The Ties That Bind: The Impact of Leader-Member Exchange, Transformational and Transactional Leadership, and Distance on Predicting Follower Performance

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The authors examined the linkages between leader-member exchange (LMX), transformational and transactional leadership, and physical distance in predicting performance of 317 followers over a 1-year period. Results from a partial least squares analysis revealed that LMX was related positively to transformational and contingent reward leadership and negatively to management-by-exception. LMX and active management-by-exception positively predicted follower performance, and physical distance moderated leadership-performance relationships. Transformational leadership produced significantly higher follower performance in close versus distant situations, whereas LMX produced high follower performance irrespective of physical distance between leaders and followers.

Interest in leadership in complex organizations is characterized by the parallel development of two different perspectives. One viewpoint is leader-focused. This stream of research attempts to explain individual, group, or organizational performance outcomes by analyzing specific leader behaviors and linking them directly to those outcomes. Examples of such perspectives include transformational, charismatic, and value-based theories of leadership, as developed by Bass (1985), House (1977), and House, Delbecq, and Taris (1996), respectively. In contrast, the second perspective focuses on the explicit one-on-one relationships that develop between leader and follower. Adherents of this perspective propose a link between follower performance and the quality and level of mutual trust, respect, and influence within those individual leader-follower relationships. The best example of this perspective is the leader-member exchange (LMX) theory of leadership originated by Graen and his colleagues (Graen, 1976; Graen & Cashman, 1975; Graen, Novak, & Sommerkamp, 1982; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995).

Leader-focused research implicitly assumes a relationship of some sort between leader and follower, and that implied relationship is fundamental to the link between leader behavior and follower response. An implied relationship, however, fails to answer questions of how, and perhaps why, followers perform differently for different leaders. Research focused on leader-follower relationships, on the other hand, pays only marginal attention to what leaders do to develop a relationship with followers. Linking the two perspectives, emphasizing both how leaders behave in order to elicit different levels of follower performance and what leaders do to encourage distinct leader-follower relationships with each follower, is potentially important in two ways. First, it may provide a reasonable explanation for what is happening inside the “black box” between observed leader behaviors and measured follower outcomes. Second, leader behaviors may provide an explanation regarding how the leader actually establishes and develops differing qualities of relationships with different followers.

The theoretical integration of transformational and LMX models of leadership has recently been proposed by Graen and Uhl-Bien (1995) and Gerstner and Day (1997). However, the empirical linkages between these models of leadership are relatively unexplored to date. One purpose of the present study is to test empirically the joint impact of the behaviorally based transformational and the relationship-based LMX models of leadership on predicting follower performance.

Previous research on LMX theory has primarily investi-
gated the characteristics of the LMX relationship and the relationship between LMX and organizational variables (Graen & Uhl-Bien, 1995). The preponderance of empirical studies on transformational leadership has focused on comparing the impact of transformational and transactional leadership on follower performance, satisfaction, and effectiveness (Bass & Avolio, 1993; Howell & Avolio, 1993). The role of organizational context in these two leadership models has been largely neglected (Gerstner & Day, 1997; Liden, Sparrowe, & Wayne, 1997; Pawar & Eastman, 1997). Because situational moderators may affect the linkage between leadership and performance outcomes (Gerstner & Day, 1997), the present study examines how the physical distance separating leader and follower moderates the impact of LMX relationships and transformational and transactional leadership on predicting follower performance over an extended time interval.

Leadership and Performance

In his extension of Burns’s (1978) analysis of political leadership, Bass (1985) differentiated between the quid pro quo dynamics of transactional leadership and transformational leadership. In transactional leadership, leader–follower relationships are based on a series of exchanges or bargains between leaders and followers. Bass (1985) differentiated two types of transactional leadership—contingent reward and management-by-exception—according to the leader’s level of engagement with followers and activity level. In contingent reward leadership, the leader and follower negotiate an agreement regarding what rewards or recognition the follower will receive for a specific level of performance. Rewards, recognition, or both are provided when the follower attains the contracted level of performance.

Leaders can also transact with followers by practicing management-by-exception, that is, by focusing on mistakes, intervening only after standards have not been met, and delaying decisions. Hater and Bass (1988) distinguished between passive management-by-exception, where the leader remains passive until problems that need correcting emerge and then intervenes with criticism or reproof, and active management-by-exception, where the leader actively monitors followers’ performances to anticipate mistakes or deviations from standards before they become a problem. In either case, negative feedback, punishment, and discipline are the likely results (Bass & Avolio, 1993).

Bass (1985) posited that transformational leadership enables followers to transcend their own self-interests for a collective higher purpose, mission, or vision and to exceed performance expectations. Transformational leaders communicate a compelling vision of the future (charisma); provide symbols and emotional appeals to increase awareness of mutual goals (inspirational motivation); encourage followers to question traditional ways of doing things (intellectual stimulation); and treat followers differently but equitably on a one-on-one basis (individualized consideration; Bass & Avolio, 1993).

Previous empirical research and meta-analyses have indicated that transformational and transactional leadership have differential effects on individual performance. Over 35 studies have reported positive relationships between transformational leadership and follower performance (Kirkpatrick & Locke, 1996). Empirical evidence has suggested that transformational leadership or its components predict positive performance outcomes in field studies (Curphy, 1992; Hater & Bass, 1988; Howell & Avolio, 1993; Keller, 1992), laboratory studies (Howell & Frost, 1989; Kirkpatrick & Locke, 1996), historical archival studies (House, Spangler, & Woycke, 1991), field experiments (Barling, Weber, & Kelloway, 1996), and meta-analytic studies (Lowe, Kroeck, & Sivasubramaniam, 1996). Thus, transformational leaders who encourage followers to question assumptions and generate new ideas, develop their capabilities, and aspire to accomplish challenging future goals are expected to enhance followers’ performance on the job.

