Leadership and Mobile Working: The Impact of Distance on the Superior-Subordinate Relationship and the Moderating Effects of Leadership Style[1]

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Abstract

Mobile work is a form of work organization that is gaining ground and affecting many organizations. Mobility increases distance in interpersonal relations. The distance that it generates has major consequences for organizations and for leadership dynamics. This article presents the results of a study that tested the impact of physical distance and psychological distance on the quality of the superior-subordinate relationship. It also aimed to assess the moderating effect of the supervisor's level of transformational leadership. Statistical analyses were done on data gathered from 286 respondents at an international management and information technology consulting firm. These analyses indicate that physical distance and psychological distance have a negative impact on relational quality, while the supervisor's level of transformational leadership moderates this relation by mitigating the negative effects. The implications of these results are discussed.

Keywords: Mobile work, Leader-Member Exchange Theory, physical distance, psychological distance, transformational leadership, e-leadership

Introduction

A recent survey by IDC[2] indicated that, by 2013, 1.2 billion workers around the world – one-third of the global workforce – will be mobile workers. Mobile work means that work can be done at a distance, that is, outside conventional offices, at any time and in any place (Perez, Martinez-Sanchez, Carnicer, and Jimenez, 2007). Although the mobility resulting from this kind of work organization creates many advantages, such as reduced real estate costs, better work-life balance for employees, access to a larger pool of workers, and overall improved employee productivity, the distances that it generates have major consequences for organizations and for leadership dynamics (Antonakis and Atwater, 2002; Avolio, Kahai, and Dodge, 2000).

For example, distances have a big impact on communication channels, which must become more electronic and asynchronous (Kirkman and Mathieu, 2005; Shekhar, 2006). This complicates communicative processes among individuals, increases conflict management, makes it more difficult to create a climate of trust and employee cohesion, and creates major coordination challenges (Maruping and Agarwal, 2004; Siha and Monroe, 2006; Zaccaro and Bader, 2003). From the perspective of Leader-Member Exchange (LMX) theory, studies have shown the importance of relational quality between superiors and subordinates in distance relationships such as virtual teams and different kinds of mobile work.

For example, in a context where employees are located at a distance, the quality of the superior-subordinate relationship may explain leadership effectiveness, employees' satisfaction with their jobs, staff retention, workers' performance, and employees' commitment to their organization (Golden, 2006; Golden and Veiga, 2008). However, very few studies as yet have attempted to understand the impact of distance on leadership dynamics.
Among others, we should note the work by Howell and Hall-Merenda (1999), Howell, Neufeld, and Avolio (2005) and Kirkman, Chen, Farh, Chen, and Lowe (2009), which tested the impact of physical distance on business units' performance and the effect of power distance on the perception of procedural justice and on organizational citizenship behavior.

However, no previous study has examined the impact of distance and these dimensions on the quality of the superior-subordinate relationship. Thus, continuing along the same lines as the work mentioned above and applying LMX Theory, this article presents the results of a study that had the primary objective of empirically testing the relation between distance and superior-subordinate relational quality.

In addition, the literature is unanimous about one aspect of mobile work management: managers of mobile workers must demonstrate leadership if they wish to profit from all of the benefits offered by mobility (Fisher and Fisher, 2001; Garton and Wegryn, 2006). Given the central position that managers play in mobile work organization design and the dynamics of this work organization – by transferring a certain amount of power to the workers – the leadership exercised by the manager plays a key role (Avolio and Kahai, 2003; Collinson, 2005). From this perspective, then, this study had the second objective of examining the impact of the superior's leadership style on the relation between distance and superior-subordinate relational quality.

The article is structured as follows. First, the theoretical underpinnings of this study are presented. LMX Theory, the concepts of physical and psychological distance, transformational leadership theory and our hypotheses concerning the relationships between these constructs are set out in the following section. Next, we will present the methodological framework of this study, discussing the procedure we applied and the data collection tool we used. Thirdly, the sample will be described and the results of the study presented. Finally, we will discuss the results we obtained, the limitations on this study and future research avenues resulting from our findings.

