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'Connected' presence: the emergence of a new repertoire for managing social relationships in a changing communication technoscape

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Abstract. The aim of this research is to understand how the transformation of the communication technoscape allows for the development of particular patterns in the construction of social bonds. It provides evidence for the development of a 'connected' management of relationships, in which the (physically) absent party gains presence through the multiplication of mediated communication gestures on both sides, up to the point where copresent interactions and mediated distant exchanges seem woven into a single, seamless web. After reviewing some of the current social-science research, I rely on empirical studies of the uses of the home telephone, the mobile phone, and mobile text messaging in France to discuss how this particular repertoire of 'connected' relationships has gradually crystallized as these technologies have become widespread and as each additional communication resource has been made available to users. I also describe how such a 'connected' mode coexists with a previous way of managing 'mediated' relationships, in which communication technologies were thought to substitute or compensate for the rarity of face-to-face interactions.

Introduction

The ways absent ones make themselves present have been many. However, the material resources that support absent presence might be rapidly growing in number with the advent of the so-called 'information society'. Mobile phones, e-mail, mobile messaging, to name a few, make for a changing technoscape. The aim of this paper is to understand how the transformation of this technoscape allows for the development of a particular pattern of construction of social relationships—that of the 'connected' management of relationships, in which the (physically) absent party renders himself or herself present by multiplying mediated communication gestures up to the point where copresent interactions and mediated communication seem woven in a seamless web. I will proceed in the first part of the paper by reviewing some of the current social research on the uses of communication technologies. Whereas research focusing on single mediated interactions has been quite sensitive to the way in which the material technologies that enable these interactions also shape them, this has been less the case for social-science research interested in social relationships either separately, or collectively within networks or larger relational systems. One of the reasons for this is that a relationship is usually conducted over a variety of mediated interactions and that, to understand how a given relationship might be shaped by communication technologies, one needs to take into account the way the management of a given relationship will rely on the whole available technoscape. This is the aim of the second part of the paper. By bringing together three studies, on the use of the landline telephone, the mobile phone, and mobile text messaging, I want to provide evidence of a gradual shift in which communication technologies, instead of being used (however unsuccessfully) to

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compensate for the absence of our close ones, are exploited to provide a continuous pattern of mediated interactions that combine into 'connected relationships', in which the boundaries between absence and presence eventually get blurred.

A review of current social-science research on mediated interactions and relationships I will distinguish here three scales at which the issue can be raised: the 'micro' approach dealing with single mediated interactions, the 'meso' analysis of social relationships, and the 'macro' studies of social networks and communication fluxes.

Mediated interpersonal interactions

Interpersonal interactions are situated on the smallest scales of observation. In this section I consider devices designed essentially for 'private'(1) interaction between two interlocutors determined by a telephone number or an e-mail address. The field of analysis thus defined encompasses a wide range of commonly used interactional devices such as face-to-face conversation, telephone interaction (comprised of various media: cordless or fixed residential telephone, cell phone, public booth, etc), e-mail, instant messaging, SMS (short-message service), and letters. Insofar as the situation of interaction is fairly well defined and is based on the use of a particular medium, we can try to describe the relatively general way in which these situations are shaped and formatted by the technologies underlying them. In this respect the notion of mediated interaction enables us to grasp the way in which interactional practices are embedded in a material and technological base. A comparative analysis of interpersonal interaction as mediated interaction seems, until now, to have been organized around three main criteria. (2)

The first is based on the distinction between expression and communication. This distinction was initially proposed by Goffman (1969) to account for the specific characteristics of face-to-face interaction. Expression consists of the gestures, signs, vocalizations, noises, and movements produced by individuals, usually involuntarily. These acts remain connected to their sources and have meaning only in their original context. They say nothing about things in general; their meaning is relative to the person who produced them. By opposition, Goffman limits the notion of communication to the use of linguistic signs. In this particular and narrow sense, 'communication' is related to symbolic and intentional utterances concerning things, events, or ideas. Unlike expression, it can be abstract and detached from the situation; it can relate to the past, to distant events, and to concepts. This distinction has enabled various authors to contrast different mediated interactions, often by surreptitiously introducing a form of hierarchy of modes of interaction. (3) From an interactionist point of view, people make their actions mutually intelligible, and shape their behavior accordingly by grasping all perceptible cues. The more expression there is in an interaction, the more there are available contextual cues, and the more the interaction will be

⁽¹⁾ Very often this type of interpersonal interaction is visible, either directly or via a medium, to interlocutors other than the two main protagonists. The more or less interpersonal and private nature of the interaction seems, in the final analysis, to be a property negotiated in the course of situations which can involve third parties: an example is the teenager who moves away from the group when he or she receives a call on his or her mobile (Green, 2001).

⁽²⁾ For a comparative discussion of various forms of mediated 'conversation', see, for instance, Hopper (1992) and Hutchby (2001).

⁽³⁾ It is possible to reject these hierarchies, a priori, by considering that any interaction is mediated, including face-to-face interaction (Hutchins, 1995), and that, apart from general distinctions, expression and communication must be understood in the course of interaction. The status of contextual information is also very different from one case to the next: contextual information such as background noises plays an almost incomparable role in the context of face-to-face interaction and telephone interaction.

adjusted and sustained. In this sense a telephone conversation, in which the medium screens a large number of nonverbal behaviors, could seem poor compared with the expressive richness of face-to-face interaction. (4) In a similar argument (Meyrowitz, 1985) the expressive richness of oral communication over the telephone or radio (including not only the persons talking but also the background noises of the places from which they are talking)(5) is contrasted with the expressive poorness of written interaction (such as letters or e-mail).

