups of strangers in a problem-solving task in which information sharing is necessary, a situation similar to that of top management teams. Westphal and Zajac (1995) found that the less demographic distance between the CEO and the board, the less the tendency for directors to challenge managerial preferences in the name of shareholder interests. A similar rationale can be applied to chief executive officers (CEOs) ceding more power to their teams. As Smith et al. (1994: 415) discussed in their study of top management team demography and social process, diverse teams may be viewed as less predictable in their attitudes and behaviors than homogeneous teams, and thus predictability and control will likely be enforced by the CEO through monitoring (Holmstrom, 1979) and rules and regulations (Eisenhardt, 1989). We reason that leaders who feel similar to their teams trust their teams' perspectives to be similar to their own and will be more likely to give their teams greater decision-making power:

Hypothesis 4: Similarity in trait positive affect between a group leader and his or her group members will lead to the leader's using a more participative than autocratic decision-making style.

Group Performance

There are competing theoretical arguments and empirical results relating to the effect of diversity on performance, and an extensive literature on the antecedents of group performance has arisen. Many researchers have found that there are negative effects of diversity, as heterogeneity creates distance between group members, which makes trust, rapport, social integration, and communication less likely (O'Reilly, Caldwell, and Barnett, 1989; Zenger and Lawrence, 1989; Tsui, Egan, and Xin, 1995), leading to implementation prob-

lems (Simons, 1995) as well as turnover (Jackson et al., 1991). Other researchers have argued—based on the theoretical argument laid out by Hoffman and Maier (1961)—that group heterogeneity enhances the breadth of perspective, viewpoints, cognitive resources, experiences, and general problem-solving ability of the group and that diversity can therefore help enhance performance (e.g., Cox, Lobel, and McCleod, 1991). As there is currently no clear consensus about how heterogeneity influences performance outcomes (Guzzo and Dickson, 1996), and as different dimensions of diversity have different impacts, we discuss each perspective below and posit competing hypotheses on the influence of trait positive affective diversity on group performance.

Affective homogeneity. There is substantial evidence that demographic homogeneity can positively influence group performance (see Williams and O'Reilly, 1999, for a review). As we predicted in hypothesis 3, affective homogeneity should lead to greater cooperation and less conflict. Greater cooperation and less conflict should reduce friction and increase efficiency in task performance, particularly with complex tasks that require information sharing, such as those facing top management teams. In a study of top management teams, Bourgeois (1980) found that disagreement and lack of cooperation were associated with decreased performance. Amason (1996) differentiated between cognitive conflict and affective conflict, and although cognitive conflict had a beneficial impact on decision making, affective conflict had a negative impact. Cognitive conflict concerning the merits of the ideas enhances decision making by allowing the group to refine and reject suboptimal solutions, while affective conflict is often directed more at the person than the idea, proving more destructive and isolating and thus reducing group effectiveness. Pelled (1996a) argued that performance may be reduced in groups in which there is affective and substantive conflict due to anxiety, psychological strain, lack of receptivity to ideas, and inability to assess new information—energy is spent on the conflict instead of the task. These process losses may lead to the poorer implementation found in heterogeneous teams (Simons, 1995).

In highly complex tasks, such as those facing a top management team, though informational diversity should theoretically be more beneficial than in routine tasks, this does not always play out in practice. O'Reilly and Flatt (1989) found that top management teams with homogeneous organizational tenure were more creative than teams with more diverse tenure. Dougherty (1992) found that cross-functional product teams had difficulty getting their products to market, and Ancona and Caldwell (1992) found managers' ratings of innovativeness to be lower when teams were functionally diverse than when they were homogenous. Thus, we predict the following:

Hypothesis 5a: Affectively homogeneous groups will have better group performance than will affectively diverse groups.

Affective heterogeneity. There is also support in the demography and group performance literatures for negative outcomes of group homogeneity and positive outcomes of het-

erogeneity, or diversity, particularly as it promotes debate or conflict over the task (see Milliken and Martins, 1996, for a review; Watson, Kumar, and Michaelsen, 1993; Jehn, 1995). Amason and Schweiger (1994) proposed that the positive aspect of task conflict is that it allows group members to identify and discuss diverse perspectives, thus increasing the evaluation of the criteria needed to make a high-quality decision. This is particularly true when the task requires creative problem solving and innovation, as the availability and expression of alternative perspectives can lead to novel insights (Nemeth, 1986). Most researchers studying top management teams have found positive relationships between top management team diversity and innovation (Bantel and Jackson, 1989), company growth rates (Eisenhardt and Schoonhoven, 1990), firm performance (Roure and Keeley, 1990), and effectiveness in responding to competitors (Hambrick, Cho, and Chen, 1996). Also, findings in social psychological research can help explain this with findings showing that group uniformity may be "secured at the expense of group success and group adaptation to the environment" (Moscovici, 1985: 350) and that a desire for uniformity can lead to an inability for group members to criticize and challenge ideas within the group, what Janis (1982) referred to as "group think." Thus, we also posit a competing hypothesis to the one above:

Hypothesis 5b: Affectively diverse groups will have better group performance than will affectively homogeneous groups.

Mean Level of Trait Affect

Though the literature on the relationship between affect and group-level performance variables is quite small, there is a vast body of research examining mean affect and judgment and performance tasks on an individual level, and there may be a parallel between the individual and group processes (Kelly and Barsade, 2001). Almost all research examining group-composition effects related to affect has concentrated on the relationship between the mean level of affect and various group processes and outcomes (e.g., George, 1990, 1995). As a result of this literature, two different perspectives regarding how positive emotional influence relates to individual attitudes, interpersonal processes, performance, and judgment have emerged. The first literature stream, as exemplified by research conducted by Isen and colleagues, has shown a beneficial direct effect of positive affect on judgment. For example, inducing positive mood leads to greater creativity, more efficient cognitive processing, and better use of heuristics in complex decision-making tasks, as well as broadened categories for information sorting and greater flexibility in categorization (see Isen, 1999, for a review). Inducing low positive affect (i.e., depressed mood) has also been shown to have a negative effect on cognitive performance (Mitchell and Madigan, 1984; Zarantonello et al., 1984). In contrast, the "depressive realism" literature (e.g., Alloy and Abramson, 1979, 1982; see also Golin, Terrell, and Johnson, 1977; Tabachnik, Crocker, and Alloy, 1983) offers the opposite prediction, which is that lower positive affect will lead to beneficial results in organizationally relevant contexts, as those who are more depressed will be more realistic and
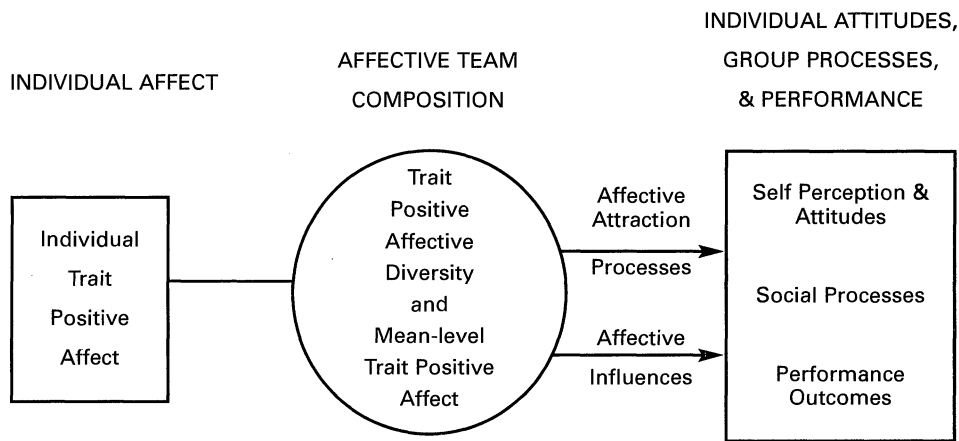
less likely to make mistakes in judgment based on self-enhancement biases. Staw and Barsade (1993) directly tested these two competing hypotheses, using trait positive affect as their predictor variable. Examining the relationship between trait positive affect and performance in a series of managerial simulations, they found that better decision making, social interaction, and leadership ratings were found in subjects high in trait positive affect than in those low in trait positive affect, giving support to the view that higher trait positive affect will lead to better individual attitudes, group processes, and performance outcomes. Thus, while it is not the focus of our study, we expect to find a positive relationship between the mean level of a team's trait positive affect and individual attitudes, group processes, and performance.

