

2008

Isolation and Emotions in the Workplace: The Influence of Perceived Media Richness and Virtuality

Jessie Pallud

Universite Paris-Dauphine/Georgia State University, jessie.pallud@dauphine.fr

Christophe Elie-Dit-Cosaque

Universite Paris-Dauphine/Georgia State University, christophe.elie-dit-cosaque@dauphine.fr

Follow this and additional works at: <http://aisel.aisnet.org/amcis2008>

Recommended Citation

Pallud, Jessie and Elie-Dit-Cosaque, Christophe, "Isolation and Emotions in the Workplace: The Influence of Perceived Media Richness and Virtuality" (2008). *AMCIS 2008 Proceedings*. 144.

<http://aisel.aisnet.org/amcis2008/144>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISEL). It has been accepted for inclusion in AMCIS 2008 Proceedings by an authorized administrator of AIS Electronic Library (AISEL). For more information, please contact elibrary@aisnet.org.

Isolation and Emotions in the Workplace: The Influence of Perceived Media Richness and Virtuality

Jessie Pallud

Université Paris-Dauphine
Georgia State University
jessie.pallud@dauphine.fr

Christophe Elie-Dit-Cosaque

Université Paris-Dauphine
Georgia State University
christophe.elie-dit-cosaque@dauphine.fr

ABSTRACT

Remote work and intensive use of Information Technologies (IT) are increasingly common in organizations. At the same time, professional stress seems to develop. However, IS research has paid little attention to the relationships between these two phenomena. The purpose of this research in progress is to present a framework that introduces the influence of (1) new spatial and temporal constraints and of (2) intensive use of IT on employee emotions at work. Specifically, this paper relies on virtuality (e.g. Chudoba et al. 2005) and media richness (Daft and Lengel 1984) theories to determine the emotional consequences of geographically distributed work.

Keywords

Isolation, Stress, Emotions, Virtuality, Media Richness Theory, Computer Mediated Communications

INTRODUCTION

Understanding the role of emotions in user interaction with Information Systems (IS) is of growing interest in IS research. Although some studies specifically deal with emotions (e.g., computer anxiety) in the workplace (e.g. Moore 2000; Venkatesh 2000; Coppola et al. 2002), much remains to be done with respect to other related issues. Indeed, new ways of working have appeared with employee stress increasing. This makes necessary to examine how emotions are related to IS and IS use.

The managerial literature regularly echoes the *stress* and ill being of managers. Beyond cyclical macroeconomic phenomena, the demands and constraints of new ways of working are, according to some researchers, among the most influential factors. Empowerment (Conger and Kanungo 1988; Spreitzer 1995; Bartlett and Ghoshal 1998), nomad teamwork (Jarvenpaa and Leidner 1998; Kayworth and Leidner 2001), and telework (Metzger and Cléach 2004) are among those ways of working, which diffusion has been fostered by IT. Telework can be defined as IT usage modes that allow working at distance (Metzger and Cléach 2004). These ways of working can also lead to increased individual performance. The reconfiguration of work, however, raises important issues about employee welfare. In fact, many studies have highlighted negative consequences that directly or indirectly contribute to deteriorating psychological working conditions. For instance, these negative outcomes can be work overload (Metzger and Cléach 2004; Ahuja and Thatcher 2005), stress, the confusion between private and professional life (Ahuja et al. 2007), and work isolation (Fritz et al. 1998; Marshall et al. 2007), which is the focus of this research. Though, in many organizations, work activities are increasingly remote and communications between employees are increasingly mediated by IT. This implies a redefinition of time and space constraints in order to cope with increasingly important pressures (Olson 1982).

What are the implications for individuals in the workplace? The research questions addressed in this research are the following:

- 1) What influences does virtuality have on work isolation and on positive and negative emotions?
- 2) Does media richness have an influence on work isolation and emotions?

It is essential to understand the role played by nomadic work in isolation (Marshall et al. 2007) and occupational stress in order to find ways to cope with its negative consequences. The first section of this article introduces the theoretical background of our research. In the second section, we present our research model and hypotheses. The third section describes the methodology to be used in order to test the proposed research model. Finally, the fourth section concludes on contributions and limitations of this research.