The second theme is based on the question of mutual attentiveness in the course of the interaction. On the one hand, we have interactions taking place, either in physical copresence (a situation of time-place unity characterizing the different forms of faceto-face interaction) or without that copresence (a situation of unity of time but not of place, as in telephone or videophone interaction, or chat rooms and instant messaging on the Internet), where certain forms of mutual adjustment and attentiveness are expected during the interaction. On the other hand, we have all the modes of interaction in which the constraint of mutual attentiveness is absent, and in which the response is perceived as delayed (use of answering-machine services and voice-message services in the context of telephone and oral interaction, and e-mail on the Internet and SMS on mobile phones in the context of electronic and textual interaction). This distinction is not independent of the first one: the less expressive a medium is, the scarcer the signs of attention from the other person and the more actors try to reassure themselves that their interlocutor is present and attentive, and that the convention of mutual attentiveness is observed. This example is particularly common in interaction on instant-message services where electronic messages are frequently sent in order to check whether the other person's attention has not been captured by another electronic conversation (Velkovska, 2002). Other distinctions can come into play in the management of reciprocity in taking turns. Here it is sometimes necessary to distinguish between ordinary conversations, in which the allocation of turns is managed by interlocutors in the frame of oral interaction that takes shape as it goes along (Sacks et al, 1974), and electronic textual interaction, in which one often has access to messages after they were written. (6)

The third theme concerns the accessibility of interlocutors on a particular medium, and especially whether or not they have to be present in a specific place in order to be reached through that medium. This question is particularly relevant to this paper, insofar as I compare the domestic or office telephone, which requires the interlocutor's presence on site, with the mobile phone, which makes a person potentially accessible wherever he or she is. Owing to its portability, the mobile phone separates interlocutors' accessibility from constraints of location, at least theoretically. In the case of the mobile phone, at the heart of the research presented here, this potentially constant accessibility with which it endows its owner, and which is its most characteristic feature, is in practice far more limited. We cannot equate (technical) accessibility and

⁽⁴⁾ Ethnomethodologists have made this an analytical advantage. In the frame of a telephone conversation, actors have to construct the mutual intelligibility of their interactions almost essentially from their verbalization. The construction of this mutual intelligibility during the course of the interaction is then empirically observable; hence the paradigmatic importance of recordings to analyze telephone conversations.

⁽⁵⁾ The expressive richness of telephone interaction does in fact also include elements of background noises which help to situate it and which often stimulate the conversation, as examples below illustrate.

⁽⁶⁾On some chat rooms on the Internet, interlocutors can visualize representations of their interlocutor's message as it is being written. This has an effect on the situation of interaction (Velkovska, 2002).

(social) availability. This availability is in fact negotiated, in several respects. First, it depends on multiple small trade-offs: taking one's cell phone with one, leaving it on or off, and answering the call oneself rather than letting the caller leave a message are all decisions determining the development of use of the mobile phone during the learning phase—a phase that is much quicker and more intense when the user is directly accessible (Licoppe and Heurtin, 2001). Second, reachability is negotiated in relation to situations, whereas availability for interaction is reaffirmed by the mention of place in the conversation—the eternal 'where are you?' in so many openings of cell-phone conversations (Laurier, 2001; Morel, 2002)—and by the explicit or implicit management of contexts of interaction: for example, by anticipating one's interlocutor's complex schedules; by exploiting resources afforded by a pause between several activities; or by isolating oneself from collective situations to delimit a 'private' frame of interaction within a public space (Green, 2001; Licoppe and Heurtin, 2002; Weilenmann and Larsson, 2001).

But the level of interaction does not cover all the questions raised by articulations between ICT (information and communication technology) and sociability. On a far broader temporal scale than that of interactions lies the question of interpersonal relations.

Social relationships equipped by communication devices

A relationship stretches over a period of time that exceeds individual interactions. As it develops it is distributed in a multiplicity of contexts and situations, so that its permanence cannot be ascribed to any specific action. In an interactionist and constructivist perspective, a relationship is presented as a sequence of situated exchanges and mediated interactions. Each of these mediated interactions reactivates, reaffirms, and reconfigures the relationship. On the other hand, the relationship is part of the participative framework in which the interaction takes place. It may be either directly referred to in subsequent exchanges or clearly referred to in the interaction in the form of signs of the link (Goffman, 1971). Eventually, the relationship assumes the metaphoric form of a 'continuous conversation', consisting of a multitude of interactions, united in time through the construction of shared expectations and routines, and of a common world (Berger and Luckmann, 1966). Because of this construction of a shared world in which the interpersonal link is constituted reflexively like an autonomous form, its representation is detached from the interactions and situations in which it is affirmed and constructed. It fits into typologies of roles and identities which can be discussed in terms of marital, friendly, parental, community, and other relations. In this respect the analysis of interpersonal relations lies between the constructivist perspective of a link that is reaffirmed and reconstructed in each interaction, and that should be understood as an accomplishment, and a more detached point of view in which the relationship is seen as an objectified form, comparable with others.

From the point of view of the embeddedness of interpersonal links in communication devices, the issue cannot be treated in the same way as in the case of interaction. We cannot talk of mediated relationships in the same way as we spoke of mediated interactions. Many interactions constituting a link tend to be distributed over a wide variety of distinct technical mediations and contexts, depending on situated and interdependent trade-offs. The fact that the link can be activated in different social worlds is probably precisely a characteristic of a strong link (Bidart, 1997). As a result, the relationship is also enhanced by the variety of media and points of access boosting and stimulating it. It is, furthermore, highly likely that people who see one another also telephone one another; accordingly, the more often people see one another the more

they telephone one another (Licoppe and Smoreda, 2000). The relationship is played out across the entire technological landscape in which it is set.

In fact the question of the relationship between interpersonal links has been raised above all in relation to the geographic separation of actors and to the technological implications of communication in the construction and maintenance of bonds between people over distances. In the case of the maintenance of a bond, the idea is that communication technologies compensate for distance and help to reestablish relational proximity threatened by geographic separation. The telephone has been promoted since its origins as a way of talking and maintaining relations over a distance (Fischer, 1992). As far as the construction of a bond is concerned, the problem arose again with electronic communication services, which raised many questions about the possibility of creating strong ties and communities without ever meeting, simply through interaction on the Internet.⁽⁷⁾ The liveliness of these debates is, in my view, a symptom of the difficulty of conceiving of the establishment of strong ties without moments of physical copresence—that is, without any face-to-face interaction.

Table 1. Types of relations, according to spatial and relational distance (Morley, 2000).

Relational distance	Spatial distance	
	close	distant
close distant	member of the community foreign	'virtual' relationship and diasporas exotic

If we draw up a table of types of relationship, depending on geographic proximity and relational proximity (table 1), the cell corresponding to the role of distance-communication devices in relation to interpersonal links is that of strong links between distant persons, with two types of case. First, a strong link is formed in various situations of initial sharing of a common place from which the actors moved away, as in the case of parents who remain in their home regions after their children move away, or in the case of diasporas. This is the main context of the substitution model—that is, the use of communication technologies to maintain the relationship. Interactional devices compensate for spatial separation and thus reactivate and reaffirm the original link. Second, the relationship is built up over a distance through electronic mediations, perhaps without the actors ever meeting and without them ever sharing a real and mythical place in which the link is rooted. Such 'virtual' relations are consequently a problem: acknowledging their existence means giving up the idea of a shared experience of a place as the foundation of the link, probably one of the most deep-rooted assumptions of our representations of sociability.