We have hypothesized that the affective diversity effects discussed above will hold true regardless of whether the group is pleasant or unpleasant, yet given the inherently negative valence of unpleasant emotion, it is natural to question whether mutual unpleasant emotion can also be positively reinforcing. There is evidence on both sides of this case. Even for unpleasant affect, research has shown that people with a negative self-perception prefer for others to see them as they see themselves—their desire for self-confirmation overcomes their desire for positive evaluation (e.g., Swann et al., 1990; Swann, Stein-Serroussi, and Giesler, 1992). There is also a large body of research showing that depressed people (e.g., Byrne, 1971; Rosenblatt and Greenberg, 1991) or those about to undergo an unpleasant experience (e.g., Schachter, 1959) prefer to engage with people perceived as being in a similar situation (e.g., Miller and Zimbardo, 1966; Gibbons, 1986; Hogue and Steinberg, 1995).

While the preponderance of evidence seems to support a completely homogeneous attraction-similarity effect, regardless of the mean level of affect, there is some evidence that would support an interaction effect between affective diversity and the mean level of affect, such that homogeneity in low-positive-affect groups could lead to different group outcomes than homogeneity within high-positive groups. There is support from motivated cognitive processing theory (Clark and Isen, 1982; Forgas, 1991) for the benefit of injecting pleasantness into a group (Isen, 1985; Saavedra and Earley, 1991). Studies show that, on average, people avoid situations that would reduce their positive emotions (Isen and Simmonds, 1978; Isen, Nygren, and Ashby, 1988) and that they seek out and remember pleasant experiences more than unpleasant experiences (Singer and Salovey, 1988). Thus there is sufficient cause to test for interaction effects beyond our main homogeneity effects. Because this is an exploratory analysis, however, and these interactional effects could take a variety of forms, we do not posit a formal hypothesis here but, rather, conduct a conservative test for the interaction.

The model developed through the theory above is shown in figure 1. We use this model to examine the influence of an individual's trait positive affective fit with his or her work group and then explore the contributions of positive affective diversity (that is, affective homogeneity and heterogeneity), mean level trait positive affect, and the interaction of these

Figure 1. Positive affective diversity model

two variables on individual attitudes and group processes and performance through an examination of trait positive affective diversity in the context of ongoing top management teams.

METHOD

Sample

The sample consisted of the CEOs of 62 U.S. companies and 239 of their top managers. The sample was derived from the participants at two CEO conferences held at an East Coast university. Invitees to both conferences were executives of leading organizations in their fields. The first conference invitation list consisted of CEOs from the *Fortune* 500 industrials; the largest 100 privately held companies in the U.S.; leading service companies (e.g., the top 25 advertising agencies and law firms, the top 10 consulting firms, the Big 6 accounting firms, etc.); leading not-for-profit organizations (including government agencies, educational institutions, professional associations, health research organizations, philanthropic organizations, and environmental organizations), and a small number of newsworthy emerging-growth companies. Invitees to the second CEO conference were CEOs from the largest 250 companies listed on the NASDAQ Stock Exchange (size defined as market capitalization).

Because of the nature of the conferences, we were in the unusual position of being able to obtain self-report trait affect, demographic, attitudinal, and group dynamic data from the CEOs and their senior management teams. The procedure for this was as follows: CEOs who registered for the CEO conferences were sent the questionnaire to complete before arriving at the conference. The questionnaire included trait affect items and demographic questions (as well as other items not related to this study). The questionnaire was an integral part of the general group feedback CEOs were to receive about themselves and their CEO peers at the conference, and CEOs were also told that they would be given individualized personality reports about themselves and their senior management team. We believe this assisted in obtaining the high CEO response rate of 67 percent. As part of the questionnaire, we asked CEOs to list the names of their top management team members and requested permission to

send these managers a questionnaire as well. Having the CEO list his or her top management team members allowed us to access directly (rather than infer from job titles) the people whom the CEO considered to be members of the top management team. CEOs listed an average of 4.41 top managers (s.d. = 3.07), and we mailed a questionnaire to each of these. The top management team's response rate for the questionnaire was also high, at 70 percent. The top management team questionnaire consisted of individual trait affect items, individual satisfaction and perceived influence measures, demographic information, questions about team-level conflict and cooperation, and an assessment of the degree of participativeness versus autocratic decision-making style of the CEO (as well as other questions not related to this study). To be included in the final sample, the CEO and at least two top managers had to complete the survey. This excluded 39 organizations, leaving 62 organizations in the final sample.

The final sample of 62 organizations varied across industry and covered the profit (both private and publicly held) and not-for-profit sectors. The publicly held companies performed slightly above the market average, with a mean market-adjusted return in 1995 of .038 (s.d. = .209). Many were newer companies, with half founded after 1971. The sample also included some older companies, which brought the mean company age to 40.46 years (s.d. = 38.24).

Positive Affective Team Composition Variables

Individual trait positive affect (PA). Trait PA is people's tendency toward pleasant emotional engagement with, or appraisal of, their environment (Staw, Bell, and Clausen, 1986). High PA is characterized by high levels of enthusiasm, energy, mental alertness, and determination, while low PA is characterized by down-heartedness, dullness, and sluggishness (Watson and Tellegen, 1985). We measured trait PA with the highly reliable and valid Well-Being Scale from the Multidimensional Personality Questionnaire (MPQ), formerly called the Differential Personality Questionnaire (Tellegen, 1982). For use here, the scale was converted from a true-or-false format to a 7-point Likert-type scale. Sample items are "I always seem to have something pleasant to look forward to," "I often feel happy and satisfied for no particular reason," and "Most days I have moments of real fun and joy." The mean of the 11-item PA scale was 5.48 (s.d. = .80), and the Cronbach alpha reliability was .87. To ensure that we were not missing an affective component of these teams, we also created team compositions variables assessing trait negative affect in the teams which were analogous to the positive affect variables. Descriptions of these variables can be found in Appendix A.

