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

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Abstract

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 hypothesize 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 high. Results from a sample of supermarket departments ($N = 348$) yielded general support for the study hypotheses. We also found evidence for a three-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.

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

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 paper, the group performance indicators of interest to scholars and practitioners include both group-produced outcomes such as problem solving, as well as 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 accumulation of findings has been equivocal, leading Van Knippenberg and Schippers (2007, p. 518-519) to conclude in their recent Annual Review of Psychology paper that,

“the 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.”

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, Miliken, Wiesenfeld, & Salgado, 2003; Webber & Donahue, 2001; Williams & O'Reilly, 1998) have argued for the importance of considering moderators in the diversity to outcomes relationships, empirical research devoted to moderators has been scarce, especially compared to research on mediators of this 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 there are likely to be a number of other important moderators (Joshi & Roh, in press), particularly ones that are more relational in nature. In this study, we focus on the moderating role of leaders.

Even though abundant research has shown that leaders are highly influential in shaping team processes and outcomes (Zaccaro, Rittman, & Marks, 2001), and therefore may very well influence the nature of the relationship between group diversity and outcomes, research on the role of leaders in diverse groups remains largely unexplored. As DiTomaso and Hooijberg 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” (1996, p. 163). The very important responsibility that leaders have to shape intragroup processes and outcomes associated with diversity through their own behaviors 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 & Gebert, 2009, for a notable exception). Do leaders influence the outcomes associated with diversity in groups? If so, in what ways?

In an attempt to explore this question, we focused in this study on 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 group *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). We focus on turnover as the outcome of interest, as it is well established as being an important outcome of diversity (Williams & O’Reilly, 1998). Overall, research has shown that members of diverse groups tend to experience lower levels of satisfaction and positive affect than members of homogeneous groups (Levine & Moreland, 1990; O’Reilly, Caldwell & Barnett, 1989), and therefore turn over faster (Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991; Williams & O’Reilly, 1998). The most often cited explanation for this draws upon social categorization and social identity theories according to which diversity traits are thought to trigger categorization processes that distinguish one’s ingroup from outgroups; processes that lead to ingroup favoritism and problematic inter-subgroup relations, that in turn result in lower commitment (Riordan & Shore, 1997) and group cohesion (O’Reilly et al., 1989), and higher relational conflict (Jehn et al., 1999) and turnover (Wagner, Pfeffer, & O’Reilly, 1984). Another

explanation for why diverse groups tend to suffer from higher levels of turnover is that diversity is associated with power imbalances that are introduced by differences in ascribed and/or achieved status (Jackson, 1996; Ridgeway, 1987), and that these power imbalances in turn affect group communication, resource allocations, negotiations, and influence attempts in such a way 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 serve to redistribute the group's power, or delegitimize perceived power imbalances and promote greater power sharing, should help to improve group processes and reduce group turnover (Alderfer, 1992; Zimmer, 1988).

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 and select replacement personnel, the disruption of operations that occur when remaining employees experience difficulty in completing their work without the departed employee with whom they were interdependent, and demoralization of remaining employees (Staw, 1980). In addition, costs continue to accrue once replacement individuals are hired, as they undergo formalized training, coworkers spend time socializing them, and newly hired employees perform at levels below that of the departed employee (Staw, 1980).

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. Our focus on the patterns of inclusion that group leaders create through their leader-member relationships contributes to a growing discussion on the

importance of organizational inclusion (Holvino, 1998; Holvino, Ferdman, & Merrill-Sands, 2004; Roberson, 2006). Scholars have suggested that in order for the potentially negative outcomes of diversity – such as turnover – to be minimized and the positive benefits of diversity to be leveraged, diverse employees need to not only be hired and retained, but also integrated into the social fabric of the organization (Cox, 1994; Thomas & Ely, 1996) and be given opportunities to meaningfully contribute their opinions and experiences (Van Knippenberg, De Dreu, & Homan, 2004). Yet despite agreement about the importance of inclusion, few empirical tests of it have been conducted. Although inclusion is likely a multi-level construct, at the unit-level, inclusion as experienced by employees varies as a function of the interpersonal context that is shaped by the unit leader (see Zohar, 2000, 2002), in particular according to the pattern of LMX relationships that a leader develops with followers. As Scandura (1999, p. 32) summarizes, “based upon the quality of the relationship that emerges [between a leader and follower], a decision is made regarding each members’ ingroup/outgroup status in the work group.”

As we describe below, the purpose of this paper is 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* (as it is referred to in LMX nomenclature) 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 that examines 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. Third, consistent with many 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 – from diversity that is lower in visibility but higher in job relatedness, such as *tenure* diversity (Pelled, 1996; Tsui, Egan, & O’Reilly, 1992), we

examine 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 examine LMX at the group level of analysis, and focus on a group outcome rather than individual outcomes, and examining the possibility that mean levels of LMX and LMX differentiation interact with diversity to influence group turnover.