Note, to conclude, that the interpretation according to which communication devices help to repair, maintain, and reaffirm a link weakened by distance, or to create a link ex nihilo by directly overcoming distance, is based on the representation of a relationship built up by the participants. This construction may involve management of the relationship that is explicit, regulated, or calculated to a greater or lesser degree, and usage of communication tools, as resources, that is sometimes

⁽⁷⁾This possibility is found in the arguments put forward by the designers of interpersonal-communication services on electronic networks, and in public debates around the spread of the Internet in the 1990s. Most of the work done on 'virtual communities' has tried to account for it or to contradict it on a sociological basis (Calhoun, 1998; Di Maggio et al, 2001; Smith and Kollock, 1999; Wellman, 1999).

tactical or strategic. (8) Thus, distance-communication devices equip the relationship. In this approach they allow the negotiation of a compromise between the relational deficit created by absence, and investments needed to maintain the 'continuous and uninterrupted conversation' that is the very substance of the link.

Talking of interpersonal links enables us to expand our analysis to a more macroscopic level, that of egocentric networks of interpersonal relations that constitute the substance of sociability. The question of information technologies is taken into account very differently here.

Analysis of social networks and systems of flux

At this more macroscopic level two main types of approach can be distinguished: those which focus on the structure of networks of links; and those which put interpersonal networks into the background and focus on the systems of flows and exchanges circulating through them.

The structural paradigm of the analysis of social networks (Burt, 1992; Degenne and Forsé 1994; Lazega, 1992; Lin, 2001) operates directly on the networked space of interpersonal links. The situation in this case is that of an individual calculating his or her opportunities in that space, the local topology of which configures his or her social capital. The focal point is therefore the network of links as an area of opportunities and constraints. Without denying the possibility of multiplex networks, with their entanglement of different types of mediation and interactional practices, the structural analysis of networks tends, often for empirical reasons, to start from relatively exhaustive data concerning one channel of interaction, to the detriment of all others. It is therefore inclined to neglect how the multiplex nature of links could, if taken into account, reshape the results. An alternative is provided by models in which the network of links constitutes a configuration in which all the elements are interdependent (what I have called a relational economy), in which the link is historically cemented through a variety of contexts and situations, and in which the main idea is to account for this configuration of networks of sociability by means of generative models (Gribaudi, 1999). But these configurational approaches started only very recently to take into account the multiplicity of modes of interaction and resources on the communicational scene in which the relationship is set, as a decisive element in the construction and nature of the personal link (Loitron, forthcoming). Sociology has also focused on the issue of networks of interpersonal relations and has made it a particular repertoire of pragmatic justification based on the mobilization of links, in which the individual is motivated by a desire to be connected, equipped with a set of links which he or she manages in relation to fluctuating objectives and temporary and revisable plans, and in which his or her greatness lies in his or her capacity not to remain stagnant but to jump from one project to the next (Boltanski and Chiapello, 1999). As these authors so rightly point out, the individual operating in the 'cité connexionniste' (connexionist world) is equipped with information technologies (page 177), but they stop at that as far as communication technologies are concerned. One would imagine that the actor in this society probably has fewer commitments and is more mobile in social networks in proportion to them having more equipment in communication resources.

Another set of research has stemmed from work in several disciplines, including sociology, anthropology, and geography. These approaches operate on a broader scale than the analysis of networks of sociability, and consider mediated interactions as a global system of flows. This flow of information and significations is superimposed over flows of persons and goods (Hannerz, 1990). It is structured in social networks

with nodes and links, embedded in a 'technological' network in which digitized electronic data circulate. This convergence of information technologies and social structure creates a new material base for the realization of activities through the social structure (Castells, 1996). By considering the structure of networks of links as a given environment, this type of analysis tries to articulate information-exchange activities and communication devices by focusing on the possibilities afforded by the digitization of exchanges in a given configuration of technologies and networks. This type of configuration conditions a particular degree of convergence and integration of the formats of exchange (insofar as the same network can transport multimedia flows). In dependence on the level of integration of media in the flows—which in turn depends on the ecology characteristic of networks of machines, technologies, organizations, or texts in which the exchanges are set—different systems of flows will, to differing degrees, have the capacity to approach distant events, places, and persons across time and space (Urry, 2000). Far from the situated and mediated character of interactions, the general distribution of possible mediatizations in this type of system of flows is then metaphorically condensed in a property similar to viscosity. This property is considered to be characteristic of a system of flows treated as a liquid, which percolates or diffuses by capillarity in a porous material consisting of interlocking social networks and technical networks underlying the system of information flows (Mol and Law, 1994; Urry, 2000).

I note, finally, that the development and growing use of communication devices affords a new opportunity for research on mediated sociability on all scales, from mediated interaction to systems of flows. It is empirically conceivable—owing to the traceability inherent in digitized interaction, and provided that current regulations concerning the confidentiality of such data are observed⁽⁹⁾—to draw up an inventory of interpersonal communication practices by compiling databases on the exchanges they involve and on their content over substantial periods of time. It is therefore conceivable, for the first time, to constitute empirical data providing access to electronically mediated practices of sociability on the three scales considered here. The question of understanding the articulation between mediated sociability and communication devices thus assumes particular depth. This is what I intend to do in this paper by concentrating on the intermediate and totally essential scale of interpersonal links. In particular, I aim to rethink the issue, too often neglected, of coupling between the construction of interpersonal links and the variety of communication technologies on which it can play.

Two ways to manage technologically equipped interpersonal relationships

I am therefore going to identify two configurations of ideal-type uses concerning the management of telephone relations between close friends or family. One consists of open and often long conversations in which people take the time to talk. These calls are made at appropriate times. Taking the time to speak on the telephone is read by participants as a sign of their mutual engagement in the conversation. The other configuration consists of short, frequent calls, the content of which is sometimes secondary to the fact of calling. The continuous nature of this flow of irregular interaction helps to maintain the feeling of a permanent connection, an impression that the link can be activated at any time and that one can thus experience the other's engagement in the relationship at any time. By drawing on several surveys—on the use of the

domestic telephone shortly before the diffusion of the mobile phone,⁽¹⁰⁾ on the use of the mobile phone at the time when its use grew exponentially,⁽¹¹⁾ and on the use of SMS on mobile phones at a time when its use developed rapidly and the use of mobile phones had become commonplace.⁽¹²⁾ I show how in practice each device offers different affordances to these modes of maintaining interpersonal relations (without determining their use completely) and each contributes to greater clarity and generality in users' representations of them.

