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"You have got a friend"
The value of perceived proximity for teleworking success in dispersed teams

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Abstract

Purpose – As a way to enable employees to work distantly, teleworking has gained a growing interest in companies. At the same time, management challenges regarding the teleworkers' risk of isolation, coupled with the need to maintain cohesion for the dispersed team, to give an example, are various. How can management practices help to maintain adequate levels of perceived proximity for a dispersed team's members? The purpose of this paper is to answer this question. Referring to a particular person's perception of how close or how far another person is, the concept of perceived proximity is mobilized. This Telecom case study is based on 22 interviews with human resources directors, managers and teleworkers. While the results of this study appear to corroborate empirically the theoretical model as proposed by O'Leary *et al.* (2014), they also propose nuances, highlighting the importance of the interpersonal relationship to expand the perceived proximity and stressing the need for both distant and face-to-face exchanges. They also help to understand which management practices can influence perceived proximity. In particular, they help to understand the role of communication and collective identity and support the importance of the e-leader. Finally, the results highlight two remote management modes that will be discussed elaborately.

Design/methodology/approach – The authors conducted a single in-depth case study of Telecom as a unique case study; it is useful to analyze new and complex phenomena for which theoretical development is emerging and the consideration of the context is essential (Yin, 2013). In total, 22 interviews were conducted with the human resources directors, managers and teleworkers. Lasting between 40 and 130 min each, the interviews were all fully transcribed and analyzed using an iterative thematic content analysis. The authors first manually analyzed the data on the basis of the social regulation theory to interpret the local and the combined regulation (that is say to how the managers and the teleworkers co-build the rules to work being distant) the telework implied between managers, teleworkers and their co-workers (Authors, 2018). Two emerging codes led the authors to reinterpret the data, compared to the initial interpretative framework. The authors thus transformed the coding and recoded the 22 interviews (Bacharach *et al.*, 2000, p. 713; cited by Gibbert *et al.* 2010, p. 58) around the objective/subjective working time and information and communication technology (ICT) use and the perceived proximity: shared identity and perceived proximity, and communication and perceived proximity.

Findings – First, the level of ICT use and the accompanying objective and subjective perceptions with regard to working time are reported and positive perceptions for the employees are determined because of the timing flexibility the ICT determines. Second, the ICT use is presented in relation to the managerial and

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collegial proximity perceived. Third, the authors discuss the shared identity processes that influence the proximity perceived, followed by the characteristics of the communication process, being the fourth one. As such, the results lead to a valuable input that enables to critically reflect on the e-leader roles, resulting in two emerging management modes seen as a continuum in terms of shared identity: the "e-communicational" mode signals the re-foundation of management in situations of distance based on the personality of the e-leader that influences the team members in terms of communicational and organizational behaviors; and the control management mode that is based upon objectives in a situation of being distant, illustrated by managers who regulate the work made by the distant team in monitoring the objectives without sharing the experience of telework.

Research limitations/implications – The results corroborate empirically with the theoretical model by Boyer O'Leary *et al.* (2014), while putting into perspective the complexity to manage the inter-subjectivity that is related to distance. More specifically, the results show that even if the ICT use leads to a new balance regarding time management for teleworkers – increasing their quality of life perceptions, with a better organizational flexibility – that is to say, a "win-win" configuration, the ultimate success of such a configuration depends on sound management practices. In this sense, the authors propose to enrich their model (Figure 3, p. 33). More extensive research will test two new moderating variables. At first, the results put in evidence the core role of e-management (e-communicational vs control), with a potential moderator effect on the relationship between objective distance and shared identification, on the one hand, and communication, on the other hand. Another result is the potential moderator effect of the ICT use on the relationship between perceived proximity and relationship quality. The nuances proposed support some recent studies arguing that distant communication (versus face-to-face) may inhibit geographically distributed team performance without consideration of the way the teams use ICT to ensure their cohesion and performance (Malhotra and Majchrzak, 2014).

Practical implications – These conclusions result into important management recommendations to support dispersed teams with how to cope with challenges such as the risk of delayed communication, possible misinterpretations, limited information richness and great conflicts (Zuofa and Ochieng, 2017).

Originality/value – Compared to the unique empirical application of the Boyer O'Leary *et al.*'s framework (2014), who found no differences existing in terms of proximity perceived with the study of 341 "geographically present" dyads with 341 "geographically distant," this study's results show that the construction of the feeling of proximity depends on a fragile balance between virtual and face-to-face exchanges. The authors also highlight the role of an e-leader in this regard and identify and compare two modes of remote management.

Keywords Team management, Teleworking, Dispersed teams, Distant management modes, Perceived proximity

Paper type Research paper

1. Introduction

What does the feeling of proximity mean? Referring to "one person's perception of how close or how far another person is," perceived proximity was conceptualized (Wilson *et al.*, 2008, p. 1) and, subsequently, operationalized (Boyer *et al.*, 2014) quite recently. In this contribution, we are focusing on teleworking[1] as:

> [. . .] a form of organizing and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis.

More specifically, we raise the following question: How to develop and to maintain the feeling of proximity of teleworkers, being geographically dispersed?

Teleworking [etymologically "working with distance" (Metzger and Cléach, 2004)] has been associated with potential growth since the early 1970s. With the increasing digitization, teleworking leads organizations to work more virtually, mainly based on temporary and agile cooperation, resulting in abolition of distances that are coupled with an increasing employees' empowerment and networking opportunities (Vignikin

et al., 2016). The phenomenon symbolizes current changes of work and of the workplace design (Bailey and Kurland, 2002), and it might be questioned how to ensure success in virtual teams and to adapt the management practices to the accompanying (experienced) distances. Following this view, teleworking benefits from a growing scientific attention, as historically, team management research has mainly focused on collocated teams (Hinds and Mortesen, 2005; Wilson *et al.*, 2013).

ATT (1971) stated that all US employees would be teleworkers in 1990. In France, the predictions were more moderate; a report by the Strategic Analysis Center[2] (2009) specified that teleworking would have a strong potential development that might impact up to 50 per cent of the active working population in 2015, against 30 per cent in 2009. Notwithstanding the moderate predictions, real-life data cannot reveal the reality of teleworking in France. More specifically, Greenworking, a consulting firm, estimated that 12.4 per cent of French employees of large companies would telework, at least, 8 h per month in 2012. In fact, 113 company agreements integrating teleworking were concluded in 2014[3], signaling the huge increase in top management interests to this arrangement.

With regard to academic results, Cocula and Fredy-Planchot (2001) came up with an historical review and proposed a continuum categorizing two types of employment relationships. On the one hand, they notified a unilateral relationship which can be associated with top management utilitarianism. On the other hand, they referred to a relationship based on employment reciprocity, reflecting strategies to provide organizational support to employees in return for their efforts. While, originally, teleworking was considered as a means to reduce the real-estate costs for companies (Kurland and Bailey, 1999), currently, teleworking is envisaged as a flexible way to organize work, coupled with ergonomics for employees (Berkery *et al.*, 2017).

Up till now, the management challenges and the risks that are associated with teleworking have been a central part in the scholarly literature, and there is an urgent need to refine the current state of knowledge (Dumas and Ruiller, 2014). More specifically, nowadays, management roles ought to be extended with the concern for preventing the risk of isolation for teleworkers in dispersed teams, that is to say, teams that are characterized by a geographical and/or a temporal dispersion and by their frequency of information and communication technology (ICT) use (Taskin, 2006). According to Organisation for Economic Co-operation and Development[4], possible barriers for teleworking success are "inflexible organisational structures and cultures, rules that do not allow for telework and a lack of infrastructure." We believe that next to contextual factors, management does play a key role in the sound implementation of teleworking. To gain more insight into the possible role management plays in this regard, this contribution focuses on how managers can influence perceived proximity in dispersed teams. As such, the objective of this study is to deepen our insight into how the process of perceived proximity among teleworkers being members of dispersed team can be facilitated by sound management practices. After depicting our theoretical framework, we will go into the methodology of our study. Next, the results of our case study approach will be outlined, followed by a thorough discussion of its outcomes. Our paper provides several contributions to the scholarly literature in this field, providing evidence of the importance of interpersonal relations (even at distance) and helping to understand how and which management practices may help to enhance perceived proximity. Indeed, our results show that the construction of the feeling of proximity depends on a fragile balance between virtual and face-to-face exchanges. We also highlight the role of the e-leader in this regard and identify and compare two modes of remote management.

2. Conceptualization: perceived proximity in dispersed teams

Teleworking is a situation in which an employee works at home, at least, part of the time (Sullivan, 2003). Some studies on teleworking have focused on the characterization of this practice and have shed more light on its prevalence in the workplace, the individual characteristics of teleworkers, the effects of teleworking and, more recently, on the reasons for which companies put it in place (Aguilera *et al.*, 2016). Some other scholars have focused on the issue of perceived proximity (Wilson *et al.*, 2008; O'Leary *et al.*, 2014).

2.1 Objective to subjective proximity

Proximity refers to "how near one thing is to another, or the fact of being near something" (Cambridge Dictionary). As the concept is being studied in many academic disciplines (economics, geography, sociology, management sciences, etc.), different conceptualizations have arisen. For instance, geographical economy scholars have explored this concept for a long time and have highlighted five main components (Bochma, 2005). Historically, they made a distinction between geographical and organizational proximity. First, geographical or spatial proximity objectively concerns the inter-personal physical distance and is in part subjectively evaluated by the way two persons or more estimate the way they feel distant or closed. It refers to the spatial distance between separate entities (Rallet and Torre, 2006), which implies that team mates need digital tools to facilitate cooperation. Second, organizational proximity is defined as the extent to which relations are shared in an intra- or inter-organizational arrangement (Bochma, 2005). It enables to structure the interactions that exist among the dispersed team members and is grounded on the amount of affiliation and similarity between the parties involved (Bouba Olga and Grossetti, 2008). Using an organizational perspective, affiliation comprises an individual's abilities to interact and to coordinate themselves with common rules and routines. Similarity implies that individuals share a system of beliefs (Rallet and Torre, 2006).

This trend of research on perceived proximity has recently raised several avenues of research or debates, leading to a need for more in-depth empirical work. In particular, the manager's role and practices are not fully understood, and given their complexity, they need more scholarly attention (Zuofa and Ochieng, 2017). O'Leary *et al.* (2014, p. 1238) suggest to investigate how the e-communication affects perceived proximity to deepen the knowledge on the differences of the communication content exchanged being distant regarding the ICT use and compared to face-to-face communication. They also underline how crucial it is to improve the understanding the recursive relationships between the perceived proximity as "the symbolic result of communications and identification".

