Do Inclusive Leaders Help to Reduce Turnover in Diverse Groups? 
The Moderating Role of Leader–Member Exchange in the Diversity to Turnover Relationship

Lisa H. Nishii
Cornell University

David M. Mayer
University of Michigan

This research examines leader–member exchange (LMX) at the group level as a moderator of the relationships between demographic (i.e., race, age, gender) and tenure diversity and group turnover. Drawing primarily from LMX, social categorization, and expectation states theories, we hypothesized that through the pattern of LMX relationships that they develop with followers, group managers influence inclusion and status differentials within groups such that the positive relationship between diversity and group turnover will be weaker when the group mean on LMX is high or when group differentiation on LMX is low. Results from a sample of supermarket departments (N = 348) yielded general support for the study hypotheses. We also found evidence for a 3-way interaction involving demographic diversity, LMX mean, and LMX differentiation such that the interaction between demographic diversity and LMX differentiation was only significant when LMX mean was high. These findings highlight the important role that leaders play in influencing the relationship between diversity and turnover through the patterns of inclusion that they create in their units.

Keywords: leader–member exchange, work groups, diversity, inclusion, turnover

For over two decades, researchers have been examining the effects of group diversity on performance outcomes. As explained by Williams and O’Reilly (1998) in their highly influential review article, the group performance indicators of interest to scholars and practitioners include both group-produced outcomes such as problem solving and the capacity of a group to function well over a long period of time as evidenced by their levels of social integration and turnover. Despite much effort to establish the nature of these relationships, the accumulated findings have been equivocal, leading Van Knippenberg and Schippers in their recent Annual Review of Psychology article (2007) to the following conclusion: [T]he field has been dominated by studies focusing on main effects. Narrative reviews and meta-analyses alike seem to corroborate the conclusions that this main effects approach is unable to account for the effects of diversity effectively. It seems to declare the bankruptcy of the main effects approach and to argue for models that are more complex and that consider moderating variables in explaining the effects of diversity. (pp. 518–519)

Identifying moderators is important not only because it can help to explain the conditions under which diversity is more or less likely to be associated with outcomes but also because it helps illuminate the processes underlying the relationship between diversity and outcomes. Despite the fact that many scholars (e.g., Jackson, Joshi, & Erhardt, 2003; Martins, Milliken, Wiesenfeld, & Salgado, 2003; Webber & Donahue, 2001; Williams & O’Reilly, 1998) have argued for the importance of moderators, empirical research devoted to moderators has been scarce, especially compared with research on mediators of the diversity-to-outcomes relationship. To date, the focus has largely been on the role of time spent together (Harrison, Price, & Bell, 1998; Pelled, Eisenhardt, & Xin, 1999; Watson, Kumar, & Michaelson, 1993), task type (Jehn, Northcraft, & Neale, 1999; Webber & Donahue, 2001), and task interdependence (Harrison, Price, Gavin, & Florey, 2002; Jehn et al., 1999), although more relational moderators are also likely to be important. In this study, we focus on the moderating role of leaders.

Even though research has shown that leaders are highly influential in shaping team processes and outcomes (Zaccaro, Rittman, & Marks, 2001) and therefore may influence the relationship between group diversity and outcomes, research on the role of leaders in diverse groups remains largely unexplored. As DiTomaso and Hooijberg (1996) cogently noted, “One would think that in the field of management the study of diversity would be all about leadership, but this is not what has developed” (p. 163). The important responsibility that leaders have to shape intragroup processes and outcomes associated with diversity has been discussed by some (e.g., Cox & Blake, 1991; Elsass & Graves, 1997; Gelfand, Nishii, Raver, & Schneider, 2005; Wentling, 2004) but empirically explored by virtually no one (see Kearney & Geber, 2009, for an exception). Do leaders influence the outcomes associated with diversity in groups?
In an attempt to explore this question, we examined the moderating role of leader–member exchange (LMX), or the quality of the relationship that a leader develops with followers (Dansereau, Graen, & Haga, 1975), on the relationship between group diversity and turnover. Others have also highlighted the importance of examining how LMX and diversity might intersect in work groups to impact outcomes (e.g., Hiller & Day, 2003). Scholars have studied turnover as an outcome of diversity not only because it has been empirically linked with diversity but also because it represents a critical organizational problem, given the many costs associated with it. The consequences of turnover include the resources that need to be expended to recruit, select, and socialize replacement personnel, and the disruption of operations that occurs when remaining employees experience difficulty in completing their work without the departed employee with whom they were interdependent (Staw, 1980), as evident in reduced operational efficiency (Alexander, Bloom, & Nuchols, 1994), manufacturing performance (Arthur, 1994), revenue growth (Baron, Hanna, & Burton, 2001), sales (Kacmar, Andrews, Van Rooy, Steilberg, & Cerrone, 2006; McElroy, Morrow, & Rude, 2001), and productivity (Huselid, 1995; Shaw, Gupta, & Delery, 2005).

The question of interest to us is what role group leaders can play in reducing these high turnover costs associated with greater diversity. Our focus on LMX is consistent with McGregor’s (1944) pioneering view that leadership is not a person; it is a process. Our general argument is that by signaling their own acceptance of employees of various backgrounds through the establishment of high-quality relationships with them, group leaders can promote norms about equality and inclusion that will facilitate greater power sharing and improve reciprocal exchanges among group members (Hollander, 2009); ultimately, improved group functioning should be evident in reduced turnover. As we will describe, the purpose of this article was to examine the moderating role of both the average level of LMX within a group (what we refer to as LMX mean), and the level of dispersion, or differentiation, in the quality of LMX relationships experienced by employees, as well as the interaction of the two, in the relationship between diversity and turnover.

There are a number of intended contributions of this research. First, ours is one of the first studies that we know of to examine the moderating effects of leaders on the diversity-to-turnover relationship, and our research comes at a time when scholars are converging in their calls for research examining the boundary conditions of diversity-to-outcomes relationships. Second, our focus on the inclusion patterns created through LMX relationships contributes to a growing discussion on the importance of organizational inclusion (Holm, 1998; Holm, Ferdman, & Merrill-Sands, 2004; Roberson, 2006). Third, consistent with others who have argued that it is important to distinguish between diversity that is high in visibility but low in job relatedness—such as diversity in demographic traits like race/ethnicity, gender, and age—and diversity that is lower in visibility but higher in job relatedness, such as tenure diversity (Pelled, 1996; Tsui, Egan, & O’Reilly, 1992), we examined both types in this research. Fourth, in line with Gerstner and Day’s (1997, p. 839) prescription that “empirical research is needed to understand how the LMX model operates at different levels of analysis,” we examined LMX at the group level of analysis, focused on a group outcome, and examined the possibility that mean levels of LMX and LMX differentiation interact with diversity to influence group turnover.

