© Academy of Management Journal
2010, Vol. 53, No. 1, 90–106.

CONSEQUENCES OF DIFFERENTIATED LEADERSHIP IN GROUPS

JOSHUA B. WU
University of Miami

ANNE S. TSUI
ANGELO J. KINICKI
Arizona State University

This study addressed the unresolved issue of how differentiated leadership (leaders treating individuals within a group differently) affects group effectiveness. We developed and tested a group-level model involving group-focused and individual-focused leadership using three-phased survey data from 70 work groups in eight companies. Results showed that differentiated leadership within groups diminished group effectiveness through creating divergence in leader identification and member self-efficacy and lower group collective efficacy. At the same time, group-focused leadership facilitated group identification and collective efficacy, which positively contributed to group effectiveness. We discuss theoretical and managerial implications of the potential cost of differentiated leadership behaviors in groups.

The study of leadership and of groups[1] constitutes two large but separate literatures. Recently, however, researchers have begun to integrate these two literatures in an attempt to understand the role of leadership in group effectiveness (Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006; Kozlowski, Gully, Salas, & Cannon-Bowers, 1996). Reviews and meta-analyses (e.g., Bass, Avolio, Jung, & Berson, 2003; Burke et al., 2006) have shown that the bulk of past research on group leadership has examined how leaders affect groups by directly linking leadership with performance at the group level. Recognizing that group leadership requires leader attention to both a group and its individual members (Hirschhorn, 1991), scholars have conducted multilevel studies to examine the influence of leadership on group- and individual-level outcomes (e.g., Chen & Bliese, 2002; Chen, Kirkman, Kanfer, Allen, & Rosen, 2007). Chen et al. (2007), in a study of empowering leadership, found that leaders can attend to both their group and individual members simultaneously. These studies represent an important step toward understanding leadership in the group setting, but further research is necessary on "the dynamic interplay between the individuals within a team and the team as a whole" (Chen et al., 2007: 331).

To advance this line of research, in the current study we aimed to investigate transformational leadership effects on groups as wholes and on the individuals within groups, *both* at the group level. We focused on transformational leadership behaviors, which inspire followers to pursue higher-order goals and to exert extraordinary effort (Bass, 1985; Shamir, House, & Arthur, 1993). Research has shown that the construct of transformational leadership is flexible as to level of analysis (Kirkman, Chen, Farh, Chen, & Lowe, 2009), comprising behaviors targeted at both groups and individuals (Kark & Shamir, 2002; Yammarino & Bass, 1990). Some of its behavioral components (e.g., "individualized consideration" and "intellectual stimulation," both defined in the next section) are aimed at influencing individual employees by addressing the uniqueness of each follower (e.g., customized coaching); such behavior represents individual-focused leadership. Other behavioral components (e.g., "idealized influence" and "inspirational motivation," also defined in the next section) are aimed at influencing a group as a whole (e.g., delivering speeches to the group); such behavior represents group-focused leadership. We adopt the label *differentiated leadership* to refer to the case in which a leader exhibits varying levels of individual-focused leadership behavior to different group members, for instance paying more attention or providing more support to some members than to others. Although group-focused leadership unites members and pro-

This article was based on the first author's doctoral dissertation. We would like to thank Peter Hom, Bradley Kirkman, and three anonymous reviewers for their constructive feedback, and Yan Zhang for her assistance in the data collection.

[1] Although we use the term "group" herein, we draw on research related to both groups and teams.

motes group effectiveness, we explore the question of whether and how differentiated leadership may dampen group effectiveness as a consequence of variations or divergence in group member experiences.

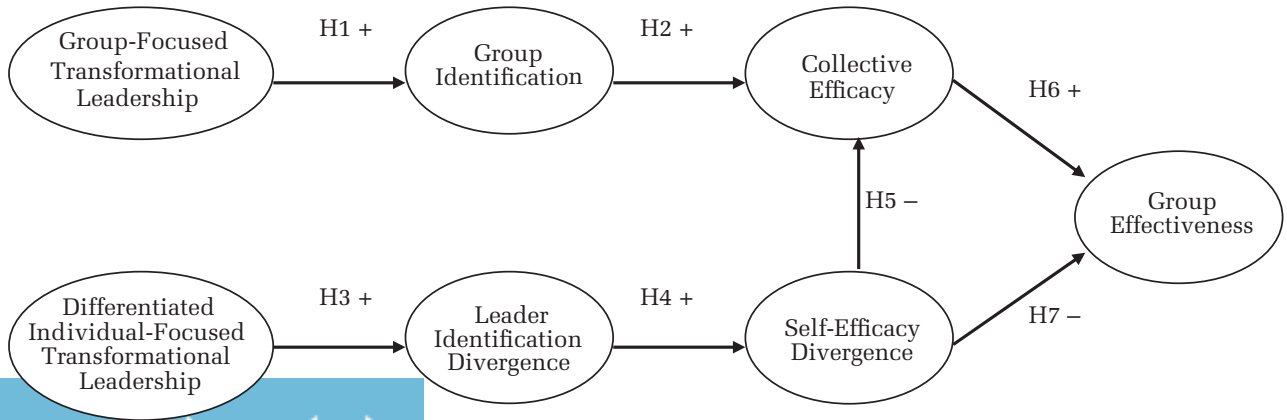
The study contributes to the existing literature in three ways. First, it sheds some light on the mechanisms through which differentiated leadership may reduce group effectiveness. Existing empirical studies have only examined the direct effects of differentiated leadership on group outcomes (e.g., Liden, Erdogan, Wayne, & Sparrowe, 2006). Researchers have called for more studies of the differentiation process and its effects on work groups (Sparrowe & Liden, 1997). Hence, examining intervening mechanisms is a promising way to advance this line of research (Vecchio, 1987). Second, the current study contributes to the study of transformational leadership. Unlike previous studies treating transformational leadership as an overarching construct, this research focuses on its behavioral components, answering Dionne, Yammarino, Atwater, and Spangler's call for "expanding our understanding of specifically how transformational leadership components can be linked to team performance through various teamwork processes" (2004: 182). Examining specific behavioral components provides clarity on how transformational leadership influences groups and their individual members. Third, the study also contributes to group leadership research by modeling both group-focused and individual-focused leadership at the group level. This effort responds to Kozlowski and Bell's statement that "team leadership would benefit from research that is explicitly targeted at the team level" (2003: 367). By tracking both group-focused and individual-focused leadership within a work group context, we are able to discover unique and new leadership insights that may be missed by examining leadership as separate processes at the individual and group levels.

THEORY AND HYPOTHESES

Elevating individual-level research to the group level requires scholars to incorporate two parallel processes, with one addressing the collective nature of the focal topic (i.e., the "whole"), and the other focusing on a group's individual members (i.e., the "parts") (Chen & Kanfer, 2007; Dansereau, Yammarino, & Kohles, 1999). Combining the "whole" view and the "parts" view facilitates a more comprehensive understanding of groups. In this research, we adopt a group-level model wherein the "parts" view of individual-focused leadership is elevated to the group level through consideration of how potential differentiation in leader behavior and divergent member responses influence group-level outcomes. Figure 1 delineates the two parallel leadership processes at the group level.

The upper segment in Figure 1 reflects the group-focused leadership process. Leadership is treated as a shared property (Klein & Kozlowski, 2000) in that leaders are assumed to behave similarly toward different members and members agree on their perception of leadership behavior. For example, leaders can influence a work group as a whole by delivering speeches to the group or by providing group-based rewards. This leadership process explains how group-focused leadership leads to shared perceptions and beliefs about group identification and collective efficacy. Group identification refers to members' collectively defining who they are in relation to their group membership (e.g., "We are the members of the engineering group"). Collective efficacy refers to a shared belief about

FIGURE 1
Group-Level Model of Dual-Focus Leadership Effects on Group Effectiveness



the group's performance potential (e.g., "We are confident that our group can successfully perform these tasks").

In contrast, the lower part of Figure 1 depicts the individual-focused leadership process (manifested by differentiated leadership at the group level). Unlike group-focused leadership, this leadership process follows a configural perspective (Klein & Kozlowski, 2000) in which leaders behave differently toward group members by paying more attention to certain members and providing more resources to others, thereby producing within-group variability of member experiences with leadership. Research on leader-member exchange (LMX) theory has consistently shown that a leader may treat members differently, resulting in a division between in-group and out-group members (Ilies, Nahrgang, & Morgeson, 2007; Liden, Sparrowe, & Wayne, 1997). Differentiated leadership promotes within-group divergence on leader identification and self-efficacy. Leader identification defines a member in relation to a leader. For example, a doctoral student may identify with her advisor in defining how she sees herself as a scholar. Self-efficacy defines people's beliefs in their ability to perform a task (Bandura, 1990). The model further links divergence in leader identification and member self-efficacy to collective efficacy and group effectiveness. Below we explicate the logic underlying the various linkages.