Affective diversity was measured through heterogeneity in trait positive affect at both the individual and team level. To measure diversity at the individual level, we followed Tsui and O'Reilly (1989) by calculating each top management team member's relational demography score, his or her affective dissimilarity from the rest of the senior management team, using the formula for Euclidean distance:

$$\left[\sum_{j=1}^{n} \frac{(S_i - S_j)^2}{n}\right]^{1/2}$$

where S_i = the respondent's own score on the dimension being examined (e.g., dispositional affect), S_j = each of the other top management team members' score on the dimension being examined (e.g., dispositional affect), and n = the number of senior managers on the top management team. This method is commonly used (e.g., O'Reilly, Caldwell, and Barnett, 1989) to examine how different an individual is on a particular dimension from each of his or her fellow group members. The mean trait PA relational demography score for the entire top management team (including the CEO) was 1.01 (s.d. = .45). We also used each CEO's trait PA relational demography score separately as the predictor variable for affective diversity when examining the CEO's participative decision-making style. The mean trait PA relational demography score for the CEOs was .94 (s.d. = .38).

To measure group-level affective diversity, we used the standard deviation of the top management team's trait PA, instead of the often used coefficient of variation, because our primary predictor variable, trait PA, was measured on an interval rather than a ratio scale (Allison, 1978). The standard deviation was also useful in our analyses in testing for the separate effects of the mean and the variance in the same equation and in testing interaction effects. The standard deviation of the top management teams ranged from .18 to 1.58, with a mean standard deviation of .71 (s.d. = .25).

Mean level trait positive affect. Group-level trait positive affect was calculated as the average of the team members' trait PA scores, including the CEO (x = 5.51, s.d. = .37). For individual-level analyses, we calculated a variable to control for the trait PA of the other members of the team. This variable represents the mean trait PA of everyone minus the self (x = 5.52, s.d. = .41).

Perceived group positive culture. To control for perceptual biases in the individual-level analyses, we measured team members' (not including the CEO) perceptions of the positive affective culture in their top management team by having them rate the following three items: "The emotional culture of our top management team is enthusiastic and cheerful," "The emotional culture of our top management team is pleasant as opposed to unpleasant," and "The emotional culture of our top management team is depressed, sluggish and gloomy" (reverse coded). We calculated a perceived team positive culture score for each team member by taking his or her mean rating on the three items (scored on a 7-point Likert scale; 1 = Strongly Disagree through 7 = Strongly Agree). The mean perceived team positive culture was 5.68 (s.d. = 1.21) and the Cronbach alpha reliability was .81. This perceptual measure differs from the trait PA measures in that it is not a measure of stable personality dispositions but, rather, is meant to indicate team members' general feelings about their team.

Dependent Variables

Individual-level attitudes and self-perceptions. Our measure of *satisfaction with team interpersonal relations* came from team members' answers to the following three questions on how satisfied they were with (1) the way they were treated by other members of the top management team, (2) the way they were treated by the CEO, and (3) the interpersonal relations between top management team members. They rated each item from 1 to 7 (1 = very dissatisfied through 7 = very satisfied), and the mean of this scale was 5.55 (s.d. = 1.16), with a Cronbach alpha of .73. We assessed *self-perceptions of influence within the team* by asking team members the following two questions: (1) "I feel I have a great deal of influence on the CEO regarding decisions within my area of responsibility," and (2) "I feel I have a great deal of influence on decisions made by the top management team." These items were assessed on a scale of 1 (Strongly Disagree) through 7 (Strongly Agree), with a mean of 5.86 (s.d. = 1.27) and a Cronbach alpha of .70.

Group-process measures. We asked senior managers (not including the CEO) about the degree of conflict and cooperativeness in their top management team. For each company, we used the mean of the senior managers' perceptions about the group process (e.g., conflict) as the group-level dependent variable. We measured group conflict using Jehn's (1995) conflict scale. *Task conflict* was measured by three items asking about differences of opinions in the top management team, team disagreement about work being done, and general degree of task conflict in the top management team. The mean of each team's task conflict score was 3.54 (s.d. = .89), with a Cronbach alpha of .73. *Emotional conflict* was measured through a four-item scale that asked about personality clashes in the top management team, degree of anger, degree of friction, and the general amount of emotional conflict in the top management team. The mean of each team's emotional conflict score was 3.42 (s.d. = 1.11), with a Cronbach alpha of .93.

Group cooperativeness. We combined two scales to make a seven-item group cooperativeness scale. The first scale consisted of the following four items: "There is a great deal of competition between members of our TMT" (reverse coded); "Members of our TMT view themselves as a team"; "When our TMT has done well, I have done well"; and "There is a lot of unpleasantness among people in this TMT" (reverse coded) (Alderfer and Smith, 1982). The second scale consisted of the following three statements: "I benefit when our team as a whole does well"; "Members of this group care a lot about it and work together to make it one of the best"; and "The members of our TMT really stick together" (Wageman, 1995). These items were scored from 1 (Strongly Disagree) to 7 (Strongly Agree), with a mean of 5.26 (s.d. = .63) and a Cronbach alpha of .82.

CEO participative leadership scale. Our CEO participative-leadership-style scale measured each CEO's degree of participativeness versus autocracy as rated by their top management teams. The members of the team completed a 17-item

decision-making scale based on a combination of Heller's (1971) and Vroom and Yetton's (1973) leadership style questionnaires (see Appendix B for a detailed description of this scale). Team members were asked about the degree of participativeness of their CEO when dealing with different types of organizational issues, such as strategy, human resources, and finance. The higher the rating, the more participative the CEO. The Cronbach alpha for this scale was .90. The ratings were aggregated across each group's top management team members to form a group-level score for each CEO ($x = 5.90$, s.d. = 1.18 on a 1–10 scale).

Group performance measures. We obtained information on financial performance for the public companies in the sample from the COMPUSTAT industrial file and the Center for Research in Security Prices (CRSP). The variable used to measure financial performance was the logged annual *market-adjusted return,* averaged across each year that the entire top management team (including the CEO) worked together. Market-adjusted returns indicate the company's stock returns minus the return on a value-weighted market index. Market-adjusted returns are a widely used metric to judge firm performance, as they are not biased by overall market performance (Brown and Warner, 1980). They also enable the most equitable comparison of performance across industries, which was necessary for our sample, which was very industry-diverse. We could not use accounting measures, such as ROA (return on assets) or ROE (return on equity), commonly used in studies focusing on a single industry, as they generally provide poor comparisons across industries, especially between people-intensive service industries and capital-intensive manufacturing industries.

Control Variables

Demographic variables were not the focus of this study, but because organizational demography and team composition research has shown that various aspects of a team's demographic composition can influence group processes and outcomes, including in top management teams (see Hambrick, 1994, for a review), the following demographic information was obtained for each top management team member as control data: sex (0 = male, 1 = female); age; years of company tenure; number of years on the top management team; functional background (coded into the following nine categories: general management, finance, operations, marketing, human resources, legal, accounting, entrepreneurial, and other); educational attainment (coded as 0 = high school degree or less, 1 = college, 2 = M.B.A./graduate degree); and the prestige of the undergraduate or graduate universities attended.[2]

Company-level control variables included the age of the company; number of managers on the senior management team (as listed by the CEO); the company's status as public, private, or not-for-profit; and a size index for the public companies (based on market capitalization). Descriptive statistics of these team and individual characteristics can be found in table 1.