The majority of previous empirical studies have demonstrated that contingent reward leadership also has a positive impact on follower satisfaction and performance (Hunt & Schuler, 1976; Klimoski & Hayes, 1980; Podsakoff, Todor, Grover, & Huber, 1984; Podsakoff, Todor, & Skov, 1982; Sims & Szilagyi, 1975), although negative relationships have been reported (Howell & Avolio, 1993; Yammarino & Bass, 1990). The majority of research findings suggest that contingent reward leadership has a positive effect on individual follower performance.

Empirical examination of the impact of management-by-exception leadership on followers’ performance has obtained mixed results. Leadership scholars have reported positive relationships (Greene, 1976), negative relationships (Bass & Avolio, 1990; Bass, Waldman, Avolio, & Bebb, 1987; Hater & Bass, 1988; Sims & Szilagyi, 1975), and no relationships (Hunt & Schuler, 1976; Podsakoff et al., 1984) between leader contingent sanctioning behavior and follower performance. However, the weight of empirical evidence suggests that constant reprimand can lead to Bass’s (1985) prediction of follower hostility, reduction in effort, and ultimately lower levels of performance. Thus, prior research on transformational and transactional leadership suggests the following hypotheses:

**Hypothesis 1:** Transformational leadership will positively predict follower performance over a 1-year period.

**Hypothesis 2:** Contingent reward leadership will positively predict follower performance over a 1-year period.

**Hypotheses 3a and 3b:** Management-by-exception leadership, either active or passive, will negatively predict follower performance over a 1-year period.
Leader–Follower Relationships, Leadership Behaviors, and Performance

LMX theory proposes that leaders establish different social exchange relationships with different followers. Low-quality LMX relationships are characterized by unidirectional downward influence, economic exchange behaviors, formal role-defined relations, and loosely coupled goals. Leaders in low-quality LMX relationships rely almost exclusively on the formal employment contract in exchanges with their members and maintain a distance between themselves and their followers (Dunegan, Duchon, & Uhl-Bien, 1992). Members in these relationships abide by the prescriptions and proscriptions of the employment contract, afford their leaders the authority of their positions, and are compensated for task performance by the organization (not the leader) in coin and various benefits (Dunegan et al., 1992; Graen & Uhl-Bien, 1995; Sparrowe & Liden, 1997; Wayne, Shore, & Liden, 1997).

High-quality LMX relationships are characterized by mutual trust, respect, influence, and obligation (Graen & Uhl-Bien, 1995). Leaders in such relationships rely more heavily on followers to act in their stead (Dunegan et al., 1992) and encourage them to undertake more responsible activities than they otherwise would (Graen & Uhl-Bien, 1995). Followers in high-quality LMX relationships interact frequently with their leaders and have their leaders’ support, confidence, encouragement, and consideration, and they take on added duties, play a greater role in meeting workgroup goals, and deliver performance beyond contractual expectations (Dunegan et al., 1992; Sparrowe & Liden, 1997; Wayne et al., 1997).

Graen and Uhl-Bien (1995) noted that LMX is both transactional and transformational because it begins as a transactional social exchange and may evolve into a transformational social exchange. Separating high- and low-quality relationships is the relative weight placed on material exchange and social exchange in that “material exchange is different from social exchange (and LMX) [because] when material exchange is the basis for the relationship, the process is not really leadership; it is closer to ‘managership’ or ‘supervision’” (Graen & Uhl-Bien, 1995, p. 238).

Graen and Uhl-Bien (1995) posited that low-quality LMX, characterized by downward influence, economic exchange, and formal role-defined relationships, is analogous to transactional leadership (Bass, 1985), in which leaders make requests of followers based on their organizational position, and followers comply because of their reporting relationship to the leader and the leader’s control of rewards. Under transactional leadership, followers are motivated to fulfill their self-interests. Conversely, high-quality leader–follower relationships, defined by mutual trust, respect, internalization of shared goals, and the willingness of followers to exert extra effort, are aligned with transformational leadership, in which leaders inspire followers to transcend their own self-interests for the broader collective purpose (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). In this instance, formal hierarchical relationships give way to “partnerships” between leaders and followers based on mutual reciprocal influence.

Graen and Uhl-Bien’s (1995) arguments relating the quality of LMX to transformational and transactional leadership parallel Burns’s (1978) discussion of these leadership behaviors as two ends of a continuum. Bass and Avolio (1993), on the other hand, conceived of transformational and transactional leadership as conceptually distinct but positively related behaviors. Empirical evidence supports Bass’s (1985) fundamental proposition that transformational leadership augments transactional leadership in predicting leader effectiveness (Hater & Bass, 1988; Seltzer & Bass, 1990; Waldman, Bass, & Einstein, 1987). Moreover, the majority of previous studies and meta-analyses have demonstrated that transformational leadership and transactional contingent reward leadership have a positive impact on follower outcomes, although transformational leadership is more positively related to these outcome variables than contingent reward (e.g., Curphy, 1992; Lowe et al., 1996). Thus, in the words of Bass and Avolio (1993, p. 70), “the evidence to date indicates that viewing transformational leadership as an extension to transactionally based models of leadership is clearly warranted.”