THEORETICAL BACKGROUND

Emotions in the Workplace

Emotions and affective relationships between individuals in the workplace are a relatively recent area of research. Research on this topic has grown significantly for about ten years (Briner 2004). Indeed, emotions and affect within organizations have long been ignored or excluded by researchers (Fineman 1993; Rafaeli and Worline 2001). The wide-spread Cartesian tradition made people think that emotions were inappropriate in the workplace. Therefore, people were supposed to leave their emotions and feelings at home (Soares 2000). Nevertheless, it is generally impossible for human beings to separate their reason from their passion (Damasio 1994). Consequently researchers found interest in studying emotions in work setting. Hochschild (1983) and then Fineman (1993) are considered as the pioneers in this field (Briner 2004). Although researchers pay more and more attention to the topic of emotions (e.g., Fineman 1993; Damasio 1994; Stanley and Burrows 2001; Goleman et al. 2002), IS researchers have understudied its links with user-IT interaction in the workplace.

Emotion has many functions for humans. In 1872, Darwin asserted that emotions are a mean for humans to survive and to adapt to their environment. Damasio (1994) showed that to behave rationally, people need emotion. Emotions are also a rich medium of communication as they can be expressed with gesture, language, or behavior (Stanley and Burrows 2001). Emotions help building interpersonal relationships (Parkinson 1996). That is why we presume that individuals who share emotions will also have closer relationships, although emotions and affective relationships are two different concepts. De Dreu and al. (2001) identify three social functions for emotions: they develop social bonding, they help express human need for social support, and they reflect the establishment of individuals' social status.

Although there is no consensus on the number of emotions, ten are generally considered to be the most common: (a) anger, disgust, contempt, (b) joy, surprise, excitement, (c) fear, distress, guilt, and shame (Stanley and Burrows 2001). Emotions can also be (a) negative, (b) positive or (c) neutral.

Measuring Emotions: the Job-Related Affective Being Stream

The job-related affective being stream of research focuses on emotions felt at work and on their influence on employee well-being. One of the most important operationalization of job-related affective being is the measurement scale developed by Warr (1990). In order to capture emotions that are specific to the work environment, Warr (1990) identified three dimensions to be included in a measurement scale. These dimensions are 1) displeased-pleased, 2) anxious-contented and 3) depressed-enthusiastic. Warr (1990) adds that these different emotions can be expressed at different levels of arousal (high/low).

Emotions at work in the IS literature

Several IS researchers have already paid attention to affective variables in IS research. For instance, Ahuja et al. (2007) did not focus on IT per se but rather on a category of IT users, IT road warriors defined as "IT consultants who spend most of their workweek at distant client sites" (p. 8). Ahuja et al. (2007) emphasized that this type of work can lead to several stressful outcomes such as work exhaustion, work overload and work-family conflicts. Earlier, Ahuja and Thatcher (2005) looked at the effects of organizational stress, captured through overload and autonomy, and its consequence on trying to innovate with IT, which is posited as a post adoptive behavior. Nonetheless, their study did not measure emotions. Although our research also deals with organizational stress, conversely, we study the outcome of IT perceptions and virtuality on emotions.

Moore (2000) conducted several interviews with IT workers in order to better understand work exhaustion. The researcher found that the main reasons for work exhaustion were the lack of material and human resources. But Moore (2000) also reported that some IT workers were exhausted because of changes with the technology. Therefore, it is reasonable to argue that IT can contribute to the deterioration of well being at work. This idea was also captured by Tarafdar et al. (2007) who

studied the stress caused by the use of IT (technostress) and its role in individual productivity. Meaningful IS studies dealing with emotions at work are presented in Table 1 below.