Theories and Hypotheses

Leader-Member Exchange (LMX) Theory

Leader-Member Exchange (LMX) theory is rooted in social exchange theory, which states that all social relations are based on individual subjectivity, which colors the quality of relations (Blau, 1964; Cropanzano and Mitchell, 2005). According to LMX, the quality of a relationship will be better or worse depending on the level of mutual trust, respect and obligation that exists between the individuals (Bolino and Turnley, 2009). In this sense, LMX theory maintains that superiors have relationships of different qualities with each of their subordinates and that the quality of these relationships will influence each worker's performance and the effectiveness of the supervisors' leadership. The rationale behind this theory is as follows:

when the relationship between a superior and a subordinate is good, the subordinate benefits from a favorable attitude on the part of the superior and from preferential treatment, manifested in more communication, more formal and informal rewards and recognition, easier access to the superior, and more feedback, enabling the subordinate to continuously improve and the leader to influence the subordinate more effectively (Elicker, Levy, and Hall, 2006). Conversely, when the quality of this relationship is poor, the supervisor offers only limited emotional support, little trust, and no additional benefits on top of what is included in the work contract, which has the effect of reducing both the worker's performance and the supervisor's leadership effectiveness (Gerstner and Day, 1997).

Studies have validated this theory in numerous contexts and shown that good-quality relationships have a positive impact on leadership effectiveness and many performance indicators such as employee performance, turnover, job satisfaction, commitment to the organization, job atmosphere, level of innovation, etc. (Graen and Uhl-Bien, 1995). In short, research shows that relational quality is an excellent predictor of managers' performance. Consequently, it is important to understand its background. In particular, given the trend for organizations to engage in mobile work practices, which create distance in relationships between superiors and subordinates, it is valuable to understand the impact of this kind of distance on relational quality.

The concept of distance

Distance refers to the gap separating two persons (Napier and Ferris, 1993). Although no studies to date have specifically examined the relation between distance and relational quality, several findings lead us to believe that the distance separating a superior and a subordinate is likely to affect the quality of their relationship.

For example, research has shown that distance between individuals creates major new communication challenges (Jacobs, 2004), difficulties understanding other people (Kirkman *et al*., 2009) and emotions likely to affect the nature of relationships such as feelings of isolation and insecurity on the part of the employee (Cooper and Kurland, 2002; Lim and Teo, 2000). In short, several studies tend to support the idea that distance has major impacts on interpersonal relationships, which are the very foundation of the exercise of leadership (Yukl, O'Donnell, and Taber, 2009). From this perspective, it is clearly relevant for us to examine the concept of distance and its connection to relational quality.

Several dimensions must be considered in studying the concept of distance. Needless to say, if we wish to understand the impact of distance on relational quality, the first factor we must investigate is the physical distance between superior and subordinate. Howell and Hall-Merenda (1999) and Howell *et al.* (2005) tested this factor, among other things. However, as the literature indicates, it is also important to pay attention to the worker's perception of this distance. Indeed, several studies suggest that this perception plays a key role in understanding leadership dynamics (Antonakis and Atwater, 2002; Brunelle, 2009). The perception of distance refers to psychological distance, which corresponds to the second factor to be considered (Wilson, O'Leary, Metiu, and Jett, 2008).

As Wilson *et al.* (2008) explain, an employee or colleague may be located physically close to us but, despite this physical proximity, may appear to be far away. Conversely, an employee or colleague may be physically distant but, despite this physical distance, may seem to be very close to us. These paradoxical situations, where perceived distance does not correspond to observable physical distance, are examples illustrating the difference that can exist between psychological distance and physical distance. As well, it is important to point out that the results of some studies indicate that physical distance is largely distinct from psychological distance (Dow, 2000; Halford and Leonard, 2006).

Indeed, as Coshall and Potter (1987) observed, physical distance explains no more than half of psychological distance. These observations mean that using physical distance as the sole measurement of distance is not sufficient to understand the impact of distance on relational quality. It is therefore important to look at psychological distance as well. In relation to the objectives of this study, the following sections present these two dimensions of the concept of distance in more detail, and set out our hypotheses concerning the relation between each of these distance dimensions and relational quality between a superior and a subordinate.

Relational quality and physical distance

Physical distance corresponds to the observable gap separating two people in space (Napier and Ferris, 1993). It is possible to measure this distance in meters, for example. Physical distance has a major influence on interpersonal relations and modes of communication (Meyer and Herscovitch, 2001). We therefore believe that it will have an impact on the quality of the relationship between superiors and their subordinates. We explain this as follows.
First, the physical distance resulting from different kinds of mobile work has the effect of reducing, or even eliminating, the informal meetings, "corridor meetings," social events, etc., that exist in conventional forms of work organization (Fisher and Fisher, 2001).