Finally, we utilize an objective measure of actual turnover. We do 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 examines 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), group 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). We consider our focus on turnover as a contribution to research on the bottom-line outcomes associated with diversity based on research that has consistently supported a negative relationship between turnover and valued unit-level outcomes such as operational efficiency (Alexander, Bloom, & Nuchols, 1994), manufacturing performance (Arthur, 1994), wage costs (Balkin & Gomez-Mejia, 1984), revenue growth (Baron, Hanna, & Burton, 2001), sales (Kacmar, Andrews, Van Rooy, Steilberg, & Cerrone, 2006; Mc Elroy, Morrow, & Rude, 2001), as well as productivity (Huselid, 1995; Shaw, Gupta, & Delery, 2005). We measured actual turnover rather than turnover intentions, the latter of which are only predictive of actual turnover under some conditions (Vandenberg & Nelson, 1999) as evidenced by the only moderately strong ($r = .45$) correlation between turnover intentions and actual turnover (Griffeth, Hom, & Gaertner, 2000).

Study Hypotheses

Group Diversity and Turnover

Although our main focus in this study is on the moderating effects of group LMX on the relationship between diversity and turnover, and we agree with others' claims about the overly simplistic and defunct "main effects" models in diversity research, we nevertheless begin with a discussion of the direct relationship between diversity and turnover. In studying the outcomes associated with diversity, past researchers either have studied each demographic diversity variable separately, or have examined some aggregate index of overall diversity within a group. The former approach allows researchers to examine whether there are meaningful 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 follow the advice of Zenger and Lawrence (1989) and take a middle-ground approach. We treat variables that are similar in terms of visibility and job relatedness as a set because they are expected to exert common effects, and examine them separately from diversity characteristics that differ on these properties. We thus distinguish in our study between diversity in visible, immutable *demographic* characteristics that are low in job relatedness, including 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).

It is important to point out that 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 lumped together with race and gender as representing visible characteristics that are low in job relatedness (e.g., Pelled et al., 1999; Sessa & Jackson, 1995). Even though people of the same race, gender, and/or age may share overlapping experiences that lead to general attitudinal similarity, these shared experiences will not necessarily be job-related; there is no reason to expect that there is a racial minority's approach to sales, or a woman's approach to stocking inventory (cf. Zenger & Lawrence, 1989). Although, as will become evident below, we

propose identical hypotheses for the moderated effects of LMX on the relationship between demographic and tenure diversity and turnover, we keep them separate in our analyses for two reasons: to account for the possibility that they may exhibit relationships with turnover that vary in strength due to differences in visibility and job relatedness; and in recognition of scholars' interests in researching and discussing these two classes of diversity types separately.

Demographic diversity and turnover. Research suggests that demographic diversity is positively associated with turnover (Jackson et al., 1991; O'Reilly et al., 1989; Tsui et al., 1992; Wagner et al., 1984; Wiersema & Bird, 1993). According to *social categorization theory*, people utilize 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 negative intragroup processes such as 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 (Knottnerus, 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 even if the characteristics may not be relevant to the work being conducted (Ridgeway, 1987).

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 one's 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 one's 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). When mixed with individuals who are newer to an organization and therefore different and more willing to challenge the status quo, tenure diverse groups suffer from greater communication problems (McCain et al., 1983; Smith et al., 1994; Zenger & Lawrence, 1989) and lowered levels of trust and cooperation (O'Reilly, Snyder, & Boothe, 1993), all which can lead to higher turnover (Jackson et al., 1991; McCain et al., 1983; O'Reilly et al., 1989; Wagner et al., 1984). This research led Williams and O'Reilly (1998) to conclude in their seminal literature review 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 based on group members' expectations about people's differential capacity to further the group's goals. More seasoned employees are conferred higher status because their 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 (Hambrick & 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 tend to exert influence over lower-status members (Levine & Moreland, 1990), lower-status members tend to participate less in decision-making, become more frustrated, and ultimately withdraw from the group, as evidenced in higher levels of group turnover (Jackson, 1996).

Moderating Role of LMX on the Diversity to Turnover Relationship

Given past research, that suggests that social integration can deteriorate as a function of the social categorization processes and power struggles that are triggered by diversity, moderators that serve to attenuate these negative group dynamics should improve the relationship between diversity and turnover. We expect that the pattern of LMX relationships that a group leader develops with followers is one such moderator that will influence the relationship between diversity and turnover. 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, s/he confers high status to that employee (Liden, Erdogan, Wayne, & Sparrow, 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). Not surprisingly, then, 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 larger group. First, we discuss the moderating role of the overall quality of LMX relationships with a group, or the group mean on (employees' reports of) LMX, then we discuss the moderating role of LMX differentiation, or the within-group standard deviation on LMX, on the relationship between group diversity and turnover. Finally, we present our hypotheses for a three-way interaction involving LMX mean, LMX differentiation, and diversity.