Table 1. Representative IS Studies Dealing with Emotions at Work			
Authors	Objective	Concepts	Key Findings
Ahuja et al. (2007)	Examine the antecedents of turn over intentions among IT road warriors	Work Exhaustion Work-Family Conflicts, Stress	<ul style="list-style-type: none"> IT road warriors are subject to stressful work conditions. Work exhaustion is determined by work-family conflicts, job autonomy, fairness of rewards and perceived work of load.
Tarafdar et al. (2007)	Understand the effects of IT on stress	Stress, technostress	<ul style="list-style-type: none"> Technostress positively influences role stress and is negatively related with individual productivity
Coppola et al. (2001)	Understand how online professors cope with a "computer mediated communication channel, which remains impoverished with respect to emotional expression" (p. 178)	Affective Roles	<ul style="list-style-type: none"> Online professors are particularly interested in richer media that enable emotion expression. They privilege tools that allow rich communication, the use of humor and dynamic style.
Moore (2000)	Better explain turn over among IT people	Work Exhaustion, Burnout	<ul style="list-style-type: none"> Work exhaustion of IT people leads to turnover. Work exhaustion is principally caused by a lack of resources and work overload.
Venkatesh (2000)	Identify anchors that determine ease of use perceptions	Computer Anxiety	<ul style="list-style-type: none"> Computer anxiety has a negative influence on perceived ease of use.
Compeau (1999)	Test individual reactions to computer use	Affect and Anxiety	<ul style="list-style-type: none"> Affect has a positive effect on IT use while anxiety negatively influences IT use.

As we can see in Table 1, IS research has addressed both positive and negative aspects of emotions at work in the context of IT use. However, most of these studies tend to posit emotions as an antecedent of IT use. Furthermore, they do not focus on emotions in virtual work. Thus, it is important to understand how virtuality and IT use outcomes influence positive and negative emotions at work.

In addition, emotions have a critical role within virtual work because people attach the greatest importance to bonds and trust when performing work without face-to-face communication (Goleman et al. 2002). Therefore, evaluating the nature of emotions and the communication or expression of these emotions in distributed work is a phenomenon that should be investigated. To address this issue, we developed a research model that is depicted hereafter.

RESEARCH MODEL AND HYPOTHESES

The purpose of the research model, shown in Figure 1, is to test the effects of virtuality and media richness on work conditions and emotions.

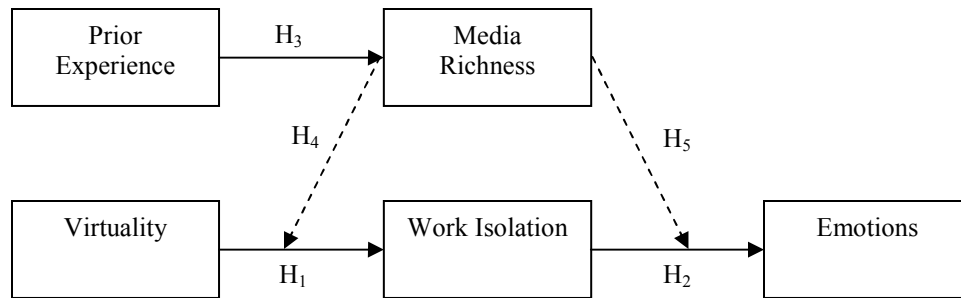


Figure 1. Model

Distributed work and virtuality

Distributed work is not completely new as it already existed in the Roman Empire. However, the development of IT in organizations has enhanced this phenomenon (Yates and Orlikowski 1992; O’Leary et al. 2002). Distributed work and remote work are synonymous in that they describe a way of working whereby all employees are not located in the same places while still working together. For example, members of a team can work in the same country but in different buildings, or in different regions. Walther (2002) highlights the fact that distributed work leads to spatial and temporal fractures because employees are dispersed geographically, and they have different time frames.

The distribution of work has promoted the development of virtual teams. Virtual teams are “groups of geographically and/or temporally dispersed individuals brought together via information and communication technologies” (Piccoli and Ives 2003, p. 365). These teams intensively use ICT to keep in touch and to do their work.