In a study of naval officers, Deluga (1992) directly demonstrated that transformational leadership is significantly associated with high-quality exchanges. Thus, we hypothesized that the quality of LMX would be positively related to transformational leadership, which helps followers reframe what the future might be, encourages them to question the tried-and-true ways to explore alternative possibilities, and coaches them to fully develop their capabilities. We further hypothesized that the quality of LMX would be positively related to contingent reward leadership but to a lesser extent than it is related to transformational leadership, because contingent reward leaders attend less to the relational aspects of leadership and more to defining the task and level of performance expected from followers. Finally, we proposed that the quality of LMX would be negatively related to management-by-exception leadership, which emphasizes mistakes, delays decisions, and avoids intervening until something has gone wrong.

**Hypothesis 4:** The quality of leader–follower relationships will be positively related to transformational leadership. **Hypothesis 5:** The quality of leader–follower relationships will have a lower positive relationship with contingent reward leadership than with transformational leadership. **Hypotheses 6a and 6b:** The quality of leader–follower relationships will be negatively related to management-by-exception leadership that is active or passive.
Prior empirical studies (e.g., Graen, Novak, & Sommerkamp, 1982; Liden & Graen, 1980; Liden, Wayne, & Stilwell, 1993; Scandura & Schriesheim, 1994; Wayne & Ferris, 1990; Wayne et al., 1997) and a recent meta-analysis (Gerstner & Day, 1997) have demonstrated positive associations between LMX and performance ratings. Thus, the accumulated empirical evidence suggests a positive relationship between LMX and follower performance, as does the conceptual link between LMX and transformational and contingent reward leadership, which indirectly links LMX to follower performance. On the basis of this literature, we proposed the following hypothesis:

**Hypothesis 7:** The quality of leader–follower relationships will positively predict follower performance.

**Physical Distance, Leadership Behaviors, and Leader–Follower Relationship Quality**

How organizational context influences the emergence and effectiveness of transformational leadership is a relatively unexplored issue (Avolio & Bass, 1988; Bass, 1985; Bass & Avolio, 1993; Bryman, 1992; Pawar & Eastman, 1997; Shamir, House, & Arthur, 1993). Likewise, Gerstner and Day (1997) observed that the role of organizational context in the LMX model requires further examination. One contextual variable that may influence both the quality of leader–follower relationships and leadership behaviors is physical distance. Dramatic changes in organizational structures, size, complexity, and work arrangements imply that leaders are increasingly responsible for managing followers who reside in different locations. Leaders in network organizations, multinational companies, or domestic companies with far-flung sites are faced with the challenges of motivating and evaluating followers who they cannot see. How leaders’ behavior and relationships with their followers is affected by the need to span physical distances is relatively unexplored.

Several leadership scholars have argued that physical distance decreases the opportunities for direct influence and potentially the effectiveness of the working relationship between leader and follower (Bass, 1990; Liden et al., 1997; Napier & Ferris, 1993). In fact, Kerr and Jermier (1978) observed that physical distance creates circumstances in which effective leadership may be impossible, as it tends to neutralize both relationship-oriented and task-oriented leadership behaviors. Conversely, physical proximity between leaders and followers facilitates the communication process and quality of exchange between leaders and followers (Bass, 1990).

The moderating effects of physical distance on the relationship between different leadership behaviors and follower performance and satisfaction have been directly studied in the leadership literature. For example, Podsakoff et al. (1984) reported that physical distance negatively moderated the relationship between contingent reward leadership and performance. They concluded that the leader’s ability to establish contingent contracts between performance expectations and rewards, to observe follower performance, and to provide timely rewards on the fulfillment of the performance contract are undermined with increasing physical distance from followers. Extrapolating from Podsakoff et al.’s (1984) conclusion, with increasing physical distance from followers, leaders may be more likely to practice arbitrary or noncontingent punishment. In situations in which physical distance precludes personal interactions with followers, the leader’s performance-related comments may be seen as arbitrary because the leader may not have had the opportunity to observe follower performance directly or to provide timely feedback. If distant followers perceive punishment as arbitrary or unwarranted, then their performance may be more negatively affected by management-by-exception leadership than punishment that is perceived as contingent or warranted, which may be the case for more proximate followers. The empirical evidence to date supports the moderating influence of physical distance on the relationship between contingent reward leadership and follower performance. Podsakoff et al.’s (1984) argument, extended to management-by-exception, suggests that management-by-exception leadership will produce worse follower performance when physical distance is high rather than low. Their study suggests the following hypotheses:

**Hypothesis 8a:** Physical distance between leader and follower will moderate the relationship between contingent reward leadership and follower performance such that contingent reward leadership will produce higher follower performance when physical distance is low rather than high.

**Hypotheses 8b and 8c:** Physical distance between leader and follower will moderate the relationship between active and passive management-by-exception leadership and follower performance such that active and passive management-by-exception will have a more negative impact on follower performance when physical distance is high rather than low.

High-quality relationships are characterized by followers spending more time and energy communicating with the leader than do those in low-quality relationships (Graen & Scandura, 1987). Additionally, followers in high-quality relationships receive higher levels of support, confidence, and consideration from the leader (Graen & Uh-Bien, 1995). Such high-quality relationships can be depicted in terms of social exchanges that are more easily fostered when physical proximity and face-to-face interactions are possible (Sparrowe & Liden, 1997).