Finally, we utilized an objective measure of actual turnover. We did so because despite the fact that the “value in diversity” hypothesis is concerned with showing that there is a business case for increasing diversity in organizations, there is a paucity of research that actually has examined objective, bottom-line outcomes associated with diversity. Instead, the vast majority of research to date has focused on attitudinal and interpersonal outcomes such as satisfaction (e.g., Hoffman, Harburg, & Maier, 1962), conflict (e.g., Eisenhardt, Kahwajy, & Bourgeois, 1997; Jehn et al., 1999; Pelled, 1996), group attractiveness (e.g., Good & Nelson, 1971), and perceptions of group cohesion (e.g., Good & Nelson, 1971; Riordan & Shore, 1997), or performance outcomes that have been assumed to result in higher financial performance but may or may not actually be associated with the bottom line, such as employees’ perceptions of performance (e.g., Pelled, 1996; Sackett, DuBois, & Noe, 1991). In contrast, as stated previously, research has consistently supported a negative relationship between turnover and the bottom line. We assessed actual turnover in our study rather than turnover intentions, since turnover intentions are only predictive of actual turnover under some conditions (Griffeth, Hom, & Gaertner, 2000; Vandenberg & Nelson, 1999).

Study Hypotheses

Group Diversity and Turnover

In studying the outcomes associated with diversity, researchers in the past have studied diversity variables separately or have examined some aggregate index of overall diversity within a group. The former approach allows researchers to examine whether there are differences across diversity variables, while the latter affords researchers greater explanatory power and parsimony. Like Pelled (1996) and Jehn and her colleagues (Jehn et al., 1999), we followed the advice of Zenger and Lawrence (1989) and take a middle-ground approach. We treated variables that are similar in terms of visibility and job relatedness as a set because we expected them to exert common effects, and we examined them separately from diversity characteristics that differ on these properties. We thus distinguished between diversity in visible, immutable demographic characteristics that are low in job relatedness (race/ethnicity, gender, and age), and tenure diversity, which is not visible per se and captures experiences, information, and perspectives relevant to cognitive tasks (Jackson, May, & Whitney, 1995; Milliken & Martins, 1996; Simons, Pelled, & Smith, 1999; Williams & O’Reilly, 1998). Although age diversity may also be related to job experiences and perspectives, age diversity captures a much wider set of personal experiences and perspectives than those related to work alone (Zenger & Lawrence, 1989) and is thus consistently considered a visible characteristic that is low in job relatedness, much like race and gender (e.g., Pelled et al., 1999; Sessa & Jackson, 1995). Although we proposed identical hypotheses involving demographic and tenure diversity, we kept them separate in our analyses for two reasons: (a) in case of possible relationships with turnover that varied in strength due to differences in visibility and job relatedness, and (b) in recognition of scholars’ interests in researching and discussing these two classes of diversity types separately (e.g., Joshi & Roh, 2009; Williams & O’Reilly, 1998).
Demographic diversity and turnover. Research suggests that demographic diversity is positively associated with turnover (Jackson et al., 1991; O’Reilly, Caldwell, & Barnett, 1989; Tsui et al., 1992; Wagner, Pfeffer, & O’Reilly, 1984; Wiersema & Bird, 1993). According to social categorization theory, people use salient demographic characteristics to make prototype-based assumptions regarding the attributes of group members (McGrath, Berdahl, & Arrow, 1995; Pelled et al., 1999; Williams & O’Reilly, 1998). Thinking about group members in prototypical terms is thought to lead to intragroup polarization; members of subgroups tend to engage in ingroup favoritism, which leads to lower positive affect (Levine & Moreland, 1990; O’Reilly, Caldwell, & Barnett, 1989; Riordan & Shore, 1997) and group cohesion (O’Reilly et al., 1989), higher relational conflict (Jehn et al., 1999), and reduced cohesion and communication (O’Reilly et al., 1989). These negative group processes increase turnover in groups (Jackson et al., 1991; Wagner et al., 1984; Wiersema & Bird, 1993).

In addition, demographic differences may influence group interactions through their associations with status and power even though differences in age, race, and gender are not work related. According to expectations states theory (Berger, Fisek, Norman, & Zelditch, 1977; Ridgeway, 1991) and the theory of structural ritualization (Knottemerus, 1997), nominal characteristics such as gender and race become associated with work-related competence beliefs when status beliefs associated with these characteristics are imported from the broader societal context and are “structurally reproduced” in the group. Certain groups within society—such as racial minorities and women—are traditionally treated as lower status (Alderfer & Smith, 1982; Alderfer & Thomas, 1988). When these status beliefs are legitimated by the leader and members of the group, they translate into power differentials that bias interactions and treatment at work such that higher status group members are favored. Ultimately, the effects of power imbalances are manifested in greater group conflict and dissatisfaction, as evidenced by higher levels of turnover (Jackson, 1996). Therefore, group context factors that redistribute the group’s power, or delegitimize power imbalances and promote greater power sharing, should help to improve group processes and reduce group turnover (Alderfer, 1992; Zimmer, 1988).

Tenure diversity and turnover. Research similarly suggests that the relationship between tenure diversity and turnover is positive (e.g., McCain, O’Reilly, & Pfeffer, 1983; Pfeffer & O’Reilly, 1987; Wagner et al., 1984). Beginning with Pfeffer’s (1983) influential article on organizational demography in which he argued that heterogeneity in cohort membership leads to dysfunctional outcomes, research has found that people are indeed attracted to others from their cohort, since they are more likely to share frames of reference, organizational experiences, patterns of communication, organizational identification, skills, and social and informational networks (Ancona & Caldwell, 1992; Beckman, Burton, & O’Reilly, 2007; Pfeffer, 1983; Tsui et al., 1992). In addition, tenure affects individuals’ cognitions, and longer tenured employees become more rigid and unwilling to deviate from established routines and repertoires for dealing with issues (Boeker, 1997; Goodstein & Boeker, 1991; Katz, 1982; Miller & Friesen, 1984). Tenure-diverse groups—that is, groups composed of longer tenured employees mixed with individuals who are newer to an organization and therefore different and more willing to challenge the status quo—suffer from greater communication problems and lowered levels of trust and cooperation (e.g., O’Reilly, Snyder, & Boothe, 1993; Zenger & Lawrence, 1989), all of which can lead to higher turnover (e.g., Jackson et al., 1991; O’Reilly et al., 1989; Wagner et al., 1984). This research led Williams and O’Reilly (1998) to conclude that “there is strong evidence that diversity in tenure is associated with lower levels of social integration, poorer communication, and higher turnover in groups” (p. 98).

In addition, tenure diversity is associated with status and power differentials within groups on the basis of group members’ expectations about others’ differential capacities to further the group’s goals. More seasoned employees are conferred higher status because tenure is assumed to relate to greater capacity to contribute to group goals, since tenure tends to be associated with broader social and informational networks that involve influential members of the organization (Beckman et al., 2007; Pfeffer, 1994), greater expertise and performance proficiency (Chao, O’Leary-Kelly, Wolf, Klein, & Gardner, 1994; Pfeffer, 1983), and a better understanding of organizational policies and procedures (Hammack & Mason, 1984), politics, history, and goals (Chao et al., 1994; Ferris, Fedor, & King, 1994; Gilmore, Ferris, Dulebohn, & Harrel-Cook, 1996; Lankau & Scandura, 2002). Because higher status group members tend to be more assertive, critical, and outspoken, and to exert influence over lower status members (Levine & Moreland, 1990), the latter tend to participate less in decision making, become more frustrated, and ultimately withdraw from the group, as seen in higher levels of turnover (Jackson, 1996).