Despite its numerous advantages for individuals and organizations, distributed work and intensive use of IT can, however, foster isolation at work. According to several researchers, this phenomenon is linked to the fact that working at distance is not convenient to all employees and to all type of tasks (Cascio 2000). Indeed, according to Cascio (2000), virtual work can lead to isolation since the necessary physical interactions no longer occur. It is therefore important that other mechanisms be organized in order to compensate this lack of interactions. In fact, the main characteristic of virtual work is the absence of co-presence (Coat and Favier 2000). Hinds and Bailey (2000) also note that distance plus mediated communications induce depersonalization of the interaction. Consequently, we formulate the following hypothesis.

HYPOTHESIS 1: *Virtuality positively influences the feeling of isolation at work.*

Work Isolation

Marshall et al. (2007) identify two types of isolation associated with these new work environments: isolation from colleagues and isolation from the organization’s social network. According to Fritz et al. (1998) traditional modes of management are not suitable to the new ways of working that appear with IT. Chidambaram and Tung (2005) also identify work isolation, which they call “immediacy gap”, as an environmental condition that can appear with distance. They conceptualize immediacy gap, borrowed from the Social Loafing Theory, as the degree of dispersion in the group varying from dispersed to collocated work.

Isolation at work has also been identified as an important factor of job stress, which may lead to physiological and mental disorders, increased absenteeism and lower productivity (Colligan and Higgins 2005) while influencing individuals’ emotional capital. Furthermore, resulting working conditions can foster the emergence of negative emotions such as stress, anxiety, fear or shame. For example, Hareli et al. (2005) indicate that a threatening atmosphere at work fosters the development of fear and strengthens the feeling of failure of the employee. Similarly, Horney (1945) explains that the feelings of isolation and insecurity are a source of anxiety. Indeed, the loss of ties with ones’ colleagues, or even the exclusion to the group to which an individual belongs, is a stressful situation for the latter, who will then develop negative emotions (De Dreu et al. 2001). Subsequently, isolated individuals develop fewer interactions in their working environment with their colleagues and share less knowledge, values and culture with their organization. Thus, work isolation is posited to foster negative emotions and to be negatively related with positive emotions.

HYPOTHESIS 2: *Work isolation is positively related to the negative axis of Warr’s scales, more precisely to emotions such as depression and anxiety.*

Prior Experience with the media

The concept of prior experience can be defined as “the extent to which a behavior has been performed in the past” (Venkatesh et al. 2006, p. 162). Prior experience with IT has been studied by several researchers who showed that when experience with IT increases, intention to use the system increases as well (Thompson et al. 1994; Thompson et al. 2006). Thompson et al. (1994) tested different relationships between prior experience and IS use. They found that the direct effect was the most important in comparison to indirect and moderating effects. Therefore, prior experience represents a predictor of IT use. Carlson and Zmud (1999) explain that the more prior experience the users have with the technology, the more they are able to detect its rich features. Consequently, we hypothesize the following:

HYPOTHESIS 3: *Prior experience with the media will positively influence perceived richness of the media.*

Perceived Media Richness

In studying the effects of media choice on communication, Daft and Lengel (1984) developed the Media Richness Theory (MRT). Daft and Lengel (1984) proposed a prescriptive model that helps individuals and organizations identifying the most appropriate medium with respect to their communication needs. MRT considers that face-to-face is the richest medium of communication. Conversely, media with written information like e-mails are leaner (Daft and Lengel 1984). Indeed, MRT postulates that a medium is rich or poor depending on its intrinsic characteristics: feedback, multiple cues, language variety, and personal focus.

Notwithstanding those insightful findings, the MRT has several limits. In fact, oral communication is not always richer than written communication. For instance, Markus (Markus 1994) showed that the potential of e-mails was underestimated by the MRT. It seems that written communication on computer is richer when individuals use instant messenger tools. Indeed, Anis (1998) asserts that dialogue in quasi-direct mode makes spontaneous communications easier. Individuals will be able to express their emotions and impulses more easily. Instant messenger also includes tools like *smileys* and other tools that enable individuals to better express their emotions. Furthermore, how individuals perceive the technology is important to determine its richness (Carlson and Zmud 1999). For example, Carlson and Zmud (1999) showed that if individuals perceive the technology as a rich one, they will use it in a richer way. Therefore, virtual work is not incompatible with the expression of emotions.