These spontaneous and unplanned meetings are known to be good ways of facilitating closeness and the development of good-quality relationships (Cropanzano and Mitchell, 2005), because these kinds of informal encounters play an important role in constructing individuals' emotional attachment (Meyer and Allen, 1997). Emotional attachment is one of the bases for a good-quality relationship (Bolino and Turnley, 2009). Moreover, studies indicate that long-distance interactions reduce the emotional content of discussions and communications, which thereby lessens the possibilities of emotional attachment (Napier and Ferris, 1993). Thus, from the perspective of LMX Theory, since physical distance limits opportunities for informal meetings between superiors and subordinates, and thus reduces the possibility that an emotional attachment will develop between them, we believed that physical distance would complicate the development and maintenance of good-quality relationships.

In addition, research has shown that the use of technologies in interpersonal relationships creates emotional detachment in individuals (Hasty, Massey, and Brown, 2006; Shepherd and Martz, 2006). Since electronic technologies are widely used in mobile work design, we view this as an additional explanation of the negative impact physical distance has on the superior-subordinate relationship.

The emotional detachment caused by the use of electronic media may be explained by the fact that they are poor on the communication richness scale (Trevino, Webster, and Stein, 2000). Communication richness refers to the ability to convey certain types of information and is determined by the capacity for immediate feedback, multiple cues and senses involved, language variety, and personalization (Daft and Lengel, 1986). Electronic media such as emails, instant messaging and shareware limit the richness of interactions because they favor more asynchronous communications, with less immediacy and less possibility of feedback (Brunelle, 2009). This results in more ambiguity and uncertainty in interpreting the messages exchanged (Lengel and Daft, 1988) and makes communication more complicated (Otondo *et al*., 2008).

Consequently, because dyads with more physical distance use leaner media to communicate, the possibilities of building an emotional attachment are limited and the chances of misunderstandings increase, meaning that it becomes more difficult to develop a good-quality relationship. We therefore believed that physical distance would have a negative effect on relational quality between a supervisor and a subordinate, leading us to formulate the following hypothesis:

Hypothesis 1: Increased physical distance between superior and subordinate will have a negative impact on their relational quality.

Relational quality and psychological distance

Psychological distance is defined as the feeling of separation that an individual has in relation to another person (Salzmann and Grasha, 1991). In other words, it is the individual's perception of feeling close to or far from another person. Two dimensions must be considered to understand an individual's perception of distance from another individual (Vaughn and Baker, 2004). First, the perceived gap may be attributed to a difference in status between the individuals. In addition, the perception of distance may be related to one person's affectivity toward the other. Since this is a perceptual construct, even if the physical distance separating individuals is the same, the psychological distance is not necessarily identical, depending on the individual who is evaluating it (Hess, 2003).

Psychological distance is based essentially on identification (Mortensen and Hinds, 2001; Wiesenfeld, Raghuram, and Garud, 2001). The more an individual identifies with another individual, that is, the more points in common this person feels that they share, the greater the feeling of closeness and the smaller the psychological distance will be (Napier and Ferris, 1993). The literature tells us that identification phenomena have a major impact on the quality of interpersonal relations (Hekman, Steensma, Bigley, and Hereford, 2009; Sluss and Ashforth, 2007). When identification exists, it reduces the uncertainty concerning the other person's intentions, facilitates mutual understanding in communication and improves the effectiveness of discussions, by allowing more personalized relations to develop.

As well, identification facilitates "connectedness" between individuals, which enhances the level of interpersonal attraction. Thus, since psychological distance is based essentially on identification, and identification favors good relationships, we believed that psychological distance would have an impact on relational quality among individuals. Thus, we formulated the following hypothesis:

Hypothesis 2: Increased psychological distance between superior and subordinate due to (a) status and (b) affect will have a negative impact on their relational quality.

The impact of leadership style: The moderating role of transformational leadership

The literature informs us that a superior's leadership style is a determinant of the success of mobile work (Gibson, Blackwell, Dominicis, and Demerath, 2002; Hambley, O'Neill, and Kline, 2007). A good leadership style can reduce, or even eliminate, the negative effects of distance (Avolio and Kahai, 2003; Konradt and Hoch, 2007; Neufeld and Fang, 2005). In this regard, the model offered by transformational leadership theory offers an interesting approach, which several researchers have suggested applying in studying the impact of leadership style in a mobile work context (Judge and Piccolo, 2004; Lowe and Gardner, 2000; Whitford and Moss, 2009).
The theoretical bases of transformational leadership were formulated by Bass (1985).