Shamir (1995) advanced similar arguments in his discussion of the influence processes used by transformational leaders who are socially close versus those who are socially distant from their followers. He contended that in close leadership situations, leaders have a greater opportunity to
show individualized consideration, sensitivity to and interest in followers’ needs, and support towards followers. Trust between leaders and followers is more likely in close than in distant circumstances because there are greater opportunities to interact directly, establish continuity in personal contacts, and engage in relationship building. Findings from a content analysis of interview transcripts of descriptions of close versus distant charismatic leaders revealed that close charismatic leaders were viewed as showing more consideration and openness with others, setting high performance standards, being unconventional in their behavior, and having a greater impact on followers’ task-related motivation and behavior. Although Shamir’s theoretical arguments and empirical evidence apply to social distance, similar arguments can also be applied to physical distance between leaders and followers (Napier & Ferris, 1993) because both variables influence the potential for interaction.

It may be equally challenging to be a follower at a distance. Working in the impression management field, Gardner and Martinko (1988a) noted that workers with offices located near their boss probably receive more cues and opportunities for upward influence than do relatively isolated employees. They also found that school principals spent more time on verbal self-presentation to higher status, external (physically distant) audiences, in this case superintendents and other central administrative staff (Gardner & Martinko, 1988b). Ferris, Judge, Rowland, and Fitzgibbons (1994) noted that physical distance had a significant negative effect on supervisor-focused influence tactics, possibly because of the types of behaviors used (doing personal favors for supervisors, complimenting them on their dress or appearance, showing interest in their personal life and volunteering help on tasks). This research implies that employees perceive a greater need to use upward influence tactics and engage in impression management when they are distant from their leaders, but that their opportunity to use those tactics effectively, and possibly to establish high-quality relationships with their leader, is limited by distance.

In support of this argument, Judge and Ferris (1993) noted as the number of opportunities a supervisor has to observe an employee increases, that employee’s performance rating also increases. Increasing physical distance decreases the likelihood of forming and sustaining high-quality relationships by limiting the opportunities for both leader and follower to engage in the necessary behaviors to form high-quality relationships. Distance also means less opportunity for leaders to observe followers and potentially lower performance ratings for employees at a distance. Thus:

**Hypothesis 8d:** Physical distance between leader and follower will moderate the relationship between LMX and follower performance such that LMX will produce higher follower performance when physical distance is low rather than high.

**Method**

**Sample**

The sample included 109 community banking managers and the 317 employees who reported directly to them (hereinafter referred to as direct reports) in a large Canadian financial institution. Each manager, who was responsible for personal and commercial financial services delivery to customers, had four to six branch managers in a designated geographic area reporting to him or her. The community banking managers were primarily men (95%) who had worked an average of 25 years with the company and were between 37 and 60 years of age, with the average age being 48 years. The direct reports were almost evenly split between men (52%) and women (48%), had worked an average of 20 years with the company, and were between 27 and 66 years of age, with the average age being 44 years.

**Procedure**

Two sources of data were used in the present study. First, all direct reports of each target leader were asked to describe the leadership behavior of their boss. Six months later the same direct reports were asked to complete the LMX scale. Second, direct report performance data were gathered from company records. These performance data were obtained approximately 1 year after the second administration of the survey measures to direct reports. To minimize the problem of common method bias, we gathered data at multiple points in time and from different sources. In particular, because ratings of LMX and leadership behaviors were generated by the same direct reports, effect sizes may be overestimated because of direct reports’ proclivity to maintain consistency in their responses (Podsakoff & Organ, 1986). As recommended by Avolio, Yammarino, and Bass (1991), a temporal delay between data collection points for different constructs from same sources was adopted in the present study to reduce the potential for inflated relationships.

Surveys were distributed through the company’s internal mail system and were returned directly by external mail to the investigators. All respondents were assured by the investigators and the vice-chairman of the personal and commercial financial services division that their responses would remain confidential. The overall response rate was 86% for leaders and 67% for direct reports.

**Measures**

**Leadership behavior.** Leadership behavior was measured with Bass and Avolio’s (1990) Multifactor Leadership Questionnaire (MLQ) Form 5X. The four scales used to measure transformational leadership were (a) charisma (six items; sample item: “Communicates a shared vision of the future”), (b) inspirational motivation (six items; sample item: “Communicates a positive and hopeful outlook for the future of our organization”), (c) intellectual stimulation (five items; sample item: “Asks questions that prompt me
to think"), and (d) individualized consideration (seven items; sample item: "Listens attentively to my concerns"). Because transformational leadership is a higher order construct comprising conceptually distinct yet typically highly intercorrelated scales (Bass, 1985; Bass & Avolio, 1993), as was the case in the present study, the four subscales were aggregated to represent the construct of transformational leadership. The three scales measuring transactional leadership were (a) contingent reward (six items; sample item: "Gives me positive feedback when I perform well"), (b) active management-by-exception (four items; sample item: "Focuses attention on irregularities, mistakes, exceptions and deviations from standards"), and (c) passive management-by-exception (four items; sample item: "Waits for problems to arise before taking action"). Direct reports were asked to judge how frequently their leader engaged in the specific behaviors measured by the MLQ, ranging from 0 (not at all) to 4 (frequently, if not always).

**LMX.** LMX measurement instruments have been continually changed over time, and different studies have used different LMX scales (Dansereau, 1995; Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). Gerstner and Day (1997, p. 828) recently observed that "despite claims of an apparently robust phenomenon (Graen & Uhl-Bien, 1995), there is surprisingly little agreement on what LMX is or how it should best be measured." Prior to 1995, when Graen and Uhl-Bien addressed the controversy surrounding the measurement of the LMX construct and recommended the use of the seven-item LMX measure, there was no clear guidance on which LMX measure to use. The present study, conducted in early 1995, used the four-item Leader-Member Exchange scale originally developed by Graen and Schiemann (1978) and extended and validated in subsequent research (e.g., Graen, Liden, & Hoel, 1982). Items were rated on 4-point scales. An illustrative sample item from the scale is "What are the chances that your leader would use his or her power to help you solve problems in your work?" in which the scale ranges from 1 (would not) to 4 (certainly would).