It is therefore by empirically constituting this particular object of analysis and by introducing a historical dimension—that is, by considering how, in practice, these modes of managing the link are redistributed when the interactional resources available to the actors change—that I am going to attempt to shed some light on the articulation between interpersonal sociability and communication technologies. The proliferation of communication devices has changed the conditions of the game. Technological innovation and the development of consumption⁽¹³⁾ in this sector resulted in very high adoption rates of mobile phones in France between 1999 and 2001, in fairly regular growth in domestic subscriptions to the Internet over the past five years, and in strong growth in the use of SMS on mobile phones in 2000 and 2001. These waves of adoption of different technologies and interpersonal communication services are all new opportunities and constraints for maintaining relations distributed in more varied mediated interactions. But each device is not just added to the others, nor is its use substituted for a rival use. It is the entire relational economy that is 'reworked' every time by the redistribution of the technological scene on which interpersonal sociability is played out. It is precisely a part of this 'work' on sociability by communication technologies that I set out to reconstruct empirically in the paper, on the level of practice—that is, on the level of interpretation and representation of uses.

Maintaining the link over a distance by taking the time for telephone conversations: a use repertoire particularly manifest in the uses of the domestic telephone

One of the stable and recurrent results of statistical research on residential telephone communication, based on the domestic telephone, is that the more distance there is between people the longer (on average) their telephone conversations are and the longer the intervals between their calls will be (Claisse and Rowe, 1993; Rivière, 2000). This effect is particularly noteworthy when the people concerned are close friends or family. Even more striking results were obtained in a recent study on trends in telephone-related behaviors before and after people moved house (Licoppe and

⁽¹⁰⁾The study on which I draw here was undertaken in 1997 and 1998, before the upsurge of the mobile phone. It has been described in Licoppe and Smoreda (2000) and Smoreda and Licoppe (2000). It was based on the detailed traffic analysis of a thousand users over a year together with in-depth interviews about the role of the mobile phone. The results were confirmed during subsequent studies performed in 2000 with a similar protocol by Mercier, de Gournay, and Smoreda, whom I wish to thank for allowing me access to some preliminary results.

(11) A number of findings from this study have been or are in the process of being published (Licoppe and Heurtin, 2001; 2002). It relied on a similar recruitment of a sample of a thousand users and detailed analysis of their mobile-phone traffic data for a year and in-depth interviews of about fifty of them about the part played by the mobile phone in the way they managed their social relationships.

(12) In this section I draw on the reinterpretation of a purely qualitative study on uses of SMS, which relied on in-depth interviews of a sample about fifty SMS users with varied profiles, dealing with their use (or nonuse) mobile messaging in the context of managing various social relationships. I wish to thank Rivière for allowing me to use some elements relevant to the line of research developed here.

(13) The average household budget for information technologies has more than doubled since 1995, an increase related primarily to mobile phones.

Smoreda, 2000): the average duration of telephone conversations remains the same when people stay in the same geographical area; it becomes shorter when people move closer together; it becomes longer when people move further apart. Trends in the frequency of calls are thus the converse of those in the duration of calls.

The most usual interpretation of this particularly robust effect consists in relating geographic distance to increasingly rare opportunities for face-to-face interaction. In this interpretation, implicitly based on the primacy of face-to-face contact as regards the richness and fullness of interaction, geographic distance is equated to relational distance. The telephone then becomes a resource for maintaining and nurturing the link, as in the following example of a student: "If I don't call them for a week [my parents] worry about me and phone me, so I never forget ... or rarely." These expectations develop into veritable telephone rituals, as in the case of the following young woman who calls her father at home with strict regularity and complains of the lack of spontaneity in this type of telephone relationship: "It's difficult for me, it's not natural to phone for example every Sunday afternoon, to like talk about my week. I prefer it when it's kind of, you know, I think about my father and I call him." In this case, not calling can undermine the emotional frame of the relationship. The ritual is instititionalized and the call itself becomes an obligation, as in the following case of a student and his grandmother: "Phoning my grandmother is a duty. I do it because I know that it'll please her, but I haven't got much to say to her. I call for the sake of calling. With my mother it's so that she doesn't worry, to know how she is, to maintain contact despite the distance."

This type of call tends to be relatively long. People take the time to talk, to exchange news without any clear purpose, as in the case of a young woman who calls her parents "without having anything special to say, just to talk", to tell them about "some silly little thing that happened the day before or in the street, I don't know, nothing at all. *And important things*." For both persons the fact of having an open conversation becomes a sign of the bond (Goffman, 1971), which is especially important as the relationship has become more vulnerable as a result of permanent or temporary physical distance. This reflexive interpretation in terms of the maintenance of the link is, moreover, fairly explicit, as in the case of the following student whose boyfriend lived far away, and who relates how she called him every evening "usually for three-quarters of an hour" to tell him "what we were going to do, when we were going to see each other" but mostly "we told each other about our days ... [and then] we had the impression we weren't so far apart. It brings one closer."

Our statistical studies on the distribution of these long calls show that calls made at home are mostly to other domestic telephones. Most of them are made in the evening after 7 PM and tend to last longer the later it is. This tendency corresponds to the higher probability that the active members of the household will be at home and available. In the evening, when the most urgent domestic chores have been taken care of, people have to choose between talking on the telephone and other activities considered as relaxation. This is the choice of the following young woman who lives alone with her child: "My pleasure in the evening isn't watching the telly, it's phoning. Since everyone's always very busy [during the day], we phone one another a lot more." The number of calls decreases sharply after 10 PM, and the average duration of calls made later than that is substantially longer (Licoppe and Smoreda, 2000). This is related to two effects: first, relatively explicit conventions of courtesy which make calls after 10 PM impolite, except in the case of very close friends and family; second, after 10 PM people are generally expected to be more available as most constraining routine domestic activities are over. Because they occur in domestic settings, these long

conversations between people who know each other very well are influenced by the rhythms and time frames of each household.