Teleworking consists of a form of distributed work, that is, it is carried out by a group of separated people and coordinated by using advanced communication technologies (Jackson and Van der Vielen, 2002). This separation is a source of difficulty which managers must seek to apprehend. Indeed, by breaking with a certain unity of time, place and action, teleworking results in "despatialization." Despatialization refers to the physical (or geographical) and psycho-sociological distance, which results from the practice of teleworking and which fundamentally alters the management mode (Taskin, 2006). On the one hand, despatialization creates tension between the experience of being physically absent from work and the need to work and be connected to one's manager and peers in the privacy of one's own home (Sewell and Taskin, 2015). On the other hand, the more the work is distributed, the more difficult it is to manage, because it rests on a mode of communication beyond the boundaries of the company. Obviously, the latter is not easy to implement, leading potentially to misunderstanding and interpersonal conflicts, which might result in inefficiency for the company (Vartiainen *et al.*, 2007).

Finally, while there is no consensus on the founding rules of teleworking, the empowerment of teleworkers implies a change in the role of managers, based on trust and performance monitoring (and not on control of the tasks), which is not self-evident in all occasions (Pyöriä, 2011). Here again, the teleworker is confronted with a paradox: teleworking is supposed to reinforce autonomy and to reduce conflicts between one's work and private life, but at the same time, it deteriorates one's communication with colleagues and managers. This leads to a certain risk for the team members as they might perceive that the sense of belongingness decreases, which might have cohesion loss consequences: quality of the cooperation, commitment, social climate and turnover (Gajendran and Harrison, 2007). Therefore, the issue regarding the relationship between the quality of management of distant relationships and perceived proximity comes up and requires some thorough empirical work. In other words, we need to deepen the knowledge and to improve management practices on the relationship-oriented leader behaviors and their influence on individual and team processes and outcomes in virtual teams (Liao, 2017).

Another current theoretical debate deals with objective versus subjective proximity. Research on proximity management focused first and foremost on the concept of "objective distance" (Wilson *et al.*, 2008). Based on the seminal work of Festinger (1950), we posit a positive relationship between physical proximity, interpersonal affinities and the frequency of communication. In the 1970s, Allen (1977) began to look into the role of distance in the regulation of work and outlined that several dimensions are to be considered: dispersion in space/time (recovery between working times) and distribution of sites (number and distance between them). Earlier outcomes on geographic dispersion are contradictory. Some researchers have shown that co-operation between teleworkers is a form of virtual teamwork that can be effective if managers combine dispersion and use of appropriate communication technologies (Von Krogh and Von Hippel, 2003). Others consider it too early to conclude that "distance is dead," and that new technologies are sufficient to overcome the difficulties that are associated with distributed teamwork (Handy, 1995).

Up till now, scholars have put less emphasis on "subjective-based" research (Ancona *et al.*, 2001), even though it has been recognized that perceived proximity is neither significantly nor positively influenced by actual physical proximity (Hansen and Lovas, 2004). Therefore, Scott (1999) already argued in favor of a more sophisticated approach to study the perceived proximity phenomenon, including subjective-based approaches. In a similar vein, the meta-analysis conducted by O'Leary and Cummings (2007) indicated a strong research trend focusing on spatial dispersion to the detriment of analyzing temporal dispersion or team configuration and hence overshadowing subjective dimensions. Their meta-analysis has yielded two perspectives that, according to the authors, deserve to be dealt with greater depth. First, the use of ICT and its effect on the relationship between objective (e.g. the chronological time for which ICT has been used, regardless of its experiences by the team members) and subjective working time (e.g. the team members' experiences of time, which is socially sense-maked during the action and by the actors involved in an event; Ancona *et al.*, 2001) should be considered. Second, the use of ICT by the organization/individual employees and their influence on the managerial and/or collegial perceived proximity should be further investigated.

2.2 Understanding relationships in dispersed teams through the lens of perceived proximity
Previously, some authors have already lobbied in favor of a conceptual refinement of the concept of perceived proximity by stating that, in essence, it refers to someone's "perception of how close or how far another person is" (Wilson *et al.*, 2008, p. 1). One example of an elaboration of the research stream on physical proximity consists of examining the

possibility of feeling (very) distant from a colleague working in the same office/building. From the standpoint of dispersed teams, researchers have sharpened their focus on the perceived proximity phenomenon among objectively distant members. The "far" and "near" qualifiers actually characterize perceptions that are differentiated depending on the individuals involved in the assessment (Harrison-Hill, 2001). The perception of distance and/ or proximity entails multiple factors, and the actual/effective distance would only exert a slight influence on this perception (Mooney et al., 1991). From this point of view, Wilson et al. (2008) and Boyer et al. (2014) highlighted two variables on which the manager can act: common or shared identity and communication.

According to the social identification theory (Ashforth and Mael, 1989), social identification with a group (e.g. a dispersed team) means that an individual has a feeling of belonging to this social category (ibid.). Shared identification comprises a self-categorization process (Turner and Haslam, 2001) built around three distinct mechanisms. First, it is based on a "common ground" (learning how to mutually understand one another, i.e. relationship building experiences) that leads to similarity and self-categorization to the group (by profession, gender, ethnicity, etc.). Second, this categorization process permits anyone to reduce uncertainty about their social environment: a sharing of characteristics and/or significant experiences makes it possible to project onto the other person in relying on one's life experiences. As a third mechanism, shared identification generates positive attributions in case "hard" data are missing or when attitudes and behaviors from the other person remain invisible, herewith consolidating the psychological bond (Hinds and Mortesen, 2005). The amount of perceived categorization differences, combined with an absence of shared identity, would explain a feeling of separation (Metiu, 2006).

In a remote management context, wherein ICT is used as a control infrastructure and wherein so-called "control" managers can be characterized by their oppressive nature (Mortensen and Hinds, 2001), such an identification process appears to be even more problematic. The element of communication refers to the frequency, intensity (both personalized and personally significant) and interaction (exchange and reciprocity) that may enhance the feelings of proximity (Burgoon et al., 2002). Communication-based opportunities, which serve to improve depictions of someone else, consequently influence the cognitive and affective dimensions of perceived proximity via the congruence of shared value references and, in so doing, strengthen the process of shared identification.

Concretely, Wilson et al. (2008), in questioning the paradoxical paradigm of feeling close to colleagues that are separated geographically, proposed a theoretical model of perceived, dyadic, cognitive and affective proximity. This model serves to "enliven" the work of Ancona and associates (2001) and Hall (1983) and reconciles the results from previous research on the contradictory effects of objective distance on interpersonal processes. The model by Wilson et al. (2008) provides a framework for considering the factors influencing perceived proximity to determine the measurement frame in which organizations are able to take advantage of dispersed teams.

More recently, O'Leary et al. (2014) refined this theoretical model. In case the objective distance is able to directly affect the perceived distance, then organizational research (Rice and Aydin, 1991) would suggest that the relationship between physical distance and perceived proximity is influenced through communication and identification processes, yielding a direct and significant effect on the perception of proximity. From this standpoint, perceived proximity would substantially influence the quality of relations perceived within a dispersed team configuration (O'Leary et al., 2014; see Figure 1, p. 12).

By virtue of its comprehensive scope, the model by Wilson et al. (2008) corroborates the findings of Nonaka and Noboru (1998), according to whom remote relations are not

Source: (Wilson *et al.*,2008) by O'Leary *et al.* (2014)
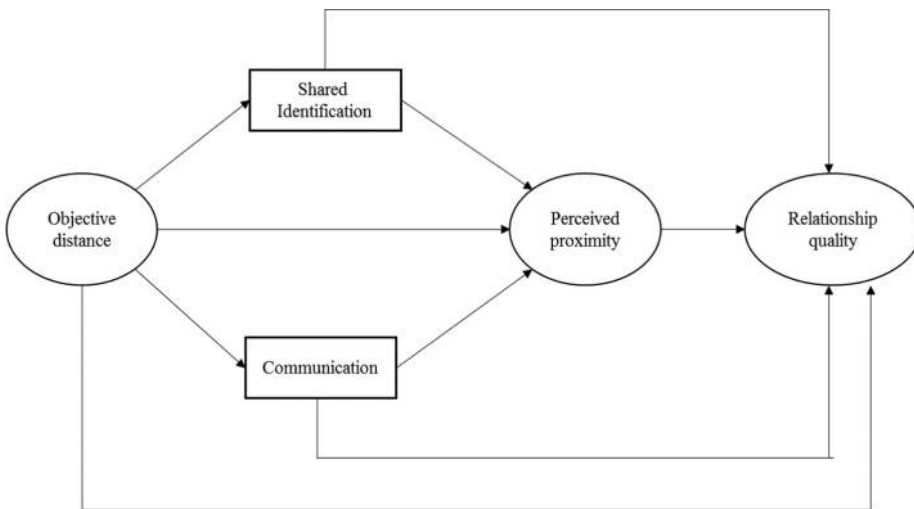
Figure 1.
Refinement of the
perceived proximity
model

necessarily less "social" or less "proximate." The model is based on sharing robust
behavioral and collective norms, a positive leader-member exchange (LMX) relationship and
team-member exchange (TMX)[5] (Gabarro, 1987). Its elements imply varying degrees of
signs of attention among one another, a sense of responsibility, reciprocity in the exchange,
the desire to collaborate in the future and workplace well-being (Hackman, 1990).

Individual factors have only been very marginally studied within the domain of research
on geographically dispersed teams (Martins *et al.*, 2004), even though the notion of remote
work is associated with a feeling of isolation and uncertainty (Kurland *et al.*, 1999). From a
managerial point of view, this last consideration implies that autonomy should be
considered as a key competence in the selection of members/teams for remote work, given
that employees need to show the capacity to cope with the potential downsides of these new
configurations. More autonomous staff members will be more willing to devote themselves
to communication and identity-building processes, thereby possibly enhancing the feeling of
perceived proximity. In addition, individual affinity for a remote working environment, as
characterized by cognitive and behavioral flexibility and adaptability, is in fact a critical
factor of success when managing remote teams (Judge *et al.*, 1999).

