

# Journal of Management

<http://jom.sagepub.com/>

---

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

James H. Dulebohn, William H. Bommer, Robert C. Liden, Robyn L. Brouer and Gerald R. Ferris

*Journal of Management* 2012 38: 1715 originally published online 19 July 2011  
DOI: 10.1177/0149206311415280

The online version of this article can be found at:  
<http://jom.sagepub.com/content/38/6/1715>

---

Published by:



<http://www.sagepublications.com>

On behalf of:



[Southern Management Association](http://www.sma.org)

**Additional services and information for *Journal of Management* can be found at:**

**Email Alerts:** <http://jom.sagepub.com/cgi/alerts>

**Subscriptions:** <http://jom.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

>> [Version of Record](#) - Oct 3, 2012

[OnlineFirst Version of Record](#) - Jul 19, 2011

[What is This?](#)

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

James H. Dulebohn

*Michigan State University*

William H. Bommer

*California State University, Fresno*

Robert C. Liden

*University of Illinois, Chicago*

Robyn L. Brouer

*University of Buffalo*

Gerald R. Ferris

*Florida State University*

---

*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*

---

*Acknowledgment: This article was accepted under the editorship of Talya N. Bauer.*

*Corresponding author: James H. Dulebohn, School of Human Resources and Labor Relations, Michigan State University, 412 S. Kedzie, East Lansing, MI 48824, USA*

*E-mail: [Dulebohn@msu.edu](mailto:Dulebohn@msu.edu)*

*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.

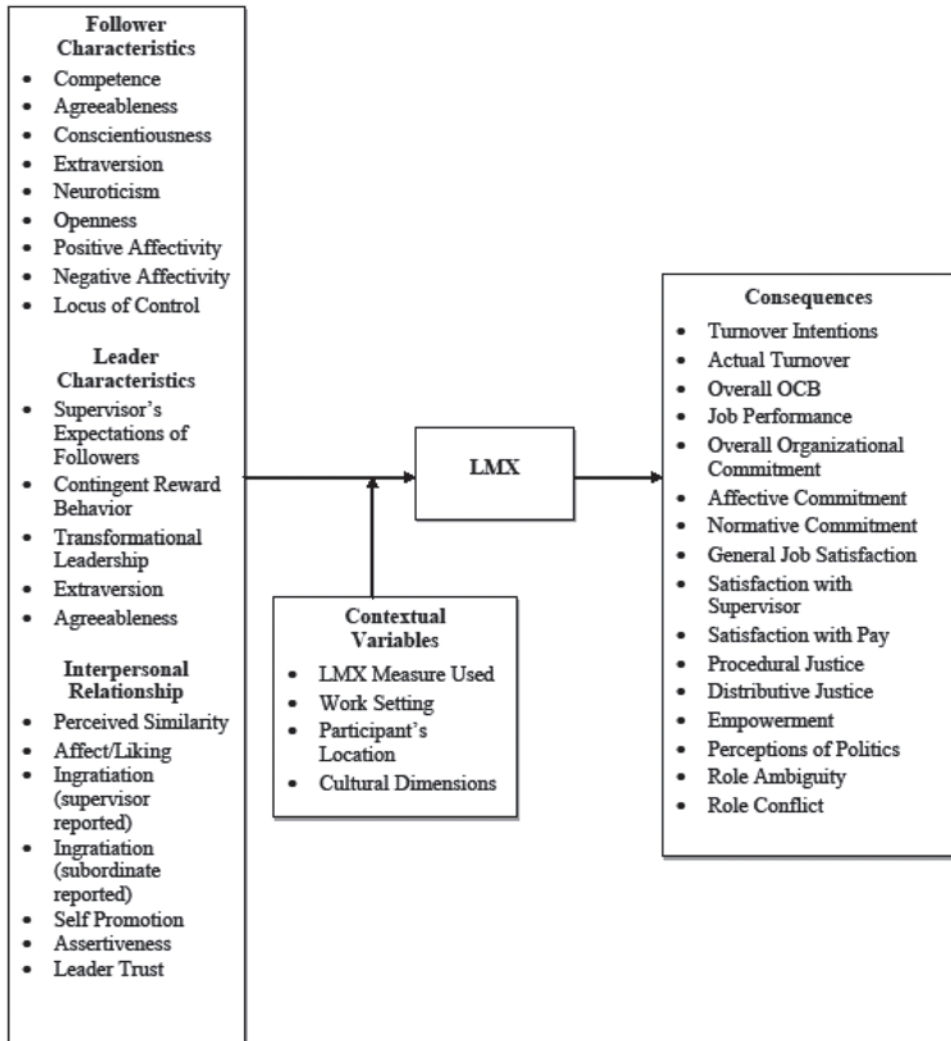
Therefore, our goals in the current investigation are to provide a meta-analytic review of LMX's antecedents and consequences and to shed light on LMX as a mediator between its antecedents and relevant consequences, thus bringing together two different streams of LMX research. To this end, we offer a 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	$\rho$	SD $\rho$	Q	80% CV		95% CI		Fail Safe N
							Lower	Upper	Lower	Upper	
<b>Follower characteristics</b>											
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
<b>Follower personality measures</b>											
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
<b>Leader behaviors and perceptions</b>											
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
<b>Leader personality measures</b>											
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
<b>Interpersonal relationship variables</b>											
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>	$\rho$	<i>SD</i> $\rho$	<i>Q</i>	80% CV		95% CI		Fail Safe <i>N</i>
							Lower	Upper	Lower	Upper	
<b>Behavioral outcomes</b>											
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
<b>Attitudinal outcomes</b>											
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	
<b>Perceptual outcomes</b>											
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
<b>Role states</b>											
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			
	$\beta$	$R^2$	$\beta'$	$R^2$	$\beta$	$R^2$	$\beta'$	$R^2$	$\beta$	$R^2$	$\beta'$	$R^2$	$\beta$	$R^2$	$\beta'$	$R^2$
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:*  $\beta$  is the unmediated regression coefficient;  $\beta'$  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.

## References

References marked with an asterisk indicate studies included in the meta-analysis.

- Adams, J. S. 1963. Toward an understanding of inequity. *Journal of Abnormal Social Psychology*, 67: 422-436.
- Aguinis, H., Dalton, D. D., Bosco, F. A., Pierce, C. A., & Dalton, C. M. 2011. Meta-analytic choices and judgment calls: Implications for theory building and testing, obtained effect sizes, and scholarly impact. *Journal of Management*, 37: 5-38.
- \*Alexander, K. N. 2009. *Praise for proactivity: The role of leadership and supervisor personality in rewarding employee proactivity*. Master's thesis, Bowling Green State University, Bowling Green, OH. Retrieved from <http://etd.ohiolink.edu/view.cgi/Alexander%20Katherine.pdf?bgsu1252440049>
- Allen, N. J., & Meyer, J. P. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63: 1-18.
- \*Allen, T. D., & Eby, L. T. 2003. Relationship effectiveness for mentors: Factors associated with learning and quality. *Journal of Management*, 29: 469-486.
- Anand, S., Hu, J., Liden, R. C., & Vidyarthi, P. R. 2011. Leader-member exchange: Recent research findings and prospects for the future. In A. Bryman, D. Collinson, K. Grint, B. Jackson, & M. Uhl-Bien (Eds.), *The Sage handbook of leadership*: 311-325. Thousand Oaks, CA: Sage.
- \*Anderson, S. E., & Williams, L. J. 1996. Interpersonal, job, and individual factors related to helping processes at work. *Journal of Applied Psychology*, 81: 282-296.
- \*Andrews, M. C., & Kacmar, K. M. 2001. Discrimination among organizational politics, justice, and support. *Journal of Organizational Behavior*, 22: 347-366.
- \*Anseel, F., & Lievens, F. 2007. The long-term impact of the feedback environment on job satisfaction: A field study in a Belgian context. *Applied Psychology: An International Review*, 56: 254-266.
- Antonakis, J., & Atwater, L. 2002. Leader distance: A review and a proposed theory. *Leadership Quarterly*, 13: 673-704.
- \*Aryee, S., & Chen, Z. X. 2006. Leader-member exchange in a Chinese context: Antecedents, the mediating role of psychological empowerment and outcomes. *Journal of Business Research*, 59: 793-801.
- Avolio, B. J., Bass, B. M., & Jung, D. I. 1999. Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72: 441-462.
- \*Barbuto, J. E., & Moss, J. A. 2006. Dispositional effects in intra-organizational influence tactics: A meta-analytic review. *Journal of Leadership & Organizational Studies*, 12(3): 30-48.
- \*Barbuto, J. E., & Wheeler, D. W. 2006. Scale development and construct clarification of servant leadership. *Group & Organization Management*, 31: 300-326.
- Barrick, M. R., & Mount, M. K. 1991. The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44: 1-26.