We shall call this use repertoire the 'conversational' mode of managing telephone relations between close friends and family, as it consists of open, relatively long conversations in which people ask about each other, at a time often set aside for that purpose. Here the word 'conversational' stresses the open nature of the interaction, in which time is taken to let it develop, rather than the idea of a dialogue with a sequence of reciprocal taking of turns. In some cases one of the interlocutors will talk all or almost all of the time. The aim is then to tell the other person about something that happened to him or her, no matter how commonplace it may be, and thus to reaffirm the link by confirming a shared memory of events not experienced together.

This conversational mode is not the only possible repertoire. I also perceive, especially with young users, the representation of another mode of telephone interaction in which certain occasional, short, targeted calls are starting to be given a form of coherence as a distinct relational mode. For example, one of the friends of a young women leaves multiple messages on the answering machine of her home telephone (a habit in their group): "Sometimes he leaves me five messages in a row: 'I'm calling you. What're you doing? You're not in, I'm thinking of you'." A distinction emerges between a multiplication of very brief calls, and calls made in a more conversational mode, as in the case of the following young woman who makes many practical calls during the day to her boyfriend but calls him every evening in another mode: "On the other hand, in the evening we just tell each other everything that happened in the day." The role of this multiplication of calls in maintaining relations between close friends is only rarely described by users of the domestic telephone. The following woman is an exception. She and her best friend "call each other every evening, sometimes up to four times in the same evening"; "we don't spend ages on the phone, it's not just to talk rubbish, for fun ... she leaves messages on my answering machine, I call her back to tell her I'm getting ready, I'm home." This type of call is not intended simply to give a sign of life; for her it has a real function of reassurance: "we reassure each other". This use is far more firmly rooted in the habits and interpretations of users of the mobile phone, as we shall see in the following section.

Maintaining the link over a distance via a 'continuous' telephonic presence: a use repertoire centred on connection

Calls made on mobile phones are shorter than those made on fixed telephones: on average one and a half minutes as opposed to five minutes. In a study undertaken in 1999 on new users of the mobile phone, whose calls and behaviors were monitored throughout the year, it was observed that short calls of less than 45 seconds accounted for half of all calls made on mobile phones (compared with about one third only of all calls from domestic telephones). This significant development of frequent short calls on the mobile phone was even more marked among young users. In all age groups, users of the mobile phone participating in the study deployed a fairly precise representation of the development of uses based on short calls for a specific purpose. Users usually give two general reasons for this:

- 1. The need for coordination: saying when one is to arrive, letting the person know one is to be late, checking an appointment or an access code, etc. The representation of noteworthy uses of the mobile phone almost always includes a story, personal or not, or urgent and extraordinary coordination that would not have been possible without the device.
- 2. The shortening of calls because of the cost but also because of situations. As in theory (but not in practice) it can be used at any time and in any place, the mobile phone

amplifies the risk of disturbing one's interlocutor in a situation unsuited to telephone communication. In this case the interlocutor makes his or her embarrassment obvious, shortens the interaction, and politely postpones it.

Such a multiplication of short mobile phone calls has been observed in teen behavior in Scandinavia, and described as a regime of 'hypercoordination' (Ling and Yttri, 2002). I want to emphasize here a different implication of constant accessibility that bears on the construction of very close relations between partners or friends, and is more aptly captured with the idea of 'connected' relationships. In a partly autonomous private sphere, strong bonds are reaffirmed and experienced through a series of interactions constituting a 'continuous conversation' (Berger and Kellner, 1964; Berger and Luckmann, 1966). Its success reaffirms the importance and status of the relationship for the protagonists, and simultaneously confirms the stabilization of a world of meaning discussed and constructed in the context of this conversation. Such relations are both structuring and precarious, and their maintenance is important. Consequently, the possibility of being able to reach each other from anywhere and at any time is a new resource and a new threat: a resource because the possibilities of making this private conversation even more continuous are enhanced; a threat because, as a result of this theoretical accessibility, each failure indicates unavailability, suggesting that one of the protagonists is too absorbed in a situation to resume the relationship. It is in this context that the mobile phone is used to reassure the other person and to reaffirm the link, by means of very short calls. (14) In the following example a sailing enthusiast regularly calls his wife "to tell her that I'll be late, to let her know ...". In his use of the mobile phone "there is the aspect of security and that of domestic organization". In other words, he distinguishes between one type of call for coordination and other, short calls to reassure. The aims of reassurance and of maintaining a close link through small communicative gestures tend to merge, as in the following example of a woman and her husband, a truck driver:

"With my husband, it's mainly to know where he is. Because he works in Saint Denis, which is quite a way away, and he doesn't have easy hours ... so I do like to know where he is But on the other hand it's really nice to be able to ... because we have access to things we didn't have before. I know when my husband's got a problem with the car, he calls me, or when he's stuck on the road. I tell myself it's one less worry. ... Otherwise, I wouldn't even know where he was, and so on. Sometimes he leaves work at five, and when he gets home it's already nine, it's taken him four hours to get home: ring road jammed, Bois de Boulogne jammed Well for me who's at home, waiting, for four hours I'm on edge. And for a lot of situations it's like that."

Calling on a mobile phone becomes an act of domestic devotion in which reassurance is experienced as much in the mind as in the body. Now she can go to sleep.

Two things threaten the success of this mode of maintaining telephone relations through small gestures reaffirming a 'presence over a distance'. Its success is threatened by the unavailability of the other person, which implies a demand for justification that weighs all the more heavily on the actors when they have relied on a multiplication of calls to construct a telephonic presence and maintain the relationship. There is also the threat of seeing the calls swing into the interpretative register of surveillance:

"Sometimes when I call my husband and I hear that noise I say 'But where are you, in a bar?" I sense he's uncomfortable and I say 'No, don't feel bad, it's okay'. And the people he's with are going to know who's on the phone. But he knows I'm casual about that. But it's true, he was really embarrassed. But it was two o'clock,

⁽¹⁴⁾This notion of distance is taken here in a subjective sense, as perceived and translated by the protagonists in terms of reciprocal rights and duties.

and usually he's already at work. And that time he'd left later, he was with his work mates. But so embarrassed!"

Note that information on the context is provided unintentionally by the receiver's sound environment.

