



## Examining the relationship of leadership and physical distance with business unit performance

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### Abstract

Measures of transformational and transactional contingent reward leadership and physical distance were used to predict the business unit performance of 101 managers. Results revealed that transformational leadership positively predicted unit performance, while contingent reward leadership was not related to performance. Physical distance between leaders and followers negatively moderated the relationship between transformational leadership and unit performance, and positively moderated the relationship between contingent reward leadership and performance. Implications for future work on leadership at a distance are discussed.

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### 1. Introduction

Changes in organizational structure, size, complexity, and work arrangements make more leaders responsible for managing followers who are at a distance (Antonakis & Atwater, 2002; Avolio, Kahai, & Dodge, 2000). Leaders in virtual organizations, multinational firms, or domestic companies with widely dispersed sites are faced with the challenges of motivating and evaluating followers who reside in different locations and/or countries. How a leader's behavior influences followers when spanning physical distances is largely unexplored.

Antonakis and Atwater (2002, p. 674) challenged the leadership field, stating that, "The dynamics of the influencing process differ[s] depending on how 'close' and how 'distant' followers are from their

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leader. In other words, the types of leader behaviors that can affect followers and how those behaviors are evaluated by followers depend on how 'close' and 'distant' followers are from their leaders." The present study addressed this challenge by examining how physical distance moderated the effects of transformational and contingent reward leadership on unit performance.

We have uncovered only one empirical study that has examined how physical distance moderated the leader–performance relationship. Howell and Hall-Merenda (1999) investigated how the joint impact of leader–member exchange relationships and transformational and transactional leadership was moderated by physical distance in predicting individual-level follower performance. The current study, using different data from the Howell and Hall-Merenda (1999) sample mentioned above, extends that work in five important ways. First, the dependent variable in the present study is business unit financial performance measured over time, as opposed to perceptual ratings of individual follower performance reported in the earlier work. Second, the business unit financial performance measure used in the current study captured the assessment of performance beyond the expected targets set, in that leaders could (and some did) exceed 100% of their goals over the performance review period. Third, this study focused on examining group level effects of leadership rather than individual level effects. Fourth, additional control variables were included (i.e., leader–follower interaction frequency and leader job tenure) to reduce the possibility of alternative explanations of results and/or confounds in the study. Fifth, rather than testing moderation by generating and comparing multiple independent models, the moderating effects of physical distance in this study are tested within a single partial least squares (PLS) model.

## **2. Leadership and performance**

Prior research and meta-analyses have all provided support for the proposition that transformational leadership, or its components (charisma, inspiration, intellectual stimulation, and individualized consideration), relate to higher individual, unit, and/or organizational performance (e.g., Dumdum, Lowe, & Avolio, 2002; Dvir, Eden, Avolio, & Shamir, 2002; Howell & Avolio, 1993). The majority of previous studies demonstrate that contingent reward leadership is positively related to individual and organizational satisfaction, effectiveness, and performance (although in some instances, contingent reward leadership is unrelated to various criterion measures of performance (e.g., Geyer & Steyrer, 1998; Hater & Bass, 1988; Judge & Piccolo, 2004), or has negatively predicted unit performance (e.g., Howell & Avolio, 1993)). In general, transformational leadership has been linked to higher levels of performance when compared to contingent reward leadership, which has varied more in terms of its relationship to performance (Avolio, 1999). Thus:

**Hypothesis 1.** Transformational leadership will positively predict business unit performance.

**Hypothesis 2.** Contingent reward leadership will positively predict business unit performance, but less strongly than transformational leadership.

## **3. Distance and performance**

Napier and Ferris (1993) identified three aspects of distance between leaders and followers: physical, structural, and psychological. A number of authors have argued that physical distance may

negatively affect how well leaders are able to work with their followers due to a potential reduction in the quality of interactions between leaders and followers (Bass, 1998; Bass & Avolio, 1990; Howell & Hall-Merenda, 1999; Yagil, 1998). Their main argument is that leaders will have less opportunity to build relationships that result in effective follower performance. Physically distant leaders may also be seen as less active by followers (Antonakis & Atwater, 2002), and less capable of providing timely recognition and rewards, thus neutralizing contingent reward relationships. We are unaware of any research that has associated objective unit performance outcomes with the physical distance between leaders and followers. We expected that physical distance will have a negative impact on business unit level performance by making it more difficult for leaders to support follower performance that enhances business outcomes.