Group-Focused Leadership

Group-focused leadership is based on the idea of average leadership style, a concept that implies that leaders view group members as a whole and treat each in the same fashion (Dansereau, Alutto, & Yammarino, 1984). Its influence target is a whole group rather than individual members within the group. Members' perceptions of their group leader's behavior are assumed to be similar and shared within their work unit (Yammarino & Bass, 1990). Two transformational leadership behaviors—idealized influence and inspirational motivation—are more likely to influence a group as a whole than individual members because of their emphasis on common ground, shared values, and ideology (Kark & Shamir, 2002). *Idealized influence*, also known as "charisma," refers to leadership behaviors that "reflect the leaders' values and beliefs, their sense of mission and purpose, and their ethical and moral orientation" (Antonakis & House, 2002: 9). Examples of idealized influence include challenging an organizational status quo and articulating a vision of the future. Such leaders take advantage of various verbal and nonverbal cues (such as slogans, symbols, rituals, speeches, and ceremonies) to propose and collectively articulate attractive and aspiring visions to groups of followers (Shamir, Zakay, Breinin, & Popper, 1998).

Inspirational motivation refers to leadership behaviors that "inspire and motivate followers to reach ambitious goals that may have previously seemed unreachable, by raising followers' expectations, and communicating confidence that followers can achieve ambitious goals" (Antonakis & House, 2002: 9–10). Examples of inspirational motivation include being a role model for followers, using verbal persuasion and organizational symbols to build morale, and highlighting group commonalities to instill pride in followers (Bass, 1985). The commonality between idealized influence and inspirational motivation is the emphasis on building a collective vision (Atwater & Bass, 1994; Dionne et al., 2004). Because achieving a collective vision requires the involvement and collective effort of all employees, leaders adopting idealized influence and inspirational motivation behaviors tend to focus on an overall bond with their follower group as a whole rather than with individual followers. In the current study, we refer to these two behavioral components as *group-focused leadership*.

As depicted in Figure 1, group-focused leadership is expected to shape members' group identification, which is a shared cognitive process in which each member defines the self in terms of his relationships to the group (Brewer & Gardner, 1996). The collective nature of group-focused leadership triggers followers' self-categorization as group members (Kark & Shamir, 2002; Mumford & Strange, 2002). A member no longer views himself as a unique individual but construes his identity to be that of a member of the group. Group attributes such as shared values and common goals become salient to the members, while individualized idiosyncratic characteristics lose prominence. These psychological mechanisms lead to the activation of members' collective identity—in our case, their group identity (Shamir, Zakay, Breinin, & Popper, 2000; Tajfel & Turner, 1986). Self-concept leadership theory (Lord & Brown, 2004) suggests that certain transformational leader behaviors that link the self-concept of followers to shared visions, values, and roles within a group are more likely to activate followers' collective identification. Similarly, Mumford and Strange (2002) noted that the creation and communication of a vision provides a structure for individuals' interpretation of how their work roles relate to a social unit's vision, thereby priming collective identification.

Figure 1 further shows that group identification

in turn influences group members' shared belief in their group's collective capability of integrating available resources for successful group task performance (Bandura, 1997): that is, its collective efficacy. Once group identification determines members' self-concepts, members tend to evaluate their groups positively (Ashforth & Mael, 1989) to maintain a positive social image. Efficacy belief is an example of this evaluation, according to core self-evaluation theory (Judge, Locke, & Durham, 1997). Previous empirical research has generally supported the above argument. Kark, Shamir, and Chen (2003), for example, found that social identification positively affected follower perceptions of collective efficacy. The above discussion leads to the following:

Hypothesis 1. Group-focused transformational leadership relates positively to members' group identification.

Hypothesis 2. Group identification relates positively to a group's collective efficacy.

Differentiated Individual-Focused Leadership

Individual-focused leadership is grounded in situational leadership theories (e.g., Fiedler, 1967; Hersey, Blanchard, & Johnson, 2001) and LMX theory (e.g., Dansereau, Graen, & Haga, 1975). These theories suggest that effective leaders vary their behavior on the basis of follower's individual differences (e.g., abilities) and contextual factors (e.g., resources, task structure), resulting in differentiated leadership of group members. The influence target in this case is individual members rather than their whole group.

Two components of transformational leadership behaviors—individualized consideration and intellectual stimulation—appear to focus more on individuals' needs, capabilities, and affective states than on their collective interests (Kark & Shamir, 2002). *Individualized consideration* refers to leadership behaviors that "provide customized socioemotional support to followers, while developing and empowering them" (Antonakis & House, 2002: 10). Kark and Shamir noted that such leader behavior emphasizes the "distinctiveness of each follower and the unique relationship between the leader and each follower" (2002: 82). Leaders demonstrating these behaviors are highly aware of each person's unique skills and so able to assign tasks that fit followers' capabilities and to provide customized learning opportunities. *Intellectual stimulation* refers to leadership behaviors that "appeal to followers' intellect to make them question their assumptions, and invite innovative and creative solutions to problems" (Antonakis & House, 2002: 10). It is intended to arouse and change followers' problem awareness, thoughts, imagination, beliefs, and values (Bass, 1985: 99). As with individualized consideration, leaders need to consider subordinates' unique capabilities and characteristics when creating intellectual stimulation (Bass, 1985) because abilities and intelligence vary among individuals (Gardner, 2000). In summary, both individualized consideration and intellectual stimulation rely on direct contact and close relationships between leaders and followers (Gerstner & Day, 1997; Howell & Hall-Merenda, 1999; Kark & Shamir, 2002). We refer to these two behavioral components as *individual-focused leadership*.

Followers under the influence of individual-focused leadership are likely to develop close, direct, and unique relationships with their leaders that are characterized by mutual trust, support, satisfaction, and interpersonal attraction (Dumdum, Lowe, & Avolio, 2002; Wang, Law, Hackett, Wang, & Chen, 2005). As a result, followers are more likely to incorporate the leader into their self-concepts and to identify with him or her—that is, leader identification occurs (Kark et al., 2003; Kark & Shamir, 2002; Shamir, Zakay, Breinin, & Popper, 1998). Self-concept leadership theory suggests that leadership effects are realized once the relevant aspect of follower identification is primed (Kark & Shamir, 2002; Lord & Brown, 2004). In the present context, this logic suggests that a leader's opinions are apt to shape a follower's self-efficacy in a positive direction; that is, verbal persuasion occurs (Wood & Bandura, 1989) once the follower identifies with the leader. Furthermore, social identity scholars have argued that one important function of social identity is self-enhancement (Sedikides & Brewer, 2001). Therefore, identifying oneself with a transformational leader is expected to produce a positive self-concept associated with high self-efficacy (Shamir, House, & Arthur, 1993), ultimately motivating followers to perform at a higher level (Brewer & Gardner, 1996). Supporting this argument, Kark et al. (2003) found that follower social identification mediated the relationship between transformational leadership and follower self-efficacy.

The above discussion depicts the leadership influence process at the individual level. At the group level, *differentiated leadership* captures the variation of individual-focused leadership among a work group's members. A high level of differentiated leadership indicates that a leader behaves differently toward different members. The leader spends more time coaching certain members than others, suggests new ways of problem solving to

some members more frequently than others, or provides intellectual challenges to some followers more than others. Conversely, low levels of differentiated leadership suggest that a leader provides a similar level of support, direction, and challenge for each group member. Research on situational leadership and LMX has shown that within-group differentiated leadership results in divergence or variation among group member perceptions of or experiences with a leader. For example, LMX studies have reported that when leaders form relationships with followers differently within a group, those followers are likely to be divided into subgroups—an in-group and an out-group, with the former enjoying a better relationship with the leader than the latter (Ilies, Nahrgang, & Morgeson, 2007; Sherony & Green, 2002). Therefore, differentiated leadership is expected to produce differences in outcomes such as members' leader identification and self-efficacy.