There are several reasons for the correspondence between use of the mobile phone and the possibility of multiplying small communication gestures to maintain a presence over a distance. First, the mobile phone is portable, to the extent of seeming to be an extension of its owner, a personal object constantly there, at hand. Second, as there is no mobile directory, one *gives* one's number to a chosen interlocutor (Licoppe and Heurtin, 2001). Explicitly inscribed in an economy of gift and countergift, the ritual exchange of mobile phone numbers represents, for the protagonists, their entry into a mode of access of which the frequency and continuity of calls are no longer limited by access to localized communication tools. Third, the mobile phone includes an extensively used, portable, condensed list of the most important and frequently called numbers. It minimizes the cognitive efforts (through memorization of numbers, maintenance and mobilization of an address list), ergonomic efforts (through instant navigation at the touch of a button), and organizational efforts (it is no longer necessary to use a fixed telephone, with its local constraints) necessary to make a call. These effects have also been used to explain the rapid adoption and appropriation of mobile phones by the public at large.

Thus equipped, it does seem possible to engage one's body, and the terminal that is its extension, in telephone communication at any time, from almost anywhere, in a few seconds, and with a few quick movements. This economy of effort favors the development of connected uses in which the multiplication of communication gestures means that each of them requires minimal connection efforts from the persons concerned.

What regulates this relational economy is, then, the effective availability of the caller and the receiver of the call, who, theoretically, is easily accessible but in practice is much more rarely so.⁽¹⁵⁾ Mobile phone communication is recontextualized by constraints of availability, which depend on opportunities stemming from its inscription in particular flows of activity, places, and time frames. Effective availability is thus always negotiated in situ, but within a participative frame in which it may initially be expected from the other party.

The possibility of being able to telephone at any time from one's mobile phone necessarily comes up against the constraints of the interlocutor's availability. Therefore, the caller has to anticipate, calculate, and evaluate how to maximize the probability of that availability. Users' anticipation becomes increasingly complex as they try to imagine their interlocutors' schedules as is evident from one woman's account.

"It depends, I see my husband, depending on the time, well, for example, I know it's a time when I don't really know where he is, if he's on his way home or still at work, so I'll first phone him at work because often he's still at work rather than coming home. But there are times, in the morning for example, it's happened that I've needed to reach him, like when I've got the wrong key or something like that, I get him directly on his mobile, because I know he's still in the car. At lunch I phone on his mobile because I tell myself he's gone to eat, that he's not at work anymore. It depends on the time."

The degree of the person's accessibility—the fact of taking calls directly rather than using the message service, which increases chances of successful anticipation of an interlocutor's availability—is a decisive factor in the development of mobile traffic:

⁽¹⁵⁾ It thus constitutes an element of this age of access, put forward as a characteristic of contemporary capitalism (Rifkin, 2000).

the more reachable a user is, the more rapidly his or her mobile phone traffic will increase (Licoppe and Heurtin, 2001).

Availability is not, of course, the only element of regulation in this interactional economy. The question of cost also plays a part, albeit an ambiguous one. The possibility of telephoning free of charge stimulates the fantasy of a continuous connection. In the year 2000, operators launched (and immediately withdrew) special offers with free calls in the evenings and on weekends. Several interviewees told us about friends of theirs who used this possibility to maintain a constant link, with the mobile on and connected next to their beds so that they could listen to each other sleeping. These 'urban myths' express the desire for constant mobile connection, now exploited in several advertisements. But the daily reality of users of mobiles is prepaid cards and flat rates. Many say they shorten their calls on mobile phones, even if it means giving up interaction that was previously in a conversational mode, as in the case of the following student and his girlfriend: "Uh, yeah, not for my girlfriend, I prefer the mobile because otherwise it takes hours, just for one call!" In this context of optimization under constraint, the habit of multiplying short calls makes it possible to maintain a more 'continuous' presence without exceeding the limits of the subscription.

What is thus outlined is a somewhat vague modality in which the link is maintained by a strengthened 'presence' via short and frequent calls from mobile phones. The act of calling can then count more than what is said. In this sense, we can refer by analogy to an almost 'phatic' mode of maintaining the link (Jakobson, 1963). Rather than constructing a shared experience by telling each other about small and big events during the day and the week, interlocutors exchange small expressive messages signaling a perception, a feeling, or an emotion, or requiring from the other person the same type of expressive message. In the case of a very close relationship, these calls tend to be as frequent as possible because the more that this presence maintained over a distance through mobile phones is continuous, the more reassuring it is in terms of the link.

This management of the relationship tends to detach telephone interaction from the places in which it takes place. The relationship seems to be reduced to the connection allowing this mediated presence. Wherever they go, individuals seem to carry their network of connections which could be activated telephonically at any moment. Multiplying calls is then a way of experiencing and reassuring oneself of the permanence of the link. Here the connection is guaranteed through a device that is both technological (the mobile phone itself and the network underlying the communication whose failures are sometimes palpable) and social (giving the other person one's numbers, visibly leaving one's mobile on, etc). In this use repertoire the permanence of the connection (which is also a place in the networked space of social links) replaces that of ordinary places, thus supporting, through repeated trials (telephone interaction), the feeling of the longevity of social links. (16) Places and contexts are always likely to come back into these mobile phone interactions, for example, through background noises: "No, but sometimes it's maybe just to hear a background noise, something that makes us think of the place where the other person may be. Or silence, as you said when someone calls you at home. You hear the mobile voice, and at the same time no background noise. It's disturbing!" The absence of clues for identifying the place from which the other person is talking is always a problem for a proper management of the interaction.

⁽¹⁶⁾The sociologist Hallbwachs described how the repeated inscription of interactions in places gives social groups a collective memory, through the permanence of material patterns inscribed in space and the imprint of social groups on them (1997).

The configuration of connected uses is not directly determined by the nature of the relationship, even if it is more or less adapted to it. Some relationships offer it more affordance, especially those which need to be affirmed through multiple contacts, either real or potential, in which alternating telephone calls and face-to-face encounters impact on each other. Age is important here insofar as it distinguishes stages in life in which engagement in social networks takes on different forms. The younger the users of mobile phones, the larger the proportion of short calls tend to be. From one stage in life to the next, the question of availability is negotiated differently. In the later stages in life, in the last phases of friendship, certain telephone interaction can become reduced to a conversational and quasi-ritual mode, as in the following case of a pensioner and his good friends who live in the country: " ... our friendship was based on four phone calls a year, except for the times we were able to meet, so these three or four phone calls a year carry on. ... When I phoned them I spent a half an hour with them. I found that half hour in the evenings, at 8.30 or 9 PM." By contrast, with his Parisian friends, who are easier to see, occasional telephone calls remain a habit: "No, those we see the most are friends or family in Paris, just because it's easier. It's so simple to make a phone call. Can you come round this afternoon?" But the identification of his 'connected' management of close relationships as an autonomous practice seems fairly clear in all users of mobile phones; although the intensity of use may vary, its explicit identification largely cuts across differences in age and lifestyle.