**Hypothesis 3.** Physical distance between leaders and followers will negatively predict unit performance.

#### 4. Physical distance as a moderator of leadership impact

Howell and Hall-Merenda (1999) reported that transformational leadership was significantly and positively related to individual follower performance in close versus distant conditions. Physical proximity between transformational leaders and followers may provide greater opportunities to demonstrate support, consideration, and interest in followers' needs. Yagil (1998) noted that close leaders may be able to deliver individually tailored confidence building communications to followers and serve as personal role models. The present study examined transformational leader behaviors such as providing meaning and excitement in followers' work, challenging assumptions, and showing sensitivity to and interest in followers' individual needs. Such leadership is expected to produce higher business unit performance when the leader is close to the follower rather than distant.

**Hypothesis 4.** Physical distance will moderate the relationship between transformational leadership and performance, such that transformational leadership will have a more positive impact on business unit performance when physical distance is low rather than high.

Podsakoff, Todor, Grover, and Huber (1984) reported that physical distance negatively moderated the contingent reward–performance relationship producing higher follower performance when physically close versus distant. Howell and Hall-Merenda (1999) found the opposite results: contingent reward leadership produced higher individual performance under distant versus close conditions. Yagil (1998) also reported that distant leaders had a greater impact on collective efficacy than individual efficacy, suggesting that distant leaders may have focused more on the group, not being able to differentiate individual performance. Additional support suggesting a positive moderating effect of distance on contingent reward leadership comes from House and Mitchell's (1974) path–goal theory (i.e., where the task is clearly defined and goals are objectively set, attempts by the leader to closely monitor goals and objectives may be seen negatively). In this study, financial goals were set centrally and unit leaders were charged to reinforce those goals. Thus:

**Hypothesis 5.** Physical distance will moderate the relationship between contingent reward leadership and business unit performance producing higher performance when physical distance is high versus low.

## 5. Method

### 5.1. Sample

The sample included 101 senior managers (“community banking managers”) and their 308 direct reports (“branch managers”) in a large Canadian financial services institution. On average, the 101 community banking managers were 48 years old, had an organizational tenure of 24 years, managed three to five direct reports each, and were predominantly male (97%). These senior leaders were responsible for commercial and personal financial service delivery to customers in designated geographic areas within Canada. The 308 branch managers were, on average, 44 years old, had an organizational tenure of 24 years, and managed 10 direct reports. Approximately half (52%) of the branch managers were male.

### 5.2. Procedure

Our research design involved collecting independent and dependent variable data at three points in time, from three sources: leaders (community banking managers), followers (branch managers), and company records, partially minimizing same method/source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). At time 1, leaders reported demographic data, and followers completed a survey rating the leadership behavior of their leader. At time 2 (6 months later), followers completed a second questionnaire asking them to describe the physical distance separating them from their leader, and to report the frequency of interaction and the length of the relationship with their leader. At time 3 (1 year later), business unit performance data were collected from the company using financial metrics summarizing the previous 12 months of performance.

Questionnaires distributed through the company’s internal mail system at time 1 and 2 were returned directly to the investigators by external mail. Leader and follower surveys were matched with a numeric code. Letters from the investigators and the Divisional Vice Chairman assured all participants that their responses would remain confidential. The response rate at time 1 was 97% for leaders ( $n=139$  of 143 surveys distributed) and 95% for followers ( $n=599$  of 630 surveys distributed). The follower response rate at time 2 was 83% ( $n=415$  of 498 surveys distributed, after removing unusable responses from the sample following time 1). All followers reported to the same leader and were in the same location at times 1 and 2.

### 5.3. Measures

#### 5.3.1. Transformational leadership

Followers judged how frequently their community banking manager engaged in transformational leadership behavior using 19 items drawn from Bass and Avolio’s (1990) Multifactor Leadership Questionnaire (MLQ Long Version). Transformational leadership was treated as a higher-order construct composed of four indicators, charisma (seven items, e.g., “Emphasizes the importance of having a collective sense of mission”), inspiration (four items, e.g., “Shows excitement and enthusiasm about future possibilities”), intellectual stimulation (four items, e.g., “Gets me to look at problems from many different angles”), and individualized consideration (four items, e.g., “Treats me as an individual rather than just as a member of a group”) (Avolio, Bass, & Jung, 1999).