Previous experiences with dispersed teams have served to create routines and norms to
ensure productivity efficiency in situations with off-site configurations. With experience,
members of a geographically distributed team learn how to communicate frequently, how to
initiate tasks quickly to meet production deadlines and how to manage to decipher the
symbolic and tacit content of messages received (Wilson *et al.*, 2008). Conceptual tinkering
regarding the perceived proximity model as developed by O'Leary *et al.* (2014) has led to
postulating that beyond communication frequency and shared identity, the symbolic
content of such constructs also proves to be essential. More specifically, individuals use ICT
to transmit the symbols of their shared values, expressing what brings them together.
Indeed, based on a study of 682 dyads, Boyer O'Leary *et al.* showed how individuals are able
to create strong psychological bonds, despite their physical separation, through the use of
ICT as a transitional means to establish their shared meaning and value systems. The

results (both quantitative and qualitative) of their empirical work on successful ICT use comparing "geographically present" dyads with "geographically distant" ones did not reveal any differences with respect to the feeling of proximity.

The academic and managerial insights proposed by Wilson *et al.* (2008) and by O'Leary *et al.* (2014) are key in our theoretical framework. Taking distance from maintaining the gap between those who believe in digital cooperation (Von Krogh *et al.*, 2003) and those who stress the positive relationship between physical proximity and the quality of interpersonal relationships, O'Leary *et al.* (2014) plead for a sophisticated conceptualization of proximity to the benefit of its subjective dimension. The literature review reports the absence of empirical studies apart from Boyer O'Leary *et al.* (*ibidem*).

In terms of managerial implications, refining the understanding of the impact of perceived proximity could highlight its added value for teleworking success in dispersed teams. First, dispersed teams may implement new practices to be encouraged when the traditional work organization poses its limits (e.g. working hours). Second, this conceptual refinement can enrich the state of knowledge on the communication structure. O'Leary *et al.* (2014) reported an increase in communication density in a teleworking situation by the facilities that ICT allows, for instance, the use of skype or videoconferencing, herewith resembling a face-to-face setting. In particular, the interviewed respondents stated that the lack of daily presence of a team does not influence the quality of the interactions because of the opportunities offered by ICT (O'Leary *et al.*, 2014). Following this perspective, a cultural vision of ICT supporting interpersonal dynamics could be considered as a way to enrich the interaction, over and above the added value in terms of productivity increase. Referring to Google Circles, O'Leary *et al.* (2014) considered ICT compensating for face-to-face interactions, herewith reinforcing the communication and the identification processes. Based on the theoretical outline given above and, more specifically, considering the need to empirically refine the perceived proximity construct, we assume that shared identity and communication influence the perceived proximity and, in turn, the relationship quality in a dispersed team.

3. Methodology: the Telecom case study

We conducted a single in-depth case study of Telecom as it is a unique case study useful to analyze new and complex phenomena for which theoretical development is emerging and the consideration of the context is essential (Yin, 2013). Telecom is a large French company that is engaged in the telecommunication sector and that demonstrates a dispersed team's culture. This research was conducted within four of its business units (France) covering three activities: Telecom business, Telecom human resources and consumer support (international and national large accounts and individual consumers). Teleworking is experimented by an undertaken agreement since 2009, which was reappointed in 2013. The ICT use in Telecom can be characterized as "mature" as employees consider the ICT as a facilitator's tool to balance work and non-work spheres (Le Douarin, 2007). Telecom invested in several tools to facilitate distant exchanges: "Com" is an instant messenger, "P" is an internal social network and "Sharedoc" is an interactive tool to share working documents. In Telecom, team integration was strived for, and the human resources unit launched the need for a thorough reflection on the management skills' development to accompany dispersed team leaders.

The framework that was initially used to structure the interviews was based on the French social regulation theory (Reynaud, 1991, 1997, 1999, 2003), but our research is explorative and enables us to generate innovative results. From January to July 2013, 22 interviews were conducted by two of the authors of this contribution with six e-leaders (four

men and two women) and 16 teleworkers (9 men and 7 women in total) working in one and the same company. For sake of anonymity, we were not allowed to gather information on the participants' ages. Teleworking appeared to be part of the company agreement that deals, among others, with professional equality, parenthood and disabled workers' employment. The company had introduced dispersed teams building upon the perceived proximity concept, which lies at the heart of our unique case analysis and which stresses the networking of employees around common interests (Moquay *et al.*, 2003). In particular, the teleworkers selected to be interviewed were motivated to experiment with telework to better conciliate their professional and their non-professional life. The principal mode we used the to collect data was interviews done by two researchers, complemented with collective interviews, observations and a quantitative study (Figure 2, p. 16).

In total, three types of telework were studied. First, telework at home was included (seven interviews with teleworkers and one with an e-leader), varying from a half day to two days per week. Second was teleworking in dispersed teams (six teleworkers with three e-leaders were interviewed). These dispersed teams were implemented as a solution proposed by the top management representatives, with the strategy to retain the small sites, and to enable employees to stay on these sites arranging their own work conditions with special attention given to ergonomics (work space and furniture). Employees are e-managed by the team leader who came on the site one or two days per week. Third, teleworking in a telecenter (interviewing three teleworkers and two e-leaders) was included in our case study, being an

Figure 2.
The Telecom case study; four modes to collect data (taken out Le Gall-Ely *et al.*, 2007)
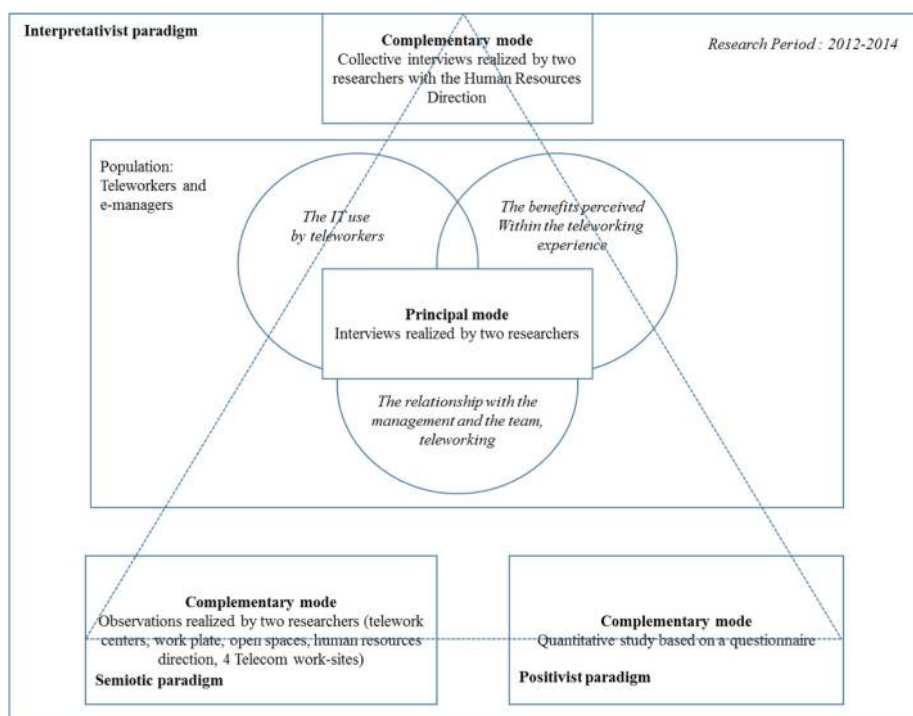
Source: Iinspired from Le Gall-Ely *et al.*, 2007).

experimental process that comprises an open office wherein co-workers joined each other for two days per week. This experiment was conducted to better understand how the experiences of the participants were different from employees in an ordinary telework context.

After holding a short professional life conversation to better understand their motives for teleworking (Dumas and Ruiller, 2014), three themes were discussed with all interviewees:

(1) the use of ICT within the teleworking experience;

(2) the benefits regarding the issue of working time and, more specifically, regarding work-life balance as perceived by teleworkers within the telework experience; and

(3) the relationships and the local regulations between the management and the teams in teleworking settings.

Our results were reported to the site managers and discussed with the interviewees to ensure accuracy. In addition, new data were collected to confirm the results (collective interviews with the human direction members, observations done on work sites and a confirmatory questionnaire), and, as such, to cross-validate them. The strategies used to enhance the validity and the reliability of the Telecom case study data are synthetized in Table I (p. 18).

The interviews, lasting between 40 and 130 min each, were all fully transcribed and analyzed using thematic content analysis (Schreier, 2014). For sake of rigor, we provide a concrete description of how categories and codes were formed iteratively (Gibbert and Ruigrok, 2010): we first manually analyze the data on the basis of the social regulation

Credibility criteria for qualitative research	Strategies used for this research
Truth value	Insider researchers' journal
	Skype and face-to-face exchanges between insider researchers and outsider researchers to account for personal bias
	Data triangulation to enhance the integrity of the analysis (ethnographic material; primary internal – teleworking agreement – teleworking charter; secondary external data)
	Selection of a company willing to integrate researchers in a transparent way (willing to allow observations at the initiative of researchers)
	Regular interviews between the insider researchers and the production sites management, the human resources management (national and local)
	Semi-structured interviews with teleworkers and e-managers allowing for revisiting data and cross-checking with emerging themes
	Systematic comments from the human resources members on the research findings and the themes
Consistency/neutrality	Introspective reports written by the insider researchers allowing for a complete description of the teams studied. This report also described the challenges, the difficulties, and the decision process taken by the e-managers
	Discussions between the insider researchers and the outsider researchers about the emerging themes was a creative process in which solutions and decisions could be debated
Applicability	The longitudinal nature of the unique case study (interviews, feedback on the interviews realized with the interviewees, rich details of the context allowed by observations) facilitates us to better understand what is case-specific and what can be transferred to other cases

Table I.
Strategies to enhance the validity and the reliability of the Telecom case study

theory (Reynaud, *ibidem*) to interpret the local and the combined regulation (that is say, to how the managers and teleworkers co-build the rules to work being distant) the telework implied between managers, teleworkers and their co-workers (Ruiller *et al.*, 2018). Two emerging codes led us to reinterpret the data, compared to the initial interpretative framework. We thus transformed the coding and recoded the 22 interviews (Bacharach *et al.*, 2000, p. 713; cited by Gibbert *et al.*, 2010, p. 58) around:

(1) the objective/subjective working time and the ICT use; and

(2) the perceived proximity:

- shared identity and perceived proximity; and
- communication and perceived proximity.

The analysis led us to identify two management modes corresponding to the eight teams investigated within the Telecom case:

(1) the e-communication (one team) mode; and

(2) the control mode (seven teams).