Building on the logic that those receiving more leader attention develop high leader identification and self-efficacy and that the deprived followers are less likely to identify with the leader and to develop high self-efficacy perceptions, we expect that a group with a high level of differentiated leadership will experience a high level of variation in leader identification and member self-efficacy. Thus, we offer the following:

Hypothesis 3. Differentiated individual-focused transformational leadership in a group relates positively to divergence in leader identification among group members.

Hypothesis 4. Divergence in leader identification among group members relates positively to divergence in self-efficacy among group members.

Relating Group Members' Self-Efficacy Divergence to Group Collective Efficacy

We further posit that members' individual self-efficacy beliefs will shape their group's shared collective efficacy perception. When highly efficacious people work together with confident peers (self-efficacy divergence is low), they tend to develop positive perceptions of their group and a shared positive collective efficacy perception. Conversely, when people with high self-efficacy are grouped with those with self-doubt (self-efficacy divergence is high), the efficacious members tend to distrust their peers' ability to execute task requirements and to be reluctant to work with them (Steiner, 1972), resulting in low expectations about the group's collective performance (Watson, Chemers, & Preiser, 2001). Moreover, when members hold divergent self-efficacy perceptions, those with low self-efficacy are susceptible to external influence (e.g., the low expectations of their highly efficacious peers) because of behavioral plasticity (Brockner, 1988), and they are likely to become pessimistic about themselves and their group. As a result, such groups are not likely to develop a high level of collective efficacy. Drawing on the above reasoning, we predict:

Hypothesis 5. Divergence in self-efficacy among a group's members relates negatively to the group's collective efficacy.

Relating Collective Efficacy and Self-Efficacy Divergence to Group Effectiveness

Group effectiveness is a multifaceted construct including both external criteria (e.g., group task performance) and internal criteria (e.g., group viability defined as members' willingness to keep their group membership and to continue functioning as a group) (Cohen & Bailey, 1997; Kozlowski & Bell, 2003). Efficacy perceptions influence both group performance and group viability. At the individual level, highly efficacious people tend to set higher goals (e.g., increasing performance standards and output quantities), develop effective task-related strategies (e.g., better problem-solving and execution approaches), experience more positive affect (e.g., feeling optimistic), and choose more appropriate tasks (e.g., tasks they like or are good at) so that performance can be enhanced (Bandura, 1997; Maddux, 1995). The same argument would substantiate the linkage between collective efficacy and group performance. Groups with a high level of collective efficacy tend to set high group goals, develop good strategies, experience positive within-group affect, and select appropriate tasks, all of which ultimately enhance group performance. In support, Gully, Incalcaterra, Joshi, and Beaubien's (2002) meta-analysis showed that collective efficacy was positively related to group performance.

Further, core self-evaluation theory (Judge et al., 1997) suggests that efficacy perceptions, as one form of self-evaluation, promote individual job satisfaction via optimism, self-consistency, and enactive mastery. The same logic holds in work groups. Members with a positive shared belief in their group's performance potential (i.e., collective efficacy) are likely to be satisfied with the group and to be willing to keep their membership; high group viability results (Gully et al., 2002). Combining the above discussions of the effects of collective efficacy on both group performance and viability, we propose:

Hypothesis 6. Collective efficacy relates positively to group effectiveness.

Social cognition theory also provides a logic with which to substantiate the relationship between member self-efficacy divergence and group effectiveness. In groups with high divergence in self-efficacy, members are likely to have different views of the standard associated with a group goal. Efficacious members are more likely to aim high, but those with low self-efficacy are uncomfortable with lofty performance standards (Vancouver, Thompson, & Williams, 2001). This divergence makes it hard to set a common goal for these groups, and the subsequent group goal commitment is likely to be low, hurting group performance (Klein & Mulvey, 1995). Moreover, high self-efficacy divergence within a group results in different levels of affective reaction. Efficacious members feel positive and optimistic, but those with low self-efficacy experience pessimism and negative emotions. The emotional variation prevents the development of a positive affective atmosphere within the group, hurting group satisfaction, a major component of viability (George, 1990). We thus hypothesize:

Hypothesis 7. Divergence in self-efficacy among group members relates negatively to group effectiveness.

METHODS

Sample and Procedures

The initial sample comprised 71 permanent work groups of full-time employees from eight organizations in the southwestern United States in diverse industries (including health care, telecommunications, retailing, construction, and recreational services). These groups included departments in customer services, retailing, marketing, product management, accounting, purchasing, human resources, and engineering. The diverse task contexts and organizational settings of this sample enhance the generalizability of our findings. The only group with a less than 50 percent within-group response rate was deleted from the sample. The final sample consisted of 70 groups with 70 leaders and 573 members. The mean group size was 8.71 members (s.d. = 3.94); groups ranged from 2 to 19 members).[2] Within-group response rates ranged from 57.14 to 100 percent, with a mean of 93.34 percent. The overall response rates of group members and leaders were 86.56 and 92.86 percent, respectively.

Data were collected through web-based surveys conducted three times over two months. We collected different variables from different sources (i.e., leaders or members) at different times to minimize common method variance. At time 1, leaders provided information on group performance, group size, group type, task interdependence, and personal demographic characteristics. Members completed questionnaires measuring leadership behaviors, group identification, and demographic characteristics. One month later (time 2), surveys measuring self-efficacy, collective efficacy, and leader identification were collected from members. At time 3 (one month after time 2), we again collected data on group performance from the leaders and information on group viability from the members.

There was minor attrition over the study period. Thirty-one members did not complete time 2 surveys, and five group leaders and 24 members did not complete time 3 surveys. To assess the effect of attrition, we performed logistic regression analyses following the procedure described in Goodman and Blum (1996). Results indicated no nonrandom response bias.[3]

Measures

Group-focused transformational leadership. To economize on degrees of freedom, we measured this construct with three manifest indicators: behavioral idealized influence, attributive idealized influence, and inspirational motivation. Each indicator was the average of items aggregated to the group level. The items for the indicators were taken from the Multifactor Leadership Questionnaire's (MLQ5x) 12-item subscale (Bass & Avolio, 1995). To match the conceptualization of group-focused leadership, the wording of the items was revised to emphasize a work group referent (e.g., "Our group leader specifies the importance of having a strong sense of purpose in working with the group as a whole" and "Our group leader emphasizes the importance of having a collective sense of mission when working in the group as a whole"). Responses were obtained on a scale ranging from 0 ("not at all") to 4 ("frequently, if not always"). As a shared group property, group-focused leadership fits Chan's (1998) referent shift consensus model in which within-group consensus of lower-level ele-

[2] Two groups had 2 members and one group consisted of 19 members. The number of members in the rest of the groups ranged from 3 to 16.

[3] Results of the logistic regression analyses are available upon request from the first author.

ments is required to form higher-level constructs. Thus, within-group agreement and between-group variability need to be demonstrated to justify data aggregation. We assessed within-group agreement on group-focused leadership using the R_{wg} statistic (James, Demaree, & Wolf, 1984). The mean and median R_{wg}'s for the 70 groups were .91 and .94, respectively, indicating a high level of within-group agreement (Lance, Butts, and Michels [2006], citing James [1988]). We performed a one-way analysis of variance (ANOVA) to examine between-group variability. The ICC(1) value was .22 (F = 3.36, $p < .01$), within the normal range found in organizational research (Bliese, 2000; Kirkman et al., 2009; Klein et al., 2000). The ICC(2) value was .70, reaching the desirable level suggested by Klein et al. (2000). These results supported aggregating the individual scores to the group level.

Differentiated individual-focused transformational leadership. This construct was measured with two indicators: differentiated individualized consideration and differentiated intellectual stimulation. These differentiated leadership indicators were based on eight items from the appropriate subscale of the MLQ5x (Bass & Avolio, 1995). Each indicator consists of four items (aggregated to the group level). The same response scale described above was used. The original MLQ wording was kept, with "individual" as the referent (e.g., "My group leader helps me to develop my strengths" and "My group leader challenges me to re-examine critical assumptions to question whether they are appropriate"). As a configural group property, differentiated leadership fits Chan's (1998) dispersion composition model (in which within-group variation conveys the substantive meaning of a construct) and represents the disparity type of diversity within a group (Harrison & Klein, 2007). The within-group differentiation measure was operationalized as a coefficient of variation (Allison, 1978), a statistic that demography researchers use as a scale-invariant measure of dispersion (Tsui & Gutek, 1999). We calculated it by dividing the within-group standard deviation of the individual-focused leadership measure by the within-group mean score of the same variable. The larger the value of this coefficient, the more dispersion there is in the group members' perceptions of leader behavior, given adjustment for mean differences between groups.

