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A Meta-Analysis of Antecedents and Consequences of Leader-Member Exchange: Integrating the Past With an Eye Toward the Future

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Although leader-member exchange (LMX) was identified in the literature nearly 40 years ago, a comprehensive empirical examination of its antecedents and consequences has not been conducted. The authors' examination included 247 studies, containing 290 samples, and 21 antecedents and 16 consequences of LMX quality. Results indicated that while leader behaviors and perceptions, follower characteristics, interpersonal relationship characteristics, and contextual variables represent significant groups of LMX antecedents, leader variables explained the most variance in LMX quality. Moderator analyses revealed that the particular LMX scale, country of participants, and work setting studied did not produce meaningful influences on the relationships in the meta-analysis. However, power distance and individualism

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did moderate some of these relationships. To provide continuity with the LMX meta-analyses and conceptual reviews that have focused on LMX consequences, the authors tested a number of mediation models. The results demonstrated that LMX frequently plays a mediating role in the relationships where mediation could be tested.

Keywords: *leader-member exchange; LMX; meta-analysis; leadership*

The leader-member exchange (LMX) theory of leadership has developed into a significant area of scientific inquiry and has received considerable empirical research attention in the organizational sciences. When it was first introduced, this theory was pathbreaking for two main reasons. First, LMX focused on the separate dyadic relationships between leaders and each of their followers. Second, LMX stipulated that leaders do not develop the same type of relationship with each follower. Specifically, LMX theory states that leaders vary their interactions across followers and, in doing so, determine their relationships with followers. Initial research on LMX theory primarily was directed at the outcomes of the relationship, and the two published meta-analyses on LMX provided support for numerous relationships between LMX and a host of attitudinal and behavioral outcomes (Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007).

However, a substantial body of empirical research has been conducted on a wide range of antecedents involved in determining the nature of LMX relationships (e.g., Epitropaki & Martin, 2005; van Breukelen, Schyns, & Le Blanc, 2006). To assess the overall progress that has been made in the study of LMX antecedents, a meta-analytic assessment would help to identify the state of our progress as well as suggest topics for future study. In addition, because the vast majority of primary research has included antecedents *or* consequences (outcomes) of LMX, but not both, meta-analysis provides an opportunity to assess LMX's mediating role.

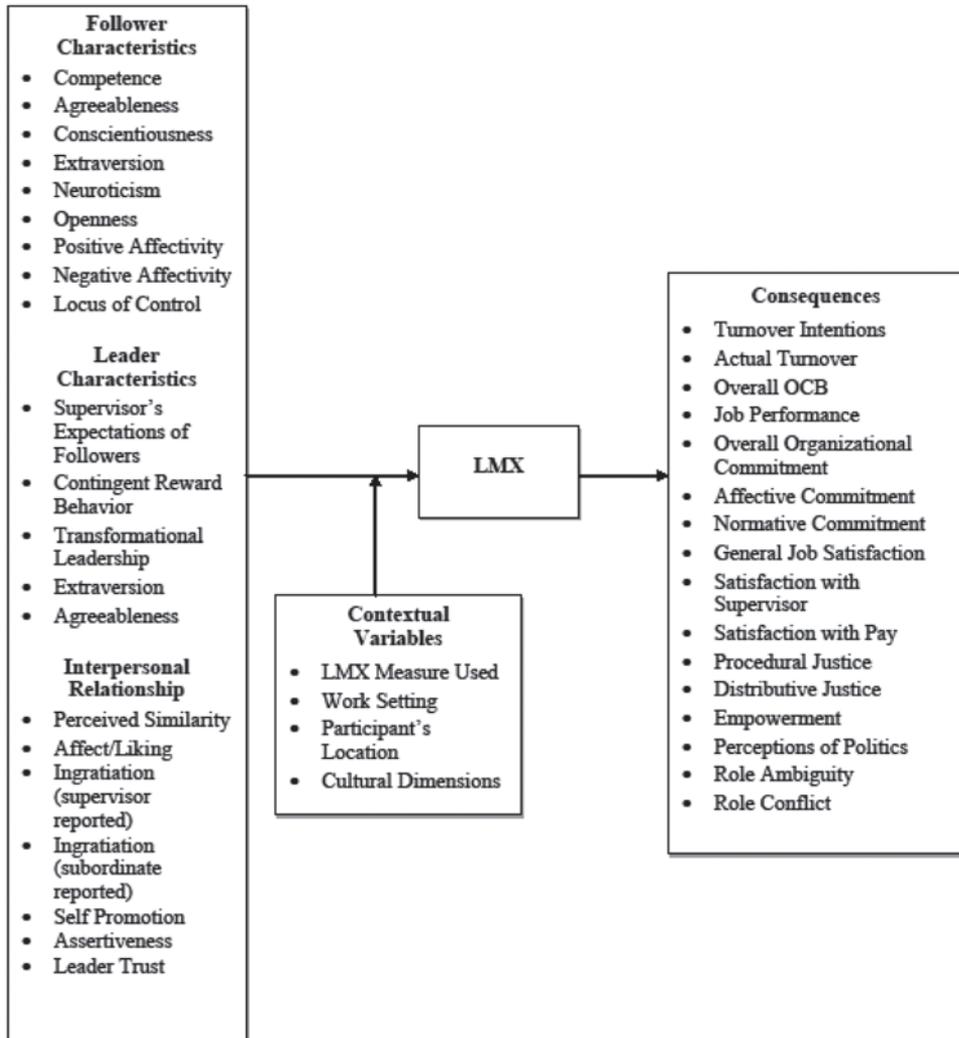
Therefore, our goals in the current investigation are to provide a meta-analytic review of LMX's antecedents and consequences and to shed light on LMX as a mediator between its antecedents and relevant consequences, thus bringing together two different streams of LMX research. To this end, we offer a theoretical framework presented in Figure 1 that is designed to enhance our understanding of the way in which LMX mediates relationships between antecedents and outcomes. We then empirically test this framework to assess the mediating role of LMX. In the process, our analyses serve to evaluate the cumulative knowledge across studies on the antecedents and consequences of LMX, as well as the moderating influence of the context surrounding leader-member relationships. Therefore, the present study represents an effort to provide a comprehensive assessment of the scientific status of LMX as a major construct in the organizational sciences.

Theoretical Foundations and Hypothesis Development

Background and Theory on LMX

Originally, LMX was rooted in role theory (Graen, 1976; Graen & Scandura, 1987) but has evolved to rely heavily on social exchange theory (Erdogan & Liden, 2002; Kamdar &

Figure 1
Leader-Member Exchange Antecedents and Consequences Theoretical Framework



Van Dyne, 2007; Liao, Liu, & Loi, 2010; Wayne & Green, 1993). Low LMX relationships are characterized by economic exchange based on formally agreed on, immediate, and balanced reciprocation of tangible assets, such as employment contracts focusing on pay for performance (P. M. Blau, 1964). On the other hand, high-LMX relationships increasingly engender feelings of mutual obligation and reciprocity (Gouldner, 1960; Liden, Sparrowe, & Wayne, 1997), which render such relationships more social in nature.

Work relationships built on social exchange, rather than economic exchange, are characterized by loyalty, commitment, support, and trust (Cropanzano & Mitchell, 2005; Uhl-Bien & Maslyn, 2003). The mutual reciprocation that embodies high-LMX relationships results in increased affective attachment between leaders and followers (Ferris et al., 2009; Gerstner & Day, 1997; Liden & Maslyn, 1998; Maslyn & Uhl-Bien, 2001; Uhl-Bien, Graen, & Scandura, 2000; Uhl-Bien & Maslyn, 2003).

A Conceptual Model of LMX Quality

We contend that although leaders are dominant in determining the quality of LMX relationships, followers influence the process as well (Dienesch & Liden, 1986; Lapiere, Hackett, & Taggar, 2006; R. Martin, Thomas, Charles, Epitropaki, & McNamara, 2005; Schyns & von Collani, 2002). This perspective represents a departure from traditional leadership approaches, which are based on the premise that leader characteristics and behaviors directly influence follower attitudes and behaviors. Lord and colleagues (Engle & Lord, 1997; Lord & Maher, 1991) stressed that both members of the dyad form *perceptions* of their dyadic counterpart, which in turn influence leader and follower reactions to the relationship.

In fact, work relationships are characterized by continuous interplay between partners (Ferris et al., 2009), and these mutual dependencies in social exchange relationships have been referred to as “reciprocal interdependence” (Cropanzano & Mitchell, 2005; Molm, 1994). According to Snodgrass, Hecht, and Ploutz-Snyder (1998), in spite of this mutuality, dependency tends to be greater for followers than leaders because of the inherent power differential. When individuals are outcome dependent on another person, it motivates them to be strongly attuned to the characteristics of their dyadic partners (Dépret & Fiske, 1992) and to closely evaluate their partners.

Leaders also depend on followers to accomplish goals, making it imperative for leaders to assess each follower. A salient part of these evaluations is ascertaining how they think that their dyadic partner feels about them (Snodgrass et al., 1998). Consequently, a thread running through the quality of LMX relationships is the dual process of leaders evaluating followers and followers assessing leaders (Dienesch & Liden, 1986; Graen & Scandura, 1987; Lord & Maher, 1991; Maslyn & Uhl-Bien, 2001; Sin, Nahrgang, & Morgeson, 2009).

In Figure 1, we present the model of LMX antecedents and consequences that provides the theoretical framework for our meta-analysis. Specifically, follower characteristics, leader characteristics (i.e., behaviors, perceptions, and personality), and interpersonal relationship variables are shown to influence LMX relationship quality, as moderated by contextual variables. Completing the process, LMX results in consequences. Therefore, the model highlights the key purposes of this meta-analysis, which are to investigate cumulative research on the antecedents and consequences of LMX, test the mediating role of LMX between antecedents and consequences, and examine moderators of the relationships between LMX antecedents and LMX.