- Bass, B. M., & Avolio, B. J. 1993. Transformational leadership: A response to critiques. In M. M. Chemers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and directions*: 49-88. San Diego, CA: Academic Press.
- Bass, B. M., & Bass, R. 2008. *The Bass handbook of leadership: Theory, research, and managerial implications* (4th ed.). New York: Free Press.
- \*Basu, R., & Green, S. G. 1995. Subordinate performance, leader-subordinate compatibility, and exchange quality in leader-member dyads: A field study. *Journal of Applied Social Psychology*, 25: 77-92.
- \*Basu, R., & Green, S. G. 1997. Leader-member exchange and transformational leadership: An empirical examination of innovative behaviors in leader-member dyads. *Journal of Applied Social Psychology*, 27: 177-199.
- \*Bauer, T. N., Erdogan, B., Liden, R. C., & Wayne, S. J. 2006. A longitudinal study of the moderating role of extraversion: LMX, performance, and turnover during new executive development. *Journal of Applied Psychology*, 91: 298-310.
- Bauer, T. N., & Green, S. G. 1996. Development of leader-member exchange: A longitudinal test. *Academy of Management Journal*, 39: 1538-1567.
- \*Bell, L. M. 1995. *Looking for passages through the glass ceiling: An empirical field investigation into the effects of gender, age and leader-member exchange relationships on the career progress and career perceptions of working professionals*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9541658)
- Bennis, W. 2007. The challenges of leadership in the modern world: Introduction to the special issue. *American Psychologist*, 62: 2-5.
- \*Bernerth, J. B. 2005. *Putting exchange back into leader-member exchange (LMX): An empirical assessment of a social exchange (LMSX) scale and an investigation of personality as an antecedent*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3201432)
- \*Bernerth, J. B., Armenakis, A. A., Field, H. S., Giles, W. F., & Walker, H. J. 2007. Is personality associated with perceptions of LMX? An empirical study. *Leadership & Organization Development Journal*, 28: 613-631.
- Bernerth, J. B., Armenakis, A. A., Field, H. S., Giles, W. F., & Walker, H. J. (2007). Leader-member social exchange (LMSX): Development and validation of a scale. *Journal of Organizational Behavior*, 28: 979-1003.
- \*Bhal, K. T. 2006. LMX-citizenship behavior relationship: Justice as a mediator. *Leadership & Organization Development Journal*, 27: 106-118.
- \*Bhal, K. T., & Ansari, M. A. 2007. Leader-member exchange-subordinate outcomes relationship: Role of voice and justice. *Leadership & Organization Development Journal*, 28: 20-35.
- \*Blau, G. 1988. An investigation of the apprenticeship organizational socialization strategy. *Journal of Vocational Behavior*, 32: 176-195.
- Blau, G. 1993. Testing the relationship of locus of control to different performance dimensions. *Journal of Occupational & Organizational Psychology*, 66: 125-138.
- Blau, P. M. 1964. *Exchange and power in social life*. New York: John Wiley.
- \*Boies, K., & Howell, J. M. 2006. Leader-member exchange in teams: An examination of the interaction between relationship differentiation and mean LMX in explaining team-level outcomes. *Leadership Quarterly*, 17: 246-257.
- Bollen, K. A., & Hoyle, R. H. 1990. Perceived cohesion: A conceptual and empirical examination. *Social Forces*, 69: 479-504.
- Bono, J. E., & Judge, T. A. 2004. Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology*, 89: 901-910.
- \*Botero, I. C. 2005. *Getting one's way vs. maintaining the relationship: Effects of leader-member exchange (LMX) quality on upward influence message production across two cultures*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3171442)
- \*Boulanger, D. 2008. *Leader-member exchange and trust: How a team building exercise improves leader-member relations*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 1455841)
- \*Brandes, P., Dharwadkar, R., & Wheatley, K. 2004. Social exchanges within organizations and work outcomes: The importance of local and global relationships. *Group & Organization Management*, 29: 276-301.
- \*Breland, J. W., Treadway, D. C., Duke, A. B., & Adams, G. 2007. The interactive effect of leader-member exchange and political skill on subjective career success. *Journal of Leadership & Organizational Studies*, 13(3): 1-14.
- Brouer, R., & Harris, K. 2007. Dispositional and situational moderators of the relationship between leader-member exchange and work tension. *Journal of Applied Social Psychology*, 37: 1418-1441.

- Brower, H. H., Lester, S. W., Korsgaard, M. A., & Dineen, B. R. 2009. A closer look at trust between managers and subordinates: Understanding the effects of both trusting and being trusted on subordinate outcomes. *Journal of Management*, 35: 327-347.
- Brower, H. H., Schoorman, F. D., & Tan, H. H. 2000. A model of relational leadership: The integration of trust and leader-member exchange. *Leadership Quarterly*, 11: 227-250.
- Byrne, D. 1971. *The attraction paradigm*. New York: Academic Press.
- \*Campbell, K. L. 2003. *Desperately seeking feedback: A model of feedback-seeking based on the leader-member exchange and communication antecedents*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3096382)
- \*Castleberry, S. B., & Tanner, J. F. 1989. Salesperson's commitment to the organization: Associations with performance, motivation, conflict, satisfaction, and relationship with the manager. *Journal of Applied Business Research*, 5(1): 84-89.
- \*Chang, C. 2005. *Investigating leader-member exchange and team-member exchange as moderators of the relationship between transformational leadership practices and team effectiveness*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3191366)
- Chang, C., Rosen, C. C., & Levy, P. E. 2009. The relationship between perceptions of organizational politics and employee attitudes, strain, and behavior: A meta-analytic examination. *Academy of Management Journal*, 52: 779-801.
- Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. 2007. A multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology*, 92: 331-346.
- \*Chen, Z., Lam, W., & Zhong, J. A. 2007. Leader-member exchange and member performance: A new look at individual-level negative feedback-seeking behavior and team-level empowerment climate. *Journal of Applied Psychology*, 92: 202-212.
- Cheung, M. W.-L., & Chan, W. 2005. Classifying correlation matrices into relatively homogeneous subgroups: A cluster analytic approach. *Educational and Psychological Measurement*, 65: 954-979.
- \*Chi, S., & Lo, H. 2003. Taiwanese employees' justice perceptions of co-workers' punitive events. *Journal of Social Psychology*, 27:143-158.
- \*Cleyman, K. L., Jex, S. M., & Love, K. G. 1995. Employee grievance: An application of the leader-member exchange model. *International Journal of Organizational Analysis*, 3: 156-174.
- Cogliser, C. C., & Schriesheim, C. A. 2000. Exploring work unit context and leader-member exchange: A multi-level perspective. *Journal of Organizational Behavior*, 21: 487-511.
- \*Cogliser, C. C., Schriesheim, C. A., Scandura, T. A., & Gardner, W. L. 2009. Balance in leader and follower perceptions of leader-member exchange: Relationships with performance and work attitudes. *Leadership Quarterly*, 20: 452-465.
- \*Colella, A., & Varma, A. 2001. The impact of subordinate disability on leader-member exchange relationships. *Academy of Management Journal*, 44: 304-315.
- \*Collins, M. 2007. *Understanding the relationships between leader-member exchange (LMX), psychological empowerment, job satisfaction, and turnover intent in a limited-service restaurant environment*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3260704)
- \*Connell, P. W. 2005. *Transformational leadership, leader-member exchange (LMX), and OCB: The role of motives*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3197920)
- \*Côté, S., & Miners, C. T. H. 2006. Emotional intelligence, cognitive intelligence, and job performance. *Administrative Science Quarterly*, 51: 1-28.
- Cropanzano, R., & Folger, R. 1989. Referent cognitions and task decision autonomy: Beyond equity theory. *Journal of Applied Psychology*, 74: 293-299.
- Cropanzano, R., & Mitchell, M. S. 2005. Social exchange theory: An interdisciplinary review. *Journal of Management*, 31: 874-900.
- Dansereau, F., Jr., Graen, G., & Haga, W. J. 1975. A vertical dyad linkage approach to leadership within formal organizations—A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance*, 13: 46-78.
- Davis, W. D., & Gardner, W. L. 2004. Perceptions of politics and organizational cynicism: An attributional and leader-member exchange perspective. *Leadership Quarterly*, 15: 439-465.
- \*Day, D. V., & Crain, E. C. 1992. The role of affect and ability in initial exchange quality perceptions. *Group & Organization Management*, 17: 380-397.