Group identification. This construct was assessed with two manifest indicators based on four items (e.g., "I identify myself as a member of my group" and "I identify with other members of my group") from Doosje, Ellemers, and Spears (1995). Each indicator was the average of two items (aggregated to the group level). The response scale ranged from 1, "totally disagree," to 5, "totally agree." As a shared group property, group identification follows a direct consensus model (Chan, 1998). Within-group agreement (mean R_{wg} = .90, median R_{wg} = .95) and between-group variability (ICC[1] = .07; F = 1.64, $p < .01$) were examined before the aggregation. Though the ICC(2) was less than satisfactory, (.39) partly because the presence of some small groups in the sample, high within-group consensus (demonstrated by the R_{wg} values), and sufficient between-group differences (the significant F-test) suggested that data aggregation was justifiable (Bliese, 2000; Kirkman et al., 2009; Klein et al., 2000).

Leader identification divergence. Leader identification was measured by six items from Mael and Ashforth (1992) and Shamir et al. (1998) (e.g., "When someone praises my group leader, it feels like a personal compliment" and "My group leader's successes are my successes"). Group members were asked to rate their level of agreement with the statements using the same scale used for group identification. Three indicators (with two items each) were used to measure this construct. Each divergence indicator was based on the coefficient of variation.

Collective efficacy. The six items measuring this construct were derived from two sources. Four items were taken from the perceived collective efficacy scale reported in Salanova, Llorens, Cifre, Martinex, and Schaufeli (2003) (e.g., "Our group as a whole is totally competent to perform the tasks"), and two items (e.g., "Our group is able to allocate and integrate available resources to perform the tasks well") were derived from Zaccaro, Blair, Peterson, and Zazanis's (1995) conceptualization. These items represent a generalized measure of collective efficacy (that is, one not tailored to specific tasks group members might perform, but rather applicable to all kinds of tasks) because the complexity and relationships among various tasks in the sample could not be defined well. Responses were obtained on the same disagree/agree scale described above. Three indicators were used to operationalize this latent construct, each indicator the average of two items (aggregated to the group level). Within-group agreement (mean R_{wg} = .91, median R_{wg} = .94) and between-group variability (ICC[1] = .07; F = 1.60, $p < .01$) were assessed before data aggregation. The subpar ICC(2) score (.38) was compensated for by the high R_{wg}'s and the significant F.

Self-efficacy divergence. A measure of generalized self-efficacy was used because it fit the current research context better than a task-specific self-efficacy scale. We employed three items from the

personal efficacy beliefs scale developed by Riggs and Knight (1994) (e.g., "I am an expert at my individual tasks"). Two additional items were based on the definition proposed by Bandura (1990) (e.g., "I am able to mobilize available resources to perform my individual tasks well"). Responses were again obtained on the disagree/agree scale described above. Two divergence indicators were used to measure this construct, one consisting of three items and the other, of two items. We calculated self-efficacy divergence scores as the coefficient of variation.

Group effectiveness. This construct was measured with two indicators: group performance and group viability. The three-item group performance scale (including quantity, quality, and interpersonal skill)[4] was derived from Barrick, Stewart, Neubert, and Mount's (1998) instrument. These items were generic and applicable to all groups. At time 3 of the data collection effort, group leaders rated their groups' performance over the past two months using the scale 1, "somewhat below requirements," to 5, "consistently exceeds requirements." No aggregation was needed because performance was directly measured at the group level. A seven-item scale by Barrick et al. (1998) measured group viability (e.g., "Working with our group members is an energizing and uplifting experience" and "Our group shows signs of falling apart" [reverse-coded]). Members indicated their agreement using the disagree/agree scale described above. Assessment of within-group agreement (mean R_{wg} = .79, median R_{wg} = .86) showed adequate agreement among group members. Between-group variability was demonstrated by ICC values (ICC[1] = .14; F = 2.30, $p < .01$; ICC[2] = .56). Given these statistics, we aggregated viability scores up to the group level.

Control variables. Research on efficacy shows that previous performance is the most powerful force shaping efficacy perceptions (Bandura, 1982). Therefore, group performance based on group leaders' evaluations at time 1 was used as a control variable. Task interdependence is another important factor for group outcomes (Kozlowski & Bell, 2003). Thus, we included a three-item measure (Campion, Medsker, & Higgs, 1993) of this variable, completed by group leaders in the time 1 survey using the disagree/agree scale (e.g., "Members of my group depend on each other for information and materials needed to perform their tasks" and "Within my group, jobs performed by group members are all related to one another"). Analyses included this measure as a control variable.

Additional controls were group size, leaders' and members' group tenures (in years), group type (categories were general work group, project group, management group, and other[5] [Cohen & Bailey, 1997]), and company. We found insignificant correlations between group size, leader/member tenure, and the core variables in the proposed model.[6] One-way ANOVA, using group type and company as classification variables, revealed nonsignificant F-values for all of the core variables.[7] To conserve statistical power, we excluded these control variables from the hypothesis tests.

Since the demographic diversity of a group has implications for group process and outcomes (Tsui & Gutek, 1999), we included the diversity variables of age, gender, race/ethnicity, and educational level for each group's members as additional controls for group effectiveness. The coefficient of variance was computed for age (a continuous variable) and Blau's index (Blau, 1977) captured heterogeneity in the other three categorical demographic variables. Only age diversity was correlated significantly with group effectiveness and was included as an additional control variable when testing our hypotheses.[8]

Analyses

Assessing discriminant validity. Before data aggregation, we performed two separate confirmatory factor analyses (CFAs) to investigate the discriminant validity of the a priori factor structures of three individual-level constructs (individual-focused leadership, leader identification, and self-efficacy) and four constructs with the group referent (group-focused leadership, group identification, collective efficacy, and group viability). The

[4] Excluding the interpersonal skill item did not change the results.

[5] The sample contained 12 management groups. The members of those groups are supervisors. We ran the model without these groups and the results remained the same. To conserve power, we kept these groups in the analyses.

[6] Including these control variables in the structural model analyses did not change the results.

[7] ANOVA results are available upon request. Since the eight companies represented diverse industries, and the focus of our study was group effectiveness rather than firm performance, company was a more potent control variable than industry.

[8] We thank the editor for suggesting this control variable. Including the other three demographic diversity variables in the structural model analyses did not change the results.

EQS program with the elliptical estimation method[9] (Bentler, 1995) was used to perform the CFA. Overall model fit was assessed by the comparative fit index (CFI; Bentler, 1990) and the incremental fit index (IFI; Bollen, 1989). These fit indexes were evaluated with the traditional cutoff value of .90. In addition, the root mean square error of approximation (RMSEA; Browne & Cudeck, 1992) was used to assess lack of model fit. Close fit is achieved with RMSEA values of .05 or less; reasonable fit, with values between .05 and .08; mediocre fit, with values between .08 and .10; and poor fit, with values larger than .10 (Browne & Cudeck, 1992).

In addition to affirming the fit of two baseline models, we analyzed alternative models by combining original factors to test discriminant validity. Chi-square difference tests were used to compare the alternative models. We conducted an additional test to examine the discriminant validity of the two leadership scales. Specifically, we compared R_{wg} scores and ICC statistics, expecting higher agreement on the group-focused leadership scale than on the individual-focused leadership scale, especially in groups with large divergence in individual-focused leadership.

Hypothesis testing. Structural equation modeling (SEM) with latent constructs was used to test the seven hypotheses. Analyses based on the group-level, aggregated data were implemented with the elliptical estimation method in the EQS program (Bentler, 1995). The same fit indexes described above were used to assess model fit. The fit of the measurement model was assessed, and then the structural model was tested (Anderson & Gerbing, 1988). We included two unmeasured common method variance (CMV) factors in the structural model using a procedure described in Podsakoff, MacKenzie, Lee, and Podsakoff (2003) to partial out method variance. One CMV factor was linked to the indicators measured at time 1 in the member surveys. A second CMV factor was linked to the indicators measured at time 2 in the member surveys. Because of the identification issue, we ran the models with the two CMV factors separately and found that they did not change the results of the structural model.[10] Below, we report the results without the CMV factors.

[9] Results of Mardia's test suggested that the data deviated from multivariate normality. Therefore, an elliptical estimation method was used to derive robust parameter estimates (Bentler, 1995).