### 5.3.2. Contingent reward leadership

Contingent reward leadership behavior was measured using the Multifactor Leadership Questionnaire (four items, e.g., “Expresses satisfaction when I meet his or her expectations”) (Bass & Avolio, 1990).

### 5.3.3. Physical distance

Physical distance was measured using an adaptation of Klauss and Bass’s (1982) ordinal scale, which asked followers to describe how close their workspace was to their manager. Our sample contained an uneven mix of followers who were “very close” ( $n=48$ ), “fairly close” ( $n=10$ ), “somewhat close” ( $n=11$ ), “fairly distant” ( $n=165$ ), and “very distant” ( $n=144$ ). Focusing on the leader level, we recoded distance as a dichotomous variable (close= same city; distant= different city), and retained only the “majority” of follower responses. For example, if a leader had three close followers and one distant follower, the one distant follower was removed and the leader was coded as “close”; thus there was no overlap in the samples. Sixty-two percent of leaders (63 of 101) were classified as close and 38% of leaders were distant.

### 5.3.4. Business unit performance

This measure was developed internally and represented the extent to which the community banking managers met three key financial targets including profit, revenue, and productivity ratio (weighted at 40%, 20%, and 40%, respectively). Business unit financial targets were established annually through a team-based consultative process between community banking managers, vice presidents, and divisional senior vice presidents. Community banking managers’ progress in reaching their targets was reviewed by the vice president to whom they reported on a quarterly basis. At year’s end, each community banking manager received a score ranging from 0 (85% of target achieved) to 10 (greater than 115% of target achieved) from his or her divisional vice president.

### 5.3.5. Controls

Since Antonakis and Atwater (2002) noted an association between interaction frequency and follower ability and performance, we included average leader–follower interaction frequency as a control on unit performance. We also included length of leader–follower relationship and leader job tenure, since prior leader experience may account for some variance in performance (e.g., Waldman, Ramirez, House, & Puranam, 2001). Leader–follower interaction frequency and length of leader–follower relationship were each computed using follower responses averaged to the leader level, with  $r_{wg}$  analyses (James, Demaree, & Wolf, 1984) producing an inter-rater agreement level of at least .7 on each of these control measures.

## 5.4. Data analysis

Hypotheses were tested using a structural equation modeling procedure called partial least squares (PLS) (Fornell & Bookstein, 1982; Wold, 1982). PLS is appropriate for early stage research models where the emphasis is on theory exploration and prediction (Jöreskog & Wold, 1982). It does not require multivariate normality for estimating parameters, is suitable for use with smaller samples (Barclay, Higgins, & Thompson, 1995), and is less affected by changes in the distributional properties of the sample from normality (see Wilcox, 1998 for a more detailed discussion of some of the shortcomings of standard regression analysis). The path coefficients in a PLS model are standardized regression coefficients, and the loadings of items on the constructs are the same as factor loadings (Table 1).

Table 1  
Factor and cross-factor loadings, internal consistency reliabilities, and average variance extracted from measures ( $N=101$ )

Measures	Loadings			Performance	Controls		
	TF leadership (.94, .93, .81) <sup>a</sup>	CR leadership (.95, .97, .82)	Distance		Job tenure	Years with leader	Interaction frequency
TF 1	0.96	0.54	-0.03	0.21	-0.04	-0.03	0.05
TF 2	0.94	0.62	-0.05	0.14	-0.03	-0.02	0.05
TF 3	0.86	0.62	0.01	0.06	0.01	-0.02	0.06
TF 4	0.82	0.78	0.06	0.09	0.03	0.00	0.02
CR 1	0.66	0.90	0.05	0.01	0.01	-0.01	0.06
CR 2	0.69	0.99	0.02	0.03	-0.03	0.00	0.08
CR 3	0.73	0.82	0.07	-0.01	-0.02	-0.01	0.05
CR 4	0.71	0.90	0.06	0.00	0.00	-0.07	0.11
Distance	-0.01	0.02	1.00	-0.15	-0.10	0.08	-0.18
Performance	0.17	0.04	-0.15	1.00	-0.10	-0.02	-0.20
Job tenure	-0.07	0.10	0.16	-0.01	1.00	0.41	-0.07
Years with leader	-0.02	0.00	0.08	-0.02	-0.03	1.00	-0.08
Interaction frequency	0.05	0.08	-0.18	-0.20	0.02	-0.08	1.00