Prior to our presentation of LMX antecedents and consequences, it needs to be pointed out that a review of the LMX literature indicates the following. First, a number of the correlates, and LMX, are reported by subordinates, and thus are derived from a single

source. Second, the majority of LMX studies have been cross-sectional. Consequently, possibilities exist for reverse causality for some of the variables. One of the objectives of this meta-analysis is to provide clarification of the variables' roles as either antecedents or consequences, based on theoretical considerations and the preponderance of evidence of their roles as represented in the literature.

Antecedents

Follower characteristics. Initial perceptions are based largely on individual characteristics of the dyadic partner (Fiske, 1993). Initial attraction is based on physical characteristics and personality (Byrne, 1971). Over time, behaviors influence the evolution of relationships. Early LMX theory development posited that followers are chosen by leaders for high-quality relationships largely based on their skill and competence and their motivation to assume greater responsibility (Liden & Graen, 1980). Competence measures used in LMX studies typically have included leader ratings of followers' general ability or experience.

It is posited that leaders assess follower competence to determine the tasks to be assigned to each follower (Graen & Scandura, 1987). As a result, the follower's response to the initial task assignment represents a primary stimulus evaluated by the leader (Dienesch & Liden, 1986; Graen, 1976). Followers, who are evaluated as capable of performing the roles assigned, are more likely to form high-quality relationships with their leaders. Followers who are viewed as incapable of role accomplishment tend to form lower quality relationships with leaders and thus tend to perform at lower levels (Graen & Scandura, 1987).

Hypothesis 1a: Follower competence and follower perceptions of LMX are positively associated.

Follower characteristics suggested to influence LMX also include personality factors, and a number of personality variables have been discussed in the extant literature. More specifically, the Big Five personality factors, locus of control, positive affectivity (PA), and negative affectivity (NA) all have received some previous attention. There has been surprisingly limited empirical research attention examining the Big Five dimensions (i.e., conscientiousness, extraversion, agreeableness, openness to experience, and neuroticism) and their association with LMX. Of the factors, conscientiousness consistently has been demonstrated as the most reliable predictor of job performance (Barrick & Mount, 1991). Furthermore, researchers have contended that LMX is dependent not only on supervisor perceptions of member competence but also on member achievement and dependability (Graen & Scandura, 1987; Liden & Graen, 1980), which are the two domains of conscientiousness (Mount & Barrick, 1995).

Second, regarding extraversion, Phillips and Bedeian (1994) suggested that extraverts, in contrast to introverts, are more likely to seek interactions and interpersonal relations with others. Furthermore, R. Hogan (1986) described this personality dimension as composed of two components: sociability and ambition. Based on this, it is expected that extraverted followers (i.e., insofar as possible) more likely pursue high levels of interaction with leaders, which could contribute to higher quality LMX.

Third, agreeableness has been found to be positively related to cooperation, helping behavior, and adaptive social behaviors (Graziano, Habashi, Sheese, & Tobin, 2007). Also, agreeableness has been found to be positively associated to reciprocity behavior (Perugini, Gallucci, Presaghi, & Ercolani, 2003), which is central to social exchange relationships (Gouldner, 1960) and LMX (Erdogan & Liden, 2002). Fourth, openness to experience is characterized by traits such as imaginative, creative, intelligent, and broad-minded (Barrick & Mount, 1991). Thus, in contrast to close-minded workers, followers characterized by openness may be more likely to pursue and accept expanded roles based on social exchange, which transcend a relationship that is only limited to economic exchange and formally agreed on employment contracts (Bernerth, Armenakis, Field, Giles, & Walker, 2007). Fifth, neuroticism has been described in terms of trait descriptors such as anger, anxious, depressed, embarrassed, worried, and insecure (Barrick & Mount, 1991). Neurotic individuals have been found to be limited with respect to social competence and less prone to establish long-term relationships that require commitment, trust, and social skills (Bernerth et al., 2007).

Hypothesis 1b: Follower conscientiousness, extraversion, agreeableness, and openness to experience are positively, and neuroticism is negatively, associated with follower perceptions of LMX.

Beyond the Big Five, a series of other personality dimensions also have been discussed in the literature. Internal locus of control involves one's belief that control of behavior or outcomes resides primarily in oneself, whereas external locus of control refers to the conviction that control is outside of oneself (Rotter, 1966). Individuals with internal control orientation believe they can control their work setting and influence their interactions with others more than those with an external control orientation (R. Martin et al., 2005; Phillips & Bedeian, 1994). This sense of control encourages internals to engage actively in the environment. Therefore, internals are more likely to attempt control over their environment with initiative-based behaviors, rather than being passively compliant (G. Blau, 1993; Phillips & Bedeian, 1994).

Initiative-based behaviors include things such as feedback seeking, negotiation, and increased communication. This initiative predisposes internals to attempt to shape relationships with their supervisors through negotiation. According to Graen and Scandura (1987), role making (i.e., the process that leads to higher quality LMX relationships) involves actively negotiating one's job roles and duties with the supervisor. Therefore, because internals are more likely to engage in initiative-based behavior, they are more likely to actively negotiate their roles in the organization, and thus develop higher quality relationships with their supervisors.

PA refers to the extent to which individuals feel positive, enthusiastic, engaged, and optimistic (Watson, Clark, & Carey, 1988). High PA is described using terms reflecting a high energy level, optimism, enthusiasm, interest, and determination, qualities others generally perceive as favorable. Because leaders likely equate high PA qualities with engagement and motivation, they may be more inclined to delegate favorable tasks to high PA followers, and subsequently form higher quality LMX relationships with these followers (Kinicki & Vecchio, 1994; Phillips & Bedeian, 1994).

Hypothesis 1c: Follower locus of control and PA are positively related to follower perceptions of LMX.

Alternatively, NA is described as a general factor of subjective distress that subsumes a range of mood states including fear, anxiety, irritability, hostility, fatigue, and lethargy (Watson et al., 1988). Individuals high in NA tend to view events, people, situations, and themselves in a negative light (Bernerth et al., 2007; Watson & Clark, 1984). Therefore, in a work situation, subordinates high in NA are likely to perceive their supervisors and their relationships with their supervisors negatively. Because of this, it has been argued that individuals high in NA have difficulty building effective work relationships (Bernerth et al., 2007; Hui, Law, & Chen, 1999). This, coupled with the fact that high NA people tend to be fearful, decreases the probability that those high in NA will be able to build high-quality relationships, which are built on mutual trust and liking. Taken together with the fact that people tend to perceive high NA individuals less favorably (Leary, Rogers, Canfield, & Coe, 1986), it is expected that people with high NA will have lower quality LMX relationships (Hochwarter, 2003; Hochwarter & Byrne, 2005; Hui et al., 1999).

Hypothesis 1d: Follower NA is negatively related to follower perceptions of LMX.

Leader characteristics. Next, we present leader behaviors, perceptions, and personality factors as antecedents. First, because of the power differential associated with most leader-member relationships, it can be argued that leaders exert more control in the development of LMX relationships than their followers and that leader behaviors serve as antecedents of LMX quality (Dienesch & Liden, 1986; Liden et al., 1997). We argue that leader behaviors affect followers' perceptions and responses to the leader (Lord & Maher, 1991; Nahrgang, Morgeson, & Ilies, 2009; Snodgrass et al., 1998). The two leader behaviors that have received the most attention in the extant literature are contingent reward behavior and transformational leadership.

LMX may be influenced by leader contingent reward behavior that involves providing feedback, rewards, and recognition for accomplishments. These behaviors clarify what is expected from followers, and how they will be rewarded if they meet leaders' expectations (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1993). Although it has been argued that high-quality relationships are based solely on social exchange and not on transactional exchanges (Graen & Uhl-Bien, 1995), other researchers believe, and have empirically supported the contention, that effective leaders engage in both transformational and transactional behaviors (Avolio et al., 1999). Although contingent reward behaviors are characteristic of transactional behaviors, which typify lower quality LMX relationships, higher quality relationships are not devoid of contingent reward behaviors.

Furthermore, followers of leaders who unambiguously state the linkages between behavior and corresponding rewards tend to form clear perceptions of task requirements, which in turn contribute to follower effort-performance expectancies (Waldman, Bass, & Yammarino, 1990). Moreover, high-quality LMX relationships are built on trust, respect, and mutual obligation (Brower, Lester, Korsgaard, & Dineen, 2009; Graen & Uhl-Bien, 1995), none of

which would be present if a leader did not recognize and reward good performance and clarify expectations. Therefore, followers receiving feedback, clarification, recognition, and praise for their work (i.e., contingent reward behaviors) feel a sense of obligation to their leader and are likely to experience higher quality relationships with them (Wayne, Shore, Bommer, & Tetrick, 2002).

Hypothesis 2a: Leader contingent rewards are positively related to follower perceptions of LMX.

Transformational leadership (i.e., which includes leader behaviors such as articulating an appealing vision, behaving in a way consistent with that vision, and encouraging the acceptance of group goals; Kuhnert & Lewis, 1987) may create an environment that is conducive for the development of high-quality LMX relationships (Anand, Hu, Liden, & Vidyarathi, 2011; Wang, Law, Hackett, Wang, & Chen, 2005). Followers tend to respond favorably to leaders who inspire and motivate them (Judge & Piccolo, 2004), and this positive reaction may elicit a desire on the part of followers to exert effort in forming high-quality relationships with their leaders (Maslyn & Uhl-Bien, 2001).

Hypothesis 2b: Transformational leadership is positively related to follower perceptions of LMX.

Especially salient in determining LMX quality is the leader's expectations of follower success. If leaders evaluate their followers as more likely to succeed, they are more likely to cultivate a social exchange relationship with them. Such a relationship might involve the leader engaging in behaviors such as assigning followers responsibility on important tasks and providing increased support. In anticipation of committed followers, who provide contributions to the work unit that exceed what is required, this evaluation may occur during the initial interaction with task assignments or subsequently as the relationship develops. Such leader expectations of followers serve as self-fulfilling prophecies that have been shown in experimental (McNatt, 2000; McNatt & Judge, 2004) and field (Liden, Wayne, & Stilwell, 1993; Wayne, Shore, & Liden, 1997) studies to be positively related to LMX and follower work behaviors.