Other research shows that mediated communication can be as rich as face-to-face communication (Moreland and Myaskovsky 2000). Actually, Moreland and Myaskovsky (2000) observed that employees working at distance were able to develop close relationships with their colleagues. Moreover, Arling and Subramani (2005) show that computer mediated communication can be a source of social capital for individuals working at distance. Therefore, perceived richness of the media can contribute to reduce the feeling of isolation.

Based on the above discussion, we posit that:

HYPOTHESIS 4: *The way an individual perceives the richness of an IT mediates her/his feeling of isolation due to distance at work: the more the technology will be perceived to be rich by an individual, the less that individual will feel isolated from her/ his colleagues.*

HYPOTHESIS 5: *The way the individual will perceive the richness of an IT will moderate the impacts of isolation on emotions; the more the technology will be perceived to be rich by an individual, the less that individual will express negative emotions when feeling isolated.*

METHODS

Design

The design for the research is that of a field survey (Pinsonneault and Kraemer 1993) with managers working at distance in varying degrees. As argued by Bouchard (1976), “field research is as important as laboratory research. This is because the field is where the generality, applicability, and utility of psychological knowledge are put to the test” (p. 363).

Constructs

After pretesting our questionnaire with a small sample of professionals, we will administer the survey to people currently working in one organization. The scales that will be used to test our model are borrowed from prior research. Initially in English, they will be translated into French and then translated back in English by someone who has no prior knowledge of the scales. This will help ensuring the accuracy of the translation.

The *virtuality* construct aims to measure the degree to which an individual performs the main tasks of his/her work at distance, without direct, face to face interactions with his collaborators. In sum, this construct identifies the degree of work ubiquity. This measure is based on Chudoba’s (2005) research dealing with the measurement of virtuality in teamwork.

Based on Daft and Lengel (1984), *Media Richness* refers to the extent to which an individual perceives the media used for a particular activity as information-rich.. According to media richness theory, an individual chooses a media depending on the type of task and on communication content (Daft and Lengel 1984; Daft and Lengel 1986; Daft et al. 1987). Measures for this construct are from Carlson and Zmud (1999).

The *work isolation* construct is based on a scale developed by Marshall et al. (2007). We will include items on work isolation at both the individual and organizational level.

Finally, the measurement of emotion is based on the scale of Warr (1990), who identifies positive and negative emotions that can be experienced by employees in the workplace. More specifically, we will ask participants to estimate the frequency with which, during the weeks preceding the survey, they would have experienced a variety of positive and negative emotions. Table 2 summarizes the constructs of our research model.

Construct	Nature	Dimensions	Nb. Items	Author
Prior Experience	Reflective	-	6	Carlson and Zmud (1999)
Emotions	Semantic	Anxiety-contentment	6	Warr (1990)
		Depression-Enthusiasm	6	
Virtuality	Second order formative construct Reflective sub-constructs	Geography	4	Chudoba et al. 2005
		Temporal	2	
		Cultural	2	
		Work Practices	3	
		Organization	3	
		Technology	4	
Perceived Media Richness	Reflective	-	4	Carlson and Zmud (1999)
Work Isolation (1)	Second order formative construct	Colleagues Subscale	6	Marshall et al. (2007)
Work Isolation (2)	Formative sub-constructs	Company Subscale	6	

In addition to the constructs above, a number of control variables such as work experience, gender, and age will be tested.

Sample

The target number of participant is N=250. Workers such as for example consultants or sales agents often tend to work at distance due to the *ubiquity* of their job. That is, IT increasingly allow organizations to diminish time and space constraints for a growing number of employees with ways of working such as teleworking and nomad work (Metzger and Cléach 2004). We will thus target people working at distance and sedentary ones from one organization in order to get variance in virtuality reports.

Analysis

Data will be analyzed with the software SmartPLS (Ringle et al. 2005). The PLS algorithm places fewer demands regarding data characteristics than structural equation modeling software based on covariance matrices such as Lisrel or AMOS. The guidelines most widely followed in quantitative IS research will be used for analysis (Straub 1989; Gefen et al. 2000; Boudreau et al. 2001).