As Yukl (1999) summarizes the matter, transformational leadership is interested in the effect that a superior has on the people who follow him or her and in the behaviors adopted by the superior to achieve that effect. In an organizational context, when transformational leadership is effective, subordinates feel trust, admiration, loyalty and respect for the superior. The influence process underlying transformational leadership is based on the superior's capacity to motivate others, make them aware of the consequences of their tasks, and help them to align their personal needs with those of the organization. Transformational leadership is distinguished from transactional leadership, which focuses more on the execution of the superior's requests and the respect of administrative and organizational rules.

The context of mobile work – one in which the superior must be able to influence subordinates by means of asynchronous, remote communications – is very comparable to the context of indirect leadership (Larsson, Sjöberg, Nilsson, Alvinius, and Bakken, 2007). Both share a very limited level of face-to-face contacts and interactions. Studies show transformational leadership effectively support the exercising of indirect leadership (Avolio, Zhu, Koh, and Bhatia, 2004; Larsson, Sjöberg, Vrbanjac, and Björkman, 2005). Thus, as Yammarino (1994) puts it, by working more to develop a corporate and/or team culture, communicating a vision, creating meaning, empowering employees and delegating a lot – in short, by exercising transformational leadership – the superior can exercise effective indirect leadership. This is explained by the fact that transformational management practices improve subordinates' mental representations of the behaviors to be adopted and facilitates the process of identification with the organization or the superior (Larsson *et al*., 2007).

From this perspective, and in relation to the research on indirect leadership, we believe that, by exercising transformational leadership, the superior is able to reduce, and even eliminate, the negative impacts of distance on the subordinate's perception of relational quality. This happens because, by exercising transformational leadership, the leader favors the development of clear mental representations in subordinates of the work processes and behaviors to be adopted (Brunelle, 2010; Larsson et *al.*, 2007). Clear and shared mental representations improve mutual understanding during discussions, which facilitates effective communications (Hathi, 2008), and consequently can reduce the impact of distance (Purvanova and Bono, 2009). This background led us to formulate the following hypothesis:

Hypothesis 3: A superior's transformational leadership level will moderate the correlation between (a) physical distance, (b) psychological distance due to status, c) psychological distance due to affect and the relational quality between superior and subordinate.

1. Methodology

3.1 Sample and procedure

This study was carried out at a large management and information technology consulting firm. Although we do not have precise data on the rate of mobile work conducted there, management confirmed to us that a very high proportion of the firm's employees – more than half, at the very least – worked in mobile mode. With the approval of senior management and a research ethics committee, an invitation was e-mailed to 780 employees. This invitation provided information about the goals of the study, namely to better understands leadership mechanisms in a mobile work context, and provided a link that led to the study's online questionnaire. Of the people contacted, 304 accessed the site to respond to the questionnaire and 286 completed it correctly, for a response rate of 36.6%. The respondents' mean age was 47 years old (ranging from 20 to 79), and 58% of them were men.

As anticipated, the sample had a high level of education: 33.6% of respondents had a graduate university degree, 35.3% an undergraduate degree, and only 8.7% had less than a college-level diploma. The sample was made up of employees with different jobs: 31.2% of respondents were consultants, 30.1% project managers, 25.9% customer service representatives/advisors, 10.1% technical specialists, and 2.7% administrative employees. Our analyses did not reveal any significant differences between the different employee groups' means for the various constructs of the study. Finally, our respondents informed us that they performed a mean of 60.4% of their tasks remotely (13.7% on the road, 35.2% at home, 11.5% at clients' premises

3.2 Measures

The questionnaire was developed according to the procedure suggested by Churchill (1979). Thus, the items used came from measures presented in the literature that had already been validated. The following subsections discuss the measures used for each construct.

3.2.1 Relational quality (LMX quality)

Over the years, several measures have been developed to measure relational quality. However, the LMX-7 is the best known and most widely used. The meta-analysis presented by Gerstner and Day (1997) proved the tool's psychometric properties. Following their examination of different LMX measures, Graen and Uhl-Bien (1995) concluded that the LMX-7 is "the most appropriate and recommended measure of LMX." We therefore decided to use this 7-item measure. Moreover, as Graen and Scandura (1987) recommended in instances of a one-time measurement of LMX, a condition that characterizes the present study, we only used the member questionnaire. The reason for this recommendation is that leaders are more likely to provide socially desirable answers about relationships with followers (i.e., that they treat them all the same) when surveyed on one occasion and, consequently, serious biases could arise.

3.2.2 Physical distance

We applied the approach used by Howell and Hall-Merenda (1999) and Howell *et al.* (2005) to measure physical distance. Thus, an item that asks respondents to indicate the physical difference separating them from their immediate superior was used, with a 5-point ordinal scale ranging from very close to very distant.