Hypothesis 2c: Leader expectations of follower success are positively related to follower perceptions of LMX.

Finally, despite support for an association between some personality facets and leadership approaches (Bass & Bass, 2008), LMX researchers have devoted minimal attention to leader personality. The two dimensions that have been included in several studies are extraversion and agreeableness. Extraverts have a propensity to be sociable, articulate, assertive, and status seeking. In their meta-analysis of the Big Five and leadership, Judge, Bono, Ilies, and Gerhardt (2002: 765) reported that extraversion represents "the most consistent correlate of leadership across study settings and leadership criteria." They also found that extraverted leaders are more likely to be perceived as effective by subordinates.

Similarly, Bono and Judge (2004) found that extraversion was the best personality predictor of transformational leadership. Furthermore, leader extraversion is positively related to leader emergence, perceptions of leader effectiveness, and behaviors that contribute

to relational quality, such as sociability and individualized consideration (Bono & Judge, 2004). In contrast, introversion is associated with the tendency to be more introspective, self-occupied, reserved, detached, and independent (Nahrgang et al., 2009). Consequently, we expect leader extraversion to be positively related to LMX.

Agreeableness is characterized by traits such as friendliness, sociability, warmth, compassion, and affability. Leaders high in agreeableness likely will be viewed as approachable by subordinates. Agreeableness also is positively associated with cooperative and helpful behavior (J. Hogan & Holland, 2003; LePine & Dyne, 2001) and the propensity to engage in positive interactions with others. Tjosvold (1984) found that followers of leaders who displayed warmth reported these leaders to be helpful. In addition, these followers were more willing to continue interacting socially and working with warm leaders than with cold leaders. Finally, as noted, agreeableness has been found to be positively associated to reciprocity behavior, which is central to social exchange relationships (Gouldner, 1960) and LMX (Erdogan & Liden, 2002). Thus, we expect leader agreeableness to facilitate the LMX development with followers.

Hypothesis 2d: Leader extraversion and agreeableness are positively related to follower perceptions of LMX.

Interpersonal relationship variables. It is clear that variables beyond follower characteristics and leader behavior and perceptions contribute to LMX quality. As presented in Figure 1, the third group of antecedents includes variables connected to the relationship between leaders and followers. These represent stimuli that affect the leader's and/or follower's perceptions of each other and therefore are expected to influence LMX quality. Interpersonal relationship variables include perceived similarity, affect or liking, follower upward influence behavior, and trust.

A central finding in social psychology is that similarity between individuals fosters attraction and mutual liking (Byrne, 1971). Individuals tend to be more comfortable in dyadic interactions with partners who share similar interests, values, and attitudes. In work contexts, perceived similarity on work issues, such as how to best accomplish tasks, as well as nonwork topics enhances communications that are critical for developing solid relationships (Fairhurst, 2001). Conversely, differences between leaders and followers may create barriers, detachment, distance, and interpersonal conflict, thereby leading to conditions that are unfavorable for high-quality interpersonal relationships (Uhl-Bien, 2006). Although "actual" similarity is positively related to attraction and relationship quality (Graen & Schieman, 1978), "perceptions" of similarity are relatively more important with respect to attraction and high-quality LMX relationships (Liden et al., 1993; Turban & Jones, 1988).

Hypothesis 3a: Follower perceived similarity is positively related to follower perceptions of LMX.

Because individuals gravitate toward people they like, it is not surprising that liking or affect plays an important role in the quality of relationships between leaders and followers (Chi & Lo, 2003; S. E. Murphy & Ensher, 1999). Indeed, affective judgments influence the evaluations of others (Zajonc, 1980). Humans typically desire to form favorable relationships with people they like, and LMX relationships are no exception. In an experimental study, Wayne and Ferris (1990) found that leader liking positively influenced LMX relationship

quality, and this effect was subsequently replicated in a longitudinal field study (Liden et al., 1993). Because LMX relationships have been shown to form even at the pre-entry or anticipatory socialization stage (Liden, Erdogan, & Bauer, 2006), it is reasonable to conclude that liking acts as an important antecedent of LMX.

Hypothesis 3b: Leader affect or liking is positively related to follower perceptions of LMX.

Upward influence behavior represents another interpersonal relationship variable thought to affect LMX relationship quality (Dienesch & Liden, 1986; Schriesheim, Castro, & Yammarino, 2000). Followers may be proactive in determining the quality of their LMX relationships with leaders by engaging in behaviors targeted at positively altering the perceptions that leaders form of them. Three key influence tactics are ingratiation (e.g., efforts to be liked through friendliness), self-promotion (e.g., efforts to be viewed as competent by highlighting one's accomplishments), and assertiveness (e.g., aggressive and persistent efforts in making claims).

Leader assessments are affected by follower use of influence tactics as evidenced by positive effects on LMX quality and affective reactions (Lord, 1985). Successful influence attempts, which are effectively executed and perceived as intended, positively change leaders' attributions of followers' behaviors (Liden & Mitchell, 1988). Specifically, leaders consciously or subconsciously remember followers' proactive behaviors and use this information to interpret follower behaviors, such as task performance (W. Lam, Huang, & Snape, 2007).

Ingratiation and self-promotion are tactics that focus on the desire to be liked and to be viewed as competent, respectively. As a result, successful influence attempts produce positive evaluations of followers by the leaders (e.g., E. E. Jones, 1964, 1990), and such positive evaluations traditionally have formed a strong basis for interpersonal relationships in life and at work (Wayne & Liden, 1995). Thus, ingratiation and self-promotion should be positively related to LMX (Colella & Varma, 2001; Farmer, Maslyn, Fedor, & Goodman, 1997).

Hypothesis 3c: Follower ingratiation and self-promotion influence tactics are positively related to follower perceptions of LMX.

Conversely, leaders tend to form negative perceptions of overly aggressive influence tactics used by followers (e.g., such as assertiveness; Kipnis, Schmidt, & Wilkinson, 1980). For example, followers who aggressively pursue their interests with the use of assertiveness or coercion likely will be distrusted by leaders. This may occur because leaders will interpret such behavior as an indication of ulterior motives (W. Lam et al., 2007). This situation tends to translate into the formation of a low-quality LMX relationship (Deluga & Perry, 1991; Dockery & Steiner, 1990; Krishnan, 2004).

Hypothesis 3d: Follower assertiveness influence tactics are negatively related to follower perceptions of LMX.

Trust is believed to play an important role in the relationship quality that leaders form with their followers (Brower et al., 2009; Gomez & Rosen, 2001). Initial LMX theory posited that in-group members are chosen by leaders based on their (a) skill and competence,

(b) extent to which they can be trusted, and (c) motivation to assume greater responsibility (Liden & Graen, 1980; Scandura, Graen, & Novak, 1986). Dienesch and Liden (1986) described leaders as delegating to followers early in the relationship as a means of assessing their trustworthiness, competence, and performance.

Since that time, a number of studies have found support for a positive association between leader trust of followers and LMX (e.g., Gomez & Rosen, 2001; Pelled & Xin, 2000; Van Dam, Oreg, & Schyns, 2008; Wat & Shaffer, 2005). Interestingly, Liden and Maslyn (1998) reported that, in the critical incident interview phase of their scale development for their LMX-MDM (LMX-multidimensional measure) scale, trust emerged as a dimension of LMX. However, content analyses determined that experts were not able to differentiate between loyalty and trust items, leading to a decision to drop the trust dimension from the LMX-MDM scale.

Trust theorists have posited that individuals use a cognitive, rational approach to judge whether or not they will trust someone initially, which is based on whether the person is dependable and competent (Lewicki, Tomlinson, & Gillespie, 2006; McAllister, 1995). Then, as the relationship matures, trust becomes based on affect, mutual caring, and concern (McAllister, 1995), which indicates possible reverse causality of leader trust and LMX. However, prior to developing high-quality relations, leaders initially need to trust that followers are competent and can perform their jobs.

Hypothesis 3e: Leader trust is positively related to follower perceptions of LMX.

Moderation

Figure 1 presents contextual variables as potential moderating influences on the relationships between antecedents and LMX. We examined the LMX scale used in each study as a moderator because LMX measurement has been criticized for questionable construct validity (Dienesch & Liden, 1986; Vecchio & Gobdel, 1984), absence of rigorous scale development procedures leading to dubious psychometric properties (Liden & Maslyn, 1998; Schriesheim, Castro, & Cogliser, 1999), and the addition or deletion of items across studies (Dienesch & Liden, 1986; Keller & Dansereau, 2001). Thus, questions exist whether the available scales produce different results.

We also included work setting or industry, participant location (i.e., United States vs. other countries), and collectivism and power distance of country for their possible influences on relationships between antecedents and LMX. For example, we anticipate that leaders' contingent reward behavior is more strongly related to LMX in individualistic cultures than in collectivistic cultures. This is because collectivists focus more on the success of the group and thus are less likely than individualists to evaluate their LMX relationships based on individual-level rewards that they receive from their leaders.

Mediation and Consequences

An additional objective of the current study was to investigate the processes through which LMX mediates relationships between antecedents and consequences. Theory and

research have suggested that LMX may operate as a mechanism through which antecedents affect consequences (e.g., Erdogan & Liden, 2002; Liden et al., 1997). This is reflected in our model of LMX quality in Figure 1, which presents LMX as mediating the relationships between antecedents and consequences experienced by followers. For most individuals, the essence of their experience in organizations is tempered by immediate leaders, who have been shown to be instrumental in the socialization (Ferris et al., 2009; Liden et al., 1993), motivation (Scandura et al., 1986), mentoring (Scandura & Schriesheim, 1994), and support (Settoon, Bennett, & Liden, 1996; Uhl-Bien & Maslyn, 2003) of their direct reports.