Table 1

Descriptives of Demographic Variables for Top Management Team Study

Company and top management team characteristics	%	Mean	S.D.	Min.	Max.	N
Type of company						
% Publicly held	58					
% Private (for profit)	32					
% Not for profit	10					
Company age (years)		40.46	38.24	1	147	61
Mean years TMT has been together		7.00	4.11	1	17	62
Company size index (1-10; publicly held companies only)		9.35	1.04	6	10	34
Company market-adjusted return (publicly held companies only)		.038	.209	−0.532	0.946	36

CEO individual level

	%	Mean	S.D.	Min.	Max.	N
Functional background						
General management	37					20
Finance	11					6
Operations	9					5
Marketing	17					9
Human resources	0					0
Legal	0					0
Accounting	6					3
Entrepreneur	11					6
Other	9					5
Sex						
Male	97					59
Female	3					2
Educational attainment						
High school degree or less	3					2
College degree	25					15
MBA/graduate degree	72					43
Age		52.31	7.87	31	67	53
Tenure with company (years)		13	10.89	1	43	61
Tenure on TMT (years)		7.37	6.58	<1	27	51
University prestige (0 = no undergrad.;1 = 2d tier; 2 = top tier)		1.25	0.51	0	2	59

TMT individual level (not including CEO)

	%	Mean	S.D.	Min.	Max.	N
Functional background						
General management	35					73
Finance	17					35
Operations	13					26
Marketing	12					25
Human resources	8					17
Legal	5					10
Accounting	4					8
Entrepreneur	2					4
Other	4					8
Sex						
Male	89					184
Female	11					22
Educational attainment						
High school degree or less	3					7
College degree	47					105
MBA/graduate degree	50					113
Attended same undergrad. college as CEO (yes)	4					218
Attended same undergrad. college as another TMT member (yes)	14					200
Age		48.72	9.54	29	91	216
Tenure with company (years)		13.32	8.11	1	37	239
Tenure on TMT (years)		7.28	4.06	1	17	239
University prestige (0 = no undergrad.;1 = 2d tier; 2 = top tier)		1.15	0.53	0	2	227

We controlled for demographic composition in individual-level analyses by including each senior manager's demographic characteristics in the equation, as well as his or her Euclidean distance from the team on each characteristic. In group-level analyses, the team means for the demographic variables were included as well as the team's standard deviations. For categorical variables, such as functional background, we used Blau's (1977) index of heterogeneity instead of standard deviations to index group-level differences. The formula for Blau's index (1977) is $1 - \Sigma p i^2$, where p equals the percent of individuals in a category and i equals the number of different categories being measured.

To reflect the findings of previous organizational demography studies, and to conduct a more conservative test of the affective diversity variable, all of the demographic characteristics, individual, group-level, and relational demography measures listed in table 1 were entered on the first step of a hierarchical regression in each of our analyses. Only those variables found to be significant were entered in subsequent analyses and are listed in the correlation matrix in tables 2 and 3.

RESULTS

The means, standard deviations, and intercorrelations among all variables used in the analyses are reported in tables 2 and 3.

Table 2

Means, Standard Deviations, and Correlations among Individual-Level Top Management Team (TMT) Variables*

Variable	Mean	S.D.	1	2	3	4
1. Difference in tenure from other TMT members[†]	5.21	4.71				
2. Undergraduate prestige[†]	1.15	.53	−.04 (209)			
3. Difference in undergraduate prestige from other TMT members[†]	0.61	.40	−.01 (201)	.06 (224)		
4. Trait positive affect (PA)[†]	5.48	.80	.02 (213)	.00 (226)	.03 (223)	
5. Mean level trait PA of other TMT members[†]	5.53	.41	.16● (213)	.06 (226)	.04 (223)	.04 (238)
6. Mean perceived TMT positive culture[†]	5.68	1.21	.18●● (214)	−.01 (227)	−.03 (224)	.35●●● (238)
7. Individual-level affective diversity	1.01	.45	−.16● (213)	.01 (223)	.03 (223)	−.39●●● (235)
8. Interpersonal satisfaction with the TMT	5.55	1.16	.16● (213)	−.03 (226)	−.14● (223)	.37●●● (237)
9. Perceived influence on TMT	5.86	1.27	.05 (213)	.14● (223)	−.04 (223)	.27●●● (237)

Variable	5	6	7	8
6. Mean perceived TMT positive culture[†]	.03 (238)			
7. Individual-level affective diversity	−.24●●● (235)	−.11 (235)		
8. Interpersonal satisfaction with the TMT	−.04 (237)	.67●●● (238)	−.22●●● (234)	
9. Perceived influence on TMT	−.10 (237)	.45●●● (238)	−.17●● (234)	.56●●● (237)

●$p < .05$; ●●$p < .01$; ●●●$p < .001$; two–tailed tests.
*Numbers in parentheses are numbers of TMT respondents.
[†]Includes CEO response (otherwise TMT responses only).

Table 3

Means, Standard Deviations, and Correlations among Group-level Top Management Team (TMT) Variables*

Variable	Mean	S.D.	1	2	3	4
1. Mean tenure on TMT[†]	7.00	4.11				
2. Mean TMT tenure at company[†]	12.57	7.97	.69••• (62)			
3. Mean number of managers from CEO's university	0.05	0.12	.00 (61)			
4. Difference in TMT functional backgrounds[†]	0.55	0.21	.02 (62)	.10 (62)		
5. Individual CEO trait positive affect (PA)[†]	5.67	0.66	.12 (59)	.16 (59)	.00 (59)	.02 (59)
6. Mean level trait PA of other TMT members[†]	5.51	0.37	.09 (62)	.05 (62)	.12 (61)	−.17 (62)
7. Difference in CEO trait PA and TMT trait PA[†]	0.94	0.38	−.08 (59)	−.01 (59)	.33•• (59)	.20 (59)
8. Group–level affective diversity[†]	0.71	0.25	−.08 (62)	−.03 (62)	.19 (61)	.19 (62)
9. Mean TMT emotional conflict	3.42	1.11	−.30• (62)	−.32•• (62)	−.33••• (61)	−.02 (62)
10. Mean TMT task conflict	3.54	0.89	−.25• (62)	−.27• (62)	−.25• (61)	−.10 (62)
11. Mean TMT cooperativeness	5.26	0.63	.06 (20)	.05 (20)	.36 (20)	.29 (20)
12. Mean CEO participative vs. autocratic decision–making style	5.90	1.18	.15 (62)	.22 (62)	.01 (61)	−.04 (62)
13. Mean company annual market–adjusted return	0.038	0.209	−.05 (36)	−.11 (36)	−.07 (36)	.40 (36)

Variable	5	6	7	8	9	10
6. Mean level trait PA of other TMT members[†]	.47••• (59)					
7. Difference in CEO trait PA and TMT trait PA[†]	−.07 (59)	−.39•• (59)				
8. Group–level affective diversity[†]	−.16 (59)	−.47••• (62)	.84••• (59)			
9. Mean TMT emotional conflict	.04 (59)	−.22 (62)	.00 (59)	.07 (62)		
10. Mean TMT task conflict	.03 (59)	−.30•• (62)	.10 (59)	.14 (62)	.84••• (62)	
11. Mean TMT cooperativeness	−.22 (19)	.38 (20)	.11 (19)	.00 (20)	.74••• (20)	−.73••• (20)
12. Mean CEO participative vs. autocratic decision–making style	−.03 (59)	.19 (62)	−.17 (59)	−.21 (62)	−.33 (62)	−.27• (62)
13. Mean company annual market–adjusted return	.00 (35)	−.09 (36)	−.12 (35)	−.14 (36)	.07 (36)	.01 (36)

Variable	11	12
12. Mean CEO participative vs. autocratic decision–making style	.21 (20)	
13. Mean company annual market–adjusted return	.68 (6)	−.07 (36)

• $p < .05$; •• $p < .01$; ••• $p < .001$; two-tailed tests.
* Numbers in parentheses are numbers of TMT respondents.
[†] Includes CEO response (otherwise TMT responses only).