CONCLUSION

This study presents a research framework to assess the effects of virtuality and perceived media richness. It can contribute to a better understanding and conceptualization of emotions at work.

This paper has some limitations. First, we intend to measure perceptions, what will rely on participants' awareness of their emotional state. Further, although field research is useful in exploring real-world issues as they occur in the workplace, this design is not as strong as an experimental design (Cook and Campbell 1979). However, we contend that the application of the most rigorous principles for this kind of methodology (e.g. Bouchard 1976) helps insuring a sufficient level of rigor. Third, this research does not take into account personality that can be another important variable in the context of IT use according to recent research (McElroy et al. 2007). For instance, Parkinson (1996) asserts that culture and socialization can modify emotional reactions.

In spite of these limitations, this research has also several theoretical and practical contributions. Chudoba et al. (2005) studied the consequences of virtual work on team performance and they found that distance alone could not explain team performance. However, their paper does not address the emotional consequences of virtual work. Our research is an attempt to fill in this gap. We focus on social and emotional consequences of distance and perceived richness of the media, by introducing isolation and emotions at work. Therefore, our work can extend prior IS research on the effects of distance and virtuality. Furthermore, work at distance and this intensive use of IT has often been presented with a positive point of view: IT enable employees to better organize their work and to be more efficient. Our research model opens the possibility to see emerging other types of reactions such as stress and isolation. This issue is a contemporary one and it echoes recent preoccupations of companies and government about employee stress.

REFERENCES

- Ahuja, M.K., Chudoba, K.M., Kacmar, C.J., McKnight, D.H., and George, J.F. "IT Road Warriors: Balancing Work-Family Conflict, Job Autonomy, and Work Overload to Mitigate Turnover Intentions," *Mis Quarterly* (31:1) 2007, pp 1-17.
- Ahuja, M.K., and Thatcher, J.B. "Moving beyond intentions and toward the theory of trying: effects of work environment and gender on post-adoption information technology use," *MIS Quarterly* (29:3) 2005, pp 427-459.
- Anis, J. *Texte et Ordinateur, L'écriture Réinventée ?* De Boeck Université, Bruxelles, 1998.
- Arling, P., and Subramani, M. "Being There Versus Being Wired: The Effect of Collocation on Social Capital in Distributed Teams," 26th International Conference on Information Systems, Las Vegas, USA, 2005, pp. 563-575.
- Bartlett, C.A., and Ghoshal, S. *L'entreprise Individualisée: Une Nouvelle Logique de Management*, 1998.
- Bouchard, T.J. "Field Research Methods: Interviewing, Questionnaires, Participant Observation, Unobtrusive Measures," in: *Handbook of Industrial and Organizational Psychology*, M.D. Dunnette (ed.), Rand McNally, Chicago, 1976.
- Boudreau, M.-C., Gefen, D., and Straub, D. "Validation in IS Research: A State-of-the-Art Assessment," *MIS Quarterly* (25:1) 2001, pp 1-26.
- Briner, R.B. "Emotions and Organizations: A Decade of Development," *Human relations* (57:10) 2004, pp 1383-1362.
- Carlson, J.R., and Zmud, R.W. "Channel Expansion Theory and the Experiential Nature of Media Richness Perceptions," *Academy of Management Journal* (42:2) 1999, pp 153-170.
- Cascio, W.F. "Managing a Virtual Workplace," *Academy of Management Executive* (14:3) 2000, pp 81-90.
- Chidambaram, L., and Tung, L.L. "Is Out of Sight, Out of Mind? An Empirical Study of Social Loafing in Technology-Supported Groups," *Information Systems Research* (16:2) 2005, pp 149-168.
- Chudoba, K.M., Wynn, E., Lu, M., and Watson-Manheim, M.B. "How virtual are we? Measuring virtuality and understanding its impact in a global organization," *Information Systems Journal* (15:4) 2005, pp 279-306.
- Coat, F., and Favier, M. "La Réalité de la Virtualité : Le Cas des Equipes Virtuelles," 5ème colloque AIM (Association Information et Management), Montpellier, 2000, pp. 28-29
- Colligan, T.W., and Higgins, E.M. "Workplace Stress: Etiology and Consequences," *Journal of Workplace Behavioral Health* (21:2) 2005, pp 89-97.
- Conger, J.A., and Kanungo, R.N. "The Empowerment Process: Integrating Theory and Practice," *Academy of Management Review* (13:3) 1988, pp 471-482.
- Cook, T.D., and Campbell, D.T. *Quasi Experimentation: Design and Analytical Issues for Field Settings* Rand McNally, Chicago, 1979.
- Coppola, N.W., Hiltz, S.R., and Rotter, N.G. "Becoming a Virtual Professor: Pedagogical Roles and Asynchronous Learning Networks," *Journal of Management Information Systems* (18:4), Spring 2002, pp 169-189.
- Daft, R., and Lengel, R. "Information Richness: A New Approach to Managerial Behavior and Organization Design," *Research in Organizational Behavior* (6) 1984, pp 191-233.