RESULTS

Discriminant Validity

Two baseline models were fitted to the data ($N = 573$). Results showed good fit for both the three-factor model ($\chi^2[df = 149] = 521.23$, $p < .01$; CFI = .94, IFI = .94, RMSEA = .07) and the four-factor model ($\chi^2[df = 371] = 1{,}002.43$, $p < .01$; CFI = .97, IFI = .97, RMSEA = .06). All factor loadings were significant at the .05 level. Comparisons of the baseline models with all the alternative models using chi-square difference tests revealed that the baseline models fit the data best,[11] supporting the discriminability of the measures.

We further examined the discriminability of the two leadership scales using the R_{wg} and intraclass correlation statistics. Results showed a high level of within-group agreement on group-focused leadership (mean $R_{wg} = .91$; median $R_{wg} = .94$). The ICC statistics were an ICC(1) of .22 and an ICC(2) of .70. We expected that R_{wg} and ICC values would be higher for group-focused leadership than for individual-focused leadership, particularly for groups with high divergence in individual-focused leadership. We used the median split approach, splitting the divergence score, and computed the agreement indexes for the 35 groups with high leadership divergence (mean $R_{wg} = .72$, median $R_{wg} = .75$; ICC[1] = .09, ICC[2] = .45). These values are much smaller than the corresponding values for group-focused leadership. The results for the 35 groups with low leadership divergence (mean $R_{wg} = .86$, median $R_{wg} = .90$, ICC[1] = .18, ICC[2] = .64) are reasonable (since their leaders treated the members of these groups consistently) but still lower than the agreement indexes for group-focused leadership. Taken together, results supported the discriminant validity of the group-focused and individual-focused leadership scales.

Hypothesis Testing

Measurement model analyses. The baseline measurement model consisting of ten latent constructs (seven constructs related to the hypotheses

[10] Chi-square difference tests showed that the two models with the CMV factors fit the data equally well as the model with no CMV factors ($\Delta\chi^2[df = 5] = 4.23$ n.s.; $\Delta\chi^2[df = 8] = 9.05$, n.s).

[11] Results of the alternative model comparisons are available upon request from the first author.

TABLE 1
Descriptive Statistics and Correlations for the Group-Level Data[a]

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Age diversity, time 1	0.21	0.10										
2. Task interdependence, time 1	3.76	0.94	−.19	(.82)								
3. Group-focused transformational leadership, time 1	3.76	0.51	−.17	.10	(.96)							
4. Differentiated individual-focused transformational leadership, time 1	0.34	0.09	.11	−.34**	−.49**							
5. Leader identification divergence, time 2	0.26	0.11	.10	−.10	−.37**	.42**						
6. Group identification, time 1	4.41	0.31	−.05	−.13	.34**	−.31**	−.21	(.84)				
7. Self-efficacy divergence, time 2	0.12	0.06	.29*	−.01	.08	.04	.27*	−.05				
8. Collective efficacy, time 2	4.25	0.36	−.30*	−.09	.17	−.14	−.25*	.48**	−.27*	(.95)		
9. Group performance, time 1	3.94	0.58	−.27*	.21	.14	−.22	−.22	.19	.10	.26*	(.76)	
10. Group effectiveness, time 3	4.00	0.39	−.26*	−.08	.43**	−.24*	−.38**	.41**	−.12	.47**	.53**	(.81)

[a] $n = 70$. Scale reliabilities are shown in parentheses on the diagonal. No statistical methods are currently available to evaluate the reliability of dispersion measures (Chen, Mathieu, & Bliese, 2004).

* $p < .05$

** $p < .01$

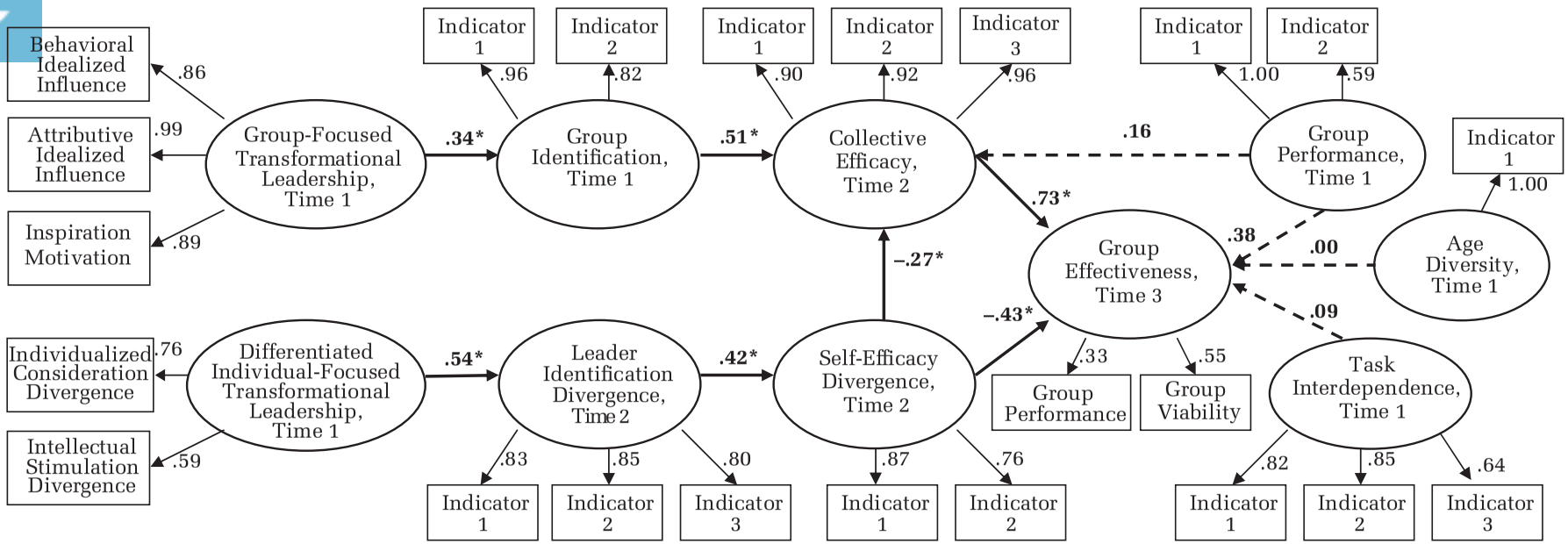
plus three control variables) was fitted to the group-level data ($n = 70$). This measurement model reproduced the observed covariance matrix accurately with a nonsignificant chi-square statistic ($\chi^2[df = 186] = 198.63$, $p > .05$; CFI = .99, IFI = .99, RMSEA = .03). All factor loadings were significant. Table 1 presents descriptive statistics for the group-level data on the ten constructs.

Structural model analyses. Figure 2 presents the results of the full structural model. Results revealed that the model fit the sample data well ($\chi^2[df = 210] = 231.94$, $p > .05$; CFI = .98, IFI = .98, RMSEA = .04). All seven hypothesized structural paths were statistically significant. Group-focused leadership was positively related to members' group identification ($\beta = .34$, $p < .05$), which was further associated with their collective efficacy perception ($\beta = .51$, $p < .05$), supporting Hypotheses 1 and 2. Differentiated individual-focused leadership positively transferred to within-group divergence in members' leader identification ($\beta = .54$, $p < .05$), which in turn positively influenced self-efficacy divergence ($\beta = .42$, $p < .05$), supporting Hypotheses 3 and 4. Hypothesis 5 was also supported by a negative relationship between self-efficacy divergence and collective efficacy ($\beta = -.27$, $p < .05$). Collective efficacy was positively related to group effectiveness ($\beta = .73$, $p < .05$), substantiating Hypothesis 6. The hypothesized negative relationship between self-efficacy divergence and group effectiveness (Hypothesis 7) was also supported ($\beta = -.43$, $p < .05$). None of the control variables were significantly related to group effectiveness.