3.2.3 Psychological distance

To measure psychological distance, we used the 3-item status subscale and the 11-item affect subscale of the Grasha-Ichiyama Psychological Size and Distance Scale (GIPSDS) developed and validated by Salzmann and Grasha (1991) and then used in a number of studies including the one by Vaughn and Baker (2004), which demonstrated that it has good psychometric properties. Thus, we asked respondents to use 7-point Likert scales to assess a series of statements describing their interactions with their immediate superior. An example of an item from the status subscale is: "*[…] When interacting with my immediate superior, I feel like I have [Much less/Much more] expertise."* An example from the affect subscale is: "*[…] When interacting with my immediate superior, I usually feel [Not at all/ Very] close."*

3.2.4 Transformational leadership

Transformational leadership was measured with the 20-item Multifactorial Leadership Questionnaire (MLQ 5x Short). This measure is the most widely used for the purpose and its psychometric properties are recognized by the scientific community (Avolio and Bass, 2004).

3.2.5 Control variables

On the basis of previous studies, data was also collected in order to assess the results as a function of the duration of the relationship between superior and subordinate (dyad tenure), the number of months of experience in the present job, the percentage of work carried out remotely, and the respondent's age and gender (Golden, 2006b; Golden and Veiga, 2008; Golden, Veiga, and Dino, 2008).

2. Results

4.1 Data analysis

Several analyses were carried out to verify the psychometric properties of our measures. Table 1 presents the means, standard variations and correlations for each measure. To determine whether there were multicollinearity effects, we also calculated the variance inflation factors (VIF) for all relationships. All VIFs were lower than 2.5, which is far lower than the acceptance criterion of 10 and indicates that there was no multicollinearity problem (Hair, Anderson, Tatham, and Black, 1998). Then, using Cronbach's alphas, we evaluated construct reliability.

The Cronbach's alphas for all constructs were higher than 0.90.[3] We then carried out confirmatory factor analyses (CFA) to verify the constructs' concurrent validity. The goodness-of-fit statistics indicated the unidimensionality of our measures (Anderson and Gerbing, 1988);[4] all factor loadings were highly significant ($p < .001$) and all the estimates for the average variance extracted (AVE) were higher than the 0.50 level (Fornell and Larcker, 1981). Finally, we assessed discriminant validity among all of our measures by using two-factor CFA models, as recommended by Anderson and Gerbing (1988). Thus, an unconstrained and a constrained model for each possible pair of constructs were run and compared. In all cases, the chi-square value of the unconstrained model was significantly less than that of the constrained model. Overall, the results showed adequate reliability and validity levels for all measures.

Table 1

Means, standard deviations and correlations

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Dyad tenure (months)	45.70	54.99	1.00									
2. Gender (0 = male, 1 = female)	0.42	0.49	0.05	1.00								
3. Age (years)	47.03	13.68	0.29**	–0.02	1.00							
4. Mobile experience (months)	78.16	88.24	0.46**	0.12*	0.41**	1.00						
5. % Mobile	59.60	35.50	0.08	0.02	0.23**	0.09	1.00					
6. Physical distance (/5)	2.73	1.44	–0.16*	0.01	0.09	–0.08	0.33**	1.00				
7. Psychological distance (status) (/7)	5.15	1.22	0.00	0.04	0.06	0.06	0.03	0.03	1.00			
8. Psychological distance (affect) (/7)	3.17	1.18	–0.09	–0.10	–0.02	–0.07	–0.11	0.03	–0.39*	1.00		
9. Transformational leadership (/7)	4.78	1.24	0.12*	0.15*	0.03	0.06	0.08	–0.12*	0.18**	–0.70**	1.00	
10. LMX (/7)	3.79	0.84	0.26**	0.13*	0.13*	0.18**	0.10	–0.13*	0.14*	–0.70**	0.76*	1.00

* $p < .05$, ** $p < .01$

4.2 Testing of hypotheses

Table 2 presents the results of the analyses carried out to test our hypotheses. Recall that hypothesis 1 anticipated a negative relation between physical distance and relational quality (LMX) and hypothesis 2 posited a negative relation between psychological distance (a) due to status and (b) due to affect and relational quality. In accordance with the procedure recommended by Hair *et al.* (1998), linear regressions were conducted to test these hypotheses. Model 2 in Table 2 corresponds to the outcome of this analysis. As anticipated, both hypotheses were supported. With the addition of distance into the model, we observe a significant increase ($p < .001$) of 49.5% in R^2. The correlation between physical distance and relational quality is negative and significant ($\alpha = –0.09$, $p < .05$), the correlation between the status dimension of psychological distance is negative and significant ($\alpha = –0.16$, $p < .001$), and the correlation between the affect dimension of psychological distance and relational quality is also negative and significant ($\alpha = –0.75$, $p < .001$).