- Daft, R.L., and Lengel, R.H. "Organizational Information Requirements, Media Richness and Structural Design," *Management Science* (32:5) 1986, pp 554-571.
- Daft, R.L., Lengel, R.H., and Trevino, L.K. "Message Equivocality, Media Selection, and Manager Performance: Implications for Information Systems," *MIS Quarterly* (11:3) 1987, pp 355-366.
- Damasio, A.R. *Descartes' Error: Emotion, Reason, and the Human Brain* Putnam Publishing Group, New York, 1994.
- De Dreu, C.K.W., West, M.A., Fisher, A.H., and MacCurtain, S. "Origins and Consequences of Emotions in Organizational Teams," in: *Emotions at Work: Theory, Research and Applications for Management*, R.L. Payne and C.L. Cooper (eds.), John Wiley & Sons, Chichester, England, 2001.
- Fineman, S. *Emotion in Organizations* Sage Publications, London, 1993.
- Fritz, M.B.W., Narasimhan, S., and Hyeun-Suk, R. "Communication and Coordination in the Virtual Office," *Journal of Management Information Systems* (14:4), Spring 1998, pp 7-28.
- Gefen, D., Straub, D.W., and Boudreau, M.-C. "Structural Equation Modeling and Regression: Guidelines for Research Practice," *Communications Of The Association For Information Systems* (4:7) 2000, pp 1-70.
- Goleman, D., Boyatzis, R., and McKee, A. *L'intelligence Emotionnelle au Travail* Village Mondial, Paris, 2002.
- Hareli, S., Shomrat, N., and Biger, N. "The Role of Emotions in Employee's Explanations for Failure in the Workplace," *Journal of Managerial Psychology* (20:8) 2005, pp 663-680.
- Hinds, P., and Bailey, D. "Virtual Team Performance: Modeling the Impact of Temporal and Geographic Virtuality," *Academy of Management Best Paper Proceedings*, Toronto, Canada, 2000.
- Hochschild, A.R. *The managed Heart: Commercialization of Human Feeling* University of California Press, 2nd Edition, Berkeley and Los Angeles, California, 1983.
- Horney, K. *Our Inner Conflicts: A Constructive Theory of Neurosis* Norton, New York, 1945.
- Jarvenpaa, S.L., and Leidner, D.E. "An Information Company in Mexico: Extending the Resource-Based View of the Firm to a Developing Country Context," *Information Systems Research* (9:4) 1998, pp 151-183.
- Kayworth, T.R., and Leidner, D.E. "Leadership Effectiveness in Global Virtual Teams," *Journal of Management Information Systems* (18:3) 2001, pp 7-40.
- Markus, L.M. "Electronic Mail as the Medium of Managerial Choice," *Organization Science* (5:4) 1994, pp 502-527.
- Marshall, G.W., Michaels, C.E., and Mulki, J.P. "Workplace isolation: Exploring the construct and its measurement," *Psychology & Marketing* (24:3) 2007, pp 195-223.
- McElroy, J.C., Hendrickson, A.R., Townsend, A.M., and DeMarie, S.M. "Dispositional Factors in Internet Use: Personality versus Cognitive Style," *MIS Quarterly* (31:4) 2007, pp 809-820.
- Metzger, J.-L., and Cléach, O. "Le Télétravail des Cadres: entre Suractivité et Apprentissage de Nouvelles Temporalités," *Sociologie du Travail* (46) 2004, pp 433-450.
- Moore, J.E. "One Road to Turnover: An Examination of Work Exhaustion in Technology Professionals," *MIS Quarterly* (24:1) 2000, pp 141-168.
- Moreland, R.L., and Myaskovsky, L. "Explaining the Performance Benefits of Group Training: Transactive Memory or Improved Communication?," *Organizational Behavior & Human Decision Processes* (82) 2000, pp 117-133.
- O'Leary, M., Orlikowski, W., and Yates, J. "Distributed Work over the Centuries : Trust and Control in the Hudson's Bay Company, 1670-1826," in: *Distributed Work*, P.H.S. Kiesler (ed.), The MIT Press, Cambridge MA, 2002, pp. 27-54.
- Olson, M.H. "New Information Technology and Organizational Culture," *MIS Quarterly* (6:4), Dec82 Special Issue 1982, pp 71-92.
- Parkinson, B. "Emotions are social," *British Journal of Psychology* (87:663-683) 1996.
- Piccoli, G., and Ives, B. "Trust and the Unintended Effects of Behavior Control in Virtual Teams," *MIS Quarterly* (27:3) 2003, pp 365-395.
- Pinsonneault, A., and Kraemer, K.L. "Survey Research Methodology in Management Information Systems: An Assessment," *Journal of Management Information Systems* (10:2), Fall 1993, pp 75-105.
- Rafaeli, A., and Worline, M.C. "Individual Emotion in Work Organizations," *Social Science Information* (40) 2001, pp 95-123.
- Ringle, C.M., Wende, S., and Will, A. "Smart PLS," U.o. Hamburg (ed.), University of Hamburg, , Hamburg, Germany, 2005.
- Soares, A. "Au Coeur des Services : Les Larmes au Travail," *Revue PISTES* (2:2) 2000.
- Spreitzer, G.M. "Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation," *Academy of Management Journal* (38:5) 1995, pp 1442-1465.
- Stanley, R.O., and Burrows, G.D. "Varieties and Functions of Human Emotion," in: *Emotions at Work*, R.L.P.a.C.L. Cooper (ed.), John Wiley and Sons, 2001.
- Straub, D.W. "Validating Instruments in MIS Research," *MIS Quarterly* (13:2) 1989, pp 147-166.