- \*Deluga, R. J. 1992. The relationship of leader-member exchange with laissez-faire, transactional, and transformational leadership in naval environments. In K. E. Clark, M. B. Clark, & D. P. Campbell (Eds.), *Impact of leadership*: 237-247. Greensboro, NC: Center for Creative Leadership.
- \*Deluga, R. J. 1994. Supervisor trust building, leader-member exchange and organizational citizenship behavior. *Journal of Occupational and Organizational Psychology*, 67: 315-326.
- \*Deluga, R. J. 1998. Leader-member exchange quality and effectiveness ratings: The role of subordinate-supervisor conscientiousness similarity. *Group & Organization Studies*, 23: 189-216.
- \*Deluga, R. J., & Perry, J. T. 1991. The relationship of subordinate upward influencing behavior, satisfaction and perceived superior effectiveness with leader-member exchanges. *Journal of Occupational Psychology*, 64: 239-252.
- \*Deluga, R. J., & Perry, J. T. 1994. The role of subordinate performance and ingratiation in leader-member exchanges. *Group & Organization Management*, 19: 67-86.
- \*DelVecchio, S. K. 1998. The quality of salesperson-manager relationship: The effect of latitude, loyalty and competence. *Journal of Personal Selling & Sales Management*, 18: 31-47.
- Dépret, E. M., & Fiske, S. T. 1992. Social cognition and power: Some cognitive consequences of social structure as a source of control deprivation. In G. Weary, F. Gleicher, & K. Marsh (Eds.), *Control, motivation, and social cognition*: 176-202. New York: Springer-Verlag.
- Dienesch, R. M., & Liden, R. C. 1986. Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11: 618-634.
- \*Dionne, S. D., Yammarino, F. J., Atwater, L. E., & James, L. R. 2002. Neutralizing substitutes for leadership theory: Leadership effects and common-source bias. *Journal of Applied Psychology*, 87: 454-464.
- Dirks, K. T., & Ferrin, D. L. 2002. Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87: 611-628.
- \*Dobbins, G. H., Cardy, R. L., & Platz-Vieno, S. J. 1990. A contingency approach to appraisal satisfaction: An initial investigation of the joint effects of organizational variables and appraisal characteristics. *Journal of Management*, 16: 619-632.
- \*Dockery, T. M., & Steiner, D. D. 1990. The role of the initial interaction in leader-member exchange. *Group & Organization Studies*, 15: 395-413.
- \*Dolden, S. A. 2001. *An examination of the moderating role of perceived support for innovation on leader-member exchange, team-member exchange, and individual-level work outcomes*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 1406127)
- \*Duarte, N. T., Goodson, J. R., & Klick, N. R. 1994. Effects of dyadic quality and duration on performance appraisal. *Academy of Management Journal*, 37: 499-521.
- \*Duchon, D., Green, S. G., & Taber, T. D. 1986. Vertical dyad linkage: A longitudinal assessment of antecedents, measures, and consequences. *Journal of Applied Psychology*, 71: 56-60.
- \*Dulac, T., Coyle-Shapiro, J., Henderson, D., & Wayne, S. 2008. Not all responses to breach are the same: The interconnection of social exchange and psychological contract processes in organizations. *Academy of Management Journal*, 51: 1079-1098.
- Dulebohn, J. H., & Ferris, G. R. (1999). The role of influence tactics on fairness perceptions of performance evaluations. *Academy of Management Journal*, 42: 288-303.
- \*Dunegan, K. J. 2003. Leader-image compatibility: An image theory view of leadership. *Journal of Business and Management*, 9: 61-78.
- \*Dunegan, K. J., Duchon, D., & Uhl-Bien, M. 1992. Examining the link between leader-member exchange and subordinate performance: The role of task analyzability and variety as moderators. *Journal of Management*, 18: 59-76.
- \*Dunegan, K. J., Tierney, P., & Duchon, D. 1992. Perceptions of an innovative climate: Examining the role of divisional affiliation, work group interaction, and leader/subordinate exchange. *IEEE Transactions on Engineering Management*, 39: 227-235.
- \*Dunegan, K. J., Uhl-Bien, M., & Duchon, D. 2002. LMX and subordinate performance: The moderating effects of task characteristics. *Journal of Business and Psychology*, 17: 275-286.
- Dvir, T., Eden, D., & Banjo, M. L. 1995. Self-fulfilling prophecy and gender: Can women be Pygmalion and Galatea? *Journal of Applied Psychology*, 80: 253-270.
- Eden, D. 1984. Self-fulfilling prophecy as a management tool: Harnessing Pygmalion. *Academy of Management Review*, 9: 64-73.



- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. 1986. Perceived organizational support. *Journal of Applied Psychology*, 71: 500-507.
- \*Elicker, J. D., Levy, P. E., & Hall, R. J. 2006. The role of leader-member exchange in the performance appraisal process. *Journal of Management*, 32: 531-551.
- \*Engle, E. M., & Lord, R. G. 1997. Implicit theories, self-schemas, and leader-member exchange. *Academy of Management Journal*, 40: 988-1010.
- \*Epitropaki, O., & Martin, R. 1999. The impact of relational demography on the quality of leader-member exchanges and employees' work attitudes and well-being. *Journal of Occupational and Organizational Psychology*, 72: 237-241.
- \*Epitropaki, O., & Martin, R. 2005. From ideal to real: A longitudinal study of the role of implicit leadership theories on leader-member exchanges and employee outcomes. *Journal of Applied Psychology*, 90: 659-676.
- \*Erdogan, B. 2002. *Leader-member exchange differentiation fairness: Evidence for a new construct*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3058101)
- Erdogan, B., & Bauer, T. N. 2010. Differentiated leader-member exchanges: The buffering role of justice climate. *Journal of Applied Psychology*, 95: 1104-1120.
- \*Erdogan, B., & Enders, J. 2007. Support from the top: Supervisors' perceived organizational support as a moderator of leader-member exchange to satisfaction and performance relationships. *Journal of Applied Psychology*, 92: 321-330.
- \*Erdogan, B., Kraimer, M. L., & Liden, R. C. 2004. Work value congruence and intrinsic career success: The compensatory roles of leader-member exchange and perceived organizational support. *Personnel Psychology*, 57: 305-332.
- Erdogan, B., & Liden, R. C. 2002. Social exchanges in the workplace: A review of recent developments and future research directions in leader-member exchange theory. In L. L. Neider & C. A. Schriesheim (Eds.), *Leadership*: 65-114. Greenwich, CT: Information Age.
- \*Erdogan, B., & Liden, R. C. 2006. Collectivism as a moderator of responses to organizational justice: Implications for leader-member exchange and ingratiation. *Journal of Organizational Behavior*, 27: 1-18.
- \*Erdogan, B., Liden, R. C., & Kraimer, M. L. 2006. Justice and leader-member exchange: The moderating role of organizational culture. *Academy of Management Journal*, 49: 395-424.
- Fairhurst, G. T. 2001. Dualisms in leadership research. In L. L. Putnam & F. M. Jablin (Eds.), *The new handbook of organizational communication*: 379-439. Sage: Newbury Park, CA. Thousand Oaks, CA: Sage.
- \*Farmer, S. M., Maslyn, J. M., Fedor, D. B., & Goodman, J. S. 1997. Putting upward influence strategies in context. *Journal of Organizational Behavior*, 18: 17-42.
- Ferris, G. R., & Kacmar, K. M. 1992. Perceptions of organizational politics. *Journal of Management*, 18: 93-116.
- Ferris, G. R., Liden, R. C., Munyon, T. P., Summers, J. K., Basik, K. J., & Buckley, M. R. 2009. Relationships at work: Toward a multidimensional conceptualization of dyadic work relationships. *Journal of Management*, 35: 1379-1403.
- Ferris, G. R., Perrewé, P. L., & Douglas, C. 2002. Social effectiveness in organizations: Construct validity and research directions. *Journal of Leadership & Organizational Studies*, 9(1): 30-55.
- Fiske, S. T. 1993. Social cognition and social perception. *Annual Review of Psychology*, 44: 155-194.
- Folger, R. 1986. Rethinking equity theory: A referent cognitions model. In H. W. Bierhoff, R. L. Cohen, & J. Greenberg (Eds.), *Justice in social relations*: 145-162. New York: Plenum.
- \*Foosiri, P. 2002. *An empirical study of organizational commitment and antecedents of Thai employees within the American Chamber of Commerce in Thailand*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3069475)
- \*Gandolfo, C. J. 2006. *The role of leader member exchange theory and multi-rater feedback on evaluating the performance appraisal process*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3215013)
- \*Gerras, S. J. 1992. *The effect of cognitive busyness and nonverbal behaviors on trait inferences and leader-member exchange judgments*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9236826)
- Gerstner, C. R., & Day, D. V. 1997. Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82: 827-844.
- \*Gillis, L. R. 2008. *A network perspective of multiple social exchange relationships*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3311476)