Moderating Role of LMX on the Diversity-to-Turnover Relationship

Moderators that serve to attenuate the negative group dynamics triggered by diversity should improve the relationship between diversity and turnover. We expected to find that the pattern of LMX relationships that a group leader develops with followers would be one such moderator. The LMX relationships that leaders develop with their followers range from low-quality economic-exchange relationships, in which followers are only motivated to do what is formally required by their job descriptions but little more, to high-quality social exchange relationships characterized by mutual trust, respect, and obligation (Graen & Uhl-Bien, 1995). When a leader develops a high-quality relationship with a follower, he or she confers high status to that employee (Liden, Erdogan, Wayne, & Sparrowe, 2006; Mannix & Neale, 2005; Scandura, 1999); thus, the LMX relationships that a leader develops with group members create a hierarchy within the group that reflects leader-established norms regarding the status and associated treatment of various group members (Elsass & Graves, 1997; Scandura, 1999). Whether one is involved in a low- or high-quality relationship has significant implications not only for one’s individual outcomes (Gerstner & Day, 1997) but for one’s standing within the group.

LMX mean. When leaders establish high-quality relationships with followers, they provide “safe passages” (DiTomaso & Hoojberg, 1996, p. 170) for them by triggering others to comply with leader-established norms about their acceptance. The more group members overall feel validated and accepted by virtue of their high-quality relationships with the leader, the more they will feel
empowered, motivated, and psychologically safe about engaging in interpersonal risk taking and sharing, as they have been validated by the support received from their group leader (Gomez & Rosen, 2001; Schyns, Paul, Mohr, & Blank, 2005). When more employees feel validated and therefore more comfortable behaving authentically (Polzer, Milton, & Swann, 2002; Swann, Kwan, Polzer, & Milton, 2003; Swann, Milton, & Polzer, 2000), interpersonal interactions should improve, as reflected in lower turnover.

In addition, the overall quality of LMX relationships that a group leader develops with followers can be taken as an indicator of the extent to which the leader has engaged in power sharing with followers (Hollander, 2009). According to Hollander’s (2009) theory of inclusive leadership, leaders are most effective when they empower their followers and enable two-way influence, thereby promoting the expanded use of followers’ skills, autonomy, and responsibility. Ultimately, by being inclusive leaders, group managers afford followers greater discretion in the way they do their jobs (McClane, 1991). When combined with the greater psychological safety that followers feel to engage in interpersonal risk taking and sharing, as well as their greater likelihood of being good group and organizational citizens who are concerned for the good of the group (and not just for themselves; Graen & Uhl-Bien, 1995; Wayne, Shore, & Liden, 1997), diverse groups should be more able to engage in team reflexivity, or the careful consideration and discussion of its functioning, in ways that limit diversity-related group disintegration (Van Knippenberg & Schippers, 2007) and lower turnover. In support of this idea, research has shown that high overall LMX is associated with lower group conflict (Boies & Howell, 2006) and greater cooperation, satisfaction, and perceptual agreement with coworkers (Cogliser & Schriesheim, 2000; Kozlowski & Doherty, 1989; McClane, 1991).

Even more basic is the expectation that the more employees in a diverse group enjoy high-quality relationships with the group manager, the greater their collective access to valued developmental opportunities and resources, personally motivating exchanges with the leader, and important group responsibilities (Gerstner & Day, 1997), and thus the less likely it is for them to turnover. Accordingly, we expected that in groups characterized by a high LMX mean, the positive relationship between diversity and turnover should be attenuated when compared with groups characterized by a low group mean on LMX:

Hypothesis 1a/b: The positive relationship between (demographic or tenure) diversity and turnover will be moderated by the group mean on LMX such that the relationship will be weaker when group mean on LMX is high as opposed to low.

LMX differentiation. An important aspect of LMX theory is the notion of differentiation—the process of developing high-quality relationships with some group members and low-quality relationships with other group members (Maslyn & Uhl-Bien, 2005). There is currently some debate about whether LMX differentiation leads to positive group outcomes (Graen & Uhl-Bien, 1995; Liden, Sparrowe & Wayne, 1997; Scandura, 1999; Schyns, 2006; Sparrowe & Liden, 1997). An argument for differentiation is that given limited time and resources, it is unlikely for a leader to be able to maintain high-quality exchanges with all followers, and thus they should invest their time and resources into their most promising ones. In contrast, we argue that LMX differentiation is harmful for groups, particularly for diverse ones, because it connotes messages of exclusion and can have adverse effects for both the individuals experiencing low-quality relationships and for the group as a whole. When resources are disproportionately allocated to the leader’s ingroup, outgroup members are likely to feel unfairly treated (Liden et al., 2006; Scandura, 1999) and dissatisfied (McClane, 1991). When group members perceive the leader’s differentiation to be unfair or otherwise disagree with the legitimacy of the leader-conferred status distinctions, group affect, cooperation, cohesion, and retention rates will suffer (Cogliser & Schriesheim, 2000; Ford & Seers, 2006; Liden et al., 2006; Schyns, 2006).

Although it is true that we might have expected a direct negative effect of LMX differentiation on group turnover, we expected LMX differentiation to matter more for turnover in diverse than in homogeneous groups. Members of diverse groups are predisposed to expect status hierarchies, power struggles, and ingroup–outgroup conflicts, whether they are imported from the broader societal context, as is the case with demographic diversity, or are based on organizationally relevant status differences, as is the case with tenure diversity. However, in order for a status differential to become ritualized within a group, it must be supported by a legitimate authority figure like a manager (Ridgeway & Correll, 2006). When group managers challenge the assumed association between a demographic category and expectations of competence in diverse groups by developing similar quality relationships with followers, the reinforcement of the status beliefs will be undermined, and the status dimension can lose its meaning within that context (Ridgeway, 1991; Ridgeway & Correll, 2006). Thus, we expected that by developing LMX relationships of similar quality with followers, group managers can confer similar status to followers and help to neutralize rather than exacerbate the political activity (O'Reilly et al., 1993) and distorted communication patterns (Kirchmeyer & Cohen, 1992) that characterize diverse groups. As a result, the expected positive relationship between diversity and turnover should be reduced when LMX differentiation is low, as opposed to high. In homogeneous groups, there is less reason to expect pre-existing status distinctions. Therefore, leaders play less of a role in legitimizing or delegitimizing power imbalances and thereby in influencing associated levels of turnover. Accordingly, we made the following hypothesis:

Hypothesis 2a/b: The positive relationship between (demographic or tenure) diversity and turnover will be moderated by the group differentiation on LMX such that it will be weaker when group differentiation on LMX is low as opposed to high.

Interaction of LMX mean, LMX differentiation, and diversity on turnover. First, in the context of a high group mean on LMX, we expected the positive relationship between diversity and turnover to be weaker when there is low as compared with high LMX differentiation. This is because low differentiation around a high LMX mean represents the best-case scenario: The leader signals his or her acceptance of all employees equally (or near equally), thereby delegitimizing any existing status differentials and encouraging group members to accept each other as ingroup members. In contrast, when there is high LMX differentiation around a high
group mean, the select few who experience low-quality relationships amidst the many others enjoying high-quality exchanges are likely to feel especially excluded. The lack of numerous coworkers in the same (low LMX) position makes it difficult for one to attribute one’s low-quality exchange to the leader (i.e., “That’s just how people are treated around here”); instead, self-attributions are more likely. Indeed, people turn to aggregate sources of social comparison as an indication of the extent to which they are valued as an individual (Buckingham & Alicke, 2002). When the aggregate level of LMX is high while one’s own experiences differ markedly, the message one receives is that there is something that makes him or her less valued (Lind & Tyler, 1988; Tyler & Lind, 1992). These self-attributions may have rather detrimental effects on one’s emotions (e.g., self-esteem, morale), and, according to work by Barsade (2002), a single person experiencing strong negative affect can have a surprisingly large influence on the group’s mood or affect, as reflected ultimately in group turnover.