LMX mean. When leaders establish high-quality relationships with followers, they provide “safe passages” (DiTomaso & Hooijberg, 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 with greater discretion should be more able to engage in greater team reflexivity, or the careful consideration of 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 their group managers, 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 more likely it is for them to feel engaged, included, and less likely to turnover. Accordingly, we expect that in groups characterized by a high LMX mean, the positive relationship between diversity and turnover should be attenuated when compared to groups characterized by a low group mean on LMX:

Hypothesis 1a/b: The positive relationship between (demographic/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). Although the initial conceptualization of LMX viewed differentiation as descriptive (i.e., this is what leaders do) as opposed to prescriptive (i.e., this is what leaders should do), 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 social resources, it is unlikely for a leader to be able to develop and maintain high-quality exchanges with all followers and thus they should invest their time and resources into their most promising employees. 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 at large. 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 and turnover will suffer (Liden et al., 2006). In particular, outgroup members' feelings of resentment and exclusion can hamper group cooperation

(Colquitt, Noe, & Jackson, 2002), identification, harmony, and cohesion (Cogliser & Schriesheim, 2000; Ford & Seers, 2006; Schyns, 2006), and make group members less willing to exert effort toward group goals (Liden et al., 2006). Furthermore, since differentiation has been associated with perceptual disagreement about the work climate (Ford & Seers, 2006), it is less likely that group members will be able to work effectively together toward the accomplishment of group goals.

Although it is true that we might expect a direct negative effect of LMX differentiation on group turnover, we expect LMX differentiation to matter more for turnover in diverse than 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. By treating followers similarly (i.e., developing similar quality LMX relationships), leaders have the potential to alter rather than reinforce pre-existing status and power distinctions such that employees interact with one another on a level playing field. Indeed, an important aspect of expectation states theory is that 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 them, 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 expect that by developing LMX relationships of similar quality with followers, group managers can 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. By conferring similar status to followers, group managers signal that despite their differences, group members are similarly valued. As a result, the expected positive relationship between diversity and turnover should be reduced when LMX differentiation is low, as compared to diverse groups

that are characterized by high LMX differentiation. In homogeneous groups, there is less reason to expect pre-existing status distinctions, and therefore less of a role for leaders to play in legitimizing or delegitimizing power imbalances and therefore influencing associated levels of turnover. Therefore, we expect LMX differentiation to play less of a role in influencing turnover in homogeneous groups. Taken together, we hypothesize:

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

Interaction of LMX mean, LMX differentiation, and diversity on turnover. We just proposed that in diverse groups, low LMX differentiation should help to reduce turnover because by treating followers similarly, group leaders are less likely to reinforce and legitimize pre-existing status and power differentials. Here, we further argue that turnover should be lowest in diverse groups that are characterized by low LMX differentiation around a high LMX mean. This notion is consistent with LMX theory which states that workgroup outcomes can be improved when leaders establish consistently positive relationships with followers (Graen, Novak, & Sommerkamp, 1982). To suggest that the positive effects of high LMX mean in diverse groups – such as greater felt psychological safety, discretion, and motivation to overcome diversity-related group disintegration - are most likely to accrue when there is low differentiation around that mean is not surprising (i.e., high diversity x high LMX mean x low LMX differentiation three-way interaction). In these groups, we can expect decision making to be most decentralized, and for power sharing to be the most egalitarian, since low levels of LMX differentiation mean the reduction or elimination of leader-legitimized status differentials. Indeed, in such groups, it is likely for group morale to be high and group conflict to be low (Boies & Howell, 2006) because employees will feel similarly well treated by their supervisors and will therefore feel reassured that their interests will be advanced through group membership (cf. Colquitt et al., 2002) despite their demographic differences. Unfortunately, however, the

optimal case in which a leader develops high-quality relationships with all of his/her followers (i.e., low differentiation around a high mean) is not always achieved, and we expect the group mean on LMX and LMX differentiation to interact with group diversity in meaningful ways to affect group turnover.

First, in the context of a *high group mean on LMX*, we expect the positive relationship between diversity and turnover to be weaker when there is low as compared to high LMX differentiation. This is because low differentiation around a high LMX mean represents the best-case scenario: the leader signals his/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/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*, we once again expect the positive relationship between group diversity and turnover to be stronger when LMX differentiation is high as compared to low, since high levels of differentiation will fail to neutralize or delegitimize diversity-related power differentials. At first this may appear counter-intuitive 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 *homogeneous* 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, since diverse groups are predisposed to experience status hierarchies and power struggles, we expect 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. However, we do not expect high LMX differentiation around a *low* LMX mean to exacerbate the relationship between diversity and turnover as much as would be the case for high LMX mean. 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 unfortunate employees experience low-quality exchanges (i.e., high LMX differentiation). According to Hollander's (2009) inclusive leadership theory, in such cases, follower reactions 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 hypothesize:

Hypothesis 3a/b: The positive relationship between (demographic/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

The hypotheses were tested utilizing data from employees that were nested within

departments (e.g., grocery, meat, produce) in a large supermarket chain in the United States. A total of 4500 employees voluntarily responded to a survey during working hours (40% response rate), and to assure respondents of the confidentiality of their responses, all completed surveys were sent directly to the first author. Of them, 38% were male and 81% were Caucasian. 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 which ranged in size from 5-64 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 respondents in response to questions with nominal (race and gender) or ordinal (age and tenure) options. Age diversity was indexed 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 $1 - \sum p_k^2$, where p is the proportion of unit members in the k^{th} 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

indexes to create an overall *demographic* diversity measure for the sake of parsimony (e.g., Jehn 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 using an overall demographic diversity measure involves fewer regressions than testing the hypotheses separately for each of race, gender, and age diversity; thus, the family wise 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).