The hierarchical regression in table 4 (model 1) supports hypothesis 1. Controlling for the demographic and affective control variables, there was a significant effect of affective diversity. The more similar in trait positive affect (PA) a team member was to his or her fellow team members, the greater his or her satisfaction with the interpersonal relations on the top management team. There was no significant effect of

Table 4

Hierarchical Regression of Individual-level Affective Diversity of TMT Members on Individual-level Satisfaction with the Group and Self-perceptions of Influence*

Variable	Interpersonal satisfaction with the TMT 1	Perceived influence on TMT 2
Difference in tenure from other TMT members	.15**	–
Difference in prestige of undergrad. university from other TMT members	–.14*	–
Prestige of undergraduate university	–	.14*
Contribution to R^2	.04	.02
Trait positive affect (PA)	.17***	.13*
Perceived TMT positive culture	.60***	.41***
Mean PA level of other team members†	–.06	–.12*
Contribution to R^2	.45	.23
Difference in PA from other TMT members†	–.11*	–.14**
Contribution to R^2	.01	.02
Interaction of mean level TMT PA and PA diversity	.07	–.11
Contribution to R^2	.00	.01
Overall F-ratio	29.09***	13.55***
Adjusted R^2	.49	.25
N	209	223

* $p < .05$; ** $p < .01$; *** $p < .001$; one–tailed tests; interactions are two-tailed tests.
* Entries represent standardized coefficients and are reported in the order entered.
† Includes CEO response (otherwise TMT responses only).

mean trait PA and no interaction effects between mean trait PA level and affective diversity. Model 2 shows that, as predicted by hypothesis 2, controlling for demographic and affective controls, there is a significant effect of affective diversity. The more affectively similar a team member is to the trait PA of others in his or her team, the greater is his or her perceived influence. No main effects of mean trait PA level or interaction effects between mean trait PA level and affective diversity were found.

Table 5 shows the hierarchical regressions examining the influence of trait positive affective diversity on group dynamics. Mean TMT trait PA level is significantly positively related to group cooperativeness, but there is no significant effect of affective diversity on cooperativeness. There is, however, a significant interaction effect between mean team trait PA level and trait PA affective heterogeneity. To examine the form of the interaction, we divided the sample into four groups according to a median split on each of the two variables making up the interaction. Figure 2 shows that the interaction comes from the significantly lower level of cooperativeness of groups that are affectively diverse and have a low level of mean trait PA as compared with the other three groups: high mean level trait PA and affectively diverse, high and low mean level of trait PA, and affectively homogeneous.

The results in table 5 for task and emotional conflict are very similar to those for group cooperativeness. Controlling for the demographic variables (mean tenure level and number of managers from the same university as the CEO), mean trait

Table 5

Hierarchical Regression of Affective Diversity in TMT Trait PA on TMT Cooperativeness and Task and Emotional Conflict*

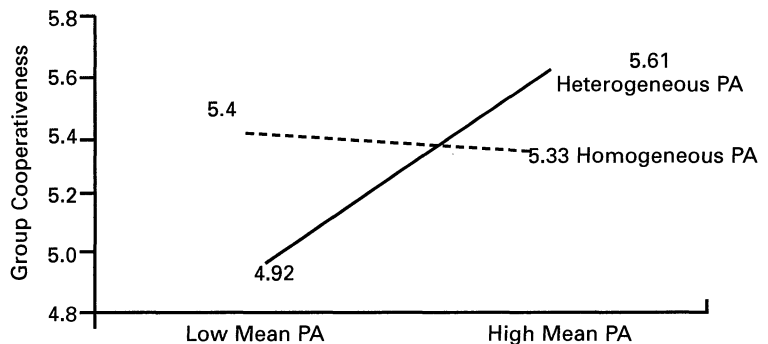| Variable	Group cooperativeness 1	Task conflict 2	Emotional conflict 3
Mean TMT tenure[†]	–	−.25*	−.30**
Mean number of managers from CEO's university	–	−.25*	−.33***
Contribution to R^2	–	.13	.20
Mean trait PA level of TMT[†]	.38*	−.26*	−.16
Contribution to R^2	.14	.06	.03
Heterogeneity in TMT PA[†]	.23	.06	.04
Contribution to R^2	.04	.00	.00
Interaction of mean level TMT PA and PA diversity	.64***	−.24*	−.24*
Contribution to R^2	.39	.06	.06
Overall F-ratio	7.33***	3.65**	4.34**
Adjusted R^2	.50	.18	.22
N	20	61	61

*$p < .05$; **$p < .01$; ***$p < .001$; one-tailed tests; interactions are two-tailed tests.
*Entries represent standardized coefficients and are reported in the order entered.
[†] Includes CEO response (otherwise TMT responses only).

Figure 2. Interaction of mean top management team trait PA and heterogeneity in trait PA on group cooperativeness.

PA level had a significant negative effect on task conflict and a marginally significant effect on emotional conflict ($p < .10$). As with group cooperativeness, no significant main effect of affective diversity was found. There was a significant interaction effect between mean trait PA level and affective diversity for each type of conflict. Figures 3 and 4, which diagram the forms of these two interactions using a median split on both variables, show that the interactions are very similar to each other, and to group cooperativeness, with the affectively diverse groups low on mean trait PA being higher than the others in the level of task and emotional conflict. Thus, hypothesis 3, which predicted that more affectively homogeneous groups will experience greater cooperativeness and less conflict, was not directly supported. Rather, it was indirectly supported in the context of the interaction: homogeneous groups have equal levels of cooperativeness and task and emotional conflict, regardless of mean trait PA. In con-

Figure 3. Interaction of mean top management team trait PA and heterogeneity in trait PA on group emotional conflict.
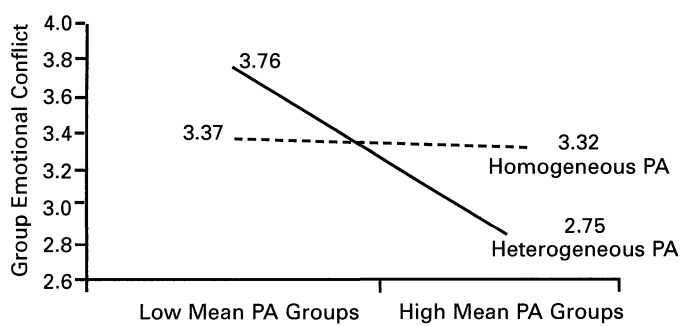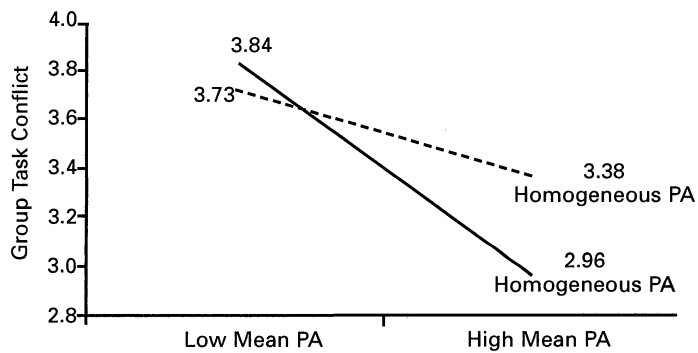

Figure 4. Interaction of mean top management team trait PA and heterogeneity in trait PA on group task conflict.

trast, affectively diverse groups that have high mean trait PA levels are characterized by greater cooperativeness and lack of conflict than are affectively diverse groups with low mean trait PA levels. Thus, increased stressful social relationships were found in affectively diverse, low mean trait PA groups as compared with the other three groups.