In the context of a low group mean on LMX, the positive relationship between group diversity and turnover should be stronger when LMX differentiation is high as compared with low. At first, this may appear counterintuitive if one assumes that it is better for a leader to establish some high-quality relationships than to develop none at all. Although it is possible that in a heterogeneous group that is not predisposed to suffer from status inequalities and power struggles, the presence of a few higher quality relationships amidst a dominant pattern of low-quality relationships (low LMX mean, high LMX differentiation) will not overly exacerbate intragroup processes and turnover, because diverse groups are predisposed to experience status hierarchies and power struggles, we expected any amount of LMX differentiation to be interpreted by followers as a legitimization of power differentials within the group. Ultimately, this should negatively affect group processes and increase turnover.

Compared with high LMX mean conditions, however, we did not expect high LMX differentiation to exacerbate the relationship between diversity and turnover as much under low LMX mean conditions. When LMX mean is low, those experiencing low-quality exchanges have meaningful social comparisons, since most other coworkers are also experiencing low-quality exchanges. Thus, the existence of a select few who are privileged to enjoy high-quality exchanges is less bothersome than when most employees enjoy high-quality exchanges (i.e., high LMX mean), but a few un fortunate employees experience low-quality exchanges (i.e., high LMX differentiation). According to Hollander’s (2009) inclusive leadership theory, in such cases, reactions of followers will be more negative, as they are likely to perceive that their leader is able to achieve the desired outcome of high-quality LMX relationships (as evidenced by high LMX mean) but chooses not to in all cases (as evidenced by high LMX differentiation). When followers perceive that their leader is generally less capable of achieving a desired outcome like high-quality LMX relationships (as evidenced by low LMX mean), however, they tend to react less negatively when the outcome is not achieved. Accordingly, we made the following hypothesis:

Hypothesis 3a/b: The positive relationship between (demographic or tenure) diversity and turnover will be moderated by both LMX mean and LMX differentiation such that the interaction between diversity and differentiation will be stronger when LMX mean is high as opposed to low.

Method

We tested the hypotheses utilizing data from employees nested within departments (e.g., grocery, meat, produce) in a large supermarket chain in the United States. A total of 4,500 employees voluntarily responded to a survey during working hours (40% response rate), and to assure respondents of the confidentiality of their responses, we arranged for all completed surveys to be sent directly to our research team. In terms of gender and race, 38% of the respondents were men and 62% were women; 81% were White. In terms of age, 10.6% were under 18, 20.3% were between 18 and 22, 10.6% were between 23 and 29, 17.1% between 30 and 39, and 41.4% were older than 40. In terms of departmental tenure, 25.6% had been working in the department for less than a year at the time of the survey, 23.8% between 1 and 3 years, 15.1% between 3 and 5 years, 16.1% between 5 and 10 years, and 19.5% had been working in their departments for over 10 years. Data were maintained only for employees in departments with five or more respondents (to guard against potential instability in the data; Bliese, 2000), leaving a total of 384 departments that ranged in size from five to 64 respondents. On average, there were nine respondents per department, and the average departmental response rate was 46%. However, turnover data were not available for all of the departments, and thus the sample size involved in the actual analyses was 348 departments.

Measures

Diversity. All demographic data used to calculate the diversity indices were self-report data provided voluntarily by survey participants in response to questions with nominal (race and gender) or ordinal (age and tenure) options. We indexed age diversity using departmental standard deviations (SD); SD was chosen over other diversity measures since maximum SD does not increase with the size of a unit (Harrison & Klein, 2007). Due to the categorical nature of race and gender, however, SD is not an appropriate measure of diversity, and thus we used Blau’s (1977) index of homogeneity, which is the most commonly used index of diversity for categorical variables (Harrison & Klein, 2007). The formula used to calculate this index is 1 – Σp^2, where p is the proportion of unit members in the kth category. Blau values capture the spread of group members across qualitatively different demographic categories, with maximum values being reached when group members are spread equally over all possible categories of a demographic variable. Following past research, we averaged race, gender, and age diversity indices to create an overall demographic diversity measure for the sake of parsimony (e.g., John et al., 1999; Schippers, Den Hartog, Koopman, & Wienk, 2003; Van der Vegt & Janssen, 2003). Doing so is also advantageous for statistical reasons, since testing hypotheses with an overall demographic diversity measure involves fewer regressions than testing the hypotheses separately for each of race, gender, and age diversity; thus, the familywise error rate is kept to a minimum (Howell, 1997). As recommended by Schippers et al. (2003), in order to ensure that the diversity scores for race, gender, and age were given equal weight in the overall demographic diversity index, we
first divided the score for each characteristic by the natural logarithm of the number of categories represented in that diversity characteristic (for example, two for gender).

As with age diversity, we indexed tenure diversity using departmental SD. In recognition of the fact that tenure is positively associated with age, and therefore that tenure diversity is positively associated with age diversity, when testing hypotheses involving tenure diversity we controlled for age diversity to ensure that results reflect the effects of tenure diversity and not age diversity.

**LMX.** We measured the quality of leader–member exchanges using an adapted version of the LMX-7 measure (Scandura & Graen, 1984), which purportedly has the highest average alpha of the LMX measures (Gerstner & Day, 1997). LMX items, which were assessed on a 5-point Likert-type scale, were answered by departmental employees. An example item is, “I feel that my manager recognizes my potential.” The reliability of the scale was \( \alpha = .94 \). Although it is technically not necessary to justify aggregation by showing that values for aggregation statistics satisfy recommended cutoff levels since variation around the mean (i.e., LMX differentiation) is also of interest in this study (Kozlowski & Klein, 2000), our calculations of the most commonly calculated aggregation statistics—the intraclass correlation coefficient (ICC) and within-group agreement (\( r_{wg} \))—indicated that there was sufficient within-department agreement on LMX to make the LMX mean a reliable and meaningful variable (ICC \(_1 = .09 \); ICC \(_2 = .62 \); \( r_{wg} = .67 \); Bliese, 2000). Consistent with precedent set by the most recent group-level LMX research (e.g., Ford & Seers, 2006; Liden et al., 2006; Schyns, 2006), we assessed LMX differentiation by calculating the within-department SD on the LMX-7 measure.

Turnover. Turnover was calculated with data provided by the participating organization. For each department, the organization provided information on the number of people who left each month as well as the reasons for their departure. Three researchers then independently coded the reasons into voluntary versus involuntary categories. The number of voluntary attritions in each department was then divided by the total number of employees in the department to arrive at a turnover rate for each month. Turnover rates across the 7 months following data collection were averaged to obtain a stable estimate of departmental turnover.