<sup>a</sup> Values in parentheses represent internal consistency reliability, Cronbach's alpha, and average variance extracted, respectively, for each factor.

Hypotheses 1–3 were tested by examining the paths from transformational leadership, contingent reward leadership, and physical distance to performance in the unmoderated model (i.e., with moderator relationships excluded). To test path significance, jackknife statistics were calculated using a blindfolding resampling procedure, with an omission distance of one case per resample (Lohmöller, 1984). To test Hypotheses 4 and 5, two standardized cross-product interaction constructs were computed and included in the model, as described by Chin, Marcolin, and Newsted (2003) and as is common in regression analyses (Aiken & West, 1991). Each of the four transformational leadership and contingent reward indicator scores was multiplied by the distance indicator score, resulting in four cross-product interaction items reflecting a new interaction construct, distance $\times$ transformational, and four cross-product interaction items for distance $\times$ contingent reward leadership. Since distance is a dichotomous indicator (1=close, 2=distant), for close leaders, the interaction items are identical to the standardized leadership item scores, and for distant leaders, the interaction item scores are the standardized leadership item scores multiplied by two. Path significance was tested by calculating jackknife statistics (Lohmöller, 1984).

The focal leader's business unit was the level of analysis used in the present study. Results from  $r_{wg}$  analyses indicated an acceptable IRC of .7 for at least 70% of leaders, for all measures, which was confirmed by one-way ANOVA and Bartlett's test for homogeneity of variance.

## 6. Results

The measurement model was tested by examining individual item reliability, internal consistency, and convergent and discriminant validity. All items loaded at the .7 level or higher on their respective

Table 2  
Means, standard deviations, and intercorrelations for constructs ( $N=101$ )

	Number of items	Mean	S.D.	1	2	3	4	5	6	7
1. Transformational	4	2.69	0.56	<b>(0.90)<sup>a</sup></b>						
2. Contingent reward	4	2.52	0.77	0.67 <sup>b</sup>	<b>(0.91)</b>					
3. Distance	1	1.38	0.49	-0.01	0.02	<b>(1.00)</b>				
4. Performance	1	4.59	1.47	0.16	0.03	-0.15	<b>(1.00)</b>			
5. Job tenure	1	4.80	1.84	-0.02	-0.02	-0.10	-0.10	<b>(1.00)</b>		
6. Years with leader	1	3.19	0.70	-0.02	0.00	0.08	-0.02	0.03	<b>(1.00)</b>	
7. Interaction frequency	1	110.95	209.63	0.05	0.08	-0.18	-0.20	0.02	-0.08	<b>(1.00)</b>

<sup>a</sup> Bold-faced elements on the diagonal represent the square root of the average variance extracted. Off-diagonal elements are correlations between measures. For adequate discriminant validity, the elements in each row and column should be smaller than the bold-faced element in that row or column.

<sup>b</sup> Correlations greater than .18 were significant at the  $p<.05$  level; correlations greater than .24 were significant at the  $p<.01$  level.

constructs, indicating acceptable item reliability (Chin, 1998). Scale reliabilities (internal consistencies) for the transformational and contingent reward leadership constructs examined in this study were .94 and .95, respectively, and Cronbach's alphas were .93 and .97, respectively. Convergent validity was evaluated by calculating the average variance extracted (AVE) for each construct. When the AVE exceeds .5, the interpretation is that the variance shared between the construct and its measures is greater than unexplained error (Fornell & Larcker, 1981). The AVE for transformational and contingent reward leadership was .81 and .82, respectively (details of this analysis may be obtained from the first author).