Like age diversity, tenure diversity was also indexed using departmental SD. In order to recognize the fact that tenure is positively associated with age, and therefore tenure diversity 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. The quality of leader-member exchanges was measured 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 recommend 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 (rwg_j) – indicated that there was sufficient within-department agreement on LMX to make the LMX mean a reliable and meaningful variable ($ICC_1 = .09$; $ICC_2 = .62$; $rwg_j = .67$; 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 standard deviation (SD) on the LMX-7 measure.

Turnover. Turnover was calculated using 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 seven months following data collection were averaged to obtain a stable estimate of departmental turnover.

Analyses

To test the hypotheses, we used moderated regression using mean-centered predictor variables. Centering independent variables is important when testing interactions because it helps enhance the interpretability of the interactions and because it helps to reduce multicollinearity that is introduced into the regression equations due to the scaling of the independent variables (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 (one SD above the mean) and low (one 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 Richter (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 standard deviation of .60. Thus, in the results that we report below, 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 (one standard deviation below the mean), which is above the mid-point 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 ($\beta = -.11$; $\Delta R^2 = .01$; $p \leq .05$), and Hypothesis 1b involving tenure diversity ($\beta = -.14$; $\Delta R^2 = .02$; $p \leq .01$) were both supported, as the negative regression coefficients for the interactions, suggest 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 ($b = .05$, $p \leq .05$) is attenuated when LMX mean is high, as evidenced by the non-significant relationship between demographic diversity and turnover ($b = .00$, $p \geq .05$). 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 ($b = .01, p \geq .05$). 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 ($b = -.02, p \leq .05$), suggesting when LMX mean is high, there is actually lower turnover in tenure diverse than 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 ($\beta = .15; \Delta R^2 = .03; p \leq .01$) and Hypothesis 2b involving tenure 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, non-significant 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 to 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 non-significant main effect of tenure diversity on turnover. An analysis of simple slopes revealed a non-significant 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 non-significant 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 interaction between diversity and LMX differentiation as evidenced by 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 ; $t = 3.55$; $p < .01$), but not when LMX mean is low (slopes 3 and 4; $t = .53$; $p > .10$).

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; $t = 2.02$; $p < .05$).

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 non-significant relationship between tenure diversity and turnover becomes negative when the group mean on LMX is high. We also found that the positive relationship between demographic diversity and turnover is attenuated when LMX differentiation is low, and the non-significant 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 unless a leader is capable of developing high-quality

relationships with all of his/her followers, it may be better – at least within a demographically diverse environment – not to develop high-quality relationships with any. Of course, future research would need to confirm these findings before such a recommendation was advocated.

Theoretical Implications

Our work contributes to the diversity and LMX literatures in a number of ways. First, our theory and results help to illuminate the important moderating role of group leaders in the diversity to performance relationship. Rather than focus on task-features such as task type and task interdependence as past research has done, we focused instead on a new area within diversity research and found that, consistent with our expectations, the pattern of inclusion that leaders create through the relationships that they develop with their followers has a significant impact on the relationship between diversity and turnover.

Our findings suggest that future research that further examines the moderating role of both leaders and inclusion is warranted. It would be helpful to know, for example, what types of leaders are more likely to develop high-quality LMX relationships with all of their followers – that is, what 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 willing and capable of contributing maximally toward collective organizational goals? According to O'Hara and colleagues (O'Hara, Beehr, & 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, what policies and practices are likely to create organizational climates for inclusion that moderate the effects of diversity?

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 similar levels of acceptance by the manager help to break down status differences, which in turn facilitate interpersonal sharing and congruence (Polzer et al., 2002; Swann et al., 2003; Swann et al., 2000) among employees? And when leaders do differentiate, are reactions to that differentiation 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 other, 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 has opted not to develop a high-quality relationship with him because she does 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 performance. Thus, future research that assesses employees' perceptions about the bases for differentiation, as well as their associated justice perceptions, 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 "leader effect" to refer 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 instead of the reverse conditions of low LMX mean or high LMX differentiation, we saw that for demographic diversity the leader effect was to help attenuate a positive