4. Results

First, the level of ICT use and the accompanying objective and subjective perceptions with regard to working time are reported and positive perceptions are determined for the employees because of the timing flexibility the ICT determines. Second, we present the ICT use in relation to the managerial and collegial proximity perceived. Third, we go into the shared identity processes that influence the proximity perceived, followed by the characteristics of the communication process, being the fourth one. As such, our results lead to valuable input that enables us to critically reflect on the e-leader roles, resulting into two emerging management modes we see as a continuum in terms of shared identity:

(1) the "e-communicational" mode, which signals the re-foundation of management in situations of distance based on the personality of the e-leader that influences the team members in terms of communicational and organizational behaviors; and

(2) the control management mode, which is based upon objectives in a situation of being distant, illustrated by managers who regulate the work made by the distant team monitoring the objectives without sharing the experience of telework.

4.1 The level of information and communication technology use and objective and subjective perceptions with regard to working time

In Telecom, the use of ICT may be qualified as "mature." Employees easily coordinate their use of the phone, e-mail service, the "com" (instant messaging) tool and CoopNet (an application sharing tool) for working remotely. This successful appropriation of ICT characterizes an "e-communication" mode in which formal exchanges (i.e. meetings and working in "project mode" from multiple physical locations) overlap with informal exchanges. Over time, Telecom's management is pursuing continuous development of this "e-communication" mode (through Intranet, shared videos, company blogs, etc.). The use of email and the "com" tool for instant messaging helps to ensure a permanent bond among members of a dispersed team:

> Every morning, when I go online, I send out a message to all site managers and to my boss letting them know that I've arrived and can now be reached. Same thing then when I log off, I say

goodbye as a means of informing them that my workday is over [...] In case dictates need to be made, we send each other little notes [...] using the "Com" tool (Trainer and support staff member, full-time contract, half day-a-week teleworker).

When interrogating employees regarding their teleworking situation and its impact on their personal schedules, all agree with the premise that reducing commuting time has a significant impact on perceived quality of life, whether in the professional or personal realm. An employee's organizational flexibility is a major advantage for reshaping his/her daily schedule: examples mentioned referred to picking up a child from school at 5 p.m., concentrating on a specific project task without being interrupted by workplace commotion or breaking the monotony of the professional routine:

We adopted a five-year-old boy and I really wanted to better allocate my time to be able to eat with him [...]. If I wanted to have lunch with him, I'd have to spend over two hours a day commuting (Project manager, full-time contract, two days/week teleworking]).

This reorganization of work may thus influence not only the objective relationship with time (commuting time) but also the subjective relationship (quality of perceived time).

For instance, teleworking leads to personal flexibility in terms of schedule management (objective time):

Instead of getting up at 6 a.m., I can wake up at 7! It's really a time when I can relax. And this flexibility allows me to be more mellow with my kids. To know that on Wednesdays, I've got more time for them, I'll be able to review their homework with them, and to be free to spend more time with them [...]. And to feel less guilty than when always having to run around and be at work (Training assistant, 90 per cent time contract, teleworks Wednesday mornings and has Wednesday afternoons off).

The use of ICT in teleworking situations makes it possible to reconfigure the standard pace of a typical workplace, in line with one's personal preferences and private life pressures and/or ways of dealing with traffic pressures. Moreover, such organizational flexibility enables managing medical and/or administrative appointments, hence underscoring a feeling of greater freedom in managing one's personal time. That is to say, employees are not working less in terms of productive time, but instead in a way that provides greater quality and work-life balance. In addition, employees admit to be more amenable to adapt to schedule changes or to alter their teleworking patterns to suit the team's needs, for instance, to have face-to-face meetings and to deal with constraints associated with traveling in and around Paris:

I can ask to telework on an afternoon when I've got a 5.30 p.m. meeting at the school, which still keeps me connected until around 5.25 p.m. [...] and then I'll jump back online at 7 p.m. because I'll need to complete my emails or I'll have some work to finish up by the next day [...]. It's really a win-win situation!

Besides the positive effect of well-being associated with managing one's personal schedule, the reliance on teleworking and physical separation of team members, because of ICT, might offer a way of reallocating professional working time during the daily schedule. The latter may evoke the impression that time spent at work actually goes more quickly (subjective time):

There's the benefit of a more relaxed and calmer employee, with fewer kilometers traveled at the beginning of the week, and then there's the other side of the coin, which suggests an employee's thinking as follows: I've got two days left to my work week, I'll get into the telecenter office, enjoy seeing my colleagues and tell myself that the end of the week is in sight, the weekend's coming. Moreover, at the telecenter office, those who see us arriving on Thursday mornings readily

comment: "So, the week's nearly over" [...]. This way, the week goes by more quickly because we're actually breaking up the day-to-day monotony (Customer support manager, full-time contract, teleworking to a remote center three days a week).

This set-up also lays the foundation for reconfiguring social bonds with the team. Teleworking staff members may be looking to compensate for the lack of face-to-face contact, which ICT technologies fail to replace entirely. A longing for good-quality informal and/or socialization time has been voiced: lunching more often with colleagues from the workplace, enjoying discussions during breaks, etc.

4.2 The level of information and communication technology use and managerial and collegial perceived proximity

Many teleworkers have noted a drop in the number of requests submitted, and contacts initiated by the manager and the other team members, when working remotely. Several factors may explain this tendency, including the fear of being intrusive to the remote employee; teleworking being associated with working time that requires sustained concentration (example of a trainer preparing teaching materials while working off-site); notions surrounding an employee's physical presence (if the employee is teleworking, he/she is considered absent from the regular workplace environment); and perception of the employee as someone who typically segments his/her professional and personal spaces.

Perceived proximity depends on the content of the particular type of work. If the team needs extensive relationship building to achieve its objectives, then special attention should be given to how to manage the perceived proximity in a situation wherein employees are being and working at a distance:

I feel that solid training and a cultural shift are both necessary, whether talking about managers or employees. I was successful at the telework center instituting an autonomous work environment [...]. I had to change my stance with respect to my own management [...]. It requires considerable reflection; otherwise, you've got your team members frequently using the line "don't bug me, I'm at a meeting." On the other hand, in a teleworking context, the line becomes 'feel free to reach me' as if the door was open or as if the door was closed, but the "Com" tool message reads: "I'd like to speak to you. Can I?" "Yes, we can speak," then a conversation is held, time for a real dialogue, everything that needed to be aired gets said, help is provided. I really appreciate this principle when it works to everyone's benefit (E-manager of the teleworkers in the telecenter, full-time contract).

However, if teamwork does not require extensive collaboration, proximity-based expectations are completely different, and as a result, the dispersed working situation does not produce the same effects:

I find that human relations remain relatively unchanged given our way of working. We spend a lot of time on the phone or in meetings. We're all working on different projects. Our professional contact is rather limited, at least as regards the day-to-day exchanges, with my fellow team member. [...]. The kinds of exchanges happening every once in a while might consist of asking a question to someone who had encountered an identical problem to ours. So whether that would be asked over the phone, by messaging or email, or in person, it really doesn't matter (E-manager of the teleworkers in the telecenter, full-time contract).

From our interviews, we encountered two different types of remote relationship management which may correspond to the content inherent in the team's particular sector or their organizational practices (collaborative vs joint presence of individuals belonging to the same team). First, managing perceived proximity relies on interpersonal confidence. More specifically, we noticed the existence of a teleworking mode within a team composed of five

teleworkers (including the manager), where the team shares a representation of teleworking as a means of optimizing and facilitating a parent's schedule. This mode is characterized by the lack of formalized controls for monitoring off-site activity and a trust-based approach to achieving objectives. While granting teleworking days requires amending the labor contract, it is not exceptional for the team to spend an afternoon "off-site" getting some work done remotely. The atmosphere associated with a remote work environment is reputed to be friendly, revealing the shared values of the team, and inspired from the personalities of the leader and the team members but also their alchemy:

> I've also got a relationship with my colleagues, who are used to me not showing up on-site and who telework themselves; so we're very familiar with the way things are and it all goes really smoothly among us. We've also built this climate of trust among our colleagues. They know I'm working away from the office, they'll call me on my cell, they'll send me quick messages via the "Com" tool. I feel where everyone is, I always remain connected to group activities and I don't lose contact with our activities (E-manager and teleworker, full-time contract).

Second, controlling work output may provide a means for overseeing "manager-teleworker" perceived proximity through activity monitoring, which then becomes a rite in the relationship. The situations encountered attest to a diversity of practices or tools: for instance, related to the job of a company trainer, customized (i.e. non-institutionalized) Excel files for work completed off-site to be evaluated, summary documents, reports and deliverables (e.g. training materials):

> For my team supervisor, it's true that I complete a file, a schedule of what I accomplished during the morning. An activity monitoring calendar, a sort of control chart indicating "how I spent my morning" (Teleworker, full-time contract, teleworks one half day per week).

The practice or tool is subsequently exchanged by email, herewith enabling the manager to check the work output and to examine whether the objectives have been reached. With this set-up, the issue of a remote work environment does not even make a difference in terms of trust.

4.3 Shared identity and perceived proximity

From our outcomes, it appears that teleworkers who have the feeling of shared identity indeed perceive more proximity. More specifically, the teleworkers and the e-leaders' feedback on work being distant reveals a high variability concerning the shared identity. On the one hand, teleworking is disparate in practice. Where the CEO's intention to operationalize teleworking is recognized by most of the employees, the execution is contingent to the middle management positioning:

> Some local business units are well acculturated to telework, in particular units positioned on international large account. In contrast, on these historical units with traditional hierarchical management [. . .] Teleworking is not well implemented [. . .] You can still encounter managers who think that a woman teleworking, is at home with her children! (E-leader, teleworker, Human Resources Department).

On the other hand, the interviewees highlighted the importance of the "pros" or "cons" that middle management argues on the issue of teleworking:

> Actually, my direct manager is really open-minded with teleworking arrangements [. . .] However, his manager, was much more reluctant to implement teleworking. As a result, I've been asked to fill out a file, month by month, on what activities I have performed in order to control whether I have met my objectives. I filled them out for a year, explaining what I had done: 2h emails treatment, 2h documenting stuff, writing training, meetings with so and so [. . .] One year we did

this, and then we decided to stop [. . .]. Fortunately, my direct manager, at one time, thought there was no value added and that it was unproductive time (Teleworker, full-time contract, one day per week).