**Analyses**

To test the hypotheses, we used moderated regression with mean-centered predictor variables. Centering independent variables is important when testing interactions because it helps enhance the interpretability of the interactions (Aiken & West, 1991). In order to probe significant two-way interactions, we followed procedures recommended by Cohen, Cohen, West, and Aiken (2003): We examined the significance of the simple slopes representing the relationship between diversity and turnover at high (1 SD above the mean) and low (1 SD below the mean) values of the moderator. Following recent convention, when testing Hypothesis 2 in which LMX differentiation was the moderator of interest, we controlled for the effect of the LMX mean since the two are correlated (Liden et al., 2006). In addition, in order to account for the significant correlation between age diversity and tenure diversity (\( r = .19 \); \( p < .01 \)), we controlled for age diversity when testing hypotheses involving tenure diversity (Hypotheses 1b, 2b, and 3b).

When probing significant three-way interactions related to Hypothesis 3, we utilized techniques described by Dawson and Rich ter (2006) to test whether individual slopes differed from each other in ways we hypothesized, rather than test whether the simple slopes were significantly different from zero. In essence, this technique involves testing whether the ratio of the differences between a pair of slopes and its standard error differs from zero. In addition, since past research has shown that group size may affect group dynamics (e.g., Pelled, 1996), we controlled for departmental size in our analyses.

**Results**

Descriptive statistics for and correlations among unit-level variables are shown in Table 1. Note that the average group mean on LMX across all units in our sample was 3.63, with a SD of 0.60. Thus, in the results that we report, the groups that we refer to as having a “low group mean” on LMX are characterized by a group mean on LMX of 3.03 (1 SD below the mean), which is above the midpoint of the 5-point LMX scale. Although the mean LMX score of these groups is certainly low in a relative sense, it is important to keep in mind that a group LMX mean of 3.03 is not very low in an absolute sense.

**LMX Mean as a Moderator of Diversity Effects**

In Hypothesis 1, we predicted that the positive relationships between group diversity and turnover would be moderated by the group mean on LMX such that the relationship would be weaker when the group mean on LMX was high as opposed to low. As Table 2 illustrates, Hypothesis 1a involving demographic diversity

| Table 1 Descriptive Statistics and Correlations Among Study Variables |
|-----------------------------|---|---|---|---|---|---|
| Variable                    | 1  | 2  | 3  | 4  | 5  | M  | SD |
| 1. Group size               |   | 8.98| 7.70|   |   |   |   |
| 2. Demographic diversity    | .34** |   |   |   |   |   |   |
| 3. Tenure diversity         | .12*  | .16** |   |   |   |   |   |
| 4. LMX mean                 |   | -0.09| -0.10* | 0.05| -0.49** | 3.63| 0.60 |
| 5. LMX differentiation      | -1.11* | -0.09| -0.02| -0.11*| -0.49**| 0.90| 0.32 |
| 6. Turnover                 | .12*  | .17** | -0.05| -0.11*| -0.03 | 0.03| 0.03 |

Note. \( N = 348 \) departments. Higher diversity indices correspond to higher heterogeneity. LMX = leader–member exchange.

\( * p < .05 \). \( ** p < .01 \).
Hypothesis 1a and turnover when the group mean on LMX is low (β = −.11; \( \Delta R^2 = .01; p \leq .05 \)) and Hypothesis 1b involving tenure diversity (β = −.14; \( \Delta R^2 = .02; p \leq .01 \)) were both supported, as the negative regression coefficients for the interactions, suggesting that the relationship between diversity and turnover is weaker under conditions of high LMX mean for both forms of diversity.

The significant interaction involving LMX mean as a moderator of the relationship between demographic diversity and turnover is shown in Figure 1. An analysis of simple slopes revealed that the significant positive relationship between demographic diversity and turnover when the group mean on LMX is low (β = .05, \( p \leq .05 \)) is attenuated when LMX mean is high, as evidenced by the nonsignificant relationship between demographic diversity and turnover (β = .00, \( p \leq .05 \)). The significant interaction involving LMX mean as a moderator of the relationship between tenure diversity and turnover is shown in Figure 2. Although the negative coefficient for the interaction suggests that the relationship between tenure diversity and turnover is attenuated when the moderator, LMX mean, is high, the nuance of the relationship differed slightly from expectations. The expected positive relationship between tenure diversity and turnover was not significant, and the simple slope for the relationship between tenure diversity and turnover when LMX mean is low is not significantly different from zero (β = .01, \( p \geq .05 \)). When group mean on LMX is high, however, the relationship between tenure diversity and turnover is actually even more preferable than expected: It is negative (β = −.02, \( p \leq .05 \)), which suggests that when LMX mean is high, there is actually lower turnover in tenure diverse than in tenure homogeneous groups.

**LMX Differentiation as a Moderator of Diversity Effects**

The results involving LMX differentiation as the moderator in the diversity-to-turnover relationships are presented in Table 3. In support of Hypothesis 2a involving demographic diversity (β = .15; \( \Delta R^2 = .03; p \leq .01 \)) and Hypothesis 2b involving tenure diversity (β = .14; \( \Delta R^2 = .02; p \leq .01 \)).

### Table 2

**Regression Results Involving LMX Mean as a Moderator (Hypotheses 1)**

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Step 1 β</th>
<th>Step 2 β</th>
<th>Step 3 β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group size</td>
<td>.12*</td>
<td>.08</td>
<td>.07</td>
</tr>
<tr>
<td>Demographic diversity</td>
<td>.08</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>LMX mean</td>
<td>−.09</td>
<td>−.11*</td>
<td></td>
</tr>
<tr>
<td>Demographic Diversity × LMX Mean</td>
<td>.01</td>
<td>.03</td>
<td>.04</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.01</td>
<td>.03</td>
<td>.04</td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.01*</td>
<td>.02</td>
<td>.01*</td>
</tr>
<tr>
<td>Hypothesis 1b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group size</td>
<td>.08</td>
<td>.08</td>
<td>.07</td>
</tr>
<tr>
<td>Age diversity</td>
<td>.17**</td>
<td>.18***</td>
<td>.19**</td>
</tr>
<tr>
<td>Tenure diversity</td>
<td>−.09</td>
<td>−.08</td>
<td></td>
</tr>
<tr>
<td>LMX mean</td>
<td>−.09</td>
<td>−.11*</td>
<td></td>
</tr>
<tr>
<td>Tenure Diversity × LMX Mean</td>
<td>.04</td>
<td>.06</td>
<td>.08</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.04</td>
<td>.06</td>
<td>.08</td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.04**</td>
<td>.02*</td>
<td>.02**</td>
</tr>
</tbody>
</table>

*Note. \( N = 348 \) departments. LMX = leader–member exchange. 
* \( p \leq .05 \). \** \( p \leq .01 \)."
diversity ($\beta = .11; \Delta R^2 = .01; p \leq .05$), we found that high LMX differentiation exacerbates (or low LMX differentiation attenuates), the positive relationship between diversity and turnover as evidenced by the positive regression coefficients for the interaction terms. As Figure 3 illustrates, the interaction involving LMX differentiation as the moderator of the relationship between demographic diversity and turnover was consistent with what we had hypothesized. An analysis of simple slopes revealed a positive relationship between demographic diversity and turnover when LMX differentiation is high ($b = .06, p \leq .01$) and an attenuated, nonsignificant relationship when LMX differentiation is low ($b = -.01, p \geq .05$). In other words, turnover is higher in diverse groups in which leaders develop relationships of variable quality with followers, as compared with groups in which leaders develop relationships of comparable quality with followers.