Previous research has shown that leadership has powerful and direct effects on group outcomes (e.g., Burke et al., 2006). On the basis of this logic, an alternative model was evaluated that included two direct paths from group-focused leadership and differentiated individual-focused leadership to group effectiveness. This model fit the data well ($\chi^2[df = 208] = 232.13$, $p > .05$; CFI = .97, IFI = .97, RMSEA = .04), but the fit of the baseline model was better. All seven hypothesized paths remained significant in this alternative model. However, the two additional direct paths were not significant (β's = −.08 and −.39, both n.s.), suggesting that the effects of leadership behaviors on group effectiveness were indirect and completely accounted for by the intervening variables in our sample. We tested another alternative model to examine possible cross-process effects between the two leadership constructs. We added a path from group-focused leadership to leader identification divergence and another path from differentiated individual-focused leadership to group identification.[12] This alternative model did not fit significantly better overall than the baseline model ($\chi^2[df = 208] = 231.50$, $p > .05$; CFI = .98, IFI = .98, RMSEA = .04; $\Delta\chi^2[df = 2] = 0.44$, n.s.); and the two cross-process parameter estimates were not significant (β's = .07 and .03, both n.s.). This finding provides further evidence of the distinctiveness of the two leadership foci and their effects on group processes. All told, results provided support to the proposed model.

[12] We thank one reviewer for suggesting this alternative model test.

FIGURE 2
Results of the SEM Model with Latent Constructs[a]



[a] $n = 70$. Standardized factor loadings and path coefficients are presented. All factor loadings are significant at the .05 level.
* $p < .05$

DISCUSSION

The current study examined the effectiveness of both group-focused and individual-focused leadership behaviors at the group level. In keeping with the hypotheses, results show that group-focused transformational leadership facilitates group identification and collective efficacy, which positively contribute to group effectiveness. Also supporting our hypotheses, differentiated individual-focused transformational leadership in a group leads to divergence in leader identification and self-efficacy beliefs, which dampens a group's collective efficacy and effectiveness.

Though the results on group-focused leadership corroborate previous research (Burke et al., 2006; Kark, Shamir, & Chen, 2003), findings on the outcomes of differentiated leadership are counterintuitive. They are contrary to the common wisdom well-articulated by Hirschhorn (1991), who wrote that successfully leading a group requires a leader to not only inspire the group as a whole but also to be attentive to unique individual needs. Our analysis of the dual-focus leadership behaviors provides us with reason to question Hirschhorn's recommendation. Current results suggest that leaders who attempt to satisfy both individual and group needs may inadvertently compromise group processes and group outcomes. In this section, we elaborate the theoretical implications of our findings for leadership and group research, discuss study limitations, and offer some managerial implications.

Theoretical Implications

First of all, our study sheds some new light on an unresolved issue, "whether leaders should or should not differentiate among their members" (Sparrowe & Liden, 1997: 545). Though previous LMX research rests on the assumption that developing unique leader-member relationships in a group is likely to create subgroups and may be detrimental to group work, empirical evidence for that assumption is lacking (Sparrowe & Liden, 1997). Liden et al. (2006) directly examined the relationship between LMX differentiation (that is, a leader's forming different relationships with the members of a group) and group performance. They proposed competing hypotheses, suggesting both a positive and a negative relationship. Their findings failed to support either prediction. Several differences between their study and ours may account for the different findings: Liden et al. examined the quality of the leader-member relationship perceived by followers, but we measured multiple transformational leadership behaviors observed by followers. They used a variance score, whereas we employed the coefficient of variation, which takes group means into consideration. More importantly, we included intervening variables (i.e., leader identification divergence and self-efficacy divergence) to explicate how differentiated treatment from a leader impacts group effectiveness. As in Liden et al., our alternative model test did not show a main effect from leadership behavior to group effectiveness. Thus, our results suggest an intervening process of leadership influence, not a mediating effect (Mathieu & Taylor, 2006). In other words, the negative influence of leadership differentiation on group effectiveness is indirect, through divergent member experiences.

The central argument of situational leadership theories (Fiedler, 1967; Hersey et al., 2001; House & Mitchell, 1974) is that leaders need to exhibit different behaviors to fit follower characteristics and situational factors. Hersey et al. (2001), for example, specifically suggested that leadership effectiveness is realized by matching appropriate leadership behavior with an individual follower's level of maturity. Their argument, however, was originated at the individual level and is "most robust" at this level (Vecchio, 1987). At the group level, Hersey et al. (2001) argued that leaders must determine an entire group's level of readiness so that the relevant group leadership behavior can be selected. Our finding about group-focused leadership supports their assertion. Interestingly, our results on differentiated individual-focused leadership suggest that applying situational leadership to different individuals within a group may have unintended consequences for group effectiveness. Previous research has not investigated this issue either theoretically or empirically, despite Vecchio's (1987) comments about this possibility. Findings from the current study, which was conducted at the group level, indicate that the individual-level situational leadership argument may need refinement and revision when it is applied at the group level. This is a promising topic for future research.

Second, the results of our study also suggest potential trade-offs between leading a group and leading individuals. Although Chen et al. (2007) reported no trade-off between maximizing individual and group levels of empowerment, our study reveals a clear trade-off between treating group members differently (i.e., demonstrating high divergence in individual-focused leadership) and treating them all alike (i.e., demonstrating group-focused leadership). It is possible that the same dynamic operates with empowering leadership. Divergence in leader treatment within a group may

create divergence in individual empowerment, which in turn may impair group performance. Kirkman and Rosen (1999), for example, also suggested a potential conflict between team and individual empowering. Our study adds an additional understanding of group dynamics that has evaded the attention of past research on leadership and groups.

Perhaps a course of inquiry more meaningful than arguing about which leadership focus is superior would be to examine when leader differentiation is more or less detrimental for group outcomes by considering various moderators. Liden et al. (2006) found an intriguing result on the moderating role of task interdependence: LMX differentiation was positively related to group performance when task interdependence was high. They reasoned that high interdependence enhances the need for leaders to coordinate members and allocate resources within a group to achieve performance goals. From a different but related standpoint, Uhl-Bien and Graen (1998) reported that individual self-management (signaling high individuality with less intragroup coordination) worked better in functional teams in which members' tasks were mainly independent than it did in cross-functional teams, in which more coordination among members was needed to generate successful outcomes. These conflicting findings underscore the need for future research to explore why and how interdependence affects differentiated leadership.

Third, the current study extends research on transformational leadership by examining its multiple components and grouping them into two categories: group-focused and individual-focused behaviors. Recent research on leadership suggests the need to differentiate between leadership behaviors targeting a social unit and those targeting individual followers (Kark & Shamir, 2002). Our study answers this call and, further, provides empirical support for the view that the two leadership processes are independent from each other. Kark et al.'s (2003) study showed that transformational leadership predicts identification with both a collective and a leader. Differentiating group-focused and individual-focused leadership adds clarity to their findings as to which specific leadership behaviors affect which focus of follower identification. Though informative, using separate leadership behaviors to indicate individual- and group-focused leadership represents a preliminary approach. Further theoretical and empirical work is necessary and desirable to identify both common and unique behavioral dimensions of leadership related to group and individual.

Limitations

We acknowledge several limitations of this study. We only focused on transformational leadership. Future research could incorporate additional leadership behaviors, such as transactional leadership (Bass, 1985) and empowering leadership (e.g., Chen et al., 2007). Moreover, using idealized influence and inspiration motivation as indicators of group-focused leadership and individualized consideration and intellectual stimulation as indicators of individual-focused leadership was a departure from past research that has combined the dimensions of transformational leadership into one higher-order construct. Although our decision was guided by theory, and we received some empirical verification of the construct validity of the two sets of indicators, future research should confirm the generalizability of our findings by using all four dimensions in both individual-focused and group-focused leadership measures. We also used a subjective measure of group effectiveness. Though subjective performance ratings have positive correlations with objective data (Dess & Robinson, 1984), it would be desirable to replicate our study with objective group effectiveness measures. It also should be noted that the values of the data aggregation statistic ICC(2) for some variables (group identification and collective efficacy) were not entirely satisfactory. This result could be due to the sample's consisting of work groups whose members may not interact very often. Finally, the sample comprised hierarchical groups with formal group leaders. The results might not generalize to other types of work groups, such as self-managed teams or empowered teams with no formal leadership. Future research is needed to test the generalizability of our findings.