Table 2
Results of Regression Analysis

Variables	Model 1	Model 2	Model 3	Model 4
Step 1: Control Variables				
Dyad tenure	0.21***	0.14***	0.13***	0.12**
Gender	0.12*	0.05	0.02	0.02
Age	0.03	0.07	0.06	0.07*
Mobile experience	0.05	0.01	0.02	0.02
% Mobile	0.08	0.02	0.00	–0.01
Step 2				
Physical distance		–0.09*	–0.03	0.18
Psychological distance (status)		–0.16***	–0.10**	–0.31***
Psychological distance (affect)		–0.75***	–0.38***	–0.58***
Step 3				
Transformational leadership (TL)			0.50***	0.59***
Step 4				
Physical distance * TL				–0.24*
Psychological distance (status) * TL				0.35*
Psychological distance (affect) * TL				–0.40*
Changes in R^2	0.0895***	0.4949***	0.1127***	0.0078*
R^2	0.0895	0.5845	0.6972	0.7049
Adjusted R^2	0.0723	0.5717	0.6867	0.6912

** p < .05, ** p < .01, ***p < .001*
Note: Standardized betas are reported
Dependent variable = LMX

To test hypothesis 3, which predicted that transformational leadership would have a moderating effect on the relation between distance and relational quality, we applied the procedure recommended by Baron and Kenny (1986) and carried out hierarchical regressions. As Table 2 shows, we began by introducing the control variables (model 1). Then we inserted the predictors, namely physical distance, psychological distance due to status and psychological distance due to affect (model 2). We then added the moderating variable, transformational leadership, to the model (model 3). Finally, we added the crossed effects of the anticipated moderating effects to determine whether there really was a moderating effect (model 4).

To complete the analysis, we also present the R^2 and ΔR^2 in Table 2 to evaluate the quality of the models and the contribution of each step in relation to the previous one. As the table shows, the ΔR^2 are significant for each step, which indicates that the model is improved at each step, including the one that presents the moderating effects.

As well, the correlation of each of the crossed products presented in model 4 is significant at $p < .05$. Thus, the results support hypothesis 3. To illustrate these moderating effects, we used the procedure suggested by Sharma, Durand, and Gur-Arie (1981) and did a subgroup analysis. Thus, we divided our sample into two groups based on the scores for transformational leadership. The first group contains respondents whose supervisors showed a high level of transformational leadership (score above the median) and the second group contained those whose supervisors showed a low level of transformational leadership (score below the median). Graphs comparing the linear regressions for each of these two groups are presented in figures 1, 2 and 3. As we can see, and in accordance with the results obtained, there are major differences between the two groups as a function of transformational leadership. Among other things, we can see that relational quality is higher in all cases when supervisors have a more transformational leadership style.

Thus, whether or not physical distance or psychological distance (status and affect) is large, the relational quality between superior and subordinate will be better when the supervisor's leadership style is more transformational. This supports the idea that the supervisor's leadership style can compensate for the negative effects of distance

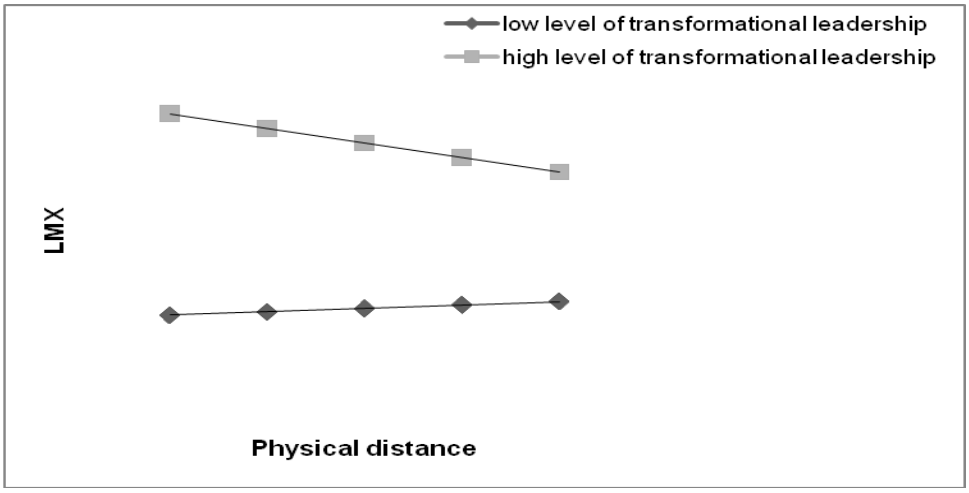

Figure 1: Moderating effect of transformational leadership (physical distance)