- \*Goertzen, B. J. 2003. *Role of managers' and direct reports' ethic of virtue on leader-member exchanges*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3102566)
- \*Golden, T. D. 2006. The role of relationships in understanding telecommuter satisfaction. *Journal of Organizational Behavior*, 27: 319-340.
- \*Gomez, C., & Rosen, B. 2001. The leader-member exchange as a link between managerial trust and employee empowerment. *Group & Organization Management*, 26: 53-69.
- Gouldner, A. W. 1960. The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25: 161-177.
- Graen, G. B. 1976. Role making process within complex organizations. In M. D. Dunnette (Ed.), *Handbook of industrial organizational psychology*: 1201-1245. Chicago: Rand-McNally.
- Graen, G., & Cashman, J. 1975. A role-making model of leadership in formal organization: A development approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers*: 143-165. Kent, OH: Kent State University Press.
- \*Graen, G. B., Liden, R. C., & Hoel, W. 1982. Role of leadership in the employee withdrawal process. *Journal of Applied Psychology*, 67: 868-872.
- Graen, G. B., Novak, M. A., & Sommerkamp, P. 1982. The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Decision Performance*, 30: 109-131.
- Graen, G. B., & Scandura, T. A. 1987. Toward a psychology of dyadic organizing. *Research in Organizational Behavior*, 9: 175-208.
- Graen, G. B., & Schiemann, W. 1978. Leader-member agreement: A vertical dyad linkage approach. *Journal of Applied Psychology*, 63: 206-212.
- Graen, G. B., & Uhl-Bien, M. 1995. Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6: 219-247.
- Graziano, W. G., Habashi, M. M., Sheese, B. E., & Tobin, R. M. 2007. Agreeableness, empathy, and helping: A person  $\times$  situation perspective. *Journal of Personality and Social Psychology*, 93: 583-599.
- \*Greguras, G. J., & Ford, J. M. 2006. An examination of the multidimensionality of supervisor and subordinate perceptions of leader-member exchange. *Journal of Occupational and Organizational Psychology*, 79: 433-465.
- \*Grosvenor, S. 2005. *Developmental antecedents of leader-follower relationships and trust*. Retrieved from ProQuest Dissertations and Theses Database. (AAT MR10326)
- \*Gupta, V., & Krishnan, V. R. 2004. Impact of socialization on transformational leadership: Role of leader member exchange. *South Asian Journal of Management*, 11(3): 7-20.
- \*Gutknecht, S. P. 2004. *The role of leader-member exchange during organizational changes*. Paper presented at the International Military Testing Association Congress, Brussels.
- Guzzo, R. A., Jackson, S. E., & Katzell, R. A. 1987. Meta-analysis analysis. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 9): 407-442. Greenwich, CT: JAI.
- \*Han, G. 2007. *Can the tables be turned? Linking racioethnicity, leader-member exchange (LMX) and career satisfaction*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3269910)
- \*Harris, K. J. 2004. What you don't know can't hurt you: The interactive relationship between leader-member exchange and perceptions of politics on job satisfaction. *Journal of Behavioral and Applied Management*, 5: 188-203.
- \*Harris, K. J., Harris, R. B., & Eplion, D. M. 2007. Personality, leader-member exchanges, and work outcomes. *Journal of Behavioral and Applied Management*, 8: 92-107.
- \*Harris, K. J., & Kacmar, K. M. 2005a. Easing the strain: The buffer role of supervisors in the perceptions of politics-strain relationship. *Journal of Occupational and Organizational Psychology*, 78: 337-354.
- \*Harris, K. J., & Kacmar, K. M. 2005b. An examination of the curvilinear relationship between leader-member exchange and intent to turnover. *Journal of Organizational Behavior*, 26: 363-378.
- \*Harris, K. J., Wheeler, A. R., & Kacmar, K. M. 2009. Leader-member exchange and empowerment: Direct and interactive effects on job satisfaction, turnover intentions, and performance. *Leadership Quarterly*, 20: 371-382.
- \*Heck, A. K., Bedeian, A. G., & Day, D. V. 2005. Mountains out of molehills? Tests of the mediating effects of self-esteem in predicting workplace complaining. *Journal of Applied Social Psychology*, 35: 2262-2289.
- \*Henderson, D., Wayne, S., Shore, L., Bommer, W., & Tetrick, L. 2008. Leader-member exchange, differentiation, and psychological contract fulfillment: A multilevel examination. *Journal of Applied Psychology*, 93: 1208-1219.



- \*Hepperlen, T. M. 2002. *Leader-member exchange (LMX) or fulfillment? The role of basic psychological needs in LMX relationships*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3074080)
- \*Hochwarter, W. A. 2003. The interactive effects of pro-political behavior and politics perceptions on job satisfaction and affective commitment. *Journal of Applied Social Psychology*, 33: 1360-1378.
- \*Hochwarter, W., & Byrne, Z. 2005. LMX and job tension: Linear and non-linear effects and affectivity. *Journal of Business and Psychology*, 19: 505-520.
- \*Hofmann, D. A., Gerras, S. J., & Morgeson, F. P. 2003. Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology*, 88: 170-178.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.
- Hogan, J., & Holland, B. 2003. Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *Journal of Applied Psychology*, 88: 100-112.
- Hogan, R. 1986. *Manual for the Hogan Personality Inventory*. Minneapolis, MN: National Computer Systems.
- \*Hogg, M. A., Martin, R., Epitropaki, O., Mankad, A., Svensson, A., & Weeden, K. 2005. Effective leadership in salient groups: Revisiting leader-member exchange theory from the perspective of the social identity theory of leadership. *Personality and Social Psychology Bulletin*, 31: 991-1004.
- \*Hooper, D. T., & Martin, R. 2008. Beyond personal leader-member exchange (LMX) quality: The effects of perceived LMX variability on employee reactions. *Leadership Quarterly*, 19: 20-30.
- \*Hoover, E. R. 2009. *How personality and self-identity impact the effects of leader member exchange on role stressors and organizational outcomes*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3394160)
- Howell, J. M., & Hall-Merenda, K. E. 1999. The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on predicting follower performance. *Journal of Applied Psychology*, 84: 680-694.
- \*Hoye, R. 2004. Leader-member exchanges and board performance of voluntary sport organizations. *Nonprofit Management and Leadership*, 15: 55-70.
- \*Hsiung, H., & Tsai, W. 2009. Job definition discrepancy between supervisors and subordinates: The antecedent role of LMX and outcomes. *Journal of Occupational and Organizational Psychology*, 82: 89-112.
- \*Hughes, S. A. 1997. *Transformational leadership, leader-member exchange, and the effects of leader/member similarity and liking*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9735931)
- \*Hui, C., Law, K. S., & Chen, Z. X. 1999. A structural equation model of the effects of negative affectivity, leader-member exchange, and perceived job mobility on in-role and extra-role performance: A Chinese case. *Organizational Behavior and Human Decision Processes*, 77: 3-21.
- \*Hui, C., Lee, C., & Rousseau, D. M. 2004. Employment relationships in China: Do workers relate to the organization or to people? *Organization Science*, 15: 232-240.
- Hunter, J. E., & Schmidt, F. L. 1990. *Methods of meta-analysis: Correcting error and bias in research findings*. Newbury Park, CA: Sage.
- \*Hutchison, S., Valentino, K. E., & Kirkner, S. L. 1998. What works for the gander does not work as well for the goose: The effects of leader behavior. *Journal of Applied Social Psychology*, 28: 171-182.
- Ilies, R., Nahrgang, J. D., & Morgeson, F. P. 2007. Leader-member exchange and citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, 92: 269-277.
- \*Iyengar, K. P. 2007. *The effect of leadership style on CIO effectiveness*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3288798)
- \*Janssen, O., & Van Yperen, N. W. 2004. Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal*, 47: 368-384.
- \*Jawahar, I. M., & Carr, D. 2007. Conscientiousness and contextual performance: The compensatory effects of perceived organizational support and leader-member exchange. *Journal of Managerial Psychology*, 22: 330-349.
- \*Johnson, J., Truxillo, D., Erdogan, B., Bauer, T., & Hammer, L. 2009. Perceptions of overall fairness: Are effects on job performance moderated by leader-member exchange? *Human Performance*, 22: 432-449.
- \*Jones, A. P., Glaman, J. M., & Johnson, D. S. 1993. Perceptions of a quality program and relationships with work perceptions and job attitudes. *Psychological Reports*, 72: 619-624.
- Jones, E. E. 1964. *Ingratiation*. New York: Appleton-Century-Crofts.
- Jones, E. E. 1990. *Interpersonal perception*. New York: Freeman.

- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. 2002. Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87: 765-780.
- \*Judge, T. A., & Ferris, G. R. 1993. Social context of performance evaluation decisions. *Academy of Management Journal*, 36: 80-105.
- \*Judge, T. A., & Piccolo, R. F. 2004. Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89: 755-768.
- \*Kacmar, K. M., Carlson, D. S., & Bratton, V. K. 2004. Situational and dispositional factors as antecedents of ingratiation behaviors in organizational settings. *Journal of Vocational Behavior*, 65: 309-331.
- \*Kacmar, K. M., Carlson, D. S., & Brymer, R. A. 1999. Antecedents and consequences of organizational commitment: A comparison of two scales. *Educational and Psychological Measurement*, 59: 976-994.
- \*Kacmar, K. M., Witt, L. A., Zivnuska, S., & Gully, S. M. 2003. The interactive effect of leader-member exchange and communication frequency on performance ratings. *Journal of Applied Psychology*, 88: 764-772.
- \*Kamdar, D., & Van Dyne, L. 2007. The joint effects of personality and workplace social exchange relationships in predicting task performance and citizenship performance. *Journal of Applied Psychology*, 92: 1286-1298.
- \*Kang, D. 2004. *The impact of organizational justice and leader-member exchange quality on motivation to participate in training: Centered on the mediating effect of employees' perceived benefits of training*. Retrieved from Dissertations & Theses @ CIC Institutions Database. (AAT 3134581)
- Kaplan, S., Bradley, J. C., Luchman, J. N., & Haynes, D. 2009. On the role of positive and negative affectivity in job performance: A meta-analytic investigation. *Journal of Applied Psychology*, 94: 162-176.
- \*Katerberg, R., & Hom, P. W. 1981. Effects of within-group and between-groups variation in leadership. *Journal of Applied Psychology*, 66: 218-223.
- \*Keller, T., & Dansereau, F. 1995. Leadership and empowerment: A social exchange perspective. *Human Relations*, 48: 127-146.
- Keller, T., & Dansereau, F. 2001. The effect of adding items to scales: An illustrative case of LMX. *Organizational Research Methods*, 4: 131-143.
- \*Kent, A., & Chelladurai, P. 2001. Perceived transformational leadership, organizational commitment, and citizenship behavior: A case study in intercollegiate athletics. *Journal of Sport Management*, 15: 135-159.
- \*Kim, S. K. 2006. *The role of envy in hospitality employees' organizational citizenship behavior: A leader-member exchange perspective*. Retrieved from Dissertations & Theses @ CIC Institutions Database. (AAT 3229316)
- \*Kinicki, A. J., & Vecchio, R. P. 1994. Influences on the quality of supervisor-subordinate relations: The role of time-pressure, organizational commitment, and locus of control. *Journal of Organizational Behavior*, 15: 75-82.
- Kipnis, D., Schmidt, S. M., & Wilkinson, I. 1980. Intraorganizational influence tactics: Explorations in getting one's way. *Journal of Applied Psychology*, 65: 440-452.
- \*Klein, H. J., & Kim, J. S. 1998. A field study of the influence of situational constraints leader-member exchange, and goal commitment on performance. *Academy of Management Journal*, 41: 88-95.
- \*Kmet, J. E. 2003. *The relationships between implicit theories, leader-member exchange, and performance feedback*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3108360)
- \*Ko, J. 2005. *Impact of leadership and team members' individualism-collectivism on team processes and outcomes: A leader-member exchange perspective*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3178416)
- \*Kraimer, M. L., & Wayne, S. J. 2004. An examination of perceived organizational support as a multidimensional construct in the context of an expatriate assignment. *Journal of Management*, 30: 209-237.
- \*Kraimer, M. L., Wayne, S. J., & Jaworski, R. A. 2001. Sources of support and expatriate performance: The mediating role of expatriate adjustment. *Personnel Psychology*, 54: 71-100.
- \*Kraus, E. 1999. *Leader-member exchange and upward influence: Interrelationships and successful consequences*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 1395749)
- \*Kraus, E. 2002. *Personality and job performance: The mediating roles of leader-member exchange quality and action control*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3076648)
- \*Krishnan, V. R. 2004. Impact of transformational leadership on followers' influence strategies. *Leadership & Organization Development Journal*, 25: 58-72.
- \*Krishnan, V. R. 2005. Leader-member exchange, transformational leadership, and value system. *Electronic Journal of Business Ethics and Organization Studies*, 10: 14-21.

- \*Kudisch, J. D., Fortunato, V. J., & Smith, A. F. R. 2006. Contextual and individual difference factors predicting individuals' desire to provide upward feedback. *Group & Organization Management*, 31: 503-529.
- Kuhnert, K. W., & Lewis, P. 1987. Transactional and transformational leadership: A constructive/developmental analysis. *Academy of Management Review*, 12: 648-657.
- \*Kunze, M. G. 2006. *An examination of the linkages between personality, leader-member exchange, and experienced violation of the psychological contract*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3194527)
- \*Lagace, R. R., Castleberry, S. B., & Ridnour, R. E. 1993. An exploratory sales force study of the relationship between leader-member exchange and motivation, role stress, and manager evaluation. *Journal of Applied Business Research*, 9(4): 110-119.
- \*Lam, T. 2003. Leader-member exchange and team-member exchange: The roles of moderators in new employees' socialization. *Journal of Hospitality & Tourism Research*, 27(1): 48-68.
- Lam, W., Huang, X., & Snape, E. 2007. Feedback-seeking behavior and leader-member exchange: Do supervisor-attributed motives matter? *Academy of Management Journal*, 50: 348-363.
- \*Landry, G., & Vandenberghe, C. 2009. Role of commitment to the supervisor, leader-member exchange, and supervisor-based self-esteem in employee-supervisor conflicts. *Journal of Social Psychology*, 149: 5-27.
- \*Lapierre, L. M., & Hackett, R. D. 2007. Trait conscientiousness, leader-member exchange, job satisfaction and organizational citizenship behaviour: A test of an integrative model. *Journal of Occupational and Organizational Psychology*, 80: 539-554.
- Lapierre, L. M., Hackett, R. D., & Taggar, S. 2006. A test of the links between family interference with work, job enrichment and leader-member exchange. *Applied Psychology: An International Review*, 55: 489-511.
- \*Law, K. S., & Wong, C.-S. 1999. Multidimensional constructs in structural equation analysis: An illustration using the job perception and job satisfaction constructs. *Journal of Management*, 25: 143-160.
- Leary, M. R., Rogers, P. A., Canfield, R. W., & Coe, C. 1986. Boredom in interpersonal encounters: Antecedents and social implications. *Journal of Personality and Social Psychology*, 51: 968-975.
- \*Lee, H. 2000. *An empirical study of organizational justice as a mediator of the relationships among leader-member exchange and job satisfaction, organizational commitment, and turnover intentions in the lodging industry*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9974193)
- \*Lee, J. 2001. Leader-member exchange, perceived organizational justice, and cooperative communication. *Management Communication Quarterly*, 14: 574-589.
- \*Lee, J. 2005. Effects of leadership and leader-member exchange on commitment. *Leadership & Organization Development Journal*, 26: 655-672.
- Lee, J. 2008. Effects of leadership and leader-member exchange on innovativeness. *Journal of Managerial Psychology*, 23: 670-687.
- LePine, J. A., & Dyer, L. V. 2001. Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with Big Five personality characteristics and cognitive ability. *Journal of Applied Psychology*, 86: 326-336.
- Leventhal, G. S. 1980. What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange: Advances in theory and research*: 27-55. New York: Plenum.
- Lewicki, R. J., Tomlinson, E. C., & Gillespie, N. 2006. Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. *Journal of Management*, 32: 991-1022.
- \*Liang, S., Ling, H., & Hsieh, S. 2007. The mediating effects of leader-member exchange quality to influence the relationships between paternalistic leadership and organizational citizenship behaviors. *Journal of American Academy of Business*, 10: 127-137.
- Liao, H., Liu, D., & Loi, R. 2010. Looking at both sides of the social exchange coin: A social cognitive perspective on the joint effects of relationship quality and differentiation on creativity. *Academy of Management Journal*, 53: 1090-1109.
- Liden, R. C., Erdogan, B., & Bauer, T. N. 2006. *The early development of leader-member exchange: A longitudinal investigation*. Paper presented as part of a symposium at the national meetings of the Academy of Management, Atlanta.
- \*Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. 2006. Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior*, 27: 723-746.