Relational leadership theory (RLT) contends that relationships between leaders and followers are critical in determining the work experiences of employees (Brower, Schoorman, & Tan, 2000). Uhl-Bien (2006) provided clarification for RLT by further stressing that the interaction between leaders and followers far exceeds the individual characteristics and perceptions of leaders and followers in determining work consequences. Uhl-Bien identified LMX as being the prime leadership approach that exemplifies RLT. When leaders and followers both put effort into the relationship (Maslyn & Uhl-Bien, 2001), they share positive perceptions of their relationship, and subsequently both parties benefit in terms of work outcomes (Cogliser, Schriesheim, Scandura, & Gardner, 2009). Thus, it is the nature or quality of leader-follower relationships (i.e., the way in which leader and follower characteristics and perceptions combine) that determines critical outcomes.

The first step in constructing mediation hypotheses was to identify the consequences to include in our models. Our selection of consequence variables was based on criterion measures that are relevant to the LMX literature, frequently included in LMX studies, and was informed by the results of Gerstner and Day (1997) and Ilies et al. (2007). While collecting articles for the meta-analysis, we identified a large number of relationships between LMX and variables that normally would be considered "outcomes." It should be emphasized that the identification of the outcomes was not theoretically driven but was based on an analysis of the relationships tested in the primary research to determine which relationships had produced enough extant research to meta-analyze. Although our data collection identified about two dozen potential outcomes, 16 stood out as being represented by an adequate number of studies (i.e., five or more). These outcomes included behavioral, attitudinal, role states, and perceptual measures.

The two prior meta-analyses on LMX found significant associations between LMX and the behavioral outcomes of actual turnover and job performance as well as turnover intentions (Gerstner & Day, 1997) and organizational citizenship behaviors (OCBs) (Ilies et al., 2007). Gerstner and Day (1997) found significant and positive associations between LMX and the attitude outcomes of satisfaction with supervision, overall satisfaction, and organizational commitment, as well as the role states of role conflict (with a negative association), and role clarity (with a positive association).

Hypothesis 4a: Follower perceptions of LMX are positively related to the behavior outcomes of job performance and OCBs and the attitudinal outcomes of satisfaction with supervision, job satisfaction, and organizational commitment.

Hypothesis 4b: Follower perceptions of LMX are negatively related to the behavior outcome of actual turnover, turnover intentions, and the role states of role ambiguity and role conflict.

Based on their adequate representation in the literature, we included three additional attitudinal measures (i.e., affective and normative commitment and pay satisfaction) and four perceptual outcomes (i.e., procedural justice, distributive justice, experienced empowerment, and perceptions of politics). For these seven variables, we specified hypotheses because they have not been included in the prior meta-analyses.

Affective and normative commitment. Affective commitment is an emotional attachment to the organization that is characterized by an individual enjoying being involved, and identifying, with the organization (e.g., Mowday, Porter, & Steers, 1982; Porter, Steers, Mowday, & Boulian, 1974). On the other hand, normative commitment is a “belief about one’s responsibility to the organization” (N. J. Allen & Meyer, 1990: 3). Essentially, this is a feeling of obligation to the organization that you should behave in ways that meet the organization’s goals because it is the right thing to do (Wiener, 1982).

There are several reasons why LMX would be positively related to commitment (Wayne et al., 2009). First, Graen (1976) argued that during the role-making process (i.e., the process leading to high-quality relationships), leaders encourage employee commitment to the organization. In high-quality relationships, the leader convinces the follower that the organization deserves commitment (Wayne et al., 2002). In addition, followers in high-quality relationships can expect to be committed to the organization because they are attached to their leaders, and they have a sense of loyalty to their leader. Because leaders represent an important proxy for the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986), this attachment and loyalty are important in increasing feelings of attachment (i.e., affective commitment) and responsibility to the organization (i.e., normative commitment; Kinicki & Vecchio, 1994).

Second, organizational commitment is argued to be influenced by job challenge, opportunities for social interaction, and feedback. In general, leaders are responsible for assigning tasks and providing feedback. Individuals in high-quality relationships generally receive tasks that go above and beyond their job contracts, resulting in them exercising increased effort (Brouer & Harris, 2007; Liden et al., 1997; Liden & Graen, 1980). Furthermore, typically these followers also are in closer contact with their leaders, thus enhancing feedback opportunities. Also, the closeness that high-quality relationships engender increases the interaction frequency between leaders and followers (Cogliser & Schriesheim, 2000; Dienesch & Liden, 1986).

Hypothesis 5a: Follower perceptions of LMX are positively related to affective and normative commitment.

Satisfaction with pay. Pay satisfaction is the next attitudinal outcome, and it is defined as the “amount of overall positive or negative affect (or feelings) that individuals have toward their pay” (Miceli & Lane, 1991: 246). The primary determinant of pay satisfaction is the discrepancy between the perceived amount of pay that individuals feel they should receive and the amount they actually do receive (M. L. Williams, McDaniel, & Nguyen, 2006). In high-quality relationships, followers receive many benefits and privileges that are not afforded others (Roch & Shanock, 2006), including more support, interaction, and rewards (Cogliser & Schriesheim, 2000; Dienesch & Liden, 1986). This tends to result in these

followers having more positive attitudes (Cropanzano & Mitchell, 2005). Consequently, it is expected that followers in high-quality relationships should experience less perceived discrepancy regarding their pay and, therefore, will experience higher pay satisfaction than followers in lower quality relationships. In support of this, a number of studies have found a significant positive relationship between LMX and satisfaction with pay (e.g., Sparrowe, 1994; Stepina, Perrewe, Hassell, Harris, & Mayfield, 1991).

Hypothesis 5b: Follower perceptions of LMX are positively related to satisfaction with pay.

Procedural and distributive justice. In our analyses, procedural and distributive justice are treated as perceptual outcomes of LMX. Although a case could be made for treating these measures as antecedents (i.e., I receive fair rewards, which came from fair procedures, and as a result I have an enhanced relationship with my supervisor), we treated the justice variables as LMX consequences for the following reasons. First, based on the observation that LMX forms relatively quickly (Bauer & Green, 1996; Dansereau, Graen, & Haga, 1975; Liden et al., 1993), it is logical to assume that evaluations of procedural and distributive justice occur later in the relationship. Second, a review of LMX studies that have included procedural and/or distributive justice indicates that a far larger percentage posited procedural and distributive justice as consequences.

Third, differential justice perceptions resulting from high-quality or low-quality status is supported by equity theory (Adams, 1963) and referent cognitions theory (RCT; Folger, 1986). Adams posited that individuals evaluating the fairness of outcomes use an equity rule whereby they compare their own input-outcome ratios to a referent or comparable other. Individuals perceive fairness when the ratio or balance of their outcomes to their inputs is equal to that of the referent other; inequity is perceived when the ratios are unequal. Adams emphasized that evaluations of equity are in the eye of the beholder, and therefore perceptions of inputs and outcomes are subjective. Other researchers have reiterated the perceptual nature of fairness evaluations (e.g., Dulebohn & Ferris, 1999; Lind & Tyler, 1988).

RCT posits that when people generate referent cognitions about their outcomes, they evaluate these outcomes on the basis of what might have been under different circumstances and conditions, such as fairer procedures (Cropanzano & Folger, 1989; Folger, 1986). Perceptions of procedural and distributive injustice are maximized when individuals believe that they would have obtained better outcomes if the decision maker would have used fairer procedures. Fair procedures are those characterized by decision-maker adherence to procedural justice rules, including bias suppression, representativeness, ethicality, accuracy, correctability, consistency, and process control (e.g., Leventhal, 1980; Lind & Tyler, 1988).

In light of LMX predictions of differential leader treatment of those in high-quality and low-quality relationships, we expect high-quality LMX relationships will lead to procedural and distributive justice perceptions (Erdogan & Bauer, 2010). In contrast, low-quality LMX relationships may lead to perceptions of injustice in process and outcomes. This may occur due to the fact that when evaluating process and outcome fairness (based on equity theory and RCT), these followers may view the leader as inconsistent or biased in processes and outcome allocations and as favoring in-group members rather than themselves. This may be justified

in that high-quality relationships are more likely to receive favorable treatment (e.g., including more complete explanations and process control in procedures) than low-quality relationships, as well as more favorable outcomes because of their status.

Hypothesis 6a: Follower perceptions of LMX are positively associated with procedural and distributive justice.

Empowerment. The next perceptual outcome of LMX, psychological empowerment, is composed of cognitions individuals have about their work roles, including meaning of work, competence, self-determination, and impact (Spreitzer, 1995). Essentially, followers in high-quality relationships have leaders who provide them support, challenging assignments, increased responsibility, decision-making capabilities, and access to information, all of which should increase perceptions of meaning, competence, self-determination, and impact (e.g., Andrews & Kacmar, 2001; Gomez & Rosen, 2001; Keller & Dansereau, 1995). Specifically, task challenge and information access should increase the meaning of work for followers in high-quality LMX relationships (Aryee & Chen, 2006).

Furthermore, the support that followers receive from their leaders should enable success and feelings of self-efficacy, thus increasing feelings of competence, whereas their frequent interactions, input in decisions, and ability to determine their own work should increase feelings of self-determination and impact (Aryee & Chen, 2006). In addition, followers in high-quality LMX relationships report having greater job responsibility and feel as though they contribute more to their work group, which should enhance perceptions of impact and self-determination (Gomez & Rosen, 2001). Therefore, followers in high-quality LMX relationships with their leaders should experience higher levels of perceived psychological empowerment.

Hypothesis 6c: Follower perceptions of LMX are positively associated with follower perceptions of psychological empowerment.

Perceptions of politics. Finally, a pervasive contextual variable in workplace settings is organizational politics, and a substantial body of empirical research has emerged on the association of perceptions of organizational politics with a host of work attitudes and behaviors (Chang, Rosen, & Levy, 2009). Perceptions of organizational politics represent a subjective experience and thus a state of mind (Ferris & Kacmar, 1992). Furthermore, politics perceptions frequently are negative and reflective of behavior characterized by self-interest, internal competition, and results based on other factors than legitimate performance (Ferris, Perrewé, & Douglas, 2002).