The results for hypothesis 4 can be seen in table 6. As this variable focused on the CEO's decision-making style, rather than group processes as a whole, we included CEO trait PA in the equation, as well as the degree of difference between the CEO's trait PA and that of the other team members. Controlling for demographic variables (mean TMT member company tenure) in a hierarchical regression, there was no significant effect of CEO trait PA on participativeness in decision-making style. As predicted in hypothesis 4, there was a marginally significant effect of affective diversity in the predicted direction. CEOs who were more similar to the mean trait PA of their senior management team had a marginally significantly more participative than autocratic decision-making style. There was no significant interaction between affective diversity and mean level affect on CEO decision-making style.

As financial performance has been discussed as influencing group processes (Ocasio, 1995), we also included this variable as a control in all of the group process variable regres-

Table 6

**Hierarchical Regression of Positive Affective Diversity on CEOs'
Participative vs. Autocratic Decision-making Style (N = 59)***

Variable	CEO participativeness in decision-making style
Mean TMT company tenure	.23*
Contribution to R^2	.05
CEO's trait PA	−.07
Contribution to R^2	.01
Difference between CEO and individual team members' PA	−.17*
Contribution to R^2	.03
Interaction of CEO PA and PA diversity	−.15
Contribution to R^2	.02
Overall F-ratio	1.55*
Adjusted R^2	.04

* $p < .10$; tests of hypotheses are one-tailed; other tests are two-tailed.
*Entries represent standardized coefficients and are reported in the order entered.

sions reported above, but there was no significant relationship between financial performance and group cooperativeness, task conflict, emotional conflict, or degree of CEO participativeness.

Lastly, we examined whether affective diversity would hinder (hypothesis 5a) or help (hypothesis 5b) group performance by examining the financial performance of the publicly held organizations in our sample. The results are shown in table 7. Controlling for differences from other TMT members in functional background (which was significantly positively related to financial performance) and mean trait PA (which was not significantly related to financial performance), a hierarchical regression showed that trait PA homogeneity was marginally significantly related to firm financial performance. The more affectively diverse the team was in trait PA, the lower the company's logged market-adjusted return over the mean number of years the team had been together. The interaction effect of affective diversity and mean level trait PA on financial performance was not significant. Thus, there is marginally significant support for hypothesis 5a, that groups that are homogeneous in their trait PA will have better performance.

As we discussed earlier, group process measures can influence financial performance as well, so we entered degree of group cooperativeness, task and emotional conflict, and degree of CEO participativeness as controls in our equation prior to entering the affective diversity variables. None of these variables was found to be significantly related to financial performance.

Table 7

Hierarchical Regression of Positive Affective Diversity on Logged Company Market-adjusted Returns Averaged across Number of Years Team Worked Together (N = 36)*

Variable	Logged market-adjusted return
Difference in functional background from other TMT members[†]	.40**
Contribution to R^2	.16
Mean trait PA level of the TMT[†]	−.03
Contribution to R^2	.00
Heterogeneity in TMT PA[†]	−.30*
Contribution to R^2	.07
Interaction of mean level TMT PA and PA diversity	−.01
Contribution to R^2	.00
Overall F-ratio	2.34*
Adjusted R^2	.13

*$p < .10$; **$p < .05$; two-tailed tests.
*Entries represent standardized coefficients and are reported in the order entered.
[†] Includes CEO response.

Exploration of Trait Negative Affect

We conducted exploratory hierarchical regression analyses for trait negative affective diversity using the variables described in Appendix B. These analyses were identical to those conducted for trait positive affective diversity. No effects for trait negative affective diversity, either at the individual level or at the group level, were found. There were also no significant effects of mean level negative trait affect on any of the dependent variables.

DISCUSSION

Teams are increasingly becoming primary in the way employees in organizations conduct work (Guzzo and Shea, 1992; Jackson, 1991). The effects of similarities and differences among team members have been shown to influence every aspect of that work. In this study we expanded on the classic examination of demographic differences to include differences in personality and emotion through trait positive affect. We found that trait positive affective diversity does make a difference in individual group members' attitudes, group processes, and group performance. Examining these differences provides a particularly interesting empirical test of the oft-stated rationale for poor team performance: personality clashes, the effects of which have been shown to be particularly strong in group settings (see Mikolic, Parker, and Pruitt, 1997).

The greater the fit in trait positive affect (PA) between top management team members and their fellow team members, the higher their satisfaction with interpersonal relations within the team and the higher their perceptions of their amount of influence on the team. A similar trait PA fit between the CEO and the rest of the team is associated with

a marginally significantly greater use of participative than autocratic decision making by the CEO. This marginally greater CEO participativeness is additional evidence that members accurately feel that they have more influence when they are in more affectively homogeneous teams.

When examining group process, we found an intriguing, and unexpected, interaction effect that can be characterized by the first line of *Anna Karenina:* "All happy families are like one another; each unhappy family is unhappy in its own way" (Tolstoy, 1961: 17). Happy, or high trait PA top management teams, had the same relatively higher levels of cooperativeness and lower levels of task and emotional conflict, regardless of affective diversity. "Unhappy" teams, or teams lower in trait PA, were unhappy in their own way, depending on their level of affective diversity. Low trait PA teams with low affective diversity had levels of cooperativeness and conflict similar to those of the happy teams. But low trait PA teams with high levels of affective diversity were significantly lower in cooperation and higher in conflict than the other three groups. Thus, for group conflict and cooperativeness, being homogeneous compensated for low trait PA, and being high in trait PA compensated for being affectively diverse, but nothing ameliorated the effect of being affectively diverse and having mean low trait PA.

These affective compensatory effects did not extend, however, to company financial performance. No interaction between mean level of trait PA or PA diversity was found, and no effects of mean trait positive affect were found: whether a TMT comprised dispositionally happier or sadder members had no relationship with financial performance. Rather, there was a marginally significant negative relationship between affective diversity and firm financial performance: more affectively diverse top management teams had poorer financial performance than did teams more homogeneous in trait PA. This result contrasts with our finding for the effect of a more standard measure of diversity—functional background—on performance. We found that top management team functional heterogeneity was associated with greater financial performance, which conforms with literature we cited earlier supporting the positive effects of some types of demographic heterogeneity and empirical findings on top management teams (Hambrick, Cho, and Chen, 1996).