Once again, the nuance of the relationship between tenure diversity and turnover as moderated by LMX differentiation was slightly different than expected, as illustrated in Figure 4, given the nonsignificant main effect of tenure diversity on turnover. An analysis of simple slopes revealed a nonsignificant relationship between tenure diversity and turnover when LMX differentiation is high ($b = .00, p \geq .05$), but a significant negative relationship between tenure diversity and turnover when LMX differentiation is low ($b = -.01, p \leq .05$). This figure shows that the relationship between tenure diversity is associated with lower turnover under conditions of low LMX differentiation than under conditions of high LMX differentiation, as expected, but rather than seeing a positive main effect attenuated by low LMX differentiation, we see evidence of a nonsignificant main effect becoming negative under conditions of low LMX differentiation.

**Interaction of LMX Mean, LMX Differentiation, and Diversity on Turnover**

In Hypothesis 3, we predicted that there would be a three-way interaction among diversity, group mean on LMX, and LMX differentiation in predicting group turnover. Specifically, we hypothesized that the interaction between diversity and LMX differentiation would be stronger when LMX mean is high as opposed to low. As seen in Table 4, Hypothesis 3a, involving demographic diversity, was supported ($\beta = .14; \Delta R^2 = .01; p \leq .05$), although Hypothesis 3b involving tenure diversity was not ($\beta = .08; \Delta R^2 = .00; p \geq .05$). The three-way interaction involving the group mean on LMX, LMX differentiation, and demographic diversity is depicted in Figure 5. The interaction between demographic diversity and LMX differentiation when LMX mean is high is depicted by the dashed lines, and the interaction between diversity and LMX differentiation when LMX mean is low is depicted by solid lines. In support of Hypothesis 3, the difference in the relationship between diversity and turnover when LMX differentiation is high versus low is more pronounced when LMX mean is high (the dashed lines) than when LMX mean is low (the solid lines). Indeed, an analysis of simple slopes revealed that the interaction of diversity and LMX differentiation is significant when LMX mean is high (Slopes 1 and 2; $t(340) = 3.55; p < .01$), but not when LMX mean is low (Slopes 3 and 4; $t(340) = .53; p > .10$).

We also proposed that the best case scenario would be for there to be low differentiation around a high LMX mean and that the worst case scenario would be for there to be high levels of differentiation around a high mean. Further look at Figure 5 indicates that this pattern was supported. Consistent with expectations, the positive relationship between demographic diversity and turnover is steepest in groups characterized by a high LMX mean and high LMX differentiation. In addition, the positive relationship was most attenuated—and in fact reversed to be negative—in groups characterized by a high LMX mean and low LMX differentiation.

Overall, this pattern indicates that the assumption that high group means on LMX are always good for the relationship between demographic diversity and turnover is problematic; if there is a lot of variance around a high mean, the relationship between demographic diversity and turnover is even worse than when all individuals experience low-quality relationships with the leader (i.e., low differentiation around a low mean). Indeed, simple slopes analysis revealed that the positive relationship between demographic diversity and turnover is significantly stronger when there is high differentiation around a high LMX mean (Slope 1) than when there is low differentiation around a low LMX mean (Slope 4; $r = 2.02; p < .05$).

**Discussion**

In response to calls in the diversity literature to develop theories that are more complex and that consider moderating variables in explaining the effects of diversity (e.g., Van Knippenberg &
Schippers, 2007), we proposed that group leaders are likely to have an important impact on the effect of group diversity on turnover through the quality of relationships that they develop with followers. Our results support this idea. We found that the positive relationship between demographic diversity and turnover is attenuated when the group mean on LMX is high, and the nonsignificant relationship between tenure diversity and turnover becomes negative when the group mean on LMX is high. We also found that

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Step 1 β</th>
<th>Step 2 β</th>
<th>Step 3 β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group size</td>
<td>.08</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>Demographic diversity</td>
<td>.08</td>
<td>.11</td>
<td>.16**</td>
</tr>
<tr>
<td>LMX mean</td>
<td>-.08</td>
<td>-.08</td>
<td>-.09</td>
</tr>
<tr>
<td>LMX differentiation</td>
<td>.03</td>
<td>.06</td>
<td>.06</td>
</tr>
<tr>
<td>Demographic Diversity * LMX Mean</td>
<td>-.03</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Demographic Diversity * LMX Differentiation</td>
<td>.16**</td>
<td>.17**</td>
<td></td>
</tr>
<tr>
<td>LMX Mean * LMX Differentiation</td>
<td>-.00</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Demographic Diversity * LMX Mean * LMX Differentiation</td>
<td></td>
<td></td>
<td>.14*</td>
</tr>
<tr>
<td>R²</td>
<td>.03</td>
<td>.06</td>
<td>.07</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.03*</td>
<td>.03*</td>
<td>.01*</td>
</tr>
</tbody>
</table>

Hypothesis 3b

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Step 1 β</th>
<th>Step 2 β</th>
<th>Step 3 β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group size</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
</tr>
<tr>
<td>Age diversity</td>
<td>.18**</td>
<td>.19**</td>
<td>.19**</td>
</tr>
<tr>
<td>Tenure diversity</td>
<td>-.09</td>
<td>-.09</td>
<td>-.05</td>
</tr>
<tr>
<td>LMX mean</td>
<td>-.07</td>
<td>-.08</td>
<td>-.08</td>
</tr>
<tr>
<td>LMX differentiation</td>
<td>.04</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>Tenure Diversity * LMX Mean</td>
<td>-.11</td>
<td>-.08</td>
<td></td>
</tr>
<tr>
<td>Tenure Diversity * LMX Differentiation</td>
<td>.06</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>LMX Mean * LMX Differentiation</td>
<td>-.01</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Tenure Diversity * LMX Mean * LMX Differentiation</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.06</td>
<td>.08</td>
<td>.08</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.06**</td>
<td>.02*</td>
<td>.00*</td>
</tr>
</tbody>
</table>

Note. N = 348 departments. LMX = leader–member exchange.

*p ≤ .05. **p ≤ .01.

Figure 5. Interaction of LMX mean, LMX differentiation, and demographic diversity on turnover. The interaction between demographic diversity and LMX differentiation when LMX mean is high is depicted by the dashed lines, and the interaction between diversity and LMX differentiation when LMX mean is low is depicted by solid lines.
the positive relationship between demographic diversity and turnover is attenuated when LMX differentiation is low, and the nonsignificant relationship between tenure diversity and turnover becomes negative when LMX differentiation in a group is low. Furthermore, we found support for a three-way interaction involving both the group mean on LMX and LMX differentiation as moderators of the relationship between demographic diversity and turnover. We found that the interaction between diversity and LMX differentiation is significant when LMX mean is high but not when LMX mean is low. Further, we found that the relationship between demographic diversity and turnover was negative in groups characterized by low differentiation around a high LMX mean, that is, when everyone within a group enjoys high-quality relationships with the leader. The relationship was the most strongly positive in groups with high LMX differentiation around a high group mean on LMX, suggesting that it is particularly harmful for group turnover when leaders develop high-quality relationships with most but not all followers. These findings highlight the importance of inclusive forms of leadership (Hollander, 2009).