Thus, comparing the situations, e-leaders and the teleworkers develop a more or less strong feeling to belong to the dispersed team. One team (from the eight teams investigated) differs from the others with a very strong identity shared and a high proximity perceived by the e-leader and the teleworkers. These team members self-categorized themselves as a "tribe" in which the e-leader who became teleworker accompanying her team to implement teleworking positions herself as a facilitator and as being at the heart of the team. This team can be considered as exceptional compared to the other seven ones investigated, regarding the team's member identification. This identification resulted in the team to be categorized by the human resources management as socially cohesive, cooperative, altruist and loyal. In this team, the female manager was considered as very influent on the shared identity:

Y well understands the constraints each of us can experiment [. . .] She is a mum and it counts! With a woman manager, who tends to balance her professional and her private life. She better understands what we live [. . .]. We are taking the direction of an "open-minded organization," based on trust [. . .]. If my manager accepts teleworking, that means she recognizes my autonomy, my needs regarding work-life balance [. . .] According to me, this is a nice recognition (Teleworker, trainer, one day per week).

The e-leader management positioning is anchored in her three team members who were interviewed and who highly recognized and admired their manager:

We are an atypical team, really envied. Their shared identity is even spotted by the Human Resources management: "The teleworking organization of this team is made possible by the professionals' activity [. . .]. This team evolves as an ecosystem. The rules and the functioning is particular and Y (the leader) has made a major contribution. She dares to get outside of the framework: teleworking schedule, the team's organization around teleworking [. . .]. A cohesive team (Human resources director).

The shared identity of this team is thus symbolized because of a high sense of belonging between the members of the dispersed team. The e-leader has a key role to co-build with the team, to implement new ways to think and to design a work organization that fits.

In the other teams, we observed (that is to say seven teams) that the e-manager did not experiment teleworking and the distant communication was mainly work-oriented with a closely monitoring of the objectives:

He follows [. . .] He sees [. . .] because everything we do is recorded. That means if I process an email, once I respond to the client [. . .] Everything I do is archived. Put in a box as it has been processed, so, afterwards, I guess they have ways to look at the number of emails that have been processed, what we did (Teleworker, support function, one day a week).

In these teams, the e-manager analyzes the work with his/her distant team members:

So, I devote a little time to what they did being distant. How it went [. . .] We discuss about what happened, if it worked or [. . .] If it didn't work. Then I ask them about what they could do differently to make it work better? I try to be a "reflective" person, someone who makes them think about what «They can do better (E-manager, support function).

Based on the results that have been reported up to now, we may categorize between two different management modes (as already mentioned above) of *e-communication mode*, on the one hand, and the more classical so-called *control mode*, on the other hand. The comparison between these two modes reveals two different managerial philosophies. Following the

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e-communication mode, the manager aims for the effectiveness of the work (the work is done regardless of the time spent: it is the result that counts), while in line with the control mode, the manager strives for work efficiency with a high amount of control (the work is planned conscientiously and is subject to regular monitoring). In other words, the final output does not differ across both situations, but the process of the work realization is impacted by the managerial relationship:

> I think he (my manager) is open-minded and he goes with the flow of time. He understands that dealing with certain constraints or certain personal aspirations impacts on how to organize work to reach objectives. It's not because you work at home that you work less well. He understands that and he adapts his management style. He knows that if he wants a meeting with me, he will ask for me on a Tuesday or a Thursday (Teleworker, full-time contract, one day per week).

From our results, it appears that in e-communication, an adjustment of the traditional managerial mode is highlighted, combatting the negative perceptions associated with the physical distance:

> My manager is smart [. . .] He isn't confined in a straitjacket prejudice. Prejudice on teleworking [. . .] This is terrible! For example, his manager has a very good eye for the need for someone to do occasional teleworking, because he needs to care for his children or to welcome an artisan for a repair to be done. Why? Because according to him, even if the person is not available for two specific hours, she will be more broadly available than someone who poses days off (Teleworker, full-time contract, one day per week).

Here, the way the manager behaves toward the teleworker, reflecting a higher shared identity, goes together with the perceived proximity.

In a so-called "friendly" teleworking team, no activity tracking exists:

> Everything is based on trust. I regularly have face-to-face or distant meetings with Y. Her desk is just next to mine [. . .] We are a very unusual and enviable team [. . .]. Y is a manager who fully understands the constraints we can have because she's a mom herself [. . .]. She better understands our constraints [. . .]. It is more difficult for managers of 55-60 years who have not been bathed in this culture there, and who had a wife at home. Some managers do not trust their team even while all goes very well. Fear of losing control (teleworker, full-time contract, one day per week).

If the e-leader is her/himself a teleworker, then trust and communication will naturally ensue because the leader and the team members share the same experience, acting together to "create a climate" of developing their empathy with a collective vision of reducing isolation risks, uncertainty or the feeling of guilt.

4.4 Intensity, frequency and interaction regarding the communication and perceived proximity

From our interviews, we may conclude that the communication learning process is augmenting in case leaders and team members' experiences of exchanges are positive. The network structure in a dispersed team seems to be strongly influenced by the way how employees make sense of their job and how they can rely on one another being distant, leading to new forms of regulations. As an example, if e-leaders' roles are not clearly defined, communication and decision-making processes can be ambiguous and opportunistic. All the employees interviewed shared that distant communication impoverished see deteriorate the relationship, the content and the intensity of the transmitted messages. Moreover, many teleworkers reported fewer demands and contacts with their manager and with their

colleagues, being far from the ordinary workplace. They mentioned four different types of causes for this:

(1) the fear of being intrusive with distant employees;
(2) the fact that telework is associated with a working time requiring special attention (e.g. a trainer writing his/her media);
(3) the presenteeism culture (when teleworking, the employee is considered absent from the ordinary work environment); and/or
(4) the fact that the employee is perceived as someone who traditionally segments professional and personal spheres.

Our results indicate that being physically present determines the socialization quality for the employee:

> The risk is the less you're there, the less you participate to important discussions for your career development [. . .] The less you're there, the less you participate to informal discussions [. . .] Therefore you're less integrated into the team (Teleworker, full-time contract, teleworking two days per week).

The distant communication structure is thus central, and for some part of the teams, we encountered that some routines were institutionalized:

> There is a steering committee for the agency every week, on Tuesday morning. This committee meeting takes place by phone call every two weeks and by means of a physical meeting every two weeks as well. By phone call, it takes two hours and when it is a physical meeting, it is between 9:00 to 1:00 pm, so this is the "big morning." And when it is physical, it is the whole day. We also wanted to give time to the steering committee to work together and exchange information on common projects [. . .]. So we wanted to create those moments of cross-trade. So we have a phone meeting, every 15 days for two hours; a physical meeting, every 15 days, for half a day (E-manager of dispersed team, full-time contract).

The combination of digital tools to communicate with face-to-face meetings supports new routines:

> We can exchange by mail, we can move folders on our common directory since I have access to everything. We also have a "Com" tool that is used immediately if you need to ask a question. Instead of calling, we send little messages and get back to each other quickly. With my supervisor, this is exactly the same; therefore, if we need to call, we call one another, if we need to exchange folders, we do so [. . .]. It does not change, just the fact that we are not in the same office (Teleworker, full-time contract, two days per week).

Managing emotions while being distant can be a challenge (to transmit enthusiasm, to understand the nature of a message when it is not technical, to motivate a team, etc.):

> If you want to federate a lot of people to reach the goals, if you want to send them the desire, the enthusiasm. If you want this team to work collectively, it goes through physical meeting, face-to-face interaction [. . .] to make a team alive (E-manager, full-time contract, teleworking half a day per week and additionally if needed due to family or work deadlines).

Ultimately, the link between virtual and face-to-face communication appeared to be the key success factor influencing the perceived proximity:

> I'm angry about this "virtual community's revolution," about the forced use of social media, and about the choice for this internal network to share documents. I'm not sure that it is the solution to maintain the link with my colleagues, to feel close while being distant [. . .]. According to me, these tools don't increase the motivation, don't give the desire to your colleagues to follow you

[...]. We need a balance between face-to-face meetings and teleworking [...] And the manager must be the guarantor to ensure the real link.

The main managerial risks (loss of cohesion and conflicts) lie in the distance approach an e-leader may prefer, at the expense of the team management and with the dilution of responsibilities associated:

We send information, issues to the higher level [...] He has some difficulties to deal with, whatever the reason. This is not our role to go digging, to deal with his own difficulties. The report is done: no feedback or solution facing our issues (Teleworker, full-time contract, two days per week).

Regardless of the manager's role, the value of interpreting non-verbal communication in face-to-face meetings is stressed:

When you're face-to-face, you can immediately see what happens in the meeting. The atmosphere [...] Someone who says two or three words on her/his business. In teleworking, you miss that: a colleague who isn't right for example (Teleworker, full-time contract, two days per week).

Our results indicate that the telecenter experience is an interesting alternative to keep the communication effective and to maintain the desired level of perceived proximity:

I can just send a message on the internal live messenger or I can send him (the manager) an email. We often have calls because all the managers have phones. So we are always in touch. We exchange on the important topics in face-to-face meetings when I'm on the telecenter site. I don't see any differences between the two sites (ordinary and on the telecenter site). Ultimately, the relationship is almost more intimate on the telecenter [...] Here we are not lost in the mass.

Thus, the e-leader's key competencies of developing and maintaining trust is a central insight to be taken into account in these teleworking organizations.

All in all, from our results, we found that e-managing can lead to more organizational burden if the identification with the leader weakens. If it implies dilution of responsibilities, by managerial delegation to a subordinate without actual delegation of decision-making, to give but one example, the managerial authority can be questioned by the team that is, in fact, at the risk of "on-site" failures. Under these circumstances, a so-called process of perceived "de-proximization" and the resulting dissatisfaction may occur, in particular, in case the manager does no longer act sufficiently as a regulator on the fieldwork, that is to say, if the team feels distant from the management in the control mode.

The right dosage between face-to-face meetings and distant relationship interactions also appears crucial, especially regarding the qualitative aspects of it. In other words, it is not so much the pace or the rhythm of interactions but the perceived quality in the exchange that matters, being highly symbolic: the meaning the members of the dispersed team share (ideology and identity) and develop. The identification and communication processes are therefore closely linked. The more the team member identifies and communicates easily and qualitatively well with his/her manager and colleagues in face-to-face meetings, the more positive relationships are brought about in dispersed teams. Conversely, in case the manager and the team members express themselves and interact in a negative way in face-to-face meetings, the risk of perceived managerial and collegial "de-proximization" is stronger.