Graen and Scandura (1987) recommended the use of the member-only questionnaire in instances of a one-time measurement of the LMX, a condition that characterizes the present study. They argued that leaders are more likely to provide socially desirable answers about relationships with their followers (i.e., that they treat them all the same) when surveyed on one occasion, than when repeated measures are taken over time.

**Physical distance.** We used an adaptation of Klauss and Bass's (1982) measure of physical distance between direct reports and their leader. Direct reports were asked to rate their physical proximity to their leader on a 5-point scale ranging from 1 (very close)—i.e., same floor, within 100 ft or 30.48 m—and 5 (very distant)—i.e., different city. The vice president of human resources for the division verified direct reports' ratings of their physical proximity to their respective leaders.

**Follower performance.** The measure of follower performance represented the direct report's overall performance appraisal rating by his or her leader on a 3-point scale that ranged from 1 (below expectations)—i.e., performance does not meet the job requirements with the level of quality expected—to 2 (quality contribution)—i.e., performance meets the job requirements with a level of quality expected of employees), to 3 (exceptional contribution)—i.e., performance exceeds the requirements of the position through excellence in majority of work dimensions). The performance appraisal rating was based on three components: (a) the accomplishment of qualitative objectives related to corporate strategic goals (i.e., financial performance, customer satisfaction, employee effectiveness, and company image); (b) the accomplishment of qualitative objectives specifically related to the community (i.e., customer service, asset quality, portfolio mix, workplace equality, and personal growth); and (c) personal effectiveness (i.e., managing change, identifying business opportunities, and thinking strategically). The direct report's overall performance appraisal rating was determined by the leader's summary assessment of these three components. The performance of each direct report was appraised by his or her leader on an annual basis.

**Control variable.** The length of time direct reports reported to a particular leader was used as a control variable in the present study, given empirical evidence that the length of the leader–follower reporting relationship moderates follower performance evaluations (Duarte, Goodson, & Klich, 1994). Direct reports were asked to rate on a 6-point scale how long they had worked with their leader, ranging from 1 (under 1 year) to 6 (more than 5 years).

**Data Analysis**

Because the fundamental premise underlying the LMX model of leadership is that unique types of relationships develop between leaders and followers, the follower level of analysis was used to analyze the data in the present study.

The hypotheses were tested using partial least squares (PLS) analysis, a structural equation modeling technique. PLS is appropriate for testing predictive research models during the early stages of theory building, which is appropriate for the present study (Barclay, Higgins, & Thompson, 1995; Fornell & Bookstein, 1982). PLS does not make assumptions about data distributions to estimate model parameters, observation independence, or variable metrics (Faulk & Miller, 1992).

The path coefficients in a PLS structural model are standardized regression coefficients. The loadings of items on the constructs are factor loadings. Therefore findings can be interpreted within the context of regression and principal-components analysis. Within the leadership literature, several recent empirical studies have used PLS (Howell & Avolio, 1993; Sosik, Avolio, & Kahai, 1997).

To test the hypotheses predicting direct effects of the transformational and transactional leadership and the quality of the leader–follower relationship constructs on follower performance, we assessed the paths from the different leadership behavior and LMX constructs to follower performance concurrently. The hypothesized direct paths from the quality of leader–follower relationship to the different transformational and transactional leadership constructs were also assessed simultaneously. The moderated model was tested by examining the path from the quality of the leader–member relationship construct to follower performance and from the transformational and transactional leadership constructs to follower performance under both physically close and distant conditions. To partition the data, followers who were located in the same city as their leader were considered close followers, whereas followers who were located in a different city from their leader were deemed distant followers. In the moderated model, the control variable, the length of the leader–follower reporting relation-
ship, was modeled as a direct path to the quality of leader-member relationship construct.

PLS tests the specified model separately for each group of cases, similar to more traditional moderated regression analysis. To test the significance of the moderator variable, physical distance, the model was analyzed twice. Jackknifed path coefficients and jackknifed standard errors generated from PLS analysis were calculated initially for close followers and then for distant followers. An unpaired t test was used to test the significance of the differences between the path coefficients for close versus distant followers (Howell & Avolio, 1993). A p value of .05 was used to test significance.

Results

Reliability and Validity of Measures

The measurement model was tested by examining individual item reliability, internal consistency, and discriminant validity. Individual item reliability was determined by examining factor loadings of the measures on their associated constructs. In PLS analysis, factor loadings exceeding .70 are acceptable (Fornell, Tellis, & Zinkhan, 1982).

Table 1 summarizes the factor loadings of the leadership behavior measures. Factor loadings for contingent reward, active management-by-exception, and passive management-by-exception items were all greater than .70. In addition, the loadings of the individual scales that comprise the higher order construct, transformational leadership, are also substantially greater than .70.

Table 1
Factor Loadings, Weights, and Internal Consistency Reliabilities (IRCs)

<table>
<thead>
<tr>
<th>Construct and measure</th>
<th>Factor loading</th>
<th>Weight of measure</th>
<th>IRC</th>
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<tr>
<td>Transformational leadership</td>
<td>Charisma</td>
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<td></td>
<td>Inspirational motivation</td>
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<td>Intellectual stimulation</td>
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<td></td>
<td>Individualized consideration</td>
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<td>Contingent reward (CR)</td>
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Note. AMBE = active management-by-exception; PMBE = passive management-by-exception.