LMX quality is likely to influence perceptions of organizational politics for several reasons. First, those in lower quality relationships perceive those in higher quality relationships as being favored, and thus judge their higher performance appraisals and greater rewards and frequency of interaction with the leader as being based on political, rather than objective factors (Davis & Gardner, 2004). Thus, lower quality LMX will contribute to higher perceptions of organizational politics. On the other hand, those in higher quality relationships have more control over their situations because of the support and decision latitude offered

by their leaders (Andrews & Kacmar, 2001). The control enjoyed by followers in higher quality LMX relationships will reduce their levels of perceived politics (Ferris et al., 2002).

Hypothesis 6d: Follower perceptions of LMX are negatively related to perceptions of politics.

Method

Literature Search and Criteria for Inclusion

We conducted a systematic computer-based search of the LMX literature up to 2010, using several methods including searches of the ABI/INFORM, Dissertation Abstracts, and PsycINFO databases and Google Scholar. To be inclusive, we conducted a broad search using keywords such as *leader-member exchange*, *LMX*, and *vertical dyad linkage*. The search was complemented by a manual review of articles identified by Gerstner and Day (1997), Liden et al. (1997), and Liden and Maslyn (1998) and a search of articles from the reference sections of all articles identified. We excluded referenced articles in those studies that did not use measures of LMX. In addition, we conducted a manual search for in-press articles in leading management journals and contacted authors who actively conduct research in this area.

We followed the advice of Aguinis, Dalton, Bosco, Pierce, and Dalton (2011) when determining a number of judgment calls in the meta-analytic process. Thus, we used several decision rules to decide which studies to include in the subsequent analyses. First, studies with no antecedent or consequence data, and studies that did not measure LMX using accepted measures, were excluded. Second, to be included, studies needed to report sample sizes along with correlations or statistical results adequate to compute a correlation coefficient or effect size between LMX quality and an antecedent or consequence. In some instances, when articles did not report data, we contacted authors to request data to compute effect sizes.

Third, studies that examined LMX quality effects only at the group level of analysis were excluded. Fourth, our study focus was on subordinate perceptions of LMX because this is consistent with the vast majority of the literature (i.e., less than 5% of studies reported only supervisor-reported LMX). Fifth, the study needed to contain a variable that fit the LMX theoretical model. These screens resulted in 247 studies, containing 290 samples.

Coding and Sample Characteristics

Each study was reviewed and independently coded by the first author and two research assistants for the types of antecedent and consequence variables, LMX, study characteristics (i.e., cross-sectional or longitudinal), sample characteristics, and source of the variables (i.e., leader or follower reported). The average intercoder percentage of agreement across the study variables was 94%. In situations where there were discrepancies among the raters, discussion among three coders was used to reach a consensus, following the approach used by Podsakoff, Bommer, Podsakoff, and MacKenzie (2006). The sample size of each empirical study was recorded as the number of observations used to compute the correlation coefficient.

Sample characteristics included the following. Approximately 63% of the sample was from private industry, for-profit organizations, 16% from the public sector, including government

employees and armed services, 15% from education, and 6% from the health sector. Next, 83% of the sample was located in the United States. Finally, the majority of the studies included in the meta-analysis reported cross-sectional results; only nine studies reported longitudinal data.

Meta-Analytic Procedures

We used the meta-analytic procedures recommended by Hunter and Schmidt (1990) to calculate the population correlations between LMX and the antecedent and consequence variables. To provide the most accurate estimates, the weighted mean correlations and their variances were corrected for measurement and sampling error. We did not attempt to correct for restriction of range. Also, for those few studies in which there were multiple indicators of a focal construct, we used linear composites of correlations (cf. Viswesvaran & Ones, 1995). In addition to reporting the mean true score correlations, it is also important in meta-analysis to describe variability in the correlations. Accordingly, we report 80% credibility intervals and 95% confidence intervals around the estimated population correlations because each interval provides distinct information about the nature of the correlations (Judge & Piccolo, 2004).

Results

Before assessing the hypothesized relationships between perceptions of LMX and its antecedents, we briefly discuss the magnitudes of the relationships between perceptions of LMX and the variables shown in Table 1. At an omnibus level, it is very clear that the variables assessed exhibited substantial relationships with LMX. Specifically, in 19 of the 21 cases, the relationship was significant (i.e., as indicated by a 95% confidence interval that excluded zero). In addition, the simple average of the absolute magnitudes of all of the relationships examined was $\rho = .33$. So, on average, the variables assessed shared about 11% of their variance with LMX.

To examine the three hypotheses and their subparts, we discuss Table 1 in detail. First, an overall statement is made about the strength of the relationships found in each category (e.g., follower characteristics, leader characteristics, and interpersonal relationship variables), and then the specific hypothesized relationships are assessed.

Follower characteristics. On average, the magnitude of the correlations between the follower characteristics and perceptions of LMX was $\rho = .20$. Hypothesis 1a was supported because of the significant relationship between follower competence and LMX ($\rho = .38$). Next, Hypothesis 1b posited that the different Big Five dimensions of personality would be associated with LMX. At an overall level, the average relationship magnitude between these Big Five dimensions and LMX was $\rho = .14$. Of the five dimensions, agreeableness ($\rho = .19$), conscientiousness ($\rho = .20$), and extraversion ($\rho = .16$) were consistent with Hypothesis 1b, whereas the relationships between LMX and emotional stability and openness to experience were not different from zero.

In addition, the follower characteristics of locus of control and PA were both positively associated with LMX ($\rho = .26$ and $.31$, respectively), and therefore Hypothesis 1c was supported. Finally, Hypothesis 1d was supported as indicated by NA's negative relationship ($\rho = -.19$) with LMX.

Table 1
Meta-Analysis of the Antecedents of Leader-Member Exchange

Variable	K	N	r	ρ	SD ρ	Q	80% CV		95% CI		Fail Safe N
							Lower	Upper	Lower	Upper	
Follower characteristics											
Competence	6	2,958	.32	.38	.19	98.68***	.14	.61	.23	.52	279
Positive affectivity	12	2,482	.28	.31	.12	35.48***	.18	.43	.24	.38	360
Negative affectivity	17	3,732	-.16	-.19	.15	64.45***	-.35	-.03	-.26	-.12	387
Follower personality measures											
Agreeableness	9	2,290	.16	.19	.06	14.73	.12	.27	.15	.24	162
Conscientiousness	9	2,075	.17	.20	.03	10.17	.17	.24	.15	.25	171
Extraversion	11	2,919	.13	.16	.09	29.09**	.04	.28	.09	.23	132
Emotional stability (neuroticism)	6	1,456	-.10	-.11	.14	29.81***	-.30	.07	-.24	.01	77
Openness	5	1,249	-.02	-.02	.11	16.62***	-.14	.10	-.16	.13	2
Locus of control	8	1,653	.22	.26	.26	90.48***	-.06	.58	.08	.44	225
Leader behaviors and perceptions											
Contingent reward behavior	6	1,900	.65	.73	.18	136.74***	.51	.96	.58	.88	542
Transformational leadership	20	5,451	.66	.73	.19	447.81***	.49	.97	.64	.81	1,805
Supervisor's expectations of followers	7	1,549	.32	.37	.08	9.34	.32	.43	.32	.43	252
Leader personality measures											
Extraversion	4	859	.16	.18	.14	16.06**	.01	.36	.04	.34	64
Agreeableness	4	859	.15	.18	.00	2.29	.18	.18	.11	.27	68
Interpersonal relationship variables											
Perceived similarity	9	1,278	.45	.50	.42	468.15***	-.04	1.00	.22	.78	441
Affect or liking	19	3,879	.43	.49	.25	348.60***	-.19	.80	.38	.61	1,145
Ingratiation (supervisor reported)	6	945	.21	.27	.23	38.75***	.00	.55	.07	.46	197
Ingratiation (subordinate reported)	15	2,804	.22	.27	.17	62.07***	.08	.46	.18	.36	491
Self-promotion influence tactics	4	1,132	.38	.45	.25	64.74***	.13	.77	.22	.70	176
Assertiveness influence tactics	8	1,638	-.10	-.12	.19	40.65***	-.34	.10	-.26	.01	88
Leader trust	18	4,918	.62	.73	.24	423.95***	.42	1.00	.64	.84	1,625

Leader characteristics. A series of very different variables associated with leaders were hypothesized to be related to LMX in Hypothesis 2. More specifically, measures of leader behavior, perceptions, and personality all were examined in the current meta-analysis. First, Hypothesis 2a posited a significant relationship between supervisors' contingent rewards behavior and perceptions of LMX. Our findings supported this hypothesis ($\rho = .73$). Second, the significant relationship posited in Hypothesis 2b, between transformational leadership and LMX, also received support ($\rho = .73$). Next, consistent with Hypothesis 2c, the results demonstrated a significant positive relationship ($\rho = .37$) between leader expectations of follower success and LMX. Finally, for Hypothesis 2d, both leader extraversion ($\rho = .18$) and agreeableness ($\rho = .18$) were found to exhibit significant positive relationships with LMX.

Interpersonal relationship. Hypothesis 3 represented a number of relationships across variables reflecting the interpersonal relationship between members of the leader-follower dyad and perceptions of LMX. The data supported Hypothesis 3a because of the positive relationship between perceived similarity ($\rho = .50$) and LMX. Hypothesis 3b also was supported as follower affect or liking for the leader was significantly related ($\rho = .49$) to LMX. Hypothesis 3c posited relationships between follower influence tactics and LMX. The influence types predicted to be positively related to LMX were found to exhibit both significant and positive relationships with LMX, thus supporting Hypothesis 3c. More specifically, the relationships between ingratiation and LMX ($\rho = .27$ for both supervisor and employee reported) and self-promotion tactics and LMX ($\rho = .45$) were positive. The relationship posited in Hypothesis 3d between assertiveness and LMX was not different from zero ($\rho = -.12$) and was subsequently not supported. The last interpersonal relationship variable posited to be related to LMX, in Hypothesis 3e, was leader trust in the follower. Table 1 reports a strong positive relationship ($\rho = .73$) between leader trust and LMX, providing support for Hypothesis 3e.