- Liden, R. C., & Graen, G. 1980. Generalizability of the vertical dyad linkage model of leadership. *Academy of Management Journal*, 23: 451-465.
- Liden, R. C., & Maslyn, J. 1998. Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management*, 24: 43-72.
- Liden, R. C., & Mitchell, T. R. 1988. Ingratiation behaviors in organizational settings. *Academy of Management Review*, 13: 572-585.
- Liden, R. C., Sparrowe, R. T., & Wayne, S. J. 1997. Leader-member exchange theory: The past and potential for the future. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 15): 47-119. Greenwich, CT: JAI.
- \*Liden, R. C., Wayne, S. J., & Sparrowe, R. T. 2000. An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology*, 85: 407-416.
- \*Liden, R. C., Wayne, S. J., & Stilwell, D. 1993. A longitudinal study on the early development of leader-member exchanges. *Journal of Applied Psychology*, 78: 662-674.
- Liden, R. C., Wayne, S. J., Zhao, H., & Henderson, D. 2008. Servant leadership: Development of a multidimensional measure and multi-level assessment. *Leadership Quarterly*, 19: 161-177.
- Lind, E. A., & Tyler, T. 1988. *The social psychology of procedural justice*. New York: Plenum.
- \*Lindsay, D. 2008. *Polychronicity and its impact on leader-member exchange and outcome behaviors*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3325941)
- Lord, R. G. 1985. An information processing approach to social perceptions, leadership and behavioral measurement in organizations. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 7): 87-128. Greenwich, CT: JAI.
- Lord, R. G., & Maher, K. J. 1991. *Leadership and information processing: Linking perceptions and performance*. New York: Routledge.
- \*Major, D. A., Kozlowski, S. W. J., Chao, G. T., & Gardner, P. D. 1995. A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. *Journal of Applied Psychology*, 80: 418-431.
- \*Martin, D. F. 1999. *The impact of trust on leader-member exchange relationships*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9933461)
- \*Martin, R., Thomas, G., Charles, K., Epitropaki, O., & McNamara, R. 2005. The role of leader-member exchanges in mediating the relationship between locus of control and work reactions. *Journal of Occupational and Organizational Psychology*, 78: 141-147.
- \*Maslyn, J. M., Farmer, S. M., & Fedor, D. B. 1996. Failed upward influence attempts: Predicting the nature of subordinate persistence in pursuit of organizational goals. *Group & Organization Management*, 21: 461-480.
- \*Maslyn, J. M., & Fedor, D. B. 1998. Perceptions of politics: Does measuring different foci matter? *Journal of Applied Psychology*, 83: 645-653.
- \*Maslyn, J. M., & Uhl-Bien, M. 2001. Leader-member exchange and its dimensions: Effects of self-effort and other's effort on relationship quality. *Journal of Applied Psychology*, 86: 697-708.
- \*Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, S. M. 2000. Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43: 738-748.
- McAllister, D. J. 1995. Affect- and cognitive-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38: 24-59.
- McNatt, D. B. 2000. Ancient Pygmalion joins contemporary management: A meta-analysis of the result. *Journal of Applied Psychology*, 85: 314-322.
- McNatt, D. B., & Judge, T. A. 2004. Boundary conditions of the Galatea effect: A field experiment and constructive replication. *Academy of Management Journal*, 47: 550-565.
- \*Mendez, M. I. 1999. *Leader-member exchange as moderator of the job dissatisfaction-communication response relationship*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 1397496)
- Miceli, M. P., & Lane, M. C. 1991. Antecedents of pay satisfaction: A review and extension. In K. M. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resources management* (Vol. 9): 235-309. Greenwich, CT: JAI.
- \*Minsky, B. D. 2002. *LMX dyad agreement: Construct definition and the role of supervisor/subordinate similarity and communication in understanding LMX*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3134753)

- Mintzberg, H. 1973. *The nature of managerial work*. New York: Harper & Row.
- Molm, L. D. 1994. Dependence and risk: Transforming the structure of social exchange. *Social Psychology Quarterly*, 57: 163-176.
- \*Morrow, P. C., Suzuki, Y., Crum, M. R., Ruben, R., & Pautsch, G. 2005. The role of leader-member exchange in high turnover work environments. *Journal of Managerial Psychology*, 20: 681-694.
- Mount, M. K., & Barrick, M. R. 1995. The Big Five personality dimensions: Implications for research and practice in human resources management. *Research in Personnel and Human Resource Management*, 13: 152-200.
- Mowday, R. T., Porter, L. M., & Steers, R. M. 1982. *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.
- \*Murphy, S. E., & Ensher, E. A. 1999. The effects of leader and subordinate characteristics in the development of leader-member exchange quality. *Journal of Applied Social Psychology*, 29: 1371-1394.
- \*Murphy, S. M., Wayne, S. J., Liden, R. C., & Erdogan, B. 2003. Understanding social loafing: The role of justice perceptions and exchange relationships. *Human Relations*, 56: 61-84.
- \*Nahrgang, J. D., Morgeson, F. P., & Ilies, R. 2009. The development of leader-member exchanges: Exploring how personality and performance influence leader and member relationships over time. *Organizational Behavior and Human Decision Processes*, 108: 256-266.
- Napier, B. J., & Ferris, G. R. 1993. Distance in organizations. *Human Resource Management Review*, 3: 321-357.
- \*Nathan, B. R., Mohrman, A. M., Jr., & Milliman, J. 1991. Interpersonal relations as a context for the effects of appraisal interviews on performance and satisfaction: A longitudinal study. *Academy of Management Journal*, 34: 352-369.
- \*Nelson, D., Basu, R., & Purdie, R. 1998. An examination of exchange quality and work stressors in leader-follower dyads. *International Journal of Stress Management*, 5: 103-112.
- Ng, T. W. H., & Sorensen, K. L. 2009. Dispositional affectivity and work-related outcomes: A meta-analysis. *Journal of Applied Social Psychology*, 39: 1255-1287.
- \*Niininen, O., Buhalis, D., & March, R. 2007. Customer empowerment in tourism through consumer centric marketing (CCM). *Qualitative Market Research*, 10: 265-281.
- \*Nishii, L., & Mayer, D. 2009. Do inclusive leaders help to reduce turnover in diverse groups? The moderating role of leader-member exchange in the diversity to turnover relationship. *Journal of Applied Psychology*, 94: 1412-1426.
- \*Novak, M. A. 1984. *A study of leader resources as determinants of leader-member exchange (power)*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 8509493)
- \*Nystrom, P. C. 1990. Vertical exchanges and organizational commitments of American business managers. *Group & Organization Studies*, 15: 296-312.
- \*O'Driscoll, M. P., & Beehr, T. A. 1994. Supervisor behaviors, role stressors and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behavior*, 15: 141-156.
- \*Olufowote, J. O. 2000. *Upward influence tactics and employee role change objectives: An exploratory investigation*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 1402902)
- \*Olufowote, J. O., Miller, V. D., & Wilson, S. R. 2005. The interactive effects of role change goals and relational exchanges on employee upward influence tactics. *Management Communication Quarterly*, 18: 385-403.
- \*Paglis, L. L., & Green, S. G. 2002. Leadership self-efficacy and managers' motivation for leading change. *Journal of Organizational Behavior*, 23: 215-235.
- \*Pelled, L. H., & Xin, K. R. 2000. Relational demography and relationship quality in two cultures. *Organization Studies*, 21: 1077-1094.
- \*Perizade, B., & Sulaiman, M. 2005. Leader-member exchange and leadership effectiveness of chief executive officers in South Sumatra, Indonesia. *Business Review*, 4: 331-337.
- Perugini, M., Gallucci, M., Presaghi, F., & Ercolani, A. P. 2003. The personal norm of reciprocity. *European Journal of Personality*, 17: 251-283.
- \*Phillips, A. S. 1992. *Leader-member exchange quality: The relationship of similarity, competence, and selected personality variables*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9301093)
- \*Phillips, A. S., & Bedeian, A. G. 1994. Leader-follower exchange quality: The role of personal and interpersonal attributes. *Academy of Management Journal*, 37: 990-1001.
- \*Piccolo, R. F., & Colquitt, J. A. 2006. Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, 49: 327-340.