**Theoretical Implications**

Our findings suggest that future research on the moderating role of both leaders and inclusion is warranted. It would be helpful to know, for example, which types of managers are more likely to engage in the type of power sharing that is characteristic of inclusive leadership (Hollander, 2009). Which leader traits and behaviors are associated with the development of high overall LMX relationships within diverse contexts? Furthermore, what other aspects of the organizational environment might contribute to employees’ feeling valued and included and therefore to employees’ being willing and capable of giving their maximum efforts toward collective organizational goals? According to O’Hara, Beehr, and Colarelli (1994), inclusion consists of decision-making influence, access to sensitive work information, and job security. Accordingly, we see inclusion in high-quality exchanges with leaders as one form of inclusion, since those individuals in high-quality LMX relationships are more likely to experience the three aspects of inclusion described by O’Hara and colleagues than individuals in low-quality LMX relationships. Nevertheless, the construct of inclusion in organizations needs to be further developed. For example, at the organizational level of analysis, which policies and practices are likely to create organizational climates for inclusion that moderate the effects of diversity? And are group managers more likely to engage in inclusive leadership when they work in organizations with inclusive climates?

In addition, although our research helped to establish the fact that patterns of LMX relationships within a group influence the relationship between group diversity and group turnover, more research is needed to understand why this is the case. For instance, our results indicate that in diverse groups, turnover is lower when there is low differentiation rather than high differentiation in LMX relationships. Is this because by establishing similar quality relationships with followers, leaders delegitimize power differentials and in turn facilitate interpersonal sharing and congruence among employees (Polzer, Milton, & Swann, 2002; Swann et al., 2000; Swann et al., 2003), as we have suggested? Future research designed to directly assess the impact of group-level LMX on power dynamics in groups is necessary before more definitive conclusions can be drawn.

Also needed is research examining whether employee reactions to leader differentiation are influenced by the criteria according to which employees think the manager is discriminating across employees. For example, differentiation based on employee ability or need may be more acceptable to employees than differentiation based on demographic or personality characteristics (cf. Liden et al., 2006). If a follower perceives that his manager has chosen to focus her energy on others, more needy followers, the effect of having a low-quality relationship with his manager may be less damaging to him than if he were to perceive that his manager had opted not to develop a high-quality relationship with him because she did not value him, his background, or his personality. The latter attribution is more likely to lower his morale and sense of self-worth, and his feelings of rejection are likely to impact his engagement with his work and coworkers. The alternative, in which managers choose to focus their energy on high-performers is also possible, and it is possible that employees are more accepting of differentiation when the pattern of differentiation can easily be attributed to differential employee ability or performance. Thus, future research in which employees’ perceptions about the bases for differentiation as well as their associated justice perceptions are assessed would be worthwhile.

A related issue has to do with the slightly different pattern of results that we observed for demographic versus tenure diversity. If, for a moment, we think of the term leader effect as referring to the hypothesized attenuating effect that a group leader can have on the relationship between diversity and turnover by exhibiting the more ideal pattern of high LMX mean or low LMX differentiation, we would see that for demographic diversity, the leader effect helped to attenuate a positive relationship with turnover into a nonsignificant one. For tenure diversity, the leader effect turned a nonsignificant relationship with turnover into a negative one. What might explain this differential pattern? A comparison of Figures 1a and 1b, and also Figures 2a and 2b, suggests that the general magnitude of the moderating effects of LMX mean and LMX differentiation are similar for demographic diversity and tenure diversity. The difference seems to stem instead from the nature of the relationship between diversity and turnover when LMX mean is low or LMX differentiation is high, that is, under conditions in which the desired leader effect does not occur. It appears that turnover is higher in demographically diverse than in tenure diverse groups, perhaps because the sociohistorical inequities associated with demographic differences that are imported into the group from society are so deeply rooted that they are associated with worse social disintegration and more intense emotions (Ridgeway, 1991). After all, to be considered low or high status within a work context on the basis of one’s ascribed characteristics—which are not work related and about which one can do nothing—seems particularly unfair. Power imbalances that exist as a result of job-related, achieved status may be more acceptable (e.g., Folger, 1994).
Our work also contributes to the LMX literature by adding to the growing body of work focused on the group level of analysis. Although in past research, demographic similarity between the leader and follower as an antecedent of LMX has been examined, research to date has not yet examined LMX within the context of group diversity. Thus, our research contributes to the LMX literature by suggesting that the interpretation and generalization of prior results at the group level may need to be tempered by considerations of group diversity, as we saw that the effects of LMX mean and differentiation on group outcomes depend on the level of diversity within a group. Our work also provides some of the first evidence that LMX mean and LMX differentiation interact in influencing outcomes, as we found support for a three-way interaction involving demographic diversity. Of the limited studies to date in which the interaction of LMX mean and LMX differentiation has been examined, only one that we know of (Boies & Howell, 2006) has shown evidence of a significant interaction.

In our research, we assessed LMX quality from the followers’ perspective, since it is a follower’s own view of whether he or she is involved in a high-quality relationships with the manager that drives subjective perceptions about status, inclusion, and worth within the group, and it is these perceptions that in turn moderate the relationship between group diversity and turnover. However, given research showing that leader and member reports of LMX quality are only correlated .29 (Gerstner & Day, 1997), it is important to address whether similar effects might be obtained if researchers used leader reports of LMX. We think it is possible that the effects could hold when leader ratings of LMX are used; however, we think it is likely that the effects are stronger when employee perceptions are used. The level of agreement between leader and follower reports of LMX may itself be important, such that the moderating effects of LMX in diversity-to-outcome relationships may be stronger when leaders and followers agree about LMX than when they disagree. We focused on employee perceptions of LMX because we think this approach makes the most theoretical sense, but it would be interesting to examine leader reports and leader–follower agreement on LMX in future research.

**Practical Managerial Implications**

Our results indicate that human resource and organizational leaders need to be aware that contrary to what they might expect, high-quality LMX relationships can lead to higher levels of turnover, depending on their distribution within departments. Although leaders who facilitate high levels of power sharing within their groups by developing consistently high-quality LMX relationships with their followers help to attenuate or even reverse the positive relationships between diversity and turnover, leaders who are inclusive of only a select few followers may actually exacerbate the relationship between diversity and turnover. Given prior evidence that LMX has important implications for individual-level engagement (Gerstner & Day, 1997), combined with these results about the implications of group-level LMX on group processes and turnover, it may behoove organizations to include measurements of LMX in their employee surveys. This would allow them to identify groups within which detrimental patterns of LMX have formed, such as when only a select few are included in a leader’s high-quality exchanges, and encourage the managers of those groups to develop more consistently high-quality LMX relationships with followers. It may be that managers are simply unaware of the effects that the pattern of their LMX relationships may be having on group processes and turnover. Of course, we must also recognize the possibility that some of the turnover observed is functional turnover. That is, managers may opt to develop high-quality LMX relationships with most of their followers except the especially low-performing or problematic employees. In turn, it may be these employees who turn over, and such turnover would be desired and functional.