5. Discussion and conclusions
The purpose of this contribution was to answer the question: How to maintain the sense of proximity, being teleworkers within a dispersed team? Our results corroborate empirically

the theoretical model by O'Leary *et al.* (2014) while putting into perspective the complexity to manage the inter-subjectivity that is related to distance. More specifically, our results show that even if the ICT use leads to a new balance regarding time management for teleworkers – increasing their quality of life perceptions, with a better organizational flexibility – that is to say, a "win-win" configuration, the ultimate success of such a configuration depends on sound management practices. In this sense, we propose to enrich their model (Figure 3, p. 33). More extensive research will test two new moderating variables. At first, our results put in evidence the core role of e-management (e-communicational vs control), with a potential moderator effect on the relationship between objective distance and shared identification, on the one hand, and communication, on the other hand. Another result is the potential moderator effect of the ICT use on the relationship between perceived proximity and relationship quality. The nuances we propose support some recent studies arguing that distant communication (versus face-to-face) may inhibit geographically distributed team performance without consideration on the way the teams use ICT to ensure their cohesion and their performance (Malhotra and Majchrzak, 2014). These conclusions result into important management recommendations to support dispersed teams with how to cope with challenges such as the risk of delayed communication, possible misinterpretations, limited information richness and great conflicts (Zuofa and Ochieng, 2017).

First, concerning the use of ICT and its relationship to time, the reduction of transport time is associated with a more positive time management perception, coupled with efficiency, as also stated in other scholarly work (Torten *et al.*, 2016). Thus, teleworking permits to redesign the working hours. For example, our results indicate that teleworkers can stop to work to adapt their timing with their families (school excursion, family lunch, etc.). Teleworking may be an organization that reveals the flexibility of the employer who allows employees to regulate their own work better. This physical distance to the workplace can help to relativize professional issues, while increasing job decision latitude (Chen and McDonald, 2015). In this respect, the ICT use (e-mail, telephone, live internal messenger, etc.) allows a permanent link with the workplace (with the associated risks, such as the overflow
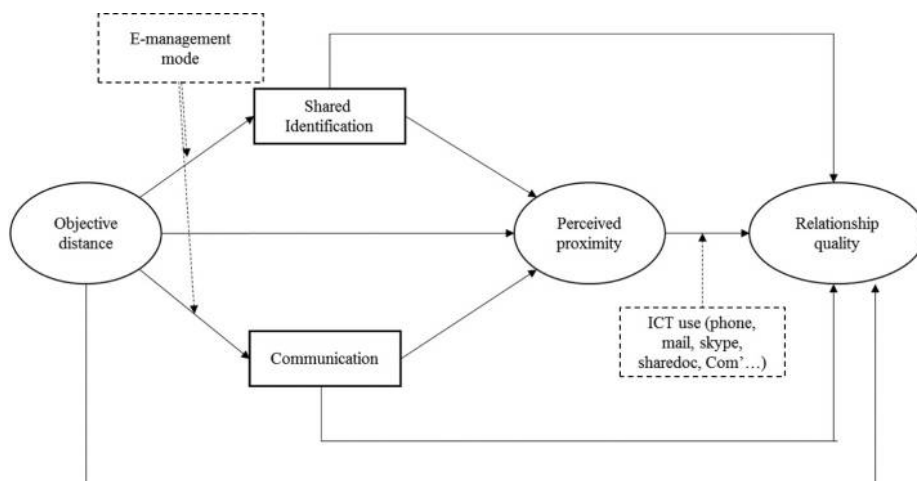
Source: Authors, 2018

Figure 3.
Nuances proposed on the perceived proximity model

and the intrusion of work on personal life) and changes time management perceptions. As such, ICT constitutes a transitional object to stay connected to the workplace and is used by employees as a mean to regulate their activity and as a mean to maintain the proximity perceived to the manager and the team. New behavioral standards are created in the dispersed team, leading to redesigning a new balance between co-located and dispersed work activities to support the sense of belonging to team (Bergum, 2010).

Second, our results help to better understand the role of management practices. At first, they confirm that the risk of uncoupling the team's members depends on the manager's capacity to facilitate the dispersed team to share a common identity to maintain the proximity perceived (Haas and Mortensen, 2016). Although dispersed teleworkers perceive themselves as having more autonomy, more flexibility to improve their self-efficacy and their productivity while reducing their stress, our results show that at the same time, they can feel socially isolated and disconnected from their peers and supervisors, which may negatively impact organizational identification (Milton *et al.*, 2017) even if at the same time. In addition, our results also show that solicitations decrease while being distant, with an impoverishment of the communication, especially in the light of the absence of non-verbal communication existing in face-to-face relationships. These results highlight the risk of teleworking for the team effectiveness. More specifically, from previous literature, we concluded that telework is associated with negative perceptions regarding team effectiveness. In case a teleworker traditionally distinguishes between his/her professional and personal life, the isolation perception can be reinforced, compared to a teleworker with an integrator profile (Dumas and Ruiller, 2014). The value of ICT use is also a function of group structure and composition (Wilson *et al.*, 2013) and of the specific professional and occupational background of the teleworkers (Le Douarin, 2007).

Third, we have shown that perceived proximity is linked to the amount of facilitation that is brought along with the specific way the management role is shaped. Referring to the fundamental Hackman's (2002) framework on how to lead teams, Haas and Mortensen (2016) underline the key competencies of leaders while supervising dispersed, digital and dynamic teams:

- the compelling direction ("Do we share a common goal? Is this goal clear?");
- the strong structure ("Do we have the right number and mix of members? Are people responsible for tasks from beginning to end? Do we have clear norms for acceptable conduct?);
- the supportive context ("Do we have the resources, information and training we need? Are there appropriate rewards for success?"); and
- the shared mindset ("Do the team members have a strong common identity? Do we readily share information with one another and understand one another's constraints and context?").

With the comparison of the two distant modes, our results show that in the e-communicational mode, the e-leader co-builds with the dispersed team the goals, the structure and the supportive context, with a high focus on the dispersed team identity. The e-leader is part of the team with a high "LMX," revealing a strong shared identity corroborating recent studies aiming at defining the e-leadership (Van Wart *et al.*, 2016).

Fourth, our results emphasize how sharing a collective identity is a key to maintain a sense of proximity. Even while the efficiency does not seem to be influenced by the management style, the dispersed team climate is conducive to commitment, in case the manager is characterized as being inspirational (Joshi *et al.*, 2009). Our results stress

the importance of leaders who personify and embody their vision by implementing new use (politeness rituals, the "morning hello" to enhance the felt connection, informal discussion via the internal live messenger). This virtual embodiness is meant to minimize the accompanied risk. Thus, the process of identification is primarily achieved through communication with others (Parker and Haridakis, 2008). In addition, our results also show that the more the team member identifies her/himself to the leader, the more the communication is of high quality and the more the "self-management" is effective. This plays a crucial role, because a high frequency of communication may lead to a sense of overload (Fonner and Roloff, 2010), whereas a high communication quality, grounded in relevant face-to-face meetings and sound use of ITC, may lead to the development of a shared identity and more perceived proximity. Our results also contribute to enrich the knowledge on the "how" to feel to be part of a group that shares a common identity, herewith rethinking the team boundaries (Haas and Mortensen, 2016) and reflecting on the role of the e-leader (Savolainen, 2014). Finally, we show that trust is central in the success of the phenomenon of teleworking from a cultural, social and experiential perspective, highlighting that the ability perceived, benevolence and integrity are also essential (Politis, 2014). Therefore, the e-leaderhip should ideally be coupled with the members' socialization management and with their employability (Taskin and Tremblay, 2010).

Fifth, two managerial modes are highlighted (Table II, page 41) and specified in terms of collective skills by the rules shared within the distant team ("the dispersed team style"), the teleworking experience of the team ("the experiential share") and the common repository of the team. The first mode can be described as "e-communicational" regarding the perceived amount of shared identity associated with teleworking (Henttonen *et al.*, 2014), which is based on interpersonal trust. The second one refers to a classical control mode aiming to

	E-communicational mode	Control mode
Shared identity		
Dispersed team style	Flexibility with regards to the framework agreements to the contract agreement: integration of work/family life balance issues	Strict compliance with the terms and conditions set out in the con tractual agreement on teleworking
Experiential share	The manager is also teleworker. The team co-constructs practices to increase the salience of proximity perceived	The manager is not a teleworker. She/He manages teleworkers
Common repository	To achieve the work objectives with the awareness of the teleworker risks (isolation, distancing to the team). Risk management shared by the team	Objectives tracking with tools (ERP, Excel documents)
Communication		
Dispersed team style	E-communicative and distributed e-communication: conveying enthusiasm, motivating with distance	Focus on work activity. Institutionalized by programed meetings articulating remote and face-to-face communication
Experiential share	Uses of specialized tools: professional messenger for the informal exhanges, telephone call to take stock of the work activity	Formalized exhange (mail) and activity tracking by genre of files (excel)
Common repository	Co-built articulation of face-to-face communication and e-communication	Structured around work objectives

Table II.
The Distant management modes, "e-communicational" and "control"

impose and evaluate the required work objectives. The first "e-communicational" mode corresponds to a teleworking organization shared between the manager and his/her team, in which time management is flexible to reach the work objectives and which is supported by all of the team members, taking into account "professional-personal" life balance issues of all parties involved. This mode is characterized by friendly communication, with the specific use of ICT (messenger made available by the company for informal exchanges and the telephone use for work objectives) and by the co-construction of face-to-face collegial times and e-communication. The second so-called "control" mode corresponds to strict compliance with the Telecom contract rules, which is closely monitored in the same way as the extent to which one reaches the required work objectives (tracked on excel files). In this control configuration, the e-manager does not telework and his/her e-communication is mainly work-centered.

The e-communicational mode appears to positively influence the identification process, highlighting the manager's ability to e-socially act while sharing the organization's framework of strategic objectives, with the objective of trust building (Savolainen, 2014). The "e-leader" should be able to individually and collectively recognize the efforts and reward while being distant. He or she should be able to "interpret electronic silences," differentiating acceptance (objectives, standards, etc.) from indifference or inattention. In this regard, Malhotra *et al.* (2007) described six key abilities for the successful e-leader:

(1) to develop and to maintain trust with the ICT use;

(2) to ensure that work objectives are understood by the dispersed team;

(3) to manage work "non-work cycles" (to arrange meetings);

(4) to monitor the progress regarding the appropriation and the use of ICT by team members;

(5) to promote the visibility of the dispersed team organization; and

(6) to encourage the sharing of inter-staff experiences.