- \*Pillai, R., Scandura, T. A., & Williams, E. A. 1999. Leadership and organizational justice: Similarities and differences across cultures. *Journal of International Business Studies*, 30: 763-780.
- Pillai, R., Schriesheim, C. A., & Williams, E. S. 1999. Fairness perceptions and trust as mediators for transformational and transactional leadership: A two-sample study. *Journal of Management*, 25: 897-933.
- Podsakoff, P. M., Bommer, W. H., Podsakoff, N. P., & MacKenzie, S. B. 2006. Relationships between leader reward and punishment behavior and subordinate attitudes, perceptions and behaviors: A meta-analytic review of existing and new research. *Organizational Behavior and Human Decision Processes*, 99: 113-142.
- Podsakoff, P. M., & Organ, D. W. 1986. Self reports in organizational research: Problems and prospects. *Journal of Management*, 12: 531-544.
- \*Polly, L. M. 2002. *Social exchange and customer service: The relationship between perceived organizational support, leader-member exchange, and customer service behavior*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3057383)
- \*Port, R. L. 2004. *Identification and exploration of the managerial behaviors associated with employee innovation*. Retrieved from ProQuest Dissertations and Theses Database. (AAT U200151)
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. 1974. Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59: 603-609.
- \*Rafferty, A. E., & Griffin, M. A. 2006. Refining individualized consideration: Distinguishing developmental leadership and supportive leadership. *Journal of Occupational and Organizational Psychology*, 79: 37-61.
- \*Rajandini, P., Scandura, T. A., & Williams, E. A. 1999. Leadership and organizational justice: Similarities and differences across cultures. *Journal of International Business Studies*, 30: 763-780.
- \*Ren, R. 2007. *Quality of supervisor-subordinate relationship, cultural values, and organizational justice*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3296523)
- \*Roch, S. G., & Shanock, L. R. 2006. Organizational justice in an exchange framework: Clarifying organizational justice distinctions. *Journal of Management*, 32: 299-322.
- \*Rodriguez-Llewellyn, Y. 2008. *Affective commitment and citizenship behaviour: The role of LMX and personality and the mediating effects of empowerment*. Unpublished master's thesis, University of Waikato, Hamilton, New Zealand. <http://researchcommons.waikato.ac.nz/handle/10289/2240>
- Rotter, J. B. 1966. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 33: 300-303.
- \*Rutkowski, K. A., & Steelman, L. A. 2005. Testing a path model for antecedents of accountability. *Journal of Management Development*, 24: 473-486.
- \*Sanchez, R. J. 2002. *The role of trust, leader-member exchange, and organizational justice in employee attitudes and behaviors: A laboratory and field investigation*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3183765)
- \*Scandura, T. A., & Graen, G. B. 1984. Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology*, 69: 428-436.
- \*Scandura, T. A., Graen, G. B., & Novak, M. A. 1986. When managers decide not to decide autocratically: An investigation of leader-member exchange and decision influence. *Journal of Applied Psychology*, 71: 579-584.
- \*Scandura, T. A., & Pellegrini, E. 2008. Trust and leader-member exchange: A closer look at relational vulnerability. *Journal of Leadership & Organizational Studies*, 15(2): 101-110.
- \*Scandura, T. A., & Schriesheim, C. A., 1994. Leader-member exchange and supervisor career mentoring. *Academy of Management Journal*, 37: 1588-1602.
- \*Schaninger, W. S., Jr. 2002. *The workplace social exchange network: An empirical examination*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3044025)
- \*Schmidt, L. L. 2006. *Self-reported emotional intelligence as an indicator of social exchange quality at work*. Retrieved from Dissertation Abstracts International Database.
- Schneider, B. 1987. The people make the place. *Personnel Psychology*, 40: 437-453.
- \*Schriesheim, C. A. 1980. The social context of leader-subordinate relations: An investigation of the effects of group cohesiveness. *Journal of Applied Psychology*, 65: 183-194.
- Schriesheim, C. A., Castro, S. L., & Cogliser, C. C. 1999. Leader-member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic practices. *Leadership Quarterly*, 10: 63-113.



- \*Schriesheim, C. A., Castro, S. L., & Yammarino, F. J. 2000. Investigating contingencies: An examination of the impact of span of supervision and upward controllability on leader-member exchange using traditional and multivariate within- and between-entities analysis. *Journal of Applied Psychology*, 85: 659-677.
- \*Schriesheim, C. A., Castro, S. L., Zhou, X., & Yammarino, F. J. 2001. The folly of theorizing "A" but testing "B": A selective level-of-analysis review of the field and a detailed leader-member exchange. *Leadership Quarterly*, 12: 515-551.
- \*Schriesheim, C. A., Neider, L. L., Scandura, T. A., & Tepper, B. J. 1992. Development and preliminary validation of a new scale (LMX-6) to measure leader-member exchange in organizations. *Educational and Psychological Measurement*, 52: 135-147.
- \*Schyns, B. 2006. Are group consensus in leader-member exchange (LMX) and shared work values related to organizational outcomes? *Small Group Research*, 37: 20-35.
- \*Schyns, B., & Croon, M. A. 2006. A model of task demands, social structure, and leader-member exchange and their relationship to job satisfaction. *International Journal of Human Resource Management*, 17: 602-615.
- \*Schyns, B., Paul, T., & Mohr, G. 2005. Comparing antecedents and consequences of leader-member exchange in a German working context to findings in the US. *European Journal of Work and Organizational Psychology*, 14: 1-22.
- Schyns, B., & von Collani, G. 2002. A new occupational self-efficacy scale and its relation to personality constructs and organizational variables. *European Journal of Work and Organizational Psychology*, 11: 219-241.
- \*Scott, S. G., & Bruce, R. A. 1994. Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37: 580-607.
- \*Seers, A. 1981. *The job characteristics model and the leader-member exchange model: A longitudinal investigation of the dual attachment concept*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 8207131)
- \*Seers, A. 1989. Team-member exchange quality: A new construct for role-making research. *Organizational Behavior and Human Decision Processes*, 43: 118-135.
- \*Seers, A., & Graen, G. B. 1984. The dual attachment concept: A longitudinal investigation of the combination of task characteristics and leader-member exchange. *Organizational Behavior and Human Performance*, 33: 283-306.
- \*Sekiguchi, T., Burton, J., & Sablinski, C. 2008. The role of job embeddedness on employee performance: The interactive effects with leader-member exchange and organization-based self-esteem. *Personnel Psychology*, 61: 761-792.
- \*Settoon, R. P., Bennett, N., & Liden, R. C. 1996. Social exchange in organizations: Perceived organizational support, leader-member exchange, and employee reciprocity. *Journal of Applied Psychology*, 81: 219-227.
- \*Sherony, K. M. 2002. *Leader emotional expression and leader-member exchange*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3099851)
- \*Sherony, K. M., & Green, S. G. 2002. Coworker exchange: Relationships between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, 87: 542-548.
- \*Sias, P. M. 2005. Workplace relationship quality and employee information experiences. *Communication Studies*, 56: 375-395.
- \*Sidhu, K. K. 1988. *The role of a leader-member exchange and work experience in the early career development of professionals*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 38822842)
- Sin, H., Nahrgang, J., & Morgeson, F. 2009. Understanding why they don't see eye to eye: An examination of leader-member exchange (LMX) agreement. *Journal of Applied Psychology*, 94: 1048-1057.
- \*Smith, M. L., Jr. 2002. *Reciprocity and social exchange relationships in organizations: Examining why and how individuals contribute to organizational social capital*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3078881)
- Snodgrass, S. E., Hecht, M. A., & Ploutz-Snyder, R. 1998. Interpersonal sensitivity: Expressivity or perceptivity? *Journal of Personality and Social Psychology*, 74: 238-249.
- \*Snyder, R. A., & Brunning, N. S. 1985. Quality of vertical dyad linkages: Congruence of supervisor and subordinate competence and role stress as explanatory variables. *Group & Organization Studies*, 10: 81-94.
- \*Snyder, R. A., Williams, R. R., & Cashman, J. F. 1984. Age, tenure, and work perceptions as predictors of reaction to performance feedback. *Journal of Psychology*, 117: 11-21.
- \*Sparrowe, R. T. 1994. Empowerment in the hospitality industry: An exploration of antecedents and outcomes. *Journal of Hospitality & Tourism Research*, 17(3): 51-73.

- \*Sparrowe, R. T., & Liden, R. C. 2005. Two routes to influence: Integrating leader-member exchange and social network perspectives. *Administrative Science Quarterly*, 50: 505-535.
- Spreitzer, G. M. 1995. Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38: 1442-1465.
- \*Stepina, L. P., Perrewe, P. L., Hassell, B. L., Harris, J. R., & Mayfield, C. R. 1991. A comparative test of the independent effects of interpersonal, task, and reward domains on personal and organizational outcomes. *Journal of Social Behavior and Personality*, 6: 93-104.
- \*Stringer, L. 2006. The link between the quality of the supervisor-employee relationship and the level of the employee's job satisfaction. *Public Organization Review*, 6: 125-142.
- \*Suazo, M. K. 2002. *An examination of antecedents and consequences of psychological contract breach*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3083200)
- \*Tangirala, S., Green, S. G., & Ramanujam, R. 2007. In the shadow of the boss's boss: Effects of supervisors' upward exchange relationships on employees. *Journal of Applied Psychology*, 92: 309-320.
- \*Tansky, J. W. 1993. Justice and organizational citizenship behavior: What is the relationship? *Employee Responsibilities and Rights Journal*, 6: 195-207.
- \*Tekleab, A. G., & Taylor, S. M. 2003. Aren't there two parties in an employment relationship? Antecedents and consequences of organization-employee agreement on contract obligations and violations. *Journal of Organizational Behavior*, 24: 585-594.
- \*Tepper, B. J., Uhl-Bien, M., Kohut, G. F., Rogelberg, S. G., Lockhart, D. E., & Ensley, M. D. 2006. Subordinates' resistance and managers' evaluations of subordinates' performance. *Journal of Management*, 32: 185-209.
- \*Tierney, P. 1999. Work relations as a precursor to a psychological climate for change The role of work group supervisors and peers. *Journal of Organizational Change Management*, 12: 120-133.
- \*Tierney, P., Bauer, T. N., & Potter, R. E. 2002. Extra-role behavior among Mexican employees: The impact of LMX, group acceptance, and job attitudes. *International Journal of Selection and Assessment*, 10: 292-303.
- \*Tierney, P., Farmer, S. M., & Graen, G. B. 1999. An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, 52: 591-620.
- Tjosvold, D. 1984. Effects of leader warmth and directiveness on subordinate performance on a subsequent task. *Journal of Applied Psychology*, 69: 422-427.
- \*Truckenbrodt, Y. B. 2000. *An empirical assessment of the relationship between leader-member exchange and organizational commitment and organizational citizenship behavior*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9988008)
- Tse, H. H., & Lam, W. 2008. *Transformational leadership and turnover: the roles of LMX and organizational commitment*. Paper presented at the Academy of Management meeting, Anaheim, CA.
- Turban, D. B., & Jones, A. P. 1988. Supervision-subordinate similarity: Types, effects on mechanism. *Journal of Applied Psychology*, 73: 228-234.
- Uhl-Bien, M. 2006. Relational leadership theory: Exploring the social processes of leadership and organizing. *Leadership Quarterly*, 17: 654-676.
- Uhl-Bien, M., Graen, G., & Scandura, T. A. 2000. Implications of leader-member exchange (LMX) for strategic human resource management systems: Relationships as social capital for competitive advantage. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 18): 137-185. Greenwich, CT: JAI.
- \*Uhl-Bien, M., & Maslyn, J. M. 2003. Reciprocity in manager-subordinate relationships: Components, configurations, and outcomes. *Journal of Management*, 29: 511-532.
- \*Uhl-Bien, M., Tierney, P. S., Graen, G. B., & Wakabayashi, M. 1990. Company paternalism and the hidden-investment process identification of the "right type" for line managers in leading Japanese organizations. *Group & Organization Studies*, 15: 414-430.
- van Breukelen, W., Schyns, B., & Le Blanc, P. 2006. Leader-member exchange theory and research: Accomplishments and future challenges. *Leadership*, 3: 295-316.
- \*Van Dam, K., Oreg, S., & Schyns, B. 2008. Daily work contexts and resistance to organizational change: The role of leader-member exchange, development climate, and change process characteristics. *Applied Psychology: An International Review*, 57: 313-334.
- \*Van Dyne, L., Jehn, K. A., & Cummings, A. 2002. Differential effects of strain on two forms of work performance: Individual employee sales and creativity. *Journal of Organizational Behavior*, 23: 57-74.