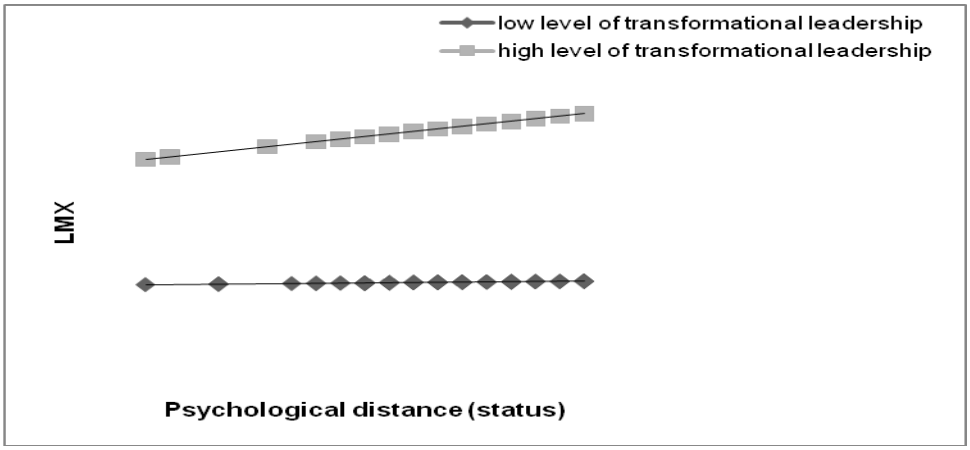

Figure 2: Moderating effect of transformational leadership
(status dimension of psychological distance)

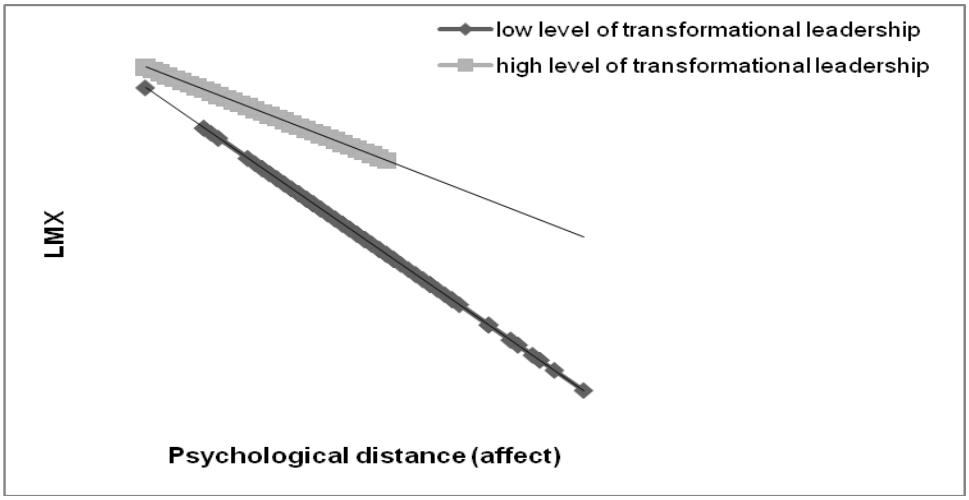

Figure 3: Moderating effect of transformational leadership
(Affect dimension of psychological distance)

3. Discussion

Based on LMX theory, the first objective of this study was to present and test hypotheses concerning the relation that might exist between physical distance, psychological distance and quality of supervisor-subordinate relations. As anticipated, the results of this study support the existence of a negative correlation between physical distance and the relational quality that exists between a supervisor and a subordinate, as well as a negative correlation between psychological distance and relational quality.

This finding is interesting and tends to support the idea that it is indispensable for organizations to be cautious in adopting mobile work (Towers, Duxbury, Higgins, and Thomas, 2006). As our results show, distance is a crucial issue in this form of work organization. Companies must therefore take the time to properly think through and anticipate the potential consequences of the distances resulting from mobility. The results obtained here suggest that organizations must not underestimate the challenges presented by the distances created by mobile work, especially psychological distance; they need to put concrete practices in place to properly manage them. They should also establish concrete management practices that will enable them to effectively support the employees who must live with these distances.