Reliability may also be assessed through a construct’s composite scale reliability, which is a measure of internal consistency reliability (Fornell & Larcker, 1981). Fornell and Larcker recommend using a criterion cut-off of .70 or more. Examination of the composite scale reliabilities for the leadership behavior measures displayed in Table 1 indicates that all of the internal consistency reliabilities for the constructs are greater than the .70 advocated by Fornell and Larcker (1981).

The reliabilities of the aggregated scales used in the structural model were also assessed. Because the LMX scale was entered into the PLS model as a single indicator, it was not possible to test its reliability using the method proposed by Fornell and Larcker (1981). Consequently, prior to aggregating the scale into a single measure, the scale reliability was assessed by Cronbach’s alpha. Cronbach’s alpha for the LMX scale was .80, which exceeds Nunnally’s (.1978) criterion of .70.

Discriminant validity of constructs was also assessed using PLS analysis. Table 2 presents the correlation matrix of the constructs in the model. The elements on the diagonal show the square root of the average variance extracted by the constructs from measures. For adequate discriminant validity, these elements should be greater than entries in the corresponding rows and columns (Fornell & Larcker, 1981). A comparison of the variance shared by a construct and its measures to the variance shared between constructs revealed adequate discriminant validity among the respective leadership constructs. Although the correlation between transformational leadership and contingent reward leadership is high, previous research indicates that these constructs are typically highly correlated as transformational leaders often display contingent reward behaviors as part of their behavioral repertoire (Bass & Avolio, 1993).

The intercorrelations among the measures revealed that LMX was positively correlated with transformational and contingent reward leadership. As expected, both LMX and transformational leadership were negatively correlated with active and passive management-by-exception and positively correlated with follower performance. Physical distance was not significantly correlated with any of the leadership or performance measures.

Tests of Hypotheses

Results testing the hypotheses regarding leadership behaviors, LMX, and follower performance are summarized in Figure 1. Hypothesis 1, which predicted a positive and significant relationship between transformational leadership and follower performance, was not supported (path coefficient = .12, t = 1.37, p > .05). Contrary to Hypothesis 2, contingent reward leadership was not significantly positively related to follower performance (path coefficient = -.03, t = -.34, p > .05). Hypotheses 3a and 3b were not
### Table 2

*Means, Standard Deviations, and Correlations of Latent Variables*

<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>No. of items</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leader–member exchange&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12.36</td>
<td>2.69</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Transformational leadership</td>
<td>2.77</td>
<td>0.77</td>
<td>24</td>
<td>.53*</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Contingent reward leadership</td>
<td>2.48</td>
<td>1.03</td>
<td>6</td>
<td>.45*</td>
<td>.79*</td>
<td>(89)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4. Active management-by-exception</td>
<td>1.24</td>
<td>0.90</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>5. Passive management-by-exception</td>
<td>0.74</td>
<td>0.91</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.18</td>
<td>0.43</td>
<td>1</td>
<td>.24*</td>
<td>.10*</td>
<td>.09*</td>
<td>.06</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>7. Length of leader–follower relationship&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3.55</td>
<td>1.44</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>8. Distance&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3.89</td>
<td>1.31</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*Note.* Items in parentheses represent the square root of the average variance extracted.

* For the partial least squares analysis, these measures consisted of one indicator. Therefore, average variance extracted for these measures could not be calculated.

*<sup>a</sup> p < .05.
supported: Active and passive management-by-exception were not significantly negatively related to follower performance (path coefficients = .15 and -.12, ts = 2.78 and -1.36, p < .005 and p > .05, respectively). Finally, as predicted in Hypothesis 7, there was a positive and significant path between LMX and follower performance (path coefficient = .34, t = 6.15, p < .0005).

Figure 2 shows the results of tests for the hypothesized relationships between LMX and leadership behaviors. As predicted in Hypothesis 4, LMX was significantly and positively related to transformational leadership (path coefficient = .54, t = 10.34, p < .0005). Hypothesis 5 was not supported: Although LMX was significantly and positively related to contingent reward leadership (path coefficient = .45, t = 6.86, p < .0005), results of a test of means (Duxbury & Higgins, 1991) indicated that the quality of leader–member relationships did not have a significantly lower positive relationship with contingent reward leadership than with transformational leadership, t(77) = .98, p > .05. The significant negative paths between LMX and active and passive management-by-exception support Hypotheses 6a and 6b, respectively (path coefficients = -.38 and -.35, ts = -8.48 and -7.46, ps < .0005).

In Hypothesis 8a, we posited that contingent reward leadership would produce higher follower performance when physical distance was close rather than distant. As shown in Table 3, the opposite result occurred: Contingent reward leadership produced significantly higher follower performance under distant versus close conditions, t(77) = −4.96, p < .0005. Hypothesis 8b was supported: Active management-by-exception produced significantly lower follower performance when followers were physically distant rather than close, t(77) = 3.17, p < .005. Contrary to Hypothesis 8c, passive management-by-exception produced significantly lower follower performance when physical distance was close rather than distant, t(77) = −2.74, p < .005. Hypothesis 8d was not supported: The relationship between LMX and follower performance was not moder-
Thus, although LMX is positively related to transformational leadership on predicting follower performance recognizes the role of the impact of LMX relationships and transformational leadership as positively associated with transformational leadership behaviors. Similar results were reported by Deluga (1992), who found a significant relationship between the transformational leadership behaviors of charisma and individualized consideration and high-quality LMX among 145 U.S. Navy officers. Thus, the present study contributes to the extant leadership literature by supporting the idea that transformational leadership may merge with the formation of high-quality relationships in a mutually reinforcing way (Deluga, 1992).