However, given the importance of turnover for valued organizational outcomes, our results are suggestive of the value of actively managing the quality of LMX relationships within organizational units through training. Diversity training should be expanded beyond traditional foci of addressing individuals’ stereotypes and assumptions to also training managers on the advantages and disadvantages associated with various patterns of within-group LMX relationships. By training managers to understand the characteristics associated with high-quality LMX relationships, managers in diverse organizations may be able to make a significant difference in improving the relationships between group diversity and outcomes. Some research suggests that the managerial behaviors associated with creating a work environment that values diversity overlap with those characteristic of high-quality LMX relationships. Chrobot-Mason (2004), for example, found that managers who were trained to exhibit diversity role behaviors, such as making an attempt to personally get to know each of their employees, attempting to remove barriers for all employees, and refraining from using language that would exclude some employees but not others, were much more likely to be rated as developing high-quality relationships with employees characterized by trust and mutual sharing (r = .80). Thus, combining traditional diversity training with LMX training may represent a seamless and logical next step. There is research that shows that managers can indeed be trained to develop high-quality LMX relationships and that the employees of LMX-trained managers benefit in significant ways, such as increased productivity, loyalty toward the leader, satisfaction, and intrinsic motivation, as well as reduced job problems and stress (Graen, Novak, & Sommerkamp, 1982). Researchers who build on this work and examine the benefits of combined diversity and LMX training for diverse groups would be providing valuable information for both research and practice.

The consistent results that we found involving turnover as the dependent variable of interest have important practical implications despite the fact that the variance accounted for by the inclusion of LMX as a moderator of the diversity to turnover relationship was often rather small ($R^2 = .01-.03$). First, it is important to point out that small effect sizes are not uncommon for interactions (Aguinis, Beatty, Boik, & Pierce, 2005). Moreover, even small effect sizes can have an important practical influence (e.g., Abelson, 1985; Aguinis et al., 2005; Prentice & Miller, 1992). According to the U.S. Department of Labor (2008), the costs of turnover include administrative costs, coworker costs, advertising and temporary agency fees, selection and orientation costs, and lost productivity. The cost of turnover for sales positions is estimated to be as high as 200–250% of annual pay (Bliss, n.d.). Annual compensation figures for employees participating in our research were not available, but according to the Bureau of Labor Statistics (U.S. Department of Labor, 2009), the average entry supermarket employee makes roughly $17,069 a year. Assuming
that turnover costs are 200% of annual compensation, this suggests
that for every employee who leaves, the cost to the organization is,
at a minimum, $34,138. If costs are greater than 200% or the
employees leaving earn more than $17,069 due to tenure, the cost
of turnover would be even higher. In the case of the three-way
interaction, when there is high differentiation around a high mean,
the turnover rate is .054, as compared with a rate of .030 when
there is low differentiation around a high mean. With an average
department size of nine employees, this difference in turnover rate
of .024 translates into a difference of $7,373.75/month (9 employ-
ees * .024 turnover rate * $34,138/replaced employee) or $88,485/
year per department. Across the 348 departments that participated
in our research, the cost difference is substantial.

Limitations

As with any study, our research has some limitations. First,
although we were fortunate to secure a large group-level data
sample, our sample was rather homogeneous in terms of race/
ethnicity. It is difficult to know how this may have affected our
results, but research conducted on more diverse samples is needed
before our results can be generalized with confidence. Some re-
search, for example, has found that the outcomes of racial diversity
tend to be more negative in homogeneous than heterogeneous
contexts (Martins et al., 2003), and thus it may be the case that in
more heterogeneous contexts, the observed positive relationship
between racial diversity and turnover may be less pronounced.
In addition, our within-department response rate was 46%; given the
assumption that group diversity measures should accurately reflect
the level of diversity within a group (i.e., based on attribute data
from each group member), missing data could potentially be
problematic. Findings from a recent simulation study by Allen,
Stanley, Williams, and Ross (2007) aimed at understanding the
impact of missing data on group diversity effects, however, sug-
gest that low within-group response rates like those found in our
study tend to lead to underestimated rather than overestimated
correlations. Thus, if anything, our sample may have provided a
conservative test of our hypotheses.

Second, our ability to interpret the significant results is limited
by the fact that we were not able to collect data on mediating
variables, due to length restrictions on our survey. We proposed
that the pattern of LMX relationships within a group would influ-
ence the relationship between diversity and turnover because it
sends important messages about the status of followers and also
helps set norms regarding inclusion, power sharing, and contribu-
tion within a group. Although our results are generally indicative
of such an effect, until follow-up research in which the influence
of LMX patterns on group norms, communication, cohesion, con-
flict, information elaboration, and the like, we are limited in our
ability to draw more definitive conclusions about why LMX mod-
erates the diversity to turnover relationship. We urge researchers
to extend this research by examining more proximal dependent vari-
ables than turnover; such an extension may lead to larger effect
sizes.

Third, we only examined surface-level diversity in our research,
and with the exception of our three-way interaction for which we
found significant results involving only demographic diversity, the
pattern of results was the same for demographic diversity and tenure
diversity. Research has shown, however, that over time, deep-level
diversity such as personality or values diversity, may have stronger
effects on group outcomes than surface-level diversity (e.g., Harrison
et al., 1998). We proposed that the pattern of LMX relationships that
a leader develops with his or her employees will send important
signals to unit members regarding the relative value and status of
employees and their associated group memberships (e.g., race/
ethnicity, gender, age, tenure). Assuming this is indeed one of the key
mechanisms through which LMX has a moderating influence on
diversity to outcome relationships, it is uncertain whether LMX would
have a strong moderating role on relationships between deeper
level diversity and performance, since personality and values tend not
to be as clearly associated with societal, institutional, and organiza-
tional status differences. Of course, future research is necessary to see
whether this is in fact the case.

Conclusions

The changing demographics of today’s workforce make man-
aging diversity effectively a key strategic issue for organizations.
The premise of the current research is that leadership—
specifically, inclusive forms of leadership—is critical for success-
fully leveraging diverse human capital. In addition to the moral
argument for developing an inclusive work environment, the re-
results of the present research suggest that inclusive leaders can also
help the bottom line.

References

Abelson, R. P. (1985). A variance explanation paradox? When a little is a

and power in assessing moderating effects of categorical variables using
multiple regression: A 30-year review. Journal of Applied Psychology, 90,
94–107.


Alderfer, C. P. (1992). Changing race relations embedded in organizations:
Report on a long-term project with the XYZ Corporation. In S. E.
Jackson and Associates (Eds.), Diversity in the workplace: Human
resources initiatives (pp. 138–166). New York: Guilford Press.

Alderfer, C. P., & Smith, K. K. (1982). Studying intergroup relations embed-

ethnicity for understanding organizational behavior. In C. Cooper and I.
Robertson (Eds.), International review of industrial and organizational
psychology (pp. 1–41). Chichester, England: Wiley.

and hospital efficiency: An organization-level analysis. Industrial Rela-
tions, 33, 505–520.

Assessing the impact of nonresponse on work group diversity effects.
Organizational Research Methods, 10, 262–286.


performance and turnover. Academy of Management Journal, 37, 670–
687.

in organizational models and employee turnover in young, high-tech


DIVERSITY, LMX, AND GROUP TURNOVER