With this in mind, based on the literature that indicates that the supervisor's leadership style is a central factor in the ability to adequately manage distances (Avolio and Kahai, 2003), and applying transformational leadership theory, this study had the second objective of presenting and testing the hypothesis that the supervisor's leadership style would have a moderating effect. As anticipated, our results support that hypothesis, indicating that the level of the supervisor's transformational leadership moderates the correlations between both physical and psychological distance and superior-subordinate relational quality.

This finding further supports the idea that supervisors' leadership style plays a key role in the success of mobile work (Purvanova and Bono, 2009). On the basis of our results, we conclude that supervisors, through their leadership style, are able to at least partially compensate for the injurious effects of distance. This finding is coherent with earlier studies indicating that immediate supervisors have a special place in the relationship between employees and their employers. The immediate superior therefore needs to focus on maintaining good relations with the subordinate.

From this perspective, the results of this study suggest that companies that wish to deploy mobile work practices must be careful in selecting the people who will supervise the mobile workers. They need to choose managers who are able to exercise transformational leadership, in other words, people who demonstrate empathy, good listening skills, vision, the ability to influence others by means of an ideal, and the capacity to inspire and provide intellectual stimulation (Bass, Jung, Avolio, and Berson, 2003).

As well, this result leads us to conclude that, in addition to providing for management practices that will support mobile workers, organizations must remember to put practices in place to support the managers who will need to supervise these workers. This type of support is often neglected by organizations. It should not be forgotten that managers too have to live with this new reality and meet new challenges.

Certain limitations on this study must be taken into account before engaging in a complete overhaul of organizational practices related to mobile work. Among other things, the results we obtained cannot be generalized to all industries and workplaces. Recall that this study was conducted with a sample that was essentially composed of professionals from a single company in a single sector, namely management consulting and IT. As well, it should not be forgotten that, given the objectives of this study, the analyses did not make it possible to establish a direct relationship between distance, the supervisor's leadership style and performance. Although there is considerable empirical evidence that relational quality is a variable that predicts performance (Henderson, Liden, Glibkowski, and Chaudhry, 2009), that relationship was not tested directly in this study. In this regard, we believe it would be relevant to continue research in this area and increase our knowledge before generalizing the results obtained here.

As we have seen in this article, mobile work is an important, and ever-growing, organizational reality that already affects many organizations and managers. This trend means that managers must learn to deal with the new reality. Many of the features, including physical and psychological distance, that characterize this context are helping to redefine the roles that managers must play today and tomorrow. This study and its results make an interesting contribution to this reflection process.

Nevertheless, we believe that numerous other studies will have to be conducted in order to better understand the leadership dynamics that apply and define the manager's role in this context. For example, following this study, it would be relevant and interesting to continue this line of research and expand the framework for consideration by attempting to understand the role played by the organization, its culture and its values. It would also be interesting to study the concrete use that mobile workers and their supervisors make of technologies in order to develop good relationships and exercise effective leadership. To sum up, this study is one step along a promising research avenue that we hope many others will follow.

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Appendix: Notes

1. This study was funded by a research grant from the FQRSC.

2. You can consult the report IDC#221309 – Worldwide Mobile Worker Population 2009–2013 at http://www.idc.com/getdoc.jsp?sessionId=andcontainerId=prUS22214110andsessionId=B477357B252DD6AF16C44DB293F3A025.

3. Psychological distance (status) ($\alpha = 0.93$), psychological distance (affect) ($\alpha = 0.94$), transformational leadership ($\alpha = 0.96$) and LMX ($\alpha = 0.92$).

4. LMX Model (AVE = 0.629) [$X^2 = 11{,}856$; df = 8; $X^2/df = 1.48$; ΔBent.-Bon. = 0.991; CFI = 0.997; IFI = 0.997; GFI = 0.988; AGFI = 0.959; RMSEA = 0.041].

Psychological Distance Model (AVE status = 0.831; AVE affect = 0.631) [$X^2 = 88{,}039$; df = 51; $X^2/df = 1.73$; ΔBent.-Bon. = 0.973; CFI = 0.988; IFI = 0.989; GFI = 0.959; AGFI = 0.926; RMSEA = 0.050].

Transformational Leadership Model (AVE = 0.596)[$X^2 = 188{,}523$; df = 128; $X^2/df = 1.47$; ΔBent.-Bon. = 0.964; CFI = 0.988; IFI = 0.988; GFI = 0.939; AGFI = 0.900; RMSEA = 0.041].