As predicted, there were significant negative paths between LMX and active and passive management-by-exception. This finding supports the characterization of lower quality relationships as unidirectional downward influence, formal role-defined relation situations in which leadership is essentially nonexistent (Graen & Uhl-Bien, 1995). Also, although higher quality LMX was positively related to contingent reward leadership, LMX did not have a significantly lower positive relationship with contingent reward leadership than with transformational leadership.

Because contingent reward leaders share expectations about their own job, the followers’ job, and their working relationship (Gerstner & Day, 1997, p. 839), they may contribute positively to the quality of leader-member relationships, albeit in a different way than transformational leaders.

Our findings suggest that Graen and Uhl-Bien’s (1995) notion that transactional leadership is associated with lower quality exchanges needs to be revised. In particular, it is important to differentiate the two types of transactional leadership, contingent reward and management-by-exception, according to the leader’s activity level and nature of interactions with followers. Leaders who practice contingent reward, which represents a positive, constructive
transaction between leaders and followers in which followers are rewarded or recognized for achieving agreed on objectives, may also engage in higher quality dyadic relationships. In contrast, leaders who engage in active and passive management-by-exception with followers, a corrective transaction that emphasizes negative feedback and reinforcement rather than the positive reinforcement used with contingent reward leadership, may have lower quality of relationships with their followers, as suggested by Graen and Uhl-Bien (1995).

The significant positive relationship between LMX and follower performance established in the present study is consistent with prior research (Graen, Novak, & Sommerkamp, 1982; Liden & Graen, 1980; Liden et al., 1993; Scandura & Schriesheim, 1994; Wayne et al., 1997). This demonstration of LMX as a significant predictor of follower performance provides empirical support for Graen and Uhl-Bien's (1995) contention that leaders should provide all of their followers with the opportunity to develop high-quality leader–follower relationships. Such relationships would, according to our results, lead directly to higher levels of follower performance.

Our examination of the extent to which different dimensions of leadership were additively and simultaneously associated with performance indicated that although both LMX and transformational leadership were positively related to follower performance, the path from transformational leadership to performance failed to reach statistical significance when other leader behaviors and LMX were included in the model. This finding is contrary to prior research that has consistently demonstrated positive associations between transformational leadership and performance. One possible explanation for these results is that despite the demonstrated discriminant validity between the LMX and transformational leadership constructs, the significant correlation between them may have attenuated the relationship between transformational leadership and performance. An alternative explanation, discussed below, is that LMX and transformational leadership are differentially related to performance when physical distance is included as a moderator in the analysis.

Results of the present study also demonstrate that the relationships between transformational, contingent reward, and active and passive management-by-exception leadership and follower performance were moderated by physical distance. This link has not been made in previous work on transformational leadership. The results show that transformational leaders produce higher follower performance in close versus distant situations, as suggested by Shamir's (1995) findings related to charisma and social distance. These findings imply that transformational leaders require physical proximity to followers in order to attend to the differential development needs of followers, to encourage them to invent novel solutions to problems, and to commu-

nicate a sense of mission and excitement. The results also imply that passive management-by-exception is significantly more detrimental to follower performance at close range than at a distance. Contrary to our expectations, it appears that physical proximity exposes followers to perceived arbitrary punishment, which negatively affects their job performance. A possible explanation for this finding may lie in the nature of passive management-by-exception leadership. Because physical distance precludes personal interactions with followers, leaders who passively wait for problems to arise before taking corrective action may have to wait much longer to observe distant followers' performance problems, if, indeed, these problems ever become apparent. This implies that distant followers may perceive less arbitrary punishment and at least partially avoid the negative impact that perceived arbitrary punishment has on performance.

Interestingly, LMX positively affected follower performance, irrespective of physical distance, implying that a positive leader–follower relationship will make leading from a distance both possible and effective. Moreover, inspection of the size of the path coefficients from LMX to close and distant follower performance, where the relationship between distant leaders and followers had a larger impact on follower performance than that of physically close leaders and followers, suggests that distance may make the heart grow fonder, or the follower perform at a higher level. The internalization of common goals, as well as the mutual trust, respect, and obligation that characterizes high-quality leader–follower exchanges (Graen & Uhl-Bien, 1995; Liden & Graen, 1980) may enable followers to transcend geographic distance in pursuit of the unit's mission and goals. Thus the results of the present study bring into question Graen and Uhl-Bien's (1995) contention that high-quality LMX relationships require direct personal interaction to be developed, nurtured and sustained.

The strong positive path between active management-by-exception and follower performance when the leader is physically proximate to the follower lends support to other leadership scholars' assertion that management-by-exception may increase performance levels if the leader clarifies performance standards, continuously monitors followers' performance to anticipate mistakes before they become a problem, and immediately takes corrective action when required (Bass, 1985; Greene, 1976; Podsakoff et al., 1984). In fact, Bass and Avolio (1990) reported positive correlations between management-by-exception and organizational effectiveness, especially for active management-by-exception.