Managerial Implications

Findings from the current study have important implications for managerial practice. Hill reported that many managers "fail to recognize their group-building responsibilities . . . conceive their people-management role as building the most effective relationships with each individual subordinate, erroneously equating the management of their group with managing the individuals in the group" (2007: 54). Our findings underscore Hill's warning. Furthermore, Hirschhorn (1991) argued that group managers need to attend to three types of relationships: (1) their relationship to each group member as an individual, (2) their relationship to a group as a whole, and (3) each individual's relationship to the group as a whole. Our model and results sug-

gest that group managers should be aware that treating members as separate individuals and applying differentiated leadership may result in some loss of group effectiveness. This occurs because divergence in members' self-efficacy lowers the group's collective efficacy. These results suggest that managers should use a contingency perspective when trying to reconcile the tension between group-focused and individual-focused leadership. For example, if group tasks do not require extensive interdependence among members, differentiated leadership might not harm collective efficacy and subsequent group performance. Thus, leadership development should include training on recognizing situations in which individualized leadership is necessary and how to apply individualized leadership without compromising group effectiveness.

Conclusions

When leading a group, should the leader pay differentiated attention to individual members and the group as a collective simultaneously? Common sense and previous research might suggest that the leader should pay equal attention to both. The current results, however, reveal that this question is not so straightforward. A high level of differentiated leadership attention to individual members may have two unintended consequences, lower collective efficacy and some loss of group effectiveness. In addition to a group-level process and an individual-level process, our study underscores the existence of a third process: divergence in individual experiences at the group level. Understanding the role of leadership in managing these three processes, the potential interactions among them, and the influence of different contexts on these processes would significantly advance group leadership research.

REFERENCES

Allison, P. D. 1978. Measures of inequality. ***American Sociological Review***, 43: 865–880.

Anderson, J. C., & Gerbing, D. W. 1988. Structural equation modeling in practice: A review and recommended two-step approach. ***Psychological Bulletin***, 103: 411–423.

Antonakis, J., & House, R. J. 2002. The full-range leadership theory: The way forward. In B. J. Avolio & F. J. Yammarino (Eds.), ***Transformational and charismatic leadership: The road ahead***: 3–33. Amsterdam: JAI Press.

Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. ***Academy of Management Review,*** 14: 20–39.

Atwater, D., & Bass, B. M. 1994. Transformational leadership in groups. In B. M. Bass & B. J. Avolio (Eds.), ***Improving organizational effectiveness through transformational leadership***: 48–83. Thousand Oaks, CA: Sage.

Bandura, A. 1982. Self-efficacy mechanism in human agency. ***American Psychologist***, 37: 122–147.

Bandura, A. 1990. Some reflections on reflections. ***Psychological Inquiry***, 1: 101–105.

Bandura, A. 1997. ***Self-efficacy: The exercise of control***. New York: W. H. Freeman.

Barrick, M. R., Stewart, G. L., Neubert, M., & Mount, M. K. 1998. Relating member ability and personality to work group processes and group effectiveness. ***Journal of Applied Psychology***, 83: 377–391

Bass, B. M. 1985. ***Leadership and performance beyond expectations***. New York: Free Press.

Bass, B. M., & Avolio, B. J. 1995. ***MLQ Multifactor leadership questionnaire for research: Permission set***. Redwood City, CA: Mindgarden.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. 2003. Predicting unit performance by assessing transformational and transactional leadership. ***Journal of Applied Psychology***, 88: 207–218.

Bentler, P. M. 1990. Comparative fit indexes in structural models. ***Psychological Bulletin***, 107: 238–246.

Bentler, P. M. 1995. ***EQS structural equations program manual***. Encino, CA: Multivariate Software.

Blau, P. M. 1977. ***Inequality and heterogeneity***. New York: Free Press.

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

Bollen, K. A. 1989. ***Structural equations with latent variables.*** New York: Wiley.

Brewer, M. B., & Gardner, W. 1996. Who is the "we"? Levels of collective identity and self representations. ***Journal of Personality and Social Psychology***, 71: 83–93.

Brockner, J. 1988. ***Self-esteem at work***. Lexington, MA: Lexington Books.

Browne, M. W., & Cudeck, R. 1992. Alternative ways of assessing model fit. ***Sociological Methods and Research***, 21: 230–258.

Burke, C. S., Stagl, K. C., Klein, C., Goodwin, G. F., Salas, E., & Halpin, S. 2006. What type of leadership behaviors are functional in groups? A meta-analysis. ***Leadership Quarterly***, 17: 288–307.

Campion, M. A., Medsker, G. J., & Higgs, A. C. 1993. Relations between work group characteristics and

effectiveness: Implications for designing effective work groups. ***Personnel Psychology***, 46: 823–850.

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

Chen, G., & Bliese, P. D. 2002. The role of different levels of leadership in predicting self- and collective efficacy: Evidence for discontinuity. ***Journal of Applied Psychology***, 87: 549–556.

Chen, G., & Kanfer, R. 2007. Toward a system theory of motivated behavior in work groups. In B. M. Staw (Ed.), ***Research in organizational behavior***, vol. 27: 223–267. Greenwich, CT: JAI Press.

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

Chen, G., Mathieu, J. E., & Bliese, P. D. 2004. A framework for conducting multi-level construct validation. ***Research in Multi-Level Issues***, 3: 273–303.

Cohen, S. G., & Bailey, D. E. 1997. What makes groups work: Group effectiveness research from the shop floor to the executive suite. ***Journal of Management***, 23: 239–290.

Dansereau, F., Alutto, J., & Yammarino, F. 1984. ***Theory testing in organizational behavior: The variant approach***. Englewood Cliffs, NJ: Prentice-Hall.

Dansereau, F., Graen, G., & Haga, W. J. 1975. A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. ***Organizational Behavior and Human Performance***, 13: 46–78.

Dansereau, F., Yammarino, F., & Kohles, J. 1999. Multiple-levels of analysis from a longitudinal perspective. ***Academy of Management Review***, 24: 346–357.

Dess, G. G., & Robinson, R. B., Jr. 1984. Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit. ***Strategic Management Journal***, 5: 265–273.

Dionne, S. D., Yammarino, F. J., Atwater, L. E., & Spangler, W. D. 2004. Transformational leadership and group performance. ***Journal of Organizational Change Management***, 17: 177–193.

Doosje, B. Ellemers, N., & Spears, R. 1995. Perceived intragroup variability as a function of group status and identification. ***Journal of Experimental Social Psychology***, 31: 410–436.

Dumdum, U. R., Lowe, K. B., & Avolio, B. J. 2002. A meta-analysis of transformational and transactional leadership correlates of effectiveness and satisfaction: An update and extension. In B. J. Avolio & F. J. Yammarino (Eds.), ***Transformational and charismatic leadership: The road ahead***: 35–66. Amsterdam: JAI Press.

Fiedler, F. E. 1967. ***A theory of leadership effectiveness***. New York: McGraw-Hill.

Gardner, H. 2000. ***Intelligence reframed: Multiple intelligences for the 21st century***. New York: Basic Books.

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

Gerstner, C. R., & Day, D. V. 1997. Meta-analytic review of leader-member exchange theory: Correlates and construct issues. ***Journal of Applied Psychology***, 82: 827–844.

Goodman, J. S., & Blum, T. C. 1996. Assessing the nonrandom sampling effects of subject attrition in longitudinal research. ***Journal of Management***, 22: 627–652.

Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. 2002. A meta-analysis of group-efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. ***Journal of Applied Psychology***, 87: 819–832.

Harrison, D. A., & Klein, K. J. 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. ***Academy of Management Review***, 32: 1199–1228.

Hersey, P., Blanchard, K. H., & Johnson, D. E. 2001. ***Management of organizational behavior*** (8th ed.). Upper Saddle River, NJ: Prentice-Hall.

Hill, L. A. 2007. Becoming the boss. ***Harvard Business Review***, 85(1): 48–57.

Hirschhorn, L. 1991. ***Managing in the new group environment: Skills, tools, and methods***. Lincoln, NE: Authors Choice Press.

House, R. J., & Mitchell, T. R. 1974. Path-goal theory of leadership. ***Journal of Contemporary Business***, 3(X): 81–97.

Howell, J. M., & Hall-Merenda, K. E. 1999. The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on predicting follower performance. ***Journal of Applied Psychology***, 84: 680–694.

Ilies, R., Nahrgang, J. D., & Morgeson, F. P. 2007. Leader-member exchange and citizenship behaviors: A meta-analysis. ***Journal of Applied Psychology***, 92: 269–277.

James, L. R. 1988. Organizational climate: Another look at a potentially important construct. In S. G. Cole & R. G. Demaree (Eds.), ***Applications of interactionist psychology: Essays in honor of Saul B. Sells***: 253–282. Hillsdale, NJ: Erlbaum.