Our results confirm that new behavioral standards will therefore be created, with the risk of a loss of interaction and communication quality, possibly leading to social isolation or loneliness felt (Kraut *et al.*, 1998). Recent key findings argue the importance of socio-emotional skills that e-leaders need to develop to insure the success of the dispersed team. These socio-emotional skills can be categorized in three types:

(1) *Social skills*: These include open communication, listening and assertiveness.

(2) *Technical skills*: These include use of facilities/ICT.

(3) *Authenticity*: This includes showing trustworthiness/openness, honesty and integrity (Savolainen, 2014).

With the comparison of the two distant modes, i.e. e-communication versus control, our results show the major role of the e-leader and her/his responsibility regarding the prevention of "de-proximity" risks. The less the employee identifies with his e-manager, the less dense and qualitative the communication is. In the control mode, teleworkers, being at home, do not project themselves to more than one day teleworking in comparison to the e-communicational mode in which the teleworking rhythm does not seem to be an issue. In summary, our results show that a sound use of ICT leads to maintain the sense of proximity in dispersed teams, while putting into perspective the

need to redesign the face-to-face[6] exchanges to ensure the shared identity of the team's members.

Our study has some limitations which may for the basis for future research perspectives. First, our methodology does not take into account the longitudinal nature of the process that comes along with establishing more perceived proximity. Example is the value of research over time to better understand the symbolic dimension of the exchanges content in the dispersed team (O'Leary *et al.*, 2014) or teams' micro processes, opening up the black box of collective competences (i.e. the group's ability to work together toward a common goal and results in the creation of a collective outcome) (Chédotel *et al.*, 2015; Melkonian and Picq, 2010; Ruuska and Teigland, 2009). An ongoing research perspective is to apprehend the process of individual development of the

e-leader skills while, at the same time, investigating the development of the collective competences for the dispersed team.

Second, the influence of teleworking contexts was not captured in our single case study. Multi-level research might be a good endeavor to investigate the relationship between:

- the teleworking CEO's project;
- the organizational arrangements proposed to the employees; and
- the local regulations between the managers and teleworkers (using an "LMX" perspective) in a thorough dispersed teams' analysis.

Finally, the specific missions and resulting activities of the employee certainly impact the interpersonal relations within a dispersed team. A job design analysis of the dispersed team members' jobs would be a fruitful entrance for future work. The investigation of the predictive value of human resource management practices, for the teleworkers themselves and as means to facilitate e-leaders (helping to reinforce teleworking), would also be relevant.

Finally, this research is based on three specific types of teleworking within one single case study only (Gibbert *et al.*, 2008; Gibbert and Ruigrok, 2010). Although this specific study does not allow us to generalize the results, this research opens up new perspectives. In particular, future research can build upon our study by comparing types of teleworking in different case approaches to understand how the context (organizational identity, ideology and culture; organizational configuration; and ICT use) determines the specific management role that is most valid to foster identification in dispersed teams.

Notes

1. Article 2 of the European Framework Agreement on Telework of 2002. Available at: www. eurofound.europa.eu/fr/observatories/eurwork/comparative-information/telework-in-the-european-union

2. http://archives.strategie.gouv.fr/cas/content/rapport-le-developpement-du-teletravail-dans-la-societe-numerique-de-demain.html

3. DATAR. Two agreements were concluded in 2005.

4. www.eurofound.europa.eu/fr/observatories/eurwork/comparative-information/telework-in-the-european-union; www.euractiv.com/section/digital/news/tele-work-growth

5. www.eurofound.europa.eu/fr/observatories/eurwork/comparative-information/telework-in-the-european-union; www.euractiv.com/section/digital/news/tele-work-growth

The LMX and TMX concepts are conceptually related. Leaders and members exchange behaviors and develop mutual expectations about future behaviors (Gabarro, 1987).

6. According to the "3 V" (Mehrabian, 1967), 7 per cent of the communication is verbal (words meaning), 38 per cent of the communication is vocal (intonation and sound of the voice) and 55 per cent is visual (facial expressions and body language).

References

Aguilera, A., Lethiais, V., Rallet, A. and Proulhac, L., (2016), "Home-based telework in France: characteristics, barriers and perspectives", *Research Report Transportation Research Part A: Policy and Practice*, Vol. 9, pp. 1-11.

Allen, T. (1977), *Managing the Flow of Technology*, MIT Press, Cambridge, MA.

Ancona, D., Goodman, P., Lawrence, B. and Tushman, M. (2001), "Time: a new research lens", *Academy of Management Review*, Vol. 26 No. 4, pp. 645-663.

Ashforth, B.E. and Mael, F. (1989), "Social identity theory and the organization", *Academy of Management Review*, Vol. 14 No. 1, pp. 20-39.

Bacharach, S., Bamberger, P. and McKinney, V. (2000), "Boundary management tactics and logics of action: the case of peer-support providers", *Administrative Science Quarterly*, Vol. 45, pp. 704-736.

Bailey, D.E. and Kurland, N.B. (2002), "A review of telework research: findings, new directions, and lessons for the study of modern work", *Journal of Organizational Behavior*, Vol. 23 No. 4, pp. 383-400.

Bergum, S. (2010), "Management of subordinates at a distance: a balance between co-located and virtual activities", paper presented at the Proceedings of the European Conference on Management, Leadership & Governance, Wroclaw, pp. 40-46.

Berkery, E., Morley, M.J., Tiernan, S., Purtill, H. and Parry, E. (2017), "On the uptake of flexible working arrangements and the association with human resource and organizational performance outcomes", *European Management Review*, Vol. 14 No. 2, pp. 165-183.

Bochma, R. (2005), "Proximity and innovation: a critical assessment", *Regional Studies*, Vol. 39 No. 1, pp. 61-74.

Bouba Olga, O. and Grossetti, M. (2008), "Socio-économie de la proximité", *Revue D'Economie Régionale Et Urbaine*, Vol. 3, pp. 1-18.

Burgoon, J., Bonito, J., Artemio, R., Dunbar, N., Kam, K. and Fischer, J. (2002), "Testing the interactivity principle: effects of mediation, propinquity, and verbal, non verbal modalities in interpersonal interaction", *Journal of Communication*, Vol. 52 No. 3, pp. 657-677.

Chédotel, F., Stimec, A. and Vignikin, A. (2015), "Management des équipes projet: l'impact de la gestion des conflits et de l'improvisation organisationnelle sur la performance", *Revue de Gestion des Ressources Humaines*, No. 96, pp. 24-42.

Chen, W. and McDonald, S. (2015), "Do networked workers have more control? The implications of teamwork, telework, ICTs, and social Capital for job decision latitude", *American Behavioral Scientist*, Vol. 59 No. 4, pp. 492-507.

Cocula, F. and Fredy-Planchot, A. (2001), "Spécificités et facteurs de réussite du management à distance", paper presented at the 12e Congrès de l'AGRH, Nancy.

Dumas, M. and Ruiller, C. (2014), "Le télétravail: les risques d'un outil de gestion des frontières entre vie personnelle et vie professionnelle?", *Management & Avenir*, Vol. 74 No. 8, pp. 71-95.

Festinger, L. (1950), "Informal social communication", *Psychological Review*, Vol. 57 No. 5, pp. 271-282.

Fonner, K.L. and Roloff, M.E. (2010), "Why teleworkers are more satisfied with their jobs than are office-based workers: when less contact is beneficial", *Journal of Applied Communication Research*, Vol. 38 No. 4, pp. 336-361.

Gabarro, J.J. (1987), "The development of working relationships" in Lorsch, J.W. (Ed.), *Handbook of Organizational Behavior*, Prentice-Hall, Englewood Cliffs, NJ.

Gajendran, R.S. and Harrison, D.A. (2007), "The good, the bad, and the unknown about telecommuting: meta-analysis of psychological mediators and individual consequences", *Journal of Applied Psychology*, Vol. 92 No. 6, pp. 1521-1524.

Gibbert, M. and Ruigrok, W. (2010), "The 'what'and 'how'of case study rigor: three strategies based on published work", *Organizational Research Methods*, Vol. 13 No. 4, pp. 710-737.

Gibbert, M., Ruigrok, W. and Wicki, B. (2008), "What passes as a rigorous case study?", *Strategic Management Journal*, Vol. 29 No. 13, pp. 1465-1474.

Haas, M. and Mortensen, M. (2016), "The secrets of great teamwork", *Harvard Business Review*, Vol. 94 No. 6, pp. 70-76.

Hackman, J.R. (2002), *Leading Teams: Setting the Stage for Great Performances*, Harvard Business School Publishing, Boston, Massachussetts.

Hackman, J.R. (1990), *Groups That Work (and Those That Don't): Creating Conditions for Effective Teamwork*, Jossey-Bass, San Francisco.

Hall, E.T. (1983), *The Dance of Life, the Other Dimension of Time*, Doubleday, New York, NY.

Handy, C. (1995), "Trust and virtual organization", *Harvard Business Review*, Vol. 73 No. 3, pp. 40-50.

Hansen, M.T. and Lovas, B. (2004), "How do multinational companies leverage technological competencies? Moving from single to interdependent explanations", *Strategic Management Journal*, Vol. 25, pp. 801-822.

Harrison-Hill, T. (2001), "How far is a long way? Contrasting two cultures' perspectives of travel distance", *Asia Pacific Journal of Marketing and Logistics*, Vol. 13 No. 3, pp. 3-17.

Henttonen, K., Johanson, J.E. and Janhonen, M. (2014), "Work-team bonding and bridging social networks, team identity and performance effectiveness", *Personnel Review*, Vol. 43 No. 3, pp. 330-349.

Hinds, P. and Mortesen, M. (2005), "Comprendre les conflits dans les équipes géographiquement distribuées: une investigation empirique", *Organization Science*, Vol. 16, pp. 290-307.

Jackson, P.J., Van der Vielen, J.M. (Eds) (2002), *Teleworking: International Perspectives – from Telecommuting to the Virtual Organization*, Routledge, London, New York, NY, 169-184.

Joshi, A., Lazarova, M.B. and Liao, H. (2009), "Getting everyone on board: the role of inspirational leadership in geographically dispersed teams", *Organization Science*, Vol. 20 No. 1, pp. 240-252.

Judge, T., Thoresen, C., Pucik, V. and Welbourne, T. (1999), "Managerial coping with organizational change: a dispositional perspective", *Journal of Applied Psychology*, Vol. 84 No. 1, pp. 107-122.