The intercorrelations presented in Table 2 provide further evidence to support the convergent and discriminant validity of the measures examined in this study. Although there was some overlap in the two leadership constructs being measured ( $r=.67$ ), as expected based on prior literature (Avolio et al., 1999; Bass & Avolio, 1990), the average correlation among the measures of each construct (shown on the diagonal of the correlation matrix) was greater than that construct's relationship with any other construct.

Hypotheses 1–3 were tested using the unmoderated model, and Hypotheses 4 and 5 were tested with the moderator relationships included. Results are shown in Table 3. Hypothesis 1 was supported: transformational leadership positively predicted unit performance ( $\lambda=.24$ ,  $t=2.22$ ,  $p<.05$ ). Hypothesis 2, which stated that contingent reward leadership would positively predict unit performance, was not supported ( $\lambda=-.11$ ,  $t=-1.29$ , n.s.). Hypothesis 3 was supported: physical distance separating leaders and followers negatively predicted unit performance ( $\lambda=-.19$ ,  $t=-4.24$ ,  $p<.001$ ). However, since the interaction terms in this model were also significant, this first-order effect should be interpreted cautiously (Aiken & West, 1991; Darlington, 1990).<sup>1</sup>

<sup>1</sup> One reviewer noted that our approach of splitting the dataset into "close" and "distant" subsets, and removing the minority data, overlooks the influence of the minority subjects on performance. In response we conducted a follow-up analysis using all of the data, without eliminating the "minority" responses (i.e.,  $n=125$  leaders of  $n=378$  followers). We used three distance categories in this analysis: all close ( $n=63$  leaders of 161 followers), mixed ( $n=40$  leaders of 150 followers), and distant ( $n=22$  leaders of 67 followers). Results from this analysis were virtually identical, with one exception: the path between distance and performance was non-significant. We believe the reason for this change is due to the wide variance in leader–follower relationships in the "mixed" categories (i.e., some mixed leaders had mostly close or mostly distant followers; others had a mix of followers across the five distance categories). Furthermore, because interaction effects were observed, direct effects must in any case be interpreted with caution.

Table 3  
Results from PLS analysis<sup>a</sup> (N=101)

	Unmoderated $\beta$	<i>t</i> -test	Moderated $\beta$	<i>t</i> -test
H1: TF→performance	.24	2.22*	.53	5.18***
H2: CR→performance	-.11	-1.29	-.45	-5.06***
H3: distance→performance	-.19	-4.24***	-.18	-2.51**
H4: distance mod-TF→performance			-.24	-4.73***
H5: distance mod-CR→performance			.36	9.00***
Performance	$R^2=.12$		$R^2=.15$	

<sup>a</sup> The three control variables on unit performance were leader's job tenure ( $\lambda=.11$ ,  $t=1.99$ ,  $p=.05$ ), average follower years with the leader ( $\lambda=-.02$ ,  $t=-1.39$ ,  $p=.17$ ), and interaction frequency ( $\lambda=-.23$ ,  $t=-2.10$ ,  $p=.04$ ).

\*  $p<.05$ .

\*\*  $p<.01$ .

\*\*\*  $p<.001$ .

In support of Hypothesis 4, the effect of transformational leadership on performance was moderated by physical distance such that transformational leadership predicted higher business unit performance when physical distance was low rather than high (moderating  $\lambda=-.24$ ,  $t=-4.73$ ,  $p<.001$ ). Hypothesis 5 was supported: contingent reward leadership produced higher unit performance when physical distance was high versus low (moderating  $\lambda=.36$ ,  $t=9.00$ ,  $p<.001$ ). Unit performance was significantly affected by two of the three control variables: leader's job tenure ( $\lambda=.11$ ,  $t=1.99$ ,  $p=.05$ ) and interaction frequency ( $\lambda=-.23$ ,  $t=-2.10$ ,  $p=.04$ ). Follower years with the leader had no impact ( $\lambda=-.02$ ,  $t=-1.39$ ,  $p=.17$ ).