- Tarafdar, M., Tu, Q., Ragu-Nathan, B.S., and Ragu-Nathan, T.S. "The Impact of Technostress on Role Stress and Productivity," *Journal of Management Information Systems* (24:1) 2007, pp 301-328.
- Thompson, R., Compeau, D., and Higgins, C. "Intentions to Use Information Technologies: An Integrative Model," *Journal of Organizational & End User Computing* (18:3) 2006, pp 25-46.
- Thompson, R.L., Higgins, C.A., and Howell, J.M. "Influence of Experience on Personal Computer Utilization: Testing a Conceptual Model," *Journal of Management Information Systems* (11:1) 1994, pp 167-187.
- Venkatesh, V. "Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model," *Information Systems Research* (11:4) 2000, pp 342-365.
- Venkatesh, V., Maruping, L.M., and Brown, S.A. "Role of time in self-prediction of behavior," *Organizational Behavior & Human Decision Processes* (100:2) 2006, pp 160-176.
- Walther, J.B. "Time Effects in Computer-Mediated Groups : Past, Present and Future," in: *Distributed work*, P.H.S. Kiesler (ed.), The MIT Press, Cambridge MA, 2002, pp. 235-257.
- Warr, P. "The Measurement of Well-Being and Other Aspects of Mental Health," *Journal of Occupational Psychology* (63) 1990, pp 193-210.
- Yates, J., and Orlikowski, W.J. "Genres of Organizational Communication: A Structural Approach to Studying Communication and Media," *Academy of Management Review* (17:2), April 1992, pp 299-326.