Although the broad nature of our sample (across both industry and sector) generally helped to support the generalizability of our results, it hindered our ability to establish a standardized measure of organizational performance in that we were only able to test the performance hypothesis with the publicly listed firms in our sample. Despite this limitation, and the consequent reduction in the number of organizations in the sample for this hypothesis, our beta was quite large (B = −.30). Accordingly, we believe this result will be even stronger if replicated in a study with a larger sample size or one in which performance is comparable across all organizations. Also, this result is particularly exciting given the inherently loose relationship between top management team dynamics and firm financial performance.[3]

3
We attempted to control for outside impacts on performance. We used market-adjusted stock returns, thereby controlling for movements in the market and the general economic factors that affect all firms in the industry. We recognize, however, that organizational performance is still influenced by other factors internal and external to the firm that are outside the control of the top management team.

Interestingly, when we examined whether the affective-diversity effect on financial performance was moderated through group process variables, we found no significant relationships between group process variables and financial performance. This is puzzling, but it may be that in dealing with their difficult group processes, affectively diverse group members have an individual-level side-effect of being psychologically distracted, which siphons away their ability to focus well on their task above and beyond the group process losses. Also, as Hackman (1983: 257) pointed out, "Too often managers or consultants attempt to 'fix' a group that has performance problems by going to work directly on obvious difficulties that exist in members' interpersonal processes. And, too often, these difficulties turn out not to be readily fixable because they are only symptoms of more basic flaws in the design of the group or in its organizational context. Process is indeed an important thing, but it is not the only thing." The affective diversity and composition of the team is one of these fundamental design aspects.

Although it was not the focus of our study, we found support for the literature showing the importance of mean trait positive affect in group process (e.g., George, 1990) but no support for its impact on group performance. It may be that the costs and benefits of each of the positive and negative affective influence processes we discussed earlier canceled each other out, while the benefits of the affective-similarity process remained constant. Also, the mean trait PA level was quite high among these top management teams, which might be expected, as having high trait PA may be more necessary on a top management team than in other jobs. This does restrict the range here, but it leads to a more conservative test.

As an exploratory test, we also tested for the effects of diversity in trait negative affect (NA) and found no relationships for either trait NA diversity or mean level trait NA measures with any of the outcome variables. Given prior research showing trait NA's explicit lack of relationship with social variables (e.g., McIntyre et al., 1991; Watson et al., 1992), it is disappointing, but not surprising, that trait NA had no effect in this situation. We do not think that this is evidence that negative affect is irrelevant to groups. Rather, we believe that the more general, overarching construct of trait negativity may be more related to internal states and therefore may not be the best type of negative emotion to study in the group context. There may still be fruitful avenues for understanding the roles of other, more social, negative emotions in groups, such as anger and anxiety.

Also, our model focuses on trait positive affect, but only as a first step. We think the model should be equally relevant and extend to other types of affect. The next step in this line of research is to examine other affective variables explicitly. For example, having established that affective traits are important to group composition, we would want to extend this inquiry to the influence of particular affective states. Affect state has been shown to be a very important determinant in forming impressions of people (see Asch, 1946; Hastorf, Schnider, and Polefka, 1970), and affective cues have been used to

make inferences about different aspects of a person's personality (e.g., Katz and Braley, 1933). The saying that first impressions count has been supported in this research on impression formation, which may indicate that studying state affect may be particularly important in groups that stay together for short periods, such as juries or task forces. This is different than in top management teams or other situations in which groups stay together for a longer period of time. The repeated encountering of a person's affective states over prolonged periods is likely to relay both a stronger and more accurate impression of the person, overcoming any false first impressions, and is thus more likely to guide responsive behavior. This is especially true as teams work together over time, as team members get to know the affective personality of their peers, how each other works, and as they accommodate each other's styles through social entrainment (McGrath, 1991). As such, the tenure of the group and of individuals within the group could also become an important component or moderator of the similarity-attraction process as it relates to positive affect at the team level.

When thinking about our results, it is natural to question the causation of the effects between affective team composition and team performance. As our measure of positive affect is a stable and reliable trait (e.g., Watson, Clark, and Tellegen, 1988) shown to be steady over different jobs and time (Staw, Bell, and Clausen, 1986; Watson and Slack, 1993), we find it more likely that it will influence group performance or processes rather than vice versa. Also, while we do not expect a reverse causation of performance on trait PA variables, even if there were such a reverse causation, we would expect it be less related to trait affective diversity and more related to mean level trait PA. Yet even this relationship was not found in this study: there was no relationship between financial performance and mean level trait PA. While economic adversity has been shown to influence group processes, for example, leading to either the strengthening of cohesive top management groups or the breaking apart of more fragmented top management groups (Ocasio, 1995), our model would suggest that this would not occur through a direct influence on trait positive affect but, rather, by its influence on individual perceptions and group social processes, such as cooperation. This is not to say, however, that we do not think performance can influence other types of affective variables that we think should be studied in an affective diversity context. For example, in the more malleable case of mood as the predictor variable, we would fully expect to see a feedback loop between team performance and individual- and group-level mood.

Affective Diversity in Top Management Teams

There were several advantages in studying affective diversity in top management teams in particular. As the work of top management teams almost exclusively involves decision-making tasks, it is similar, in this respect, to much of the classic research on which most of the demography research is based. Also, TMT membership tends to be fairly stable (in our sample TMT members had been with the team for an average of seven years), and TMTs are functionally quite

comparable, serving essentially the same collective function across organizations. With regard to understanding executive leadership in particular, we had the rare and fortunate opportunity to conduct our research on existing top management teams and have members of those teams answer (with a remarkable response rate) questions about their personal affect, attitudes, and interpersonal dynamics.

There are some drawbacks to studying top management teams, however, which suggest that it would be useful to replicate this study on other types of teams. First, as compared with teams at lower levels of the organization, these teams were quite homogeneous in some of their internal demographic characteristics (e.g., sex, race, and age), which could influence the effect of affective diversity. The influence of affective diversity in more demographically heterogeneous teams could have interesting implications for the team composition literature. For example, it may show that in such teams, affective diversity is less influential because people are focusing on other differences, such as sex or race. Or, to the contrary, it may serve an ameliorative function, helping people to find affective common ground despite their demographic diversity.

There are similar interesting issues raised when thinking about the role of affective diversity in a cross-cultural context. While there is some debate about the degree of universality of facial expressions (e.g., Russell, 1994; Ekman, 1999), a recent meta-analysis by Elfenbein and Ambady (2000) showed that basic emotions can be understood across cultures but that there is an "in-group advantage," in that people from the same culture are capable of understanding each other's emotions better than those from different cultures. This could lead to varying outcomes of affective diversity in different cross-cultural situations, depending on the degree to which people are able to read each other's affective signals accurately. If people can understand each other well affectively, then affective similarity can serve the ameliorative function discussed above, helping to bridge cultural barriers. If, however, people are misinterpreting each other's affective signals, this could lead to even greater problems and an illusory affective diversity that does not exist and worsens any existing cross-cultural difficulties. There is already some preliminary work showing the importance of looking at how cultural norms, such as individualism and collectivism, interact with demographic characteristics to influence group processes and outcomes (Chatman et al., 1998).

Secondly, replications with a different type of team performance may be useful, since although the top management team is collectively responsible for organizational performance, there are many factors that combine to influence the organization's overall performance and reduce the degree of control the team has over the final outcome. Also, the appropriate measure of performance can vary across organizations. While we were able to gather a measure of financial performance for the publicly traded companies in our sample, financial performance is not an appropriate measure for some organizations, particularly for not-for-profit or public-sector organizations.