James, L., Demaree, R., & Wolf, G. 1984. Estimating within-group interrater reliability with and without re-

sponse bias. ***Journal of Applied Psychology***, 69: 85–98.

Judge, T. A., Locke, E. A., & Durham, C. C. 1997. The dispositional causes of job satisfaction: A core evaluations approach. In L. L. Cummings & B. M. Staw (Eds.), ***Research in organizational behavior,*** vol. 17: 151–188. Greenwich, CT: JAI Press.

Kark, R., & Shamir, B. 2002. The dual effect of transformational leadership: Priming relational and collective selves and further effects on followers. In B. J. Avolio & F. J. Yammarino (Eds.), ***Transformational and charismatic leadership: The road ahead***: 6–94. Amsterdam: JAI Press.

Kark, R., Shamir, B., & Chen, G. 2003. The two faces of transformational leadership: Empowerment and dependency. ***Journal of Applied Psychology***, 88: 246–255.

Kirkman, B. L., Chen, G., Farh, J.-L., Chen, Z. X., & Lowe, K. B. 2009. Individual power distance orientation and follower reactions to transformational leaders: A cross-level, cross-cultural examination. ***Academy of Management Journal***, 52: 744–764.

Kirkman, B. L., & Rosen, B. 1999. Beyond self-management: The antecedents and consequences of team empowerment. ***Academy of Management Journal***, 42: 58–74.

Klein, K. J., Bliese, P. D., Kozlowski, S. W. J., Dansereau, F., Gavin, M. B., Griffin, M. A., Hofmann, D. A., James, L. R., Yammarino, F. J., & Bligh, M. C. 2000. Multilevel analytical techniques: Commonalities, differences, and continuing questions. In K. J. Klein & S. W. J. Kozlowski (Eds.), ***Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions***: 513–553. San Francisco: Jossey-Bass.

Klein, K. J., & Kozlowski, S. W. J. 2000. From micro to meso: Critical steps in conceptualizing and conducting multilevel research. ***Organizational Research Methods***, 3: 211–236.

Klein, H. J., & Mulvey, P. W. 1995. Two investigations of the relationships among group goals, goal commitment, and performance. ***Organizational Behavior and Human Decision Processes***, 61: 44–53.

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

Kozlowski, S. W. J., Gully, S. M., Salas, E., & Cannon-Bowers, J. A. 1996. Group leadership and development: Theory, principles, and guidelines for training leaders and groups. In M. M. Beyerlein, D. Johnson, & S. T. Beyerlein (Eds.), ***Interdisciplinary studies of work groups: Group leadership***, vol. 3: 251–289. Greenwich, CT: JAI Press.

Lance, C. E., Butts, M. M., & Michels, L. C. 2006. The sources of four commonly reported cutoff criteria. ***Organizational Research Methods***, 9: 202–220.

Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. 2006. Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. ***Journal of Organizational Behavior***, 27: 723–746.

Liden, R. C., Sparrowe, R. T., & Wayne, S. J. 1997. Leader-member exchange theory: The past and potential for the future. In G. R. Ferris (Ed.), ***Research in personnel and human resources management***, vol. 15: 41–119. Greenwich, CT: JAI Press.

Lord, R. G., & Brown, D. J. 2004. ***Leadership processes and follower self-identity***. Mahwah, NJ: Erlbaum.

Maddux, J. E. 1995. Self-efficacy theory: An introduction. In J. E. Maddux (Ed.), ***Self-efficacy, adaptation, and adjustment: Theory, research, and application***: 3–36. New York: Plenum Press.

Mael, F., & Ashforth, B. E. 1992. Alumni and their alma mater: A partial test of the reformulated model of organizational identification. ***Journal of Organizational Behavior***, 13: 103–123.

Mathieu, J. E., & Taylor, S. R. 2006. Clarifying conditions and decision points for mediation type inferences in organizational behavior. ***Journal of Organizational Behavior,*** 27: 1031–1056.

Mumford, M. D, & Strange, J. M. 2002. Vision and mental models: The case of charismatic and ideological leadership. In B. J. Avolio & F. J. Yammarino (Eds.), ***Transformational and charismatic leadership: The road ahead***: 109–142. Oxford, U.K.: Elsevier.

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

Riggs, M. L., & Knight, P. A. 1994. The impact of perceived group success-failure on motivational beliefs and attitudes: A causal model. ***Journal of Applied Psychology***, 79: 755–766.

Salanova, M., Llorens, S., Cifre, E., Martinez, I. M., & Schaufeli, W. B. 2003. Perceived collective efficacy, subjective well-being and task performance among electronic work groups: An experimental study. ***Small Group Research***, 34: 43–73.

Sedikides, C., & Brewer, M. B. (Eds.). 2001. ***Individual self, relational self, and collective self.*** Philadelphia: Psychology Press.

Shamir, B., House, R. J., & Arthur, M. B. 1993. The motivational effects of charismatic leadership: A self concept based theory. ***Organization Science***, 4: 577–593.

Shamir, B., Zakay, E., Breinin, E., & Popper, M. 1998. Correlates of charismatic leader behavior in military units: Subordinates' attitudes, unit characteristics,

and superiors' appraisals of leader performance. ***Academy of Management Journal***, 41: 387–409.

Shamir, B., Zakay, E., Breinin, E., & Popper, M. 2000. Leadership and social identification in military units: Direct and indirect relationships. ***Journal of Applied Social Psychology***, 30: 612–640.

Sherony, K. M., & Green, S. G. 2002. Coworker exchange: Relationships between coworkers, leader-member exchange, and work attitudes. ***Journal of Applied Psychology***, 87: 542–548.

Sparrowe, R. T., & Liden, R. C. 1997. Process and structure in leader-member exchange. ***Academy of Management Review***, 22: 522–552.

Steiner, I. D. 1972. ***Group process and productivity***. New York: Academic Press.

Tajfel, H., & Turner, J. C. 1986. The social identity theory of inter-group behavior. In S. Worchel & L. W. Austin (Eds.), ***Psychology of intergroup relations***: 2–24. Chicago: Nelson-Hall.

Tsui, A. S., & Gutek, B. A. 1999. ***Demographic differences in organizations: Current research and future directions***. Lanham, MD: Lexington Books.

Uhl-Bien, M., & Graen, G. B. 1998. Individual self-management: Analysis of professionals' self-managing activities in functional and cross-functional work teams. ***Academy of Management Journal***, 41: 340–350.

Vancouver, J. B., Thompson, C. M., & Williams, A. A. 2001. The changing signs in the relationships among self-efficacy, personal goals, and performance. ***Journal of Applied Psychology***, 86: 605–620.

Vecchio, R. P. 1987. Situational leadership theory: An examination of a prescriptive theory. ***Journal of Applied Psychology***, 72: 444–451.

Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. 2005. Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. ***Academy of Management Journal***, 48: 420–432.

Watson, C. B., Chemers, M. M., & Preiser, N. 2001. Collective efficacy: A multilevel analysis. ***Personality and Social Psychology Bulletin***, 27: 1057–1068.

Wood, R., & Bandura, A. 1989. Social cognitive theory or organizational management. ***Academy of Management Review,*** 14: 361–384.

Yammarino, F. J., & Bass, M. B. 1990. Transformational leadership and multiple levels of analysis. ***Human Relations***, 10: 975–995.

Zaccaro, S., Blair, V., Peterson, C., & Zazanis, M. 1995. Collective efficacy. In J. E. Maddux (Ed.), ***Self-efficacy, adaptation, and adjustment: Theory, research, and application***: 305–330. New York: Plenum.

Joshua B. Wu (joshua.wu@miami.edu) is an assistant professor of management at the School of Business Administration, University of Miami. He earned his doctoral degree in business administration at Arizona State University. His research interests include leadership, team, and social exchange.

Anne S. Tsui (anne.tsui@asu.edu) is Motorola Professor of International Management at Arizona State University and Distinguished Visiting Professor at Peking University, Xi'an Jiaotong University, and Fudan University. She received her doctorate from the University of California, Los Angeles. Her recent research interests include *guanxi* networks, employment relationships, leadership and organizational culture, especially in the Chinese context.

Angelo J. Kinicki (angelo.kinicki@asu.edu) is a professor of management and holds the Weatherup/Overby Chair in Leadership at the W. P. Carey School of Business at Arizona State University. He received his DBA from Kent State University. His research interests include coping with job loss and organizational change, leadership, organizational culture and climate, and generic multilevel issue.