## 7. Discussion

The current study contributes to our understanding of how physical distance influences the effects of transformational and contingent reward leadership on performance. First, the dependent variable, business unit financial performance measured over time, represents an objective assessment of performance, and answers calls for more longitudinal studies of leadership impact using objective measures (Judge & Piccolo, 2004). Furthermore, while performance measures are often plagued by ceiling effects, in the current study, we used a performance criterion that tapped into performance beyond expected targets set, getting closer to maximum performance (Lim & Ployhart, 2004). Third, we were able to assess how leadership predicted business unit performance versus using the more commonly reported measures of individual performance (Lowe, Kroeck, & Sivasubramaniam, 1996). Finally, rather than testing moderation by generating and comparing multiple independent models, the moderating effects of physical distance in this study were tested within a single PLS model. As Chin et al. (2003) pointed out, the traditional approaches to moderator analysis—regression and ANOVA—rely on summated scales that assume that the single item measures being used are perfectly reliable. They demonstrated that a PLS-based approach to moderator analysis in which each item's relative contribution is taken into account “in the context of the interaction model being tested” (Chin et al., p. 190) was superior to traditional approaches.

Consistent with prior empirical research, and as hypothesized, we found that transformational leadership positively predicted business unit performance over a 1-year period. Contrary to our predictions, contingent reward leadership was not positively related to business unit performance.



Although most previous studies have reported a moderately positive relationship between contingent reward leadership and performance, a few have found that contingent reward leadership is unrelated to performance (e.g., Geyer & Steyrer, 1998; Hater & Bass, 1988). One explanation for this finding is suggested by Korukonda and Hunt (1989) who argued that contingent reward leadership sends a message of approval regarding followers' current performance. If followers perceive that their performance meets expectations yet contingent rewards are not forthcoming from the leader, then followers' efforts and performance may be unaffected. This may be due to the leader simply not being able to accurately observe followers' performance, or being viewed as not providing sufficient rewards to recognize what followers felt was required. Consequently, to the degree that followers did not see a clear link between achieving performance expectations and receiving rewards and/or recognition, they may have been less motivated to attain unit performance goals.

Considering the findings from previous research (Avolio et al., 1999; Howell & Avolio, 1993), the validity of using contingent reward leadership when predicting unit performance as opposed to individual level performance may also be a factor. Specifically, as assessed by the MLQ, contingent reward relationships relate more to the goals, achievements, and evaluations that are made at an individual level. Thus a leader may very well provide recognition at an individual level that may be inconsistent within and between work units with respect to the business unit results. It appears that how we specify our criterion measure is a critical issue for future research to examine.

Extending Howell and Hall-Merenda's (1999) findings on physical distance from the individual to the unit level of analysis, we found that physical distance moderated the effect of transformational leadership on business unit performance, although these effects were not necessarily strong. Under close conditions, transformational leadership positively predicted unit performance, while under distant conditions, transformational leadership did not predict unit performance. This result implies that the combination of communicating a compelling vision, developing followers' individual capabilities and challenging the tried and true ways of thinking, is a more potent means for leaders to engage closely followers' motivations and aspirations and provide them with a meaningful purpose to pursue. Being individually considerate with followers is likely enhanced by having the leader physically close versus distant to followers. Yet, at the same time, by being distant from followers, certain inconsistencies in the leader's behavior may go unnoticed. Followers may also place greater weight or emphasis on a leader's behavior positively and/or negatively when working at a distance, in that they would typically observe the leader less frequently, but may attribute more meaning to those behaviors that are directly observed. In contrast, physical distance between transformational leaders and followers may reduce opportunities for leaders to reinforce the visionary message, and to engage in creative behavior and relationship building with followers. Through personal contact with followers, transformational leaders can demonstrate through their own actions and behaviors their support of the vision, mission, and followers' efforts (Shamir & Ben-Ari, 1999).

Overall, the present study indicated that physical distance may be a potential boundary condition for the effects of transformational leadership on unit-level performance, at least applied to this level of management and within the financial services sector. It may also be a boundary condition that will change as more leaders engage with followers on a daily basis using virtual information technology, which may explain, in part, the relatively weak moderation effect observed in the current study (Antonakis & Atwater, 2002; Avolio et al., 2000).