- \*Varma, A. 1996. *An investigation of the impact of subordinate disability and ingratiation on performance evaluations using an LMX (leader-member exchange) framework: An organizational simulation and field study.* Retrieved from ProQuest Dissertations and Theses Database. (AAT 9711146)
- \*Varma, A., Srinivas, E. S., & Stroh, L. K. 2005. A comparative study of the impact of leader-member exchange in U.S. and Indian samples. *Cross Cultural Management*, 12(1): 84-95.
- \*Varma, A., & Stroh, L. K. 2001. Different perspectives on selection for international assignments: The impact of LMX and gender. *Cross Cultural Management*, 8(3): 85-98.
- \*Vecchio, R. P. 1985. Predicting employee turnover from leader-member exchange: A failure to replicate. *Academy of Management Journal*, 28: 478-485.
- \*Vecchio, R. P. 1998. Leader-member exchange, objective performance, employment duration, and supervisor ratings: Testing for moderation and mediation. *Journal of Business and Psychology*, 12: 327-341.
- \*Vecchio, R. P., & Brazil, D. M. 2007. Leadership and sex-similarity: A comparison in a military setting. *Personnel Psychology*, 60: 303-335.
- \*Vecchio, R. P., Bullis, C., & Brazil, D. M. 2006. The utility of situational leadership theory: A replication in a military setting. *Small Group Research*, 37: 407-424.
- \*Vecchio, R. P., & Gobel, B. C. 1984. The vertical dyad linkage model of leadership: Problems and prospects. *Organizational Behavior and Human Performance*, 34: 5-20.
- Viswesvaran, C., & Ones, D. S. 1995. Theory testing: Testing psychometric meta-analysis and structural equation modeling. *Personnel Psychology*, 48: 865-885.
- \*Wakabayashi, M., & Graen, G. B. 1984. The Japanese career progress study: A 7-year follow-up. *Journal of Applied Psychology*, 69: 603-614.
- \*Wakabayashi, M., Graen, G., & Graen, M. 1988. Japanese management progress: Mobility into middle management. *Journal of Applied Psychology*, 73: 217-227.
- Waldman, B., Bass, M., & Yammarino, F. J. 1990. Adding to contingent-reward behavior—The augmenting effect of charismatic leadership. *Group & Organization Studies*, 15: 381-394.
- \*Walumbwa, F., Cropanzano, R., & Hartnell, C. 2009. Organizational justice, voluntary learning behavior, and job performance: A test of the mediating effects of identification and leader-member exchange. *Journal of Organizational Behavior*, 30: 1103-1126.
- \*Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. 2005. Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal*, 48: 420-432.
- \*Wat, D., & Shaffer, M. A. 2005. Equity and relationship quality influences on organizational citizenship behaviors: The mediating role of trust in the supervisor and empowerment. *Personnel Review*, 34: 406-422.
- Watson, D., & Clark, L. A. 1984. Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96: 465-490.
- Watson, D., Clark, L. A., & Carey, G. 1988. Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology*, 97: 346-353.
- Wayne, S. J., Coyle-Shapiro, J. A., Eisenberger, R., Liden, R. C., Rousseau, D. M., & Shore, L. M. 2009. Social influences. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.), *Commitment in organizations: Accumulated wisdom and new directions*: 253-284. Mahwah, NJ: Lawrence Erlbaum.
- \*Wayne, S. J., & Ferris, G. R. 1990. Influence tactics, affect, and exchange quality in supervisor-subordinate interactions: A laboratory experiment and field study. *Journal of Applied Psychology*, 75: 487-499.
- \*Wayne, S. J., & Green, S. A. 1993. The effects of leader-member exchange on employee citizenship and impression management behavior. *Human Relations*, 46: 1431-1440.
- Wayne, S. J., & Liden, R. C. 1995. Effects of impression management on performance ratings: A longitudinal study. *Academy of Management Journal*, 38: 232-260.
- \*Wayne, S. J., Liden, R. C., Kraimer, M. L., & Graf, I. K. 1999. The role of human capital, motivation and supervisor sponsorship in predicting career success. *Journal of Organizational Behavior*, 20: 577-596.
- \*Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. 2002. The role of fair treatment and rewards in perceptions of organizational support and leader-member exchange. *Journal of Applied Psychology*, 87: 590-598.
- \*Wayne, S. J., Shore, L. M., & Liden, R. C. 1997. Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, 40: 82-111.

- \*Wech, B. A. 2001. *Team-member exchange and trust contexts: Effects on individual level outcome variables beyond the influence of leader-member exchange*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3021460)
- \*Weitzel, J. R., & Graen, G. B. 1989. System development project effectiveness: Problem-solving C. *Decision Sciences*, 20: 507-531.
- \*Wender, L. B. 2001. *The impact of being dignified by one's manager on leader-member exchange and psychological empowerment*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 1406418)
- \*White, C. 2007. *The leader-member exchange as a function of leader rapport management behavior*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3270514)
- \*Whittington, J. L. 1997. *An integrative model of transformational leadership and follower behavior*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 9804688)
- Wiener, Y. 1982. Commitment in organizations. A normative view. *Academy of Management Review*, 7: 418-428.
- \*Wilhelm, C. C., Herd, A. M., & Steiner, D. D. 1993. Attributional conflict between managers and subordinates: An investigation of leader-member exchange effects. *Journal of Organizational Behavior*, 14: 531-544.
- \*Williams, L. J., Gavin, M. B., & Williams, M. L. 1996. Measurement and nonmeasurement processes with negative affectivity and employee attitudes. *Journal of Applied Psychology*, 81: 88-101.
- Williams, M. L., McDaniel, M., & Nguyen, N. T. 2006. A meta-analysis of the antecedents and consequences of pay level satisfaction. *Journal of Applied Psychology*, 91: 392-413.
- \*Yagil, D. 2006. Perceptions of justice within leader-employee dyads. *International Journal of Organization Theory and Behavior*, 9: 291-306.
- \*Yeh, Y. M. 2005. *An investigation of the impact of leader-member exchange, team-member exchange on staff attitudes and perceptions for accounting professionals*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3185866)
- \*Yi, X. 2002. *Guanxi and leader-member exchange in the Chinese context*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3044268)
- \*Yukl, G., & Fu, P. P. 1999. Determinants of delegation and consultation by managers. *Journal of Organizational Behavior*, 20: 219-232.
- Yukl, G., O'Donnell, M., & Taber, T. 2009. Influence of leader behaviors on the leader-member exchange relationship. *Journal of Managerial Psychology*, 24: 289-299.
- Zajonc, R. B. 1980. Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35: 151-175.
- \*Zalesny, M. D., & Kirsch, M. P. 1989. The effect of similarity on performance ratings and interrater agreement. *Human Relations*, 42: 81-95.
- \*Zhou, X. 2003. *An exploration of supervisor-subordinate agreement on leader-member exchange*. Retrieved from ProQuest Dissertations and Theses Database. (AAT 3096379)