Kraut, R., Lundmark, V., Patterson, M., Kiessler, S., Mukopadhyay, T. and Sherlis, W. (1998), "Internet paradox: a social technology that reduces social involvement and psychological well being?", *American Psychologist*, Vol. 53 No. 9, pp. 1017-1031.

Kurland, N. and Bailey, D. (1999), "The advantages and challenges of working here, there, anywhere, and anytime", *Organizational Dynamics*, pp. 1-16.

Le Douarin, L. (2007), "Les chemins de l'articulation entre vie privée et vie professionnelle. Les usages de personnels des technologies de l'information et de la communication au bureau", *Réseaux*, Vol. 140 No. 1, pp. 101-132.

Le Gall-Ely, M., Urbain, C., Gombault, A., Bourgeon-Renault, D. and Petr, C. (2007), "Une étude exploratoire des représentations de la gratuité et de ses effets sur le comportement des publics des musées et des monuments", *Recherche Et Applications En Marketing (French Edition)*, SAGE Publications, Vol. 22 No. 2, pp. 23-38.

Liao, C. (2017), "Leadership in virtual teams: a multilevel perspective", *Human Resource Management Review*, Vol. 27 No. 4, pp. 648-659.

Malhotra, A. and Majchrzak, A. (2014), "Enhancing performance of geographically distributed teams through targeted use of information and communication technologies", *Human Relations*, Vol. 67 No. 4, pp. 389-411.

Malhotra, A., Majchrzak, A. and Rosen, B. (2007), "Leading virtual teams", *Academy of Management Perspectives*, Vol. 21 No. 1, pp. 60-70.

Martins, L., Gilson, L. and Maynard, M.T. (2004), "Virtual teams: what do we know and where do we go from here?", *Journal of Management*, Vol. 30 No. 6, pp. 805-835.

Mehrabian, A. (1967), "Orientation behaviors and nonverbal attitude communication", *Journal of Communication*, Vol. 17 No. 4, pp. 324-332.

Melkonian, T. and Picq, T. (2010), "Opening the black box of collective competence in extreme projects: lessons from the French special forces", *Project Management Journal*, Vol. 41 No. 3, pp. 79-90.

Metiu, A. (2006), "Owning the code: status closure in distributed groups", *Organization Science*, Vol. 17 No. 4, pp. 418-435.

Metzger, J.-L. and Cléach, O. (2004), "Le télétravail des cadres: entre suractivité et apprentissage de nouvelles temporalités", *Sociologie Du Travail*, Vol. 46 No. 4, pp. 433-450.

Milton, S.A.A., Sinclair, M.M. and Vakalahi, H.O. (2017), "Organizational identification: perspectives of dispersed social workers", *Advances in Social Work*, Vol. 17 No. 2, pp. 285-303.

Mooney, S., Martin, S. and Lo Priesto, C. (1991), "Academic locus of control, selfesteem, and perceived distance from home as predictors of college adjustment", *Journal of Counseling & Development*, Vol. 69 No. 5, pp. 445-448.

Moquay, P., Lardon, S., Marcelpoil, E. and Piveteau, V. (2003), "Contribution des représentations spatiales à la proximité institutionnelle dans les processus de développement territorial", paper presented at the Journées de la proximité, Paris.

Mortensen, M. and Hinds, P.J. (2001), "Conflict and shared identity in geographically distributed teams", *International Journal of Conflict Management*, Vol. 12 No. 3, pp. 212-238.

Nonaka, I. and Noboru, K. (1998), "The concept of ba: building foundation for knowledge creation", *California Management Review*, Vol. 40 No. 3, pp. 40-54.

O'Leary, M.B. and Cummings, J.N. (2007), "The spatial, temporal, and configurational characteristics of geographic dispersion in teams", *MIS Quarterly*, Vol. 31 No. 3, pp. 433-452.

O'Leary, M.B., Wilson, J.M. and Metiu, A. (2014), "Beyond being there: the symbolic role of communication and identification in perceptions of proximity to geographically dispersed colleagues", *MIS Quarterly*, Vol. 38 No. 4, pp. 119-1243.

Parker, R. and Haridakis, P. (2008), "Development of an organizational identification scale: integrating cognitive and communicative conceptualizations", *Journal of Communication Studies*, Vol. 1 Nos 3/4, pp. 105-126.

Politis, J. (2014), "The effect of e-leadership on organizational trust and commitment of virtual teams", *Proceedings of the European Conference on Management, Leadership & Governance*, *Zagreb*, pp. 254-261.

Pyöriä, P. (2011), "Managing telework: risks, fears and rules", *Management Research Review*, Vol. 34 No. 4, pp. 386-399.

Rallet, A. and Torre, A. (2006), *Quelles Proximités Pour Innover*?, L'Harmattan, Collection Géographies en Liberté, Paris.

Reynaud, J.-D. (1991), "Pour une sociologie de la régulation sociale", in Octares (Ed.),*Sociologie Et Sociétés*, Automne, Toulouse, Vol. 23 No. 2, pp. 13-26.

Reynaud, J.-D. (1997), *Les Règles Du Jeu. L'action Collective Et La Régulation Sociale*, Armand Colin, 3ième édition, p. 348.

Reynaud, J.-D. (1999), *Le Conflit, La Négociation Et La Règle, Octarès Edition*, 2ième édition, Paris.

Reynaud, J.-D. (2003), "« Réflexion 1: régulation de contrôle, régulation autonome, regulation conjointe »", in: Terssac, de G. (dir.), *La Théorie De La Régulation Sociale De Jean-Daniel Reynaud: Débats Et Prolongements*, La découverte, Paris, p. 103-113.

Rice, R. and Aydin, C. (1991), "Attitudes toward new organizational technology: network proximity as a mechanism for social information processing", *Administrative Science Quarterly*, Vol. 36 No. 2, pp. 219-244.

Ruiller, C., Chedotel, F. and Dumas, M. (2018), "Quelles formes de régulation pour une mise en place réussie du télétravail dans la fonction publique territoriale?", *Revue Politiques Et Management Public*, Vol. 35 No. 1, pp. 5-26.

Ruuska, I. and Teigland, R. (2009), "Ensuring project success through collective competence and creative conflict in public–private partnerships–a case study of Bygga Villa, a Swedish triple helix e-government initiative", *International Journal of Project Management*, Vol. 27 No. 4, pp. 323-334.

Savolainen, T. (2014), "Trust-building in e-leadership: a case study of leaders' challenges and skills in technology-mediated interaction", *Journal of Global Business Issues*, Vol. 8 No. 2, pp. 45-56.

Schreier, M. (2014), "Qualitative content analysis", in Flick, U. (Ed.), *The SAGE Handbook of Qualitative Data Analysis*, Sage, Thousand Oaks, CA, pp. 170-183.

Scott, C. (1999), "Communication technology and group communication", in *Handbook of Group Communication Theory and Research*, Frey, L.R., Gouran, D. and Poole, M.S. (Eds), Sage, Thousand Oaks, CA, pp. 432-474.

Sewell, G. and Taskin, L. (2015), "Out of sight, out of mind in a new world of work? Autonomy, control, and spatiotemporal scaling in telework", *Organization Studies*, Vol. 36 No. 11, pp. 1507-1529.

Sullivan, C. (2003), "What's in a name? Definitions and conceptualisations of teleworking and homeworking", *New Technology, Work and Employment*, Vol. 18 No. 3, pp. 158-165.

Taskin, L. (2006), "Télétravail: les enjeux de la déspatialisation pour le management humain", *Revue Interventions Economiques*, Vol. 34, pp. 1-16.

Taskin, L. and Tremblay, D.G. (2010), "Comment gérer des télétravailleurs?", *Gestion*, Vol. 35, pp. 88-96.

Torten, R., Reaiche, C. and Caraballo, E.L. (2016), "Teleworking in the new millennium", *Journal of Developing Areas*, Vol. 50 No. 5, pp. 319-326.

Turner, J.C. and Haslam, A. (2001), "Social identity, organizations and leadership", in M.E. Turner (ed), *Groups at Work: Theory and Research*, Erlbaum, Mahwah, NJ, pp. 25-65.

Van Wart, M., Roman, A., Wang, X. and Liu, C. (2016), "Operationalizing the definition of e-leadership: identifying the elements of e-leadership", *International Review of Administrative Sciences*, available at: https://doi.org/10.1177/0020852316681446.

Vartiainen, M., Hakonen, M., Koivisto, S., Mannonen, P., Nieminen, M., P., Ruohomäki, V. and Vartola, A. (2007), *Distributed and Mobile Work – Places, People and Technology*, Otatiello, Helsinki.

Vignikin, A., Leroy, D. and Chédotel, F. (2016), L'improvisation en tant que situation managériale? Comment évolue-t-elle durant la vie d'un projet, *@grh, numéro dédié aux Best Papers du congrès de l'AGRH*, Vol. 18, pp. 65-98.

Von Krogh, G. and Von Hippel, E. (2003), "Editors' introduction to the special issue on open source software development", *Research Policy*, Vol. 32, pp. 1149-1291.

TPM

Wilson, J., Boyer O'leary, M., Metiu, A. and Jett, Q. (2008), "Perceptions of proximity in virtual work: explaining the paradox of 'Far-but-Close'", *Organization Studies*, Vol. 29 No. 7, pp. 979-1002.

Wilson, J., Crisp, C.B. and Mortensen, M. (2013), "Extending construal-level theory to distributed groups: understanding the effects of virtuality", *Organization Science*, Vol. 24 No. 2, pp. 629-644.

Yin, R.K. (2013), *Case Study Research, Design and Methods*, Sage Publications, Beverly Hills.

Zuofa, T. and Ochieng, E.G. (2017), "Working separately but together: appraising virtual project team challenges", *Team Performance Management: An International Journal*, Vol. 23 Nos 5/6, pp. 227-242.

Further reading

La Ville (de), V.-I. (2000), "La recherche idiographique en management stratégique", *Revue Finance-Contrôle-Stratégie*, Vol. 3 No. 3, pp. 73-99.

Mencl, J. and May, D.R. (2009), "The effects of proximity and empathy on ethical decision-Making: an exploratory investigation", *Journal of Business Ethics*, Vol. 85 No. 2, pp. 201-226.

Nobel, H. and Smith, J. (2015), "Issues of validity and reliability in qualitative research", *Evidence-Based Nursing*, Vol. 18 No. 2, pp. 34-35.

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