The last drawback to testing our hypothesis in top management teams is that the level of interdependence of the team in producing its outcome can be questionable. There has been considerable debate in the field as to the appropriateness of the label "team" for this collection of individuals or whether "top management group" is a more descriptive label (Hambrick, 1994). The interdependence of the team may well have important consequences for how decisions are made (Michel and Hambrick, 1992) and whether the outcome is a result of any group process or merely comes from individual contributions. Our results indicate that although most of the top management groups in the study do consider themselves to be teams, both paradigms may be valid, and in fact, the level of interdependence and shared decision making may vary systematically. Michel and Hambrick (1992) argued that the level of diversification of the firm determines the degree of integration it needs across business units, which in turn determines the ideal composition of the top management team and the degree to which it acts as a team versus a group of individuals. An additional interpretation suggested by our results is that the degree to which the team acts as a team rather than as a group may be as much due to the affective composition of the group as to the nature of the task at hand, which is consonant with research showing that individuals have to be satisfied with other group members, and be motivated to sustain a relationship with them, to have social integration (Katz and Kahn, 1978; Shaw, 1981). Thus, affective diversity may play an important role in this relationship motivation process, influencing group processes and group outcomes. This leads to one of the practical applications of this study, which is that it can help managers make more informed and complete decisions about the factors to consider when deciding how to put their teams together. It can also aid managerial insight into why and how current teams are functioning, by taking affect and personality explicitly into account.

CONCLUSIONS

This study has ramifications for the literature on emotions in organizations, group composition, and top management teams. For the literature on emotions in organizations, this study offers an additional conceptualization of the construct of group emotion and shows that affective diversity can influence group dynamics and performance. Our study shows that when examining emotions and personality, one needs to take into account not only the mean affective level of each group member but also the group's affective diversity and the relative similarity, or affective fit, of each member to the other group members. Also, while we focused on the overarching and stable construct of trait positive affect, there are many areas to explore in affective diversity, including moods and more specific emotions such as anger, disappointment, and joy. For the group composition and demography literatures, we offer a new compositional variable, which operates on similarity-attraction principles but differs in its emphasis on affective versus cognitive similarity as a reinforcer. Affective diversity may be able to explain contradictory effects in this literature, both in its own right and in its interaction with

other demographic variables. At the same time, the fact that we found effects similar to those of attitudinal similarity offers support for the theoretical underpinnings of the team composition literature and shows that similar effects can occur with variables not inherently tied to demographics.

Finally, our study contributes to the growing literature on the dynamics of top management teams, particularly the conditions under which the top management team may act as a team rather than a group, as described above. Also, the use of CEOs and their senior management teams as a sample has relevance for helping to understand executive leadership. This is particularly important given the great impact top management teams can have on organizational outcomes. Furthermore, because of the inherent difficulties in gaining access to top management teams, personality and other psychological variables have been little studied in top management teams (Hambrick, 1994). This does not mean that psychological variables are not important in top management; on the contrary, they may be even more vital at this level. But most likely because of this lack of access, there has been little work on executive personalities, and most of the research that has been done has focused primarily on dysfunctional personalities (see Kets de Vries and Miller, 1986, for a review). We add to this literature on executive personality by focusing on the influence of "normal" personality characteristics. The continuing study of affective diversity can help to deepen our understanding of both the emotional and compositional components of work group functioning. This can help us add to our current knowledge of the influence of demographic, functional, and cognitive diversity through a more fine-grained analysis of the influence of psychological personality characteristics and the influence of emotions in groups.

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APPENDIX A: Negative Affective Team Composition Variables

Individual trait negative affect (NA) We used the 14-item Stress Scale from the Multidimensional Personality Questionnaire (MPQ), formerly called the Differential Personality Questionnaire (Tellegen, 1982), to measure trait negative emotionality. Sample items are "I often get irritated at little annoyances," "I sometimes get myself into a state of tension and turmoil as I think of the day's events," and "I sometimes feel 'just miserable' for no good reason." The scale has been found to be a highly reliable and valid measure of the underlying NA construct (Tellegen, 1982). The scale was administered using a 7-point Likert-type scale in place of the original true-or-false format for greater response range. The scale mean was 2.79 (s.d. = 1.06), and the Cronbach alpha reliability was .89.

Negative affective diversity. Similar to positive affective diversity, we measured negative affective diversity through heterogeneity in trait negative affect at both the individual and team level. The mean trait NA relational demography score for the entire top management team (including the CEO) was 1.39 (s.d. = .57). We also used each CEO's trait NA relational demography score separately as the predictor variable for affective diversity when examining the CEO's participative decision-making style. The mean trait NA

relational demography score for the CEOs was 1.34 (s.d. = .66). We used the standard deviation of the top management team's trait NA to measure negative affective diversity (x = 1.03, s.d. = .38).

Mean level trait negative affect. We calculated group-level trait negative affect as the average of the team members' trait NA scores, including the CEO (x = 2.81, s.d. = .52). For individual-level analyses, we calculated a variable to control for the trait NA of the other members of the team. This variable represents the mean trait NA of everyone minus the self (x = 2.79, s.d. = 1.06).

Perceived group negative affective culture. To control for perceptual biases in the individual-level analyses, we measured top management team members' (not including the CEO) perceptions of the negative affective culture in their top management team by having them rate the following items: "The emotional culture of our top management team is nervous, irritable, and distressed," and "The emotional culture of our top management team is calm and serene" (reverse coded). A perceived team negative culture score was calculated for each top management team member by taking his or her mean rating on both items (scored on a 7-point Likert scale; 1 = Strongly Disagree through 7 = Strongly Agree). The mean perceived team negative culture score was 3.59 (s.d. = 1.37), and the Cronbach alpha reliability was .64.

APPENDIX B: CEO Participative Leadership Scale

Our CEO participative-leadership-style scale measured each CEO's degree of participativeness versus autocracy as rated by their top management teams. Top management team members were asked about the degree of participativeness of their CEO when dealing with the following 17 organizational issues: acquisition of major capital, change in resource allocation processes, allocation of capital, changes in operating budgets, corporate financing, corporate relocations or locations of new plants/offices, human resource strategy, corporate acquisitions, addition of a product line, deletion of a product line, emphases of particular product lines, marketing strategy, overall strategic direction, hiring members of the TMT, firing members of the TMT, international expansion, and changes to the organizational structure. Senior managers rated CEO participativeness on a 5-point response scale adapted from Heller (1971): 1 = CEO makes the decision alone without a detailed explanation to the TMT; 2 = CEO makes the decision alone with a detailed explanation to the TMT; 3 = CEO consults with the TMT and then makes the decision, which may or may not concur with the recommendations made by the TMT; 4 = there is joint decision making between the CEO and the TMT, the entire team, including the CEO, reaches consensus, and the team's decision is implemented; and 5 = the CEO delegates the decision-making responsibility to the top management team. We calculated the final CEO participative style decision-making score by recoding the five responses using the weighted scale (recoded as 0, 1, 5, 8, and 10, respectively) as recommended by Vroom and Yetton (1973), calculating the mean of the weighted 17 items for each senior manager's assessment of his or her CEO (Cronbach alpha = .90) and then aggregating the ratings across the senior management team to form a group-level score for each CEO (x = 5.90, s.d. = 1.18).