The phatic mode and its repertoire of connected uses cannot be linked *unequivocally* to a technological device (the domestic telephone, the mobile phone), even if the device offers a different type of affordance for these relational practices. Thus, the mobile phone is not used only for short calls. Over 15% of the time spent on mobile phones is devoted to conversations of over fifteen minutes, which is enough for a full conversation. Like calls on domestic telephones, these long conversations on mobile phones take place after 7 PM. Even if the constraint of being at home is partly removed by the portability of the mobile terminal, that of the interlocutor's availability is not. Beyond an apparent demand for decontextualization of interaction on mobile terminals, proprieties, inscriptions in places, and domestic schedules remain determining factors for long conversations on mobile phones, because of both parties' need for availability. On the other hand, we have seen that quick calls made for coordination and reassurance are observed in the use of the fixed telephone and message services (at home, at the office, and elsewhere).

Even if material devices do not entirely determine these different configurations of use, they do offer them more or less obvious affordances. The portability of the mobile phone does seem to prompt users to telephone more and to define and interpret more clearly a connected mode of telephone interaction in which small gestures proliferate among close friends and family, inducing a reconfiguration of uses that spreads beyond the mobile phone. The introduction of new technologies and new devices therefore introduces the time dimension, both in the distribution of uses of a particular repertoire and in its degree of explication as a meaningful practice. I shall now try to explore this idea by considering a new possibility for interaction that appeared more recently on mobile terminals.

Development of SMS, a new resource for the connected link repertoire

Until now I have considered mainly telephone conversations, a mediated form of interaction that requires both parties' attention. The interactional-service scene has been substantially enhanced as regards possibilities for delayed interactions, not only in oral exchanges (message services and voice-mail boxes) but also in written communication (the most prevalent being e-mail, accessible through personal computers, and the most

recent and widely used by the general public being SMS, accessible on mobile phones). In France, SMS really took off in the year 2000. These messages of a maximum of 160 characters in text mode are written and received on mobile terminals and billed per unit or per message. Because of this structural constraint, SMS is seen as an additional resource for short, isolated communicative gestures. Because of its limited length, it does not lend itself to lengthy conversations and was immediately adopted as a resource oriented towards use in the 'connected' mode.

Before taking a closer look at SMS, it is worth noting, at least in the case of a characteristic example, how electronic interaction can quickly assume the form of 'connected' management of the relationship even without the constraint of size. In our example, the best friend of a young women (30 years old, married with one child, living in the provinces) is in England. Formerly the only contact they had was at the friend's initiative, because telephoning abroad is expensive, especially for conversational use which is common between best friends: "Before I had Internet it was usually she who phoned, I didn't phone because it's too expensive, so I didn't call, I'm very lazy to write, writing a letter, taking the paper, posting it and all that, I hardly ever do it, but an e-mail, no, I log on, I write her a little note and that's it." Writing a letter required too great a cognitive and organizational investment. With e-mail the cost is not a problem (unlike the telephone), and the effort to initiate the interaction is minimal (unlike letter writing), so that the prospect of quick, frequent exchanges is immediately opened. These two friends have effectively switched to a connected management of their relationship via e-mail: "And I discovered the pleasure of writing to her, because we answered each other, it wasn't live chatting, but we corresponded, she received my mail, she answered straight away, she sent her answer, sometimes I answered her. Sometimes it was just a sentence, that we sent like that." Once it has been established this practice can be evaluated reflexively as a mode of maintaining the link, with its form of relevance and effectiveness, and compared with others related to the conversational mode:

"And it's true that I like it because she's really a very good friend, and since we'd ... we hadn't lost touch, but we felt really far apart before we had Internet. Now that we have e-mails we keep in touch, I tell her things as if she lived next door, as if I was phoning her regularly. I have a friend in Toulouse who hasn't got e-mail, and one could say we see each other less, and even by phone, we phone each other less than my friend in England and I send e-mails."

As the scope of this paper does not allow us to consider all modes of electronic interaction, I will temporarily posit that this type of interaction corresponds closest to 'connected' management of the link, as shown in the above example. The investment required to initiate an effort is minimal, as is the financial cost, and as writing long letters takes time users tend to write many short messages. The constraint of length incorporated in SMS simply extends the general tendency in written electronic interaction. But SMS have a particular interest: because users almost always compose and read them on their mobile phone, their use is being combined with oral use of the mobile phone, discussed in the preceding section. We shall now consider a qualitative empirical study undertaken in 2000 on SMS users, from the particular viewpoint of repertories of management of personal relations on mobile terminals (see Rivière, 2002).

It is interesting to note that when we conducted this survey the vast majority of the correspondents of SMS users were very close friends or boyfriends or girlfriends and were often the people they saw most. One of the reasons given by users was the limited length of messages. With close friends, the density of the experience shared in an intense and lasting relationship allows the use of codes, allusions, and veiled references, so that this type of interaction is hardly relevant for an outsider:

"No, but that's really a hard core, it's not the same. I think it's mainly a question of complicity Yes, we allow ourselves more, well yes, that's it, I mean, we're briefer, as I said, we use allusions, things like that. Don't have to make sentences. I can imagine someone we don't know so well, or even that we do know well but who's more of an acquaintance, I can't see myself sending them a message. In this telegraphic style, all that."

This is not their only use; they also serve to sort out problems of coordination, for example.

In the context of interaction between close friends, SMS contributes significantly to strengthening telephonic presence through frequent small gestures. This mode is clearly distinguished from 'conversational' repertoires: "An SMS is a thought at that moment, and so as not to bother the other person for 5 or 10 minutes, at work. But it's just a little thought, like that. Otherwise, the phone call, rather in the evenings, I'd say, for short conversations, advice, or anything concerning the couple." Such contrasting juxtaposition is intended to delimit more clearly the repertoire of 'connected' use as a particular practice. Some users go so far as to oppose the two practices and to reject the 'conversational' mode in favor of the 'connected' mode:

"Yes, I don't know, for example, *instead of talking for three hours about our lives*, ... for example, our aim would rather be to see each other, to arrange to meet, and directly ask when we can see each other, directly through the message. *Instead of going through: yeah, you okay and so on, because in a normal call you always go through all that*. But with the SMS you go directly through the message you want to send."