Test of Moderating Effects

Following the examination of the relationships between LMX and its hypothesized antecedents, we inspected the results to determine whether or not the relationships obtained were homogenous in nature or whether any additional analysis was warranted to determine the source of variance among the relationships. The Q statistics reported in Table 1 indicate that a large majority (17 of 21, or 81%) of the relationships summarized between the antecedents and LMX varied across samples. This suggests that moderators may be present. Therefore, in the next stage of our analysis, we examined the possible moderating effects of some potentially important differences in these studies: (a) the measure of LMX used, (b) the work setting in which the study was conducted, and (c) the cultural characteristics of participant location.

Given the widespread criticism of LMX measurement, it is surprising that the results of the moderator analysis revealed no meaningful patterns of moderated relationships for the scale used (the results are available from the authors). The scale categories we examined were the most commonly used LMX-7 and its variations (Bauer & Green, 1996; Graen, Novak, & Sommerkamp, 1982; Graen & Uhl-Bien, 1995; Liden et al., 1993; Scandura et al., 1986; Scandura & Graen, 1984), the original LMX scale and its modifications (Graen & Cashman, 1975; Liden & Graen, 1980; Wakabayashi & Graen, 1984), multidimensional versions of the LMX scale (Dienesch & Liden, 1986; Liden & Maslyn, 1998; Schriesheim, Neider, Scandura, & Tepper, 1992; Settoon et al., 1996), and the 17-item LMX scale developed by Graen and Scandura (1987). Paired comparisons between each of the pairs of scales (e.g., LMX-7 vs. the original LMX scale, the original scale vs. the 17-item scale, etc.) revealed no statistically significant differences.

Beyond the lack of findings associated with the different scales used, our analysis also showed that neither work setting (i.e., industrial settings, educational settings, public settings, and health care) nor participant location (i.e., United States and other) significantly influenced the magnitude of the relationships between the antecedents and LMX. As one

additional test to determine moderation, we further analyzed the participant location and used Hofstede's (2001) cultural dimensions as possible moderating influences. More specifically, we examined whether countries with high versus low individuality and power distance demonstrated differential relationships between the antecedents and LMX. We were able to perform this analysis in only a few cases because most of the LMX research has been done in countries with similar cultural dimension scores as the United States (i.e., Canada, Great Britain, and Australia). However, enough studies were available in the cases of leader trust and transformational leader behavior to perform such an analysis.

The results of the analyses suggested that the relationship between trust and LMX differed based on whether the culture was high or low in individuality. More specifically, when individuality was low, the relationship ($\rho = .53$) was weaker than when individuality was high ($\rho = .77$), and the confidence intervals did not overlap. This same pattern was found for the relationship between transformational leader behavior and LMX, where the relationship was weaker ($\rho = .64$) when individuality was low than when individuality was high ($\rho = .77$), but in this case the confidence intervals did overlap. When power distance was examined as the moderator, the relationship was significantly stronger between trust and LMX when power distance was low ($\rho = .78$) than when it was high ($\rho = .38$), and the confidence intervals did not overlap. In the same manner as above, the relationship between transformational leader behavior and LMX was not statistically different when power distance was high than when it was low.

Therefore, the results of the moderator analyses we conducted suggested that very few of the potential moderators (i.e., only power distance and individualism moderated the relationship between leader trust and LMX) accounted for significant variance in the relationships, and these differences would not lead to practical differences (e.g., the relationships were strongly positive in both situations, so recommendations for practice would be unaltered). So although the meta-analytic results suggested that significant variation existed, we were unable to account for much of it in our follow-up analyses searching for moderators.

Consequences of LMX

First, consistent with previously conducted meta-analyses (Gerstner & Day, 1997; Ilies et al., 2007), we found LMX to be significantly related to all of the examined consequences. The absolute magnitude of these relationships averaged $\rho = .43$. By category, LMX demonstrated the strongest average relationships with the perceptual outcomes ($\rho = .54$), followed by the attitudinal outcomes ($\rho = .44$), the role states ($\rho = .38$), and the behavioral outcomes ($\rho = .32$). Generally, this is consistent with the idea that relationships, where both measures were obtained from the same source, reflect more same-source inflation than the behavioral measures. The precise relationships can be seen in Table 2. Although it is clear that substantial variation existed across the magnitude of the relationships, the message was clear that LMX exhibited significant relationships across a wide range of attitudinal and behavioral outcomes.

We presented a series of hypotheses to assess these relationships in more detail. As a result, we reexamined the relationships tested by Gerstner and Day (1997) and Ilies et al.

Table 2
Meta-Analysis of the Consequences of Leader-Member Exchange

Variable	<i>k</i>	<i>N</i>	<i>r</i>	ρ	<i>SD</i> ρ	<i>Q</i>	80% CV		95% CI		Fail Safe <i>N</i>
							Lower	Upper	Lower	Upper	
Behavioral outcomes											
Turnover intentions	38	11,790	-.34	-.39	.07	70.98***	-.51	-.28	-.43	-.36	1,814
Actual turnover	9	1,345	-.15	-.17	.18	34.75***	-.36	.03	-.28	-.05	144
Overall OCB	27	7,541	.34	.39	.16	200.11***	.20	.58	.32	.45	1,291
Job performance	108	25,322	.30	.34	.19	892.84***	.11	.56	.30	.37	5,157
Attitudinal outcomes											
Overall organizational commitment	58	14,208	.41	.47	.15	345.19***	.30	.65	.43	.51	3,349
Affective commitment	21	8,118	.36	.41	.17	266.56***	.20	.62	.34	.48	1,055
Normative commitment	13	3,043	.27	.33	.15	58.25***	.16	.50	.24	.41	519
General job satisfaction	88	22,520	.42	.49	.16	679.31***	.29	.69	.45	.52	5,302
Satisfaction with supervisor	32	11,195	.57	.68	.24	1,138.08***	.37	.47	.57	.76	2,688
Satisfaction with pay	8	1,418	.23	.27	.05	3.22	.27	.27	.21	.32	
Perceptual outcomes											
Procedural justice	30	7,211	.48	.55	.17	258.29***	.35	.75	.48	.61	208
Distributive justice	32	6,693	.38	.44	.20	299.60***	.19	.68	.36	.50	1,728
Empowerment	11	4,296	.58	.67	.15	135.65***	.48	.86	.58	.76	726
Perceptions of politics	5	2,783	-.44	-.49	.04	6.14	-.52	-.47	-.53	-.46	240
Role states											
Role ambiguity	18	5,813	-.34	-.42	.11	61.88***	-.54	-.30	-.47	-.36	927
Role conflict	14	5,480	-.27	-.33	.09	39.10***	.42	-.23	-.38	-.27	571

(2007) through Hypotheses 4a and 4b. As reported in Table 2, the relationships between all nine of these measures and LMX were significant and in the predicted direction, thus providing support for Hypotheses 4a and 4b.

Because the current meta-analysis contains a number of consequences that have not been explored in previous meta-analyses, we presented Hypothesis 5 to test the relationships between LMX and two forms of commitment (i.e., Hypothesis 5a examined affective and normative commitment) and pay satisfaction (Hypothesis 5b). Results indicated that both Hypothesis 5a and Hypothesis 5b were supported. More specifically, there was a significant relationship between LMX and affective commitment ($\rho = .41$), as well as between LMX and normative commitment ($\rho = .33$), thus providing support for Hypothesis 5a. Furthermore, the relationship between LMX and pay satisfaction also was significant ($\rho = .27$), supporting Hypothesis 5b.

Hypothesis 6, the final hypothesis, posited relationships between a series of perceptual outcomes and LMX. All of the subhypotheses were supported, with positive findings for procedural justice ($\rho = .55$, supporting Hypothesis 6a), distributive justice ($\rho = .44$, supporting Hypothesis 6b), and empowerment ($\rho = .67$, supporting Hypothesis 6c). In addition, the hypothesized negative relationship between LMX and perceptions of politics was found ($\rho = -.49$), providing support for Hypothesis 6d.

Test of Mediation Effects

After identifying the antecedents and outcomes of LMX, we shifted our focus to exploring whether or not LMX acted as a key mediator between the antecedents and outcomes contained in this study. Because the number of possible mediated relationships is extremely large (i.e., 21 antecedents by 16 consequences or 336), we let the results presented in Table 1 guide our search. More specifically, we attempted to follow up on antecedents that possessed a corrected correlation of at least .30 (i.e., Cohen's criterion for a moderate effect size) with LMX. We reasoned that a weak relationship between an antecedent and LMX meant that the antecedent in question was not a central predictor of LMX, and that LMX would not play an important mediating role in any relationships involving such antecedent because no significant indirect effect would be likely to exist when a small effect between the antecedent and LMX exists. This step removed 12 of the antecedents from consideration (i.e., leaving 9 antecedents).

For the remaining 9 antecedents, we searched for comprehensive meta-analyses containing large numbers of the variables of interest for our study. Viswesvaran and Ones (1995) pointed out that often not all relationships specified by a theory are included in a particular primary study and that meta-analysis and structural equations may be combined to test particular theories that include constructs from different studies. For example, one study may focus on an antecedent construct (e.g., contingent reward behavior) and LMX, and another study may focus on LMX and a particular consequence (e.g., job satisfaction). The use of meta-analysis and structural equations allows for the estimation of true score correlations of the relationships among the antecedents, LMX, and consequences.

More specifically, from our analyses, we were able to provide the correlations between LMX and both the antecedents and the consequences. Subsequently, we needed to obtain values for the correlations between the antecedents and the outcomes. We found three meta-analyses that allowed us to obtain meta-analytically obtained values for the relationships between a variety of the antecedents and consequences included in our study. More specifically, the meta-analysis of the contingent reward literature published by Podsakoff et al. (2006) included contingent rewards and a number of the consequences we examined.

In addition, Dirks and Ferrin's (2002) meta-analysis provided many important relationships relating to trust, and Ng and Sorensen's (2009) meta-analysis provided the relationships of interest for PA. Although no other meta-analyses could be found that were as comprehensive as the three for contingent rewards, trust, and PA, the meta-analysis of Judge and Piccolo (2004) did contain a few values related to transformational leadership, and the Kaplan, Bradley, Luchman, and Haynes (2009) meta-analysis was used to supplement the PA data.