relationship with turnover into a non-significant one. For tenure diversity, the leader effect was to turn a non-significant 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 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 when the desired leader effect does not occur. It appears that turnover is higher in demographically diverse than tenure diverse groups, perhaps because the socio-historical inequities associated with demographic differences are so deeply rooted that they are associated with worse social disintegration and more intense emotions. After all, to be considered low or high status within a work context based on one's ascribed characteristics (about which one can do nothing) seems particularly unfair. Thus, when in a low mean LMX group a lack of high-quality LMX relationships fails to improve psychological safety, or in high LMX differentiation groups when the leader fails to delegitimize bases for such status imbalances, turnover tends to be higher than is the case in groups that differ in tenure, which is a form of ascribed status. Indeed, it is likely that power imbalances that exist as a result of job-related, achieved status are more acceptable to people than are power imbalances that exist as a result of non job-related, ascribed status characteristics (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 past research has examined demographic similarity between the leader and follower as an antecedent of LMX, 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 context, 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 important ways in influencing outcomes, as we found support for a

three-way interaction involving demographic diversity. Of the limited studies that have examined the interaction of LMX mean and LMX differentiation to date, only one that we know of (Boies & Howell, 2006) has found evidence of a significant interaction so far.

In our research we assessed LMX quality from the followers' perspective, since it is a follower's own view of whether s/he 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 which has found 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 when using leader reports of LMX. We think it is possible that the effects could hold when using leader ratings of LMX; however, we think it is likely that the effects are stronger using employee perceptions. 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 HR 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. Procedural checks and balances should be put into place to minimize the undesirable effects on turnover that may surface when only a select few are included in a leader's high-quality exchanges. Others have similarly argued that the development of selective high-quality LMX relationships can lead to perceptions of injustice, particularly for those individuals who experience low-quality LMX relationships (Liden et al., 2006; Uhl-Bien, Graen, & Scandura, 2000). If those individuals with whom a group manager establishes relatively low quality LMX relationships also happen to belong to lower-status

demographic or tenure groups, LMX differentiation could legitimize and perpetuate bias against traditionally disadvantaged groups and exacerbate dysfunctional group processes and outcomes. 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. Future research that assesses employee reactions to patterns of LMX would help tease apart instances in which LMX differentiation is associated with perceptions of bias and exclusion from those in which LMX differentiation is considered functional.

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, Beaty, 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; 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% to 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 (2008-2009), 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 a *minimum* of \$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 to a rate of .030 when there is low differentiation around a high mean. With an average department size of 9 employees, this difference in turnover

rate of .024 translates into a difference of \$7,373.75/month (9 employees * .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.

Given the importance of turnover for valued organizational outcomes, our results are suggestive of the value of going beyond a system of checks and balances to actively and explicitly 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 one's employees, attempting to remove barriers for all employees, and refraining from using language that will 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 on how 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 et al., 1982). Future research that builds on this work and that examines the benefits of combined diversity and LMX training for diverse groups would be valuable for both research and practice.

Limitations

As with any study, there are some limitations associated with our research. 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 future research conducted on more diverse samples is needed before our results can be generalized with confidence. Some research, 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. A recent simulation study by Allen, Stanley, Williams, and Ross (2007) aimed at understanding the impact of missing data on group diversity effects, however, suggests that low within-group response rates like that found in our study, tend to underestimate rather than overestimate 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 influence 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 contribution within a group. Although our results are generally indicative of such an effect, until follow-up research that assesses the influence of LMX patterns on group norms, communication, cohesion, conflict, information elaboration, and the like is conducted, we are limited in our ability to draw more definitive conclusions about *why* LMX moderates the diversity to turnover relationship. We urge researchers to extend this research by examining more proximal dependent variables than turnover; an extension which 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 only found significant results involving 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/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 as strong a 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 organizational 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 managing 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 successfully leveraging diverse human capital. In addition to the moral argument for developing an inclusive work environment, the results of the present research suggest that inclusive leaders can also help the bottom-line.

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Table 1

Descriptive Statistics and Correlations Among Study Variables

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Group Size	8.98	7.70					
2. Demographic Diversity	.41	.19	.34**				
3. Tenure Diversity	1.24	.44	.12*	.16**			
4. LMX Mean	3.63	.60	-.09	-.10*	.05		
5. LMX Differentiation	.90	.32	.11*	.09	-.02	-.49**	
6. Turnover	.03	.03	.12*	.17**	-.05	-.11*	.08

n = 249-348 departments

Higher diversity indices correspond to higher heterogeneity

** $p \leq .01$

* $p \leq .05$

Table 2

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

Predictor Variables	Dependent variable: Turnover		
	Step 1 β	Step 2 β	Step 3 β
<i>Hypothesis 1a</i>			
Group Size	.12*	.08	.07
Demographic Diversity		.08	.10
LMX Mean		-.09	-.11*
Demographic Diversity * LMX Mean			-.11*
R^2	.01	.03	.04
ΔR^2	.01*	.02	.01*
<i>Hypothesis 1b</i>			
Group Size	.08	.08	.07
Age Diversity	.17**	.18**	.19**
Tenure Diversity		-.09	-.08
LMX Mean		-.09	-.11*
Tenure Diversity * LMX Mean			-.14*
R^2	.04	.06	.08
ΔR^2	.04**	.02*	.02**