What is striking in these interviews is the extent to which this sense of a 'connected' practice comes across clearly, even more so perhaps than in surveys on telephone conversations: "it's not something essential, but it shows when we're far apart like that, that we are thinking of our brother, our sister or sometimes our girlfriend." Sometimes this goes so far as a reappropriation of customary rituals of copresence, like saying good night: "It's true that SMS are great. I've got a friend who sent me one 'Good night sweetie. Have nice dreams about Tom Cruise'—a lot of things like that! It's true that before going to sleep we send short messages to people, to say good night. We don't phone them, a message is cooler."

SMS seems to allow users to decontextualize their interactions more. Almost all of them refer to 'anywhere, any time', emphasizing the impulsive nature of the message, apparently detached from habits and routines: "It's not related to my daily habits. I mean, I don't get up and say to myself, right, I'm going to send a short message to someone. It's really a question of mood. For the past few weeks I didn't think about it, so I didn't send any." Thus, the sending of short messages seems to be totally spontaneous. Users highlight the fact that it is not assigned to a particular context or place:

"On no, not at all, no special places, it just depends on where I am, if I absolutely have to send one or if I just feel like it for fun, just a little romantic message or something, it depends. So it can be at work if I've got five minutes, or at home, also because I've got five minutes, it can be in the street, anything. There aren't really special places, no."

The exchange of gestures reaffirming the person's presence and relational engagement is, in this case, a tactic in the ordinary invention of uses (de Certeau, 1984), in which situations and opportunities are exploited. This use seems to have become so natural that the materiality of the technologies fades into the background: "As soon as I have five minutes I send one. I never force myself, it's, right, let me tell you, I had five, okay, I sent you a message, there you are. And often, I often think about my kids, my girlfriend, lots of things, and then it's true, I quickly let them know that I haven't

forgotten them." This almost systematic discourse of continuous connection, and the ideology of communication anywhere at any time, take on symptomatic value here. They testify to an entrenchment of the practices and meanings associated with connected practices. But, although this discourse is, in this sense, about practice, it cannot describe accurately actual practices. When one questions the same individuals a little further they deploy a more territorialized representation of their use. Most users declare regularly sending SMS from home in the evenings and report only occasional use in public places or when they travel, and only a few mentioned regular use during office hours, at work.

Another symptom of the crystallization of 'connected' practices as a practical and discursive repertoire of the organization of interaction between close friends is the fact that SMS can constitute a resource, not of a tactical nature but of a *strategic* nature, in the management of relationships. In this case the delayed nature of interactions, the weaker demand for reciprocity, the written form, or the terminal and its screen tend to be interposed more visibly between people. There is an almost phenomenological switch to a situation in which the terminal stops being an extension of the body and starts being an outside object, ready to be apprehended as such and therefore likely to be interposed in the exchange. (17) This opacity is a symptom, as regards pragmatic engagement in use of the device, of a form of detachment constituting a resource to deal with relational difficulties. To make the expression of aggressiveness in a friendship bearable: "The SMS enables one to stand back. Even when the person calls to send a very aggressive message, there is always the telephone between you. It's less violent, I'd say. One flares up less easily, I find, and the memory of vocal aggressiveness doesn't stay in one's mind." The same applies to a loved one. For one interviewee, in love with a dancer with totally different working hours from his own (he has a daytime job, she dances at night), SMS are part of a strategy to maintain a romantic presence, to be able to say things without seeming to require a potentially awkward reply:

"Yes, I threw in somewhere ... like for example ... a sentence like 'I'm missing you', I know that if I say that on the phone there'll be a silence afterwards, not because she doesn't want to reply but because she takes it for herself and she keeps it, in fact, whereas if I put it on the phone, at least, I'm sure there won't be a silence and that I won't have to get the conversation going again afterwards. It's a sentence and then afterwards that's it."

SMS can therefore be woven into the story of the relationship, as an element that can be used to negotiate its evolution or a difficult phase:

"That's exactly what happened with my best friend. We weren't on speaking terms anymore: for two or three months we just sent each other SMS, but ghastly stuff. I can't even tell you what words we used. He phoned me two weeks ago and said, 'listen, in fact, I was half joking in those messages. I loved irritating you and so on 'cause I know you get upset so easily ...'. So, for example, if it had been on the phone he wouldn't have been able to backtrack You see, it's not the same We let it go as if he was just teasing me whereas on the phone he wouldn't have been able to tease me like that."

The paradox is, then, that through this clarification as a particular form of mediation and strategic resource in the management of relations SMS can be appropriated in hybrid practices in which they remain small communication gestures yet in which they correspond to a ritualized and organized rather than connected relational mode.

⁽¹⁷⁾This type of switch was discussed in the case of the computer mouse (Dourish, 2001) and extended to the case of the mobile phone (Relieu, 2002).

This is, for example, the case in exceptional configurations in which because of the complexity of the relationship, SMS seem to be the only possible medium for interaction:

Q: "Yes, yes okay and with your friend before how ... I mean what type of message is it?"

A: "With my friend before we didn't send each other many SMS, it's true that since we're not together anymore, he sends me messages and we send them to each other, I'd say, once a week."

Q: "Yes."

A: "With a nice little note or ..."

Q: "So this is rather ..."

A: "Yes it's rather, I don't know or a 'I miss you' or an 'I'm thinking of you' at some stage in ... I don't know It's the kind of situation where the SMS is great because since we've broken up we don't phone each other anymore, the situation is tricky, but it doesn't mean that when we're really missing each other or I don't know, at 11 o'clock in the evening, yeah, it's good to have. We can't phone each other but you can still say something, and so can the other person, so that's great."

Conclusion

By synthesizing several studies of communications on the domestic telephone and the mobile phone, in the form of conversations or SMS, two practical modes were identified in telephone relations between close friends or family members. The first consists of conversations that are generally spread out in time, long, and sometimes even ritualized, in which the fact of taking one's time to converse is a sign of the bond, of the strength of each person's commitment to the relationship. The second consists of mostly short and frequent communicative gestures: conversations or vocal or textual messages at irregular times. It is through the frequency and continuity of this flow—in which the fact of calling counts at least as much if not more than which is said, and in which a presence is guaranteed by expressing a state, feeling, or emotion rather than by constructing a shared experience through relating past events and giving one's news—that the strength of the interlocutors' mutual engagement in the relationship is guaranteed. In this sense these modes of interaction, either conversational or connected, can be seen as configurations of the management of telephone relations between close friends that organize practices and the meaning they assume. Their definition is particularly vague because of the wide variety of uses and situations of interaction. I have tried