Once we obtained the relationships, we followed the approach used by Ilies et al. (2007) to test the mediating role of LMX. More specifically, to test for mediation, we first regressed the outcome on the independent variable (e.g., contingent rewards). These relationships were obtained from the meta-analyses described above. In the second step, we regressed the mediator (i.e., LMX) on the independent variable (the values can be seen in Table 1). The final step of the mediation test is to show that the direct effect of the independent variable on the outcome was reduced with the inclusion of the mediator (i.e., LMX). Therefore, in this final step, we ran a series of regressions where we regressed the outcome of interest (e.g., job

Table 3
Mediation Tests for Leader-Member Exchange

Variable	Positive Affectivity				Contingent Rewards				Transformational Leadership				Leader Trust			
	β	R^2	β'	R^2	β	R^2	β'	R^2	β	R^2	β'	R^2	β	R^2	β'	R^2
Behavioral outcomes																
Turnover intentions	-.35	.12	-.25	.06	-.32	.10	-.08	.01					-.47	.22	-.40	.16
Overall OCB	.23	.05	.12	.01	.21	.04	-.16	.03					.22	.05	-.14	.02
Job performance	.19	.04	.09	.01	.22	.05	-.06	.00					.17	.03	-.17	.03
Attitudinal outcomes																
Overall organizational commitment	.50	.25	.35	.12	.43	.18	.19	.04					.59	.35	.53	.28
General job satisfaction	.49	.24	.37	.14	.52	.27	.35	.12	.58	.34	.48	.23	.65	.42	.63	.40
Satisfaction with supervisor	.15	.02	-.07	.00	.55	.30	.11	.01	.71	.50	.46	.21	.85	.72	.76	.58
Perceptual outcomes																
Procedural justice	.47	.22	.33	.11	.56	.31	.34	.12					.68	.46	.60	.36
Distributive justice	.13	.02	-.01	.00	.50	.25	.38	.14					.58	.34	.55	.30

Note: β is the unmediated regression coefficient; β' represents the mediated regression coefficient.

satisfaction) simultaneously on both the independent variable of interest (e.g., contingent rewards) and the mediator (i.e., LMX). Table 3 includes the results of this analysis.

Table 3 includes some interesting patterns, the most striking of which is the extent to which LMX serves to mediate the effects of contingent reward behavior and PA, and to a slightly lesser extent transformational leadership, but plays a much weaker mediating role when it comes to leader trust. In at least a nominal manner, LMX at least partially mediated almost all of the relationships presented in Table 3, but the effect was large (e.g., reducing the variance explained in the antecedent variable by at least half) in 15 cases. Consistent with the pattern described above, this occurred only once when leader trust in follower was involved but seven times when PA and six times when contingent rewards were the antecedents of interest.

Discussion

Our objective was to provide a meta-analytic review of the antecedents and consequences of LMX. Our focus on the antecedents of LMX, and the mediating role that LMX plays in the relationships between antecedents and outcomes, serves to integrate the previously segmented study of the antecedents of LMX and the consequences of LMX. An advantage of this meta-analysis is that it included the four groups of antecedents, which allowed for a comparison of variables across studies. Combining the power of multiple primary studies enabled us to refine LMX theory. Specifically, our results differed from others, such as Liden et al. (1993), who, while not including any leader behaviors and perceptions, concluded that liking and perceived similarity were the most important variables with respect to LMX development.

One of the most interesting findings of this study was that leader behaviors and perceptions explained the most variance in LMX. Our meta-analysis results indicated that the average magnitude of the correlations of leader expectations of follower success, contingent reward behavior, and transformational leadership with LMX was .61. The fact that these were the strongest associations from our analyses may indicate that LMX is more strongly influenced by leaders rather than followers and that LMX quality is significantly affected by leaders.

The results underscore the efficacy of leader behaviors and perceptions in determining the resulting nature of LMX relationships. The quality of LMX relationships appears to be influenced by leaders' use of contingent reward behavior, transformational leadership, and their expectations of follower success. Contingent reward behavior involves providing feedback, rewards, and recognition for accomplishments, and often entails leader clarification of task requirements. Transformational leadership involves behaviors such as articulating and modeling an appealing vision and encouraging the acceptance of group goals. These results indicate that LMX relationships contain both transactional and transformational leadership, providing empirical support for the contention that LMX relationships are both transactional (Kuhnert & Lewis, 1987) and transformational (Graen & Uhl-Bien, 1995; Liden, Wayne, Zhao, & Henderson, 2008).

When leaders engage in these behaviors, it signals to followers that the leader is willing to put extra effort into the relationship, which likely encourages followers to reciprocate by providing more to the leader than is expected. Our results indicate that followers reciprocate in multiple ways, including OCBs. Leader expectations of follower success may further enhance these effects, as high expectations may represent a self-fulfilling prophecy that serves to enhance follower self-efficacy and thus improves work behaviors. This has been found in research conducted by scholars examining the Pygmalion effect (e.g., Dvir, Eden, & Banjo, 1995; Eden, 1984; McNatt, 2000).

It needs to be mentioned that the strong relationships between the leader behaviors and LMX could indicate that they are not empirically distinct. Conceptually, these three variables (i.e., LMX, transformational leadership, and contingent reward behaviors) are quite different from one another. Specifically, both transformational leadership and contingent reward behaviors are leader behaviors, whereas LMX is an assessment of the relationship between leaders and subordinates. Because LMX describes the dyadic process by which roles are developed by a leader with his or her subordinates, and the resulting exchange process, researchers have expected LMX to be affected by leader behaviors (e.g., Graen & Cashman, 1975; Yukl, O'Donnell, & Taber, 2009).

However, there are two issues that may impede our ability to understand the impact of leader behaviors on LMX. First, the primary focus of existing research examining leader behaviors leading to LMX has been on transformational leadership, with a number of studies finding an association between a composite measure of transformational leadership and LMX (Basu & Green, 1997; Howell & Hall-Merenda, 1999; J. Lee, 2008; Piccolo & Colquitt, 2006; Pillai, Schriesheim, & Williams, 1999; Tse & Lam, 2008; Wang et al., 2005). Only a few studies have examined specific dimensions of transformational leadership and LMX and have concluded that not all transformational leadership dimensions are related to LMX.

Individualized consideration, idealized influence, and relations-oriented aspects of transformational leadership have been shown to be related to LMX, whereas inspirational

motivation, intellectual stimulation, and change-oriented aspects have not (Deluga, 1992). This indicates that a composite approach is not the ideal way to examine the relationship between transformational leadership and LMX. Thus, although the results of this meta-analysis indicated a significant association between transformational leadership and LMX quality, these findings were based primarily on studies that used a composite measure of transformational leadership.

Second, the scales used to measure LMX have received criticism by leadership scholars (e.g., Liden & Maslyn, 1998; Schriesheim et al., 1992). Most current LMX scales do not measure exchange, and few measure the reciprocity between the leader and follower, although LMX is conceptualized as an exchange process based on reciprocity (Bernerth et al., 2007; Gerstner & Day, 1997). For example, it has been argued that the “theoretical underpinning of LMX-7 is not based on the conceptualization of social exchange defined by Blau (1964)” (Bernerth, Armenakis, Feild, Giles, & Walker, 2007: 983). Therefore, scales used to measure transformational leadership, contingent reward behaviors, and LMX make these constructs empirically appear to be more similar than they are conceptually.

Consequently, these results highlight the importance of rethinking how leadership scholars explore and measure the relationship between leader behaviors and LMX. Rather than relying on composite measures of transformational leadership, it may prove more fruitful for researchers to focus on specific dimensions of this leader behavior. In addition, Bernerth and his colleagues (2007) recently developed a measure of LMX as a social exchange process, with items such as “My manager and I have a two-way exchange relationship” and “If I do something for my manager, he or she will eventually repay me.” Future LMX studies should utilize this type of measure in their research because it truly focuses on the exchange process and reciprocity and can be more clearly distinguished from transformational leadership and contingent reward behaviors.

Mediating Role of LMX

Integrating our study of LMX antecedents with the more frequently studied and meta-analyzed relationships between LMX and consequences (Gerstner & Day, 1997; Ilies et al., 2007), we contributed to the LMX literature by demonstrating that LMX mediates much of the variance between the antecedents and outcomes that we were able to assess. Furthermore, these results indicate that it is the quality of the relationship that determines key outcomes, *not* the follower or leader behaviors and perceptions per se. In other words, LMX mediated many of the relationships to such a large degree that it appears that the role of LMX is central to explaining the ultimate relationship between the antecedents and the outcomes we explored. Thus, although the antecedents certainly are important in their own right and very relevant for understanding LMX quality, it is LMX that appears to bridge associations between the antecedents and outcomes that we examined in this study.

An explanation for why LMX mediates these antecedent-outcome relationships can be found in RLT. Relational leadership theorists argue that the relationship developed between leaders and followers is vastly important to follower outcomes, further suggesting that leadership is socially constructed (e.g., Brower et al., 2000). Therefore, focusing on aspects of the leader, follower, or situation in isolation would be inadequate in explaining leadership

outcomes. Uhl-Bien (2006: 671) stated that “leadership *is* relational, and cannot be captured by examination of individual attributes alone.” The results of our mediation analysis provide empirical support for this theoretical argument.

The same behaviors or characteristics in leaders and followers will not produce the same quality relationship or equivalent outcomes in all dyads. The effects of these various antecedents lie in the reactions of the individuals involved (Uhl-Bien, 2006). For instance, leaders may try displaying transformational behaviors toward their followers, and some followers may react positively to these types of behaviors, thus enhancing their relationship with their leaders (i.e., experiencing high-quality LMX relationships). On the other hand, other followers may be less enthused about such behaviors and therefore react more negatively to these behaviors, resulting in lower quality LMX relationships. It is then the quality of the LMX relationship that directly affects outcomes as such as turnover intentions and performance. The effectiveness of certain leadership behaviors is a function of the reaction of the followers and the social reality in which they find themselves. These findings highlight the fact that leadership is not just about characteristics of the leader, follower, or relationship, but it is actually a complex interaction of a social reality.