 $n = 249-348$ ** $p \leq .01$ * $p \leq .05$

Table 3

Regression Results Involving LMX Differentiation as a Moderator (Hypotheses 2)

Predictor Variables	Dependent variable: Turnover		
	Step 1 β	Step 2 β	Step 3 β
<i>Hypothesis 2a</i>			
Group Size	.11*	.06	.04
LMX Mean	-.10	-.07	-.07
Demographic Diversity		.14*	.16**
LMX Differentiation		.03	.06
Demographic Diversity * LMX Differentiation			.15**
R^2	.01	.02	.05
ΔR^2	.01*	.01	.03**
<i>Hypothesis 2b</i>			
Group Size	.07	.07	.07
Age Diversity	.17**	.18**	.18**
LMX Mean	-.10	-.07	-.08
Tenure Diversity		-.09	-.10
LMX Differentiation		.04	.05
Tenure Diversity * LMX Differentiation			.11*
R^2	.05	.06	.07
ΔR^2	.05**	.01	.01*

 $n = 249-348$ ** $p \leq .01$ * $p \leq .05$

Table 4

Regression Results Involving LMX Mean and LMX Differentiation as Moderators (Hypotheses 3)

Predictor Variables	Dependent variable: Turnover		
	Step 1 β	Step 2 β	Step 3 β
<i>Hypothesis 3a</i>			
Group Size	.08	.06	.05
Demographic Diversity	.08	.11	.16*
LMX Mean	-.08	-.08	-.09
LMX Differentiation	.03	.06	.06
Demographic Diversity * LMX Mean		-.03	.04
Demographic Diversity * LMX Differentiation		.16*	.17**
LMX Mean * LMX Differentiation		-.00	.03
Demographic Diversity * LMX Mean * LMX Differentiation			.14*
R^2	.03	.06	.07
ΔR^2	.03*	.03*	.01*
<i>Hypothesis 3b</i>			
Group Size	.07	.07	.07
Age Diversity	.18**	.19**	.19**
Tenure Diversity	-.09	-.09	-.05
LMX Mean	-.07	-.08	-.08
LMX Differentiation	.04	.05	.05
Tenure Diversity * LMX Mean		-.11	-.08
Tenure Diversity * LMX Differentiation		.06	.06
LMX Mean * LMX Differentiation		-.01	.01
Tenure Diversity * LMX Mean * LMX Differentiation			.08
R^2	.06	.08	.08
ΔR^2	.06**	.02*	.00

 $n = 249-348$ ** $p \leq .01$ * $p \leq .05$

Figure 1. Interaction of LMX Mean and Demographic Diversity on Turnover

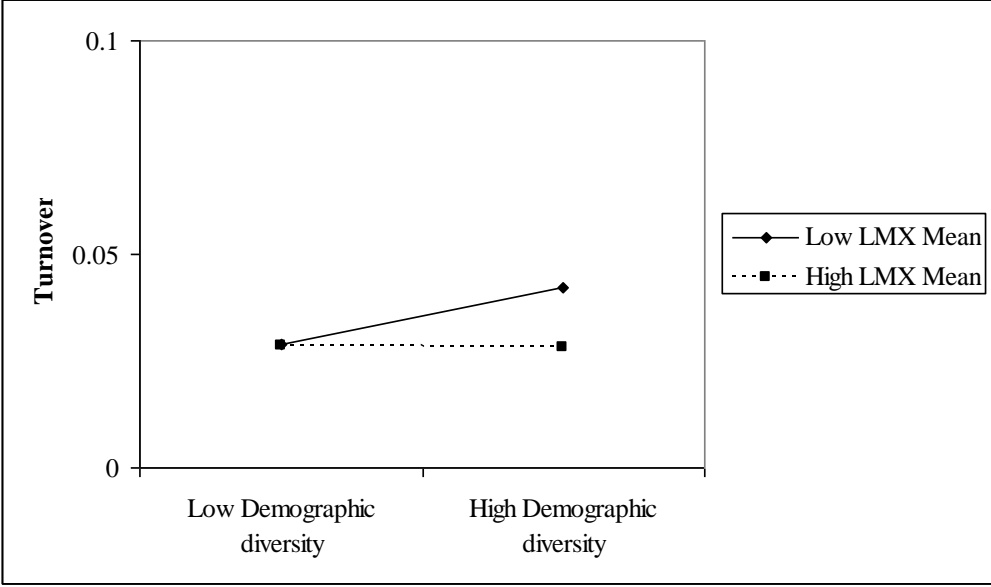


Figure 2. Interaction of LMX Mean and Tenure Diversity on Turnover

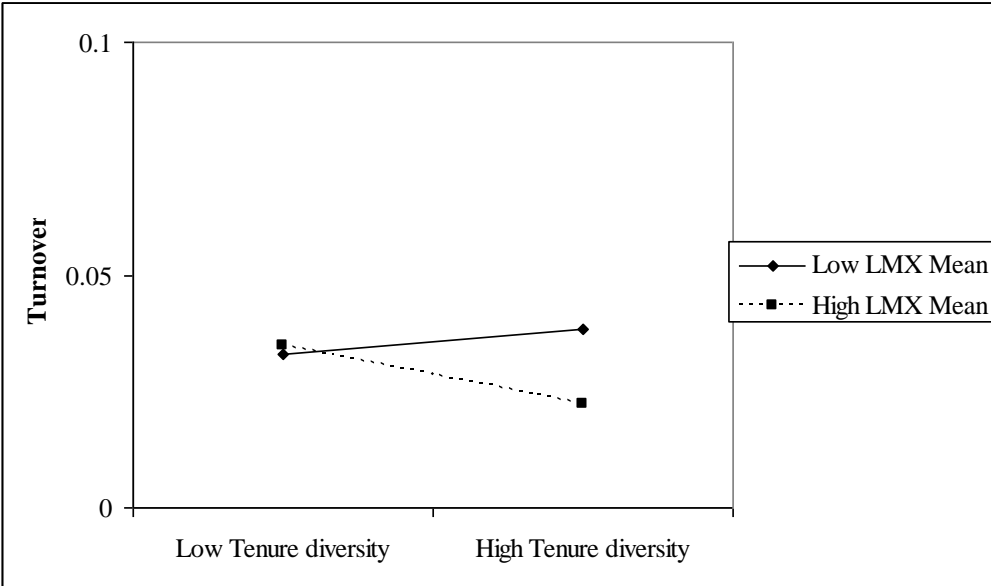


Figure 3. Interaction of LMX Differentiation and Demographic Diversity on Turnover

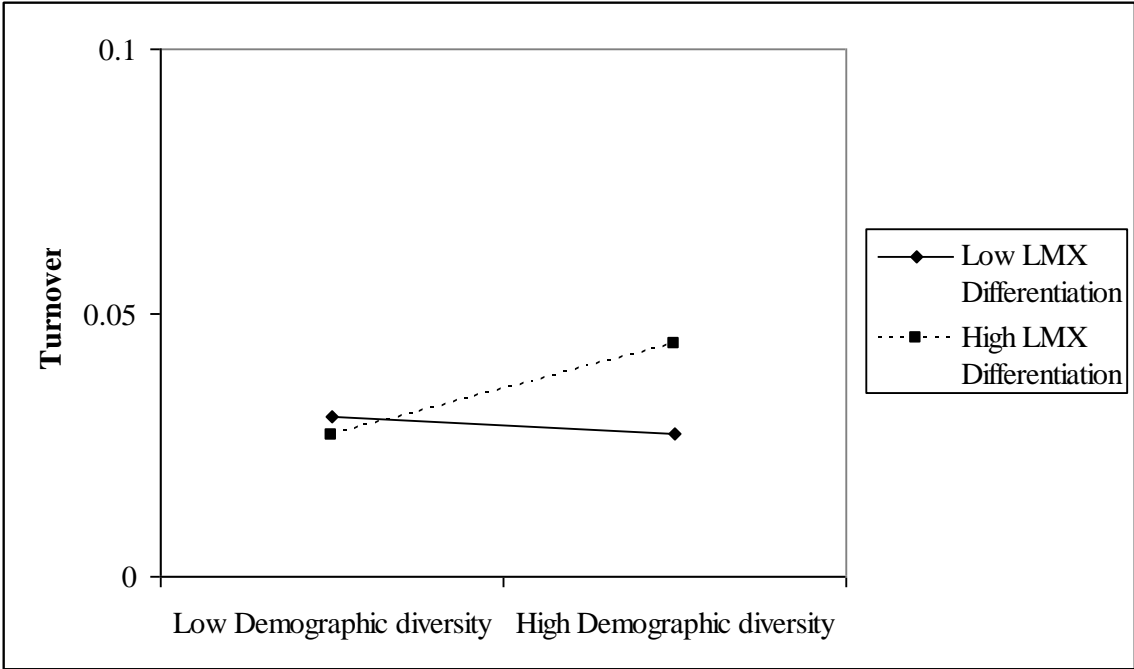


Figure 4. Interaction of LMX Differentiation and Tenure Diversity on Turnover

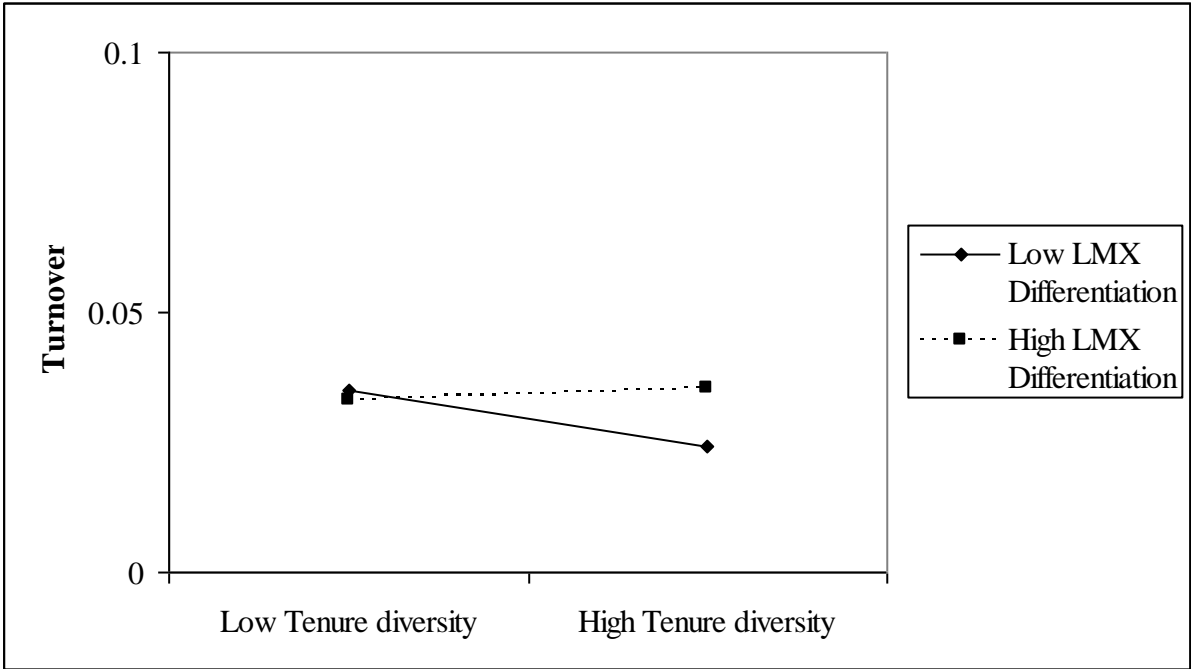
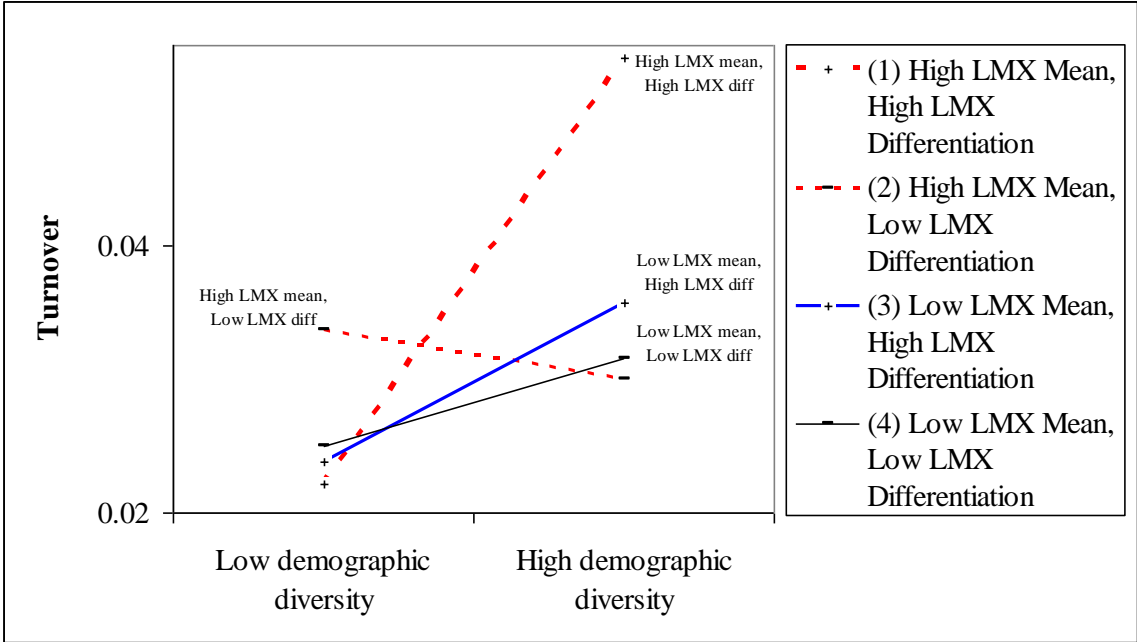


Figure 5. Interaction of LMX Mean, LMX Differentiation and Demographic Diversity on Turnover



Note: Based on median splits on LMX mean and LMX differentiation, the number of departments that fell into each of the categories are as follows: (1) High LMX mean, High LMX differentiation = 55; (2) High LMX mean, Low LMX differentiation = 137; (3) Low LMX mean, High LMX differentiation = 137; and (4) Low LMX mean, Low LMX differentiation = 55.