We speculate that the positive results of active management-by-exception may also stem from the company's culture, which has historically accepted correction of employees' behavior as an exemplary leadership practice, a practice that establishes and enforces performance standards. Anecdotal evidence gleaned from interviews with
company executives as well as recent theoretical developments (Napier & Ferris, 1993) suggest that physically close followers may be subject to higher expectations and more pressure because their leader is able to observe and monitor their performance more frequently and to note errors and slippage below standards more easily than distant followers. This evidence suggests the potential for effective active management-by-exception of spatially proximate followers, at least in the present organizational context.

One limitation of the present study is that LMX was measured from the followers’ perspective only. In their recent meta-analysis of LMX research, Gerstner and Day (1997) recommended that future research should measure LMX from both leader and follower viewpoints and examine leader–follower agreement as a relevant independent or dependent variable. However, in the present study we were concerned that the leader-performance correlations might be confounded by same-source bias and their resulting effect size estimate overstated, a conclusion also reached by Gerstner and Day (1997). Accordingly, our results represent a conservative test of the hypotheses because LMX and performance ratings were provided by different sources.

Another limitation of this study is that we do not know how long the actual relationships between the leaders and followers are. We have data on how long each follower has reported to each leader in their current position; however, we do not know about relationships that predate the current position. It is possible that some of these relationships are significantly longer than the data suggest. Future research needs to clarify how much “up-close and personal” time is required for building and maintaining high-quality leader–follower relationships.

The direction of causality represents another limitation of the present study. Although we conducted a longitudinal study in which leader behaviors and follower performance were measured 1 year apart, the presence of this interval does not obviate questions about the causal direction underlying the results. It is possible that follower performance could influence leader behavior, particularly if the relationship is an extended one. Thus the results of the present study are vulnerable to the possibility of opposite or bi-directional causal explanations due to prior acquaintance between leaders and followers. Future research should be designed using newly established leader–follower reporting relationships in order to more accurately assess the direction of causality.

Although the results indicate that LMX does not have a significantly lower relationship with contingent reward leadership than with transformational leadership, limitations in our methodology mitigate against drawing such a conclusion. According to Cooper and Richardson (1986), in order to conduct a fair comparison of the relative strength of the contingent reward and transformational leadership constructs, procedural and distributional equivalence of the means of the measures need to be demonstrated. Differences in the number of items measuring the transformational and contingent reward constructs, variations in the means and standard deviations for these measures from those reported in other studies (e.g., Bass & Avolio, 1990; Lowe et al., 1996), as well as other considerations suggest that procedural and distributional equivalence may be significant issues in the present study. Future research designed to test the augmentation hypothesis of transformational and contingent reward leadership (Bass, 1985) and the potentially different relationships between LMX and various leadership behaviors needs to ensure both procedural and distributional equivalence of the leadership measures.

The present study’s leader sample was predominantly male (95%). Given that female managers are viewed by followers as more proactive role models who are trusted and respected and who demonstrate greater sensitivity to and interest in followers’ needs in comparison with their male counterparts (Bass & Avolio, 1994), it would be interesting to conduct the analysis split on gender. Unfortunately, having so few female leaders in our sample mitigated against this type of analysis. Replicating the present study in an environment in which there is a more even distribution of roles by gender would allow for this interesting comparison.

Finally, we have only anecdotal data regarding characteristics of close and distant followers and survey data regarding leader behaviors. Observational data on these characteristics, as recommended by Hunt (1991), would enrich our understanding of the dynamics of leader–follower relationships and the role of transformational leadership behaviors in that process.

Future research is necessary to test whether the present study’s findings apply to multiple levels of analysis (Dansereau, Yammarino, & Markham, 1995) and generalize to other organizational settings, industries and cultures. In addition, investigation of a wider array of individual variables (e.g., follower autonomy and self-efficacy) and contextual variables (e.g., resource availability and goal clarity) that may influence the leader–follower relationship should be pursued. Finally, collecting data over multiple time periods would allow researchers to trace the evolution of leader–follower relationships. An understanding of the development of leader–follower relationships and leadership style would provide insights into the career development experiences and training needs of leaders and the timing of these experiences.

This study also opens an avenue for the development and testing of theory regarding the potential moderating effects of contextual variables, such as physical distance, on the relationship between LMX and the various leadership behaviors. We suspect that physical distance would moderate those relationships, as it does the LMX–follower performance relationship, and that such hypothesis development and empirical testing would further enlighten our under-
standing of how effective leaders deal with the distance factor.

In summary, our study represents the first attempt to integrate the transformational and LMX models of leadership over the full range of leadership behaviors. We extended the work of transformational scholars (e.g., Bass, 1985; Hater & Bass, 1988) and LMX scholars (e.g., Deluga, 1992; Graen & Cashman, 1975; Graen & Uhl-Bien, 1995) by integrating the models in a longitudinal design and by adding a contextual factor in order to add richness to our understanding of the predictors of follower performance. Finally, we have provided further evidence that the quality of the leader–follower relationship has a strong, positive impact on follower performance. Five years ago, Bass and Avolio (1993, p. 75) commented that “we have only scratched the surface in terms of connecting the model of transformational leadership to other [leadership] models.” We hope this study has gone beneath the surface to illuminate the linkages between LMX, transformational leadership, distance, and performance.

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**Call for Nominations**

The Publications and Communications Board has opened nominations for the editorships of *Behavioral Neuroscience, JEP: Applied, JEP: General, Psychological Methods*, and *Neuropsychology* for the years 2002–2007. Michela Gallagher, PhD; Raymond S. Nickerson, PhD; Nora S. Newcombe, PhD; Mark I. Appelbaum, PhD; and Laird S. Cermak, PhD, respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 2001 to prepare for issues published in 2002. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees. Self-nominations are also encouraged.

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