When it comes to future examinations of LMX’s mediating role, more primary research is needed to better establish the relationships between some of the important antecedents (e.g., similarity, perceived competence, affect or liking) and the types of outcomes included in this study. These studies could provide important insights to further understanding of which of the relationships are significantly mediated by LMX, and which ones operate through other or direct means.

Moderator Analysis

Our analysis did not reveal much difference in the relationships among the antecedents, consequences, and LMX based on any of the moderators we examined. Most surprising was that the particular scale used to measure LMX was not statistically relevant. That is, researchers using the LMX-7, LMX-MDM, LMX-17, and the original scale produced roughly the same results when used to study the same relationships. This lack of significant moderating effects parallels correlations between LMX measures, such as the correlation of .84 between the LMX-MDM composite (i.e., supported with a higher order CFA) and LMX-7 reported by Liden and Maslyn (1998).

Interestingly, these researchers also found that the LMX-MDM composite explained an additional 18% of the variance in job performance after controlling for LMX-7. This result suggests that even though correlations between LMX-7 and outcomes and LMX-MDM and outcomes may be statistically significant, the LMX-MDM is capable of explaining incremental variance in outcomes beyond LMX-7. This may be the result of the fact that the LMX-MDM was developed using a rigorous scale development procedure that included critical incident interviews to ensure full coverage of the LMX domain as well as assessments of content, construct, and predictive validity (Liden & Maslyn, 1998). In sum, while the correlations between LMX and outcomes reported here are not capable of capturing the incremental variance that may be explained by the LMX-MDM, we recommend that this be

investigated in future research, especially given that Liden and Maslyn's results comparing LMX-7 and the LMX-MDM were based on a relatively small sample size.

Just as LMX-7 and LMX-MDM measures of LMX produced similar relationships with antecedents and consequences, the LMX measures also correlated highly with other variables, such as the contingent rewards component of transactional leadership, as well as transformational leadership and leader trust. Despite the high correlations between these constructs, the theoretical distinctions between them provide justification for retaining them as separate entities (Bass & Bass, 2008). Bollen and Hoyle (1990: 497) dramatized this point by arguing that "high or even perfect correlation is not a sufficient condition to claim that a concept is uni-dimensional rather than bi-dimensional." So there often may be theoretical reasons to retain two constructs, or two dimensions of a construct, despite high correlations between the two. For example, occurrence of day and occurrence of night are perfectly and negatively correlated, yet darkness and light are very different theoretically, thus warranting the retention of both constructs.

Directions for Future Research

Although we found leader characteristics (i.e., behavior and perceptions) to demonstrate the strongest relationship with LMX quality, we were able to find only five variables representing this category that could be included in the meta-analysis, suggesting that there has not been a great deal of research in this area. The importance of leader behavior and perceptions has been highlighted by theorists, such as Dienesch and Liden (1986), who described the leader as central in the initial interaction with followers, through delegating tasks to the followers, in making attributions about follower performance, and in responding to follower performance. Furthermore, since generally there is a power difference in the leader's favor, leaders likely play a dominant role in LMX relationship quality. In light of our discovery that few studies have explored the relative influence of leaders and followers in LMX development, we feel this is an important area in need of additional research.

Another area that has received limited attention within LMX research is work context, and this call for research is not a new one (cf. Dienesch & Liden, 1986). Gerstner and Day (1997) suggested that future researchers continue to examine the organizational context as it relates to the development of LMX relationships. Of particular importance are multilevel studies that are capable of capturing group and organizational effects and how they impinge on individuals and groups (G. Chen, Kirkman, Kanfer, Allen, & Rosen, 2007).

Furthermore, such future research should investigate the extent to which the larger spans of control affect LMX quality through physical and/or psychological distance (e.g., Antonakis & Atwater, 2002; Napier & Ferris, 1993). Finally, with respect to context, our study highlighted the relative lack of LMX research in non-Western cultures. The significant finding that cultural dimensions (i.e., individualism and power distance) moderated the relationship between leader trust and LMX suggests the need for further investigation of the generalizability of LMX antecedent and consequence relationships that have been supported in this study to other non-Western cultures.

Another issue of LMX research that was revealed when we coded articles was that the majority of LMX studies have been cross-sectional, and the majority of relationships

reported were from the same source. Therefore, we recommend that more studies include leader perceptions of LMX as well as studies that examine leader-member agreement on LMX as a substantive variable, such as in the pioneering study by Cogliser et al. (2009). Also, although the call for longitudinal research has become virtually a boilerplate for future research suggestions, in the case of LMX, this recommendation takes on special importance.

Clearly, the best way to assess relationship development, maintenance, and decline is through long-term longitudinal research. With the exception of Wakabayashi, Graen, and Graen (1988), most longitudinal studies of LMX (e.g., Bauer & Green, 1996; Dansereau et al., 1975; Liden et al., 1993; Liden & Graen, 1980; Nahrgang et al., 2009) have covered less than 1 year. For this reason, we know substantially more about LMX development than about maintenance and decline.

Limitations of the Study

Several limitations of our research need to be recognized. First, as noted by researchers (e.g., Aguinis et al., 2011; Guzzo, Jackson, & Katzell, 1987), every meta-analytic study is subject to a variety of judgment calls that may influence the results. For example, one involves determining the population of relevant studies. Others involve the actual coding of the data. To mitigate bias for the first, as described above, we did an exhaustive search of LMX studies. Second, to deal with coding issues, we had multiple raters code the data and resolve their differences with a third rater to minimize the impact of those judgments. In spite of these efforts, our decisions nevertheless may have demonstrated some influence on the findings.

Another set of limitations exists in our analyses, which is solely the result of the state of the extant LMX literature. Specifically, relatively few of the measures in our analysis were obtained from supervisor ratings. Those obtained with self-report measures are potentially subject to same-source biases and therefore may possibly inflate the relationships between these variables and LMX as a result of common method variance (cf. Podsakoff & Organ, 1986). However, the use of dissimilar source data mitigates this possibility for some of the relationships reported by studies included in this meta-analysis.

In addition, many of the studies included in our analysis were based on a cross-sectional correlation design, which prevents the establishment of causal direction. This issue was somewhat mitigated by our inclusion of a number of antecedents and consequence variables in the model testing that were reported by the leaders and/or organization. In spite of this, relatively few of the variables were collected from different sources, meaning that a moderator analysis of variable reporting source could not be done.

Another related issue has to do with problems inherent in combining meta-analytic techniques and structural equations, which often assumes the correlation matrices that are integrated share the same population correlation matrix and therefore are homogenous rather than heterogeneous (Cheung & Chan, 2005). While recognizing that correlation matrices we integrated are not homogenous, our goal was not to look for a large series of boundary conditions in the role LMX plays. Our objective was to search for general patterns of the antecedents of LMX, the consequences of LMX, and whether or not LMX is an important

mediator. Traditionally, LMX has not been viewed as a mediator very often, but this is a role we believe it plays more frequently than the extant research has presented it as playing.

Furthermore, the lack of significant differences between the scales may be the result of methodological deficiencies in LMX research, including both single-source bias characterizing the LMX and correlated variable data in most of the studies. Regardless of the true reason for these results, these moderator results suggest that the particular LMX scale used may not make much difference when it comes to the nature of relationships between LMX and the antecedents that we examined. A related limitation in the present study exists because of the lack of longitudinal studies, especially those involving “new” leader-follower dyads, and the literature’s reliance on cross-sectional survey data. As a result, no assertion of causal direction is possible given the existing data.

Finally, in many of the cases we examined (i.e., especially in the subgroups of moderator analyses), very few studies existed. Although we resisted the urge to overinterpret these small groups of studies, there is no guarantee that the dearth of research that exists is representative of the true population distribution for the relationships of interest. Finally, because of the data available, it was not possible in the current study to examine intervening variables that may help to explain the processes by which antecedents are related to LMX. We encourage future researchers to explore this issue with research designs that lend themselves better to this sort of analysis than the meta-analytic design used in this study.

Practical Implications

Leadership takes place at multiple levels of the organization. In the executive ranks, especially at the CEO level, leaders play a figurehead role (Mintzberg, 1973), providing the organization with direction and creating the culture (Schneider, 1987). However, despite the importance of executive leadership, leadership that serves to complete the core tasks of the organization occurs at lower levels. At the work group level, leadership takes place within work relationships between leaders and subordinates. It is here that leaders empower followers, provide direction and support, and engage in mentoring behaviors with subordinates (Scandura & Schriesheim, 1994).

This study has shed further light on the role LMX plays in mediating important work relationships. Specifically, LMX mediated most of the relationships we were able to analyze. Up to this point, most research on LMX has been descriptive, with much less research prescriptive in terms of how to enhance LMX quality during the development process. The results of our study provide very strong findings as to what antecedents are associated with enhanced LMX.

Bennis (2007: 3) argued that, in its simplest form, “leadership is grounded in a relationship,” and it is important for us to keep that in mind with regard to the development of leaders. The meta-analysis results indicate that a focus on training supervisors in these behaviors may be an effective way to promote LMX quality. However, how do we train leaders to develop and maintain high-quality relationships with their followers? Graen, Novak, and colleagues’ (1982) field experiment represents one of the few studies that attempted to “train” managers to develop high-quality relationships. More studies in this area would be beneficial for LMX theory and practice as well.

Conclusion

A relatively straightforward picture of LMX emerges from this meta-analysis. It appears that much of what is involved in developing strong LMX relationships lies in the immediate purview of leaders. For example, if leaders are seen as rewarding followers based on their performance, and stimulating them to perform beyond expectations with transformational leadership, a constructive relationship with their followers is very likely to emerge. In addition to insights on LMX quality, the results demonstrated that most of the variance in outcomes was explained through the mediating role of LMX. Thus, many leader and follower behaviors appear to be interpreted by both leaders and followers in terms of their relevance to LMX relationships, leading to the conclusion that LMX relationships may be central to organizational functioning.

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