When followers were distant from their contingent reward leader, unit performance was higher than when they were close. A somewhat cynical interpretation of this result might be that these contingent reward leaders were not only ineffective, but their direct, up-close leadership interventions (perhaps

perceived as “micromanagement”) actually harmed their unit’s performance more than helped it. An alternative interpretation is that distance freed these leaders to manage more effectively in line with their leadership style, thus focusing their efforts on managing their followers contractually and delivering output based on centrally set standards. At a distance, contingent reward leaders may give followers autonomy to achieve desired results in ways that are most effective for self-managed followers.

### *7.1. Limitations*

In order to compare leaders of close versus distant followers, we adopted the strategy of retaining the majority of close followers for close leaders (dropping minority distant followers) and retaining the majority of distant followers for distant leaders (dropping minority close followers). By dropping minority followers for some leaders who contributed to business unit performance along with the majority followers, we lost some explanatory power. This was unavoidable since many of the leaders had a mix of close and distant branch manager followers. Yet, when we did include all followers in our analyses, our findings were nearly identical.

A second limitation was that we do not know the length of the working relationships between leaders and followers. While we have information on how long followers worked with their leader in their current role, we are unaware if their relationship predated the current role. Nor do we know whether leaders or followers working in close versus distant conditions were more or less capable. It is possible that either the leaders or followers in close and distant contexts may vary in ability in some systematic way, thereby confounding our results. For example, some leaders may have been assigned to work with distant followers who are more capable and trusted than close followers. Also, there could be a method problem related to distance, where less accurate ratings of transformational leadership in distant relationships were obtained because the leader was seldom observed.

While the achievement of business unit performance targets can be attributed in part to the motivational effects of transformational and contingent reward leadership, other factors may also account for business unit results. For example, it is possible that leaders may use lateral or upward influence to obtain additional resources to facilitate meeting performance targets, generate business through their community networks, and/or negotiate lower performance targets.

Relatedly, we were unable to examine in this study potential nuances in the relationships between the leaders and followers. For example, some distant leaders may establish early on face-to-face contact with their followers in order to build a potentially stronger base for distant interactions that will take place over time. In addition, we do not have data on how the close and distant leaders used technology to mitigate the distance in their relationships with followers. For example, some leaders may have used e-mail more frequently if they were physically distant.

Finally, PLS is less likely to be affected by the nuances in the distributional properties of the data, and therefore is more likely to find significance compared with more traditional statistical procedures. PLS is specifically used for this purpose during the early exploration stages when one is venturing into a new area of research inquiry.

### *7.2. Future research directions and practical implications*

Moving to a future research agenda, a growing area of research interest that extends the current study involves leading at a distance via alternative communication channels and advanced information

technology (e.g., Avolio et al., 2000). As more managers use electronic mail, net meetings, and other alternative forms of virtual interaction, a key issue is whether the use of these new technologies can substitute or even enhance the leader's impact on followers (Sosik, Avolio, & Kahai, 1997). Stated differently, will organizations be able to minimize the effects of distance on interactions between leaders and followers, particularly with the new generation of employees now moving into the workforce (Tapscott, 1996)? Also, will distance itself have to be redefined in the emerging "connected" society? What does physical distance mean if leaders can access followers through virtual communication mechanisms anytime, anywhere?

Future research on the history of the working relationship between leaders and followers, the frequency and mode of communication between them, as well as how transformational leaders construct their messages may be helpful in increasing our understanding of how to lead effectively at a distance. Further exploration of optimal combinations of leader message content and delivery style also holds promise for future research. Examining the transformational leader behaviors that are effective for each combination of "socially close or socially distant" and "physically close or physically distant" requires further investigation, especially with respect to linkages to both communication process and content. Finally, disentangling the effects of different transformational leadership behaviors on performance close up and at a distance would be a worthwhile research endeavor, as well as exploring possible mediators.

A given leadership style may have more or less impact at a distance depending on the work context, communication links, and nature of the business. Potential practical implications include considering how the same message given face-to-face may be misunderstood at a distance; the effort required by leaders at a distance to build effective relationships with followers especially in a low trust culture; and the need for follow-up when working at a distance to ensure that the leader's message was received and understood. The stronger relationship between transformational leadership and unit performance under physically close conditions suggests that leaders at a distance may need to work harder at relating to their followers' needs and aspirations in order to have the same level of positive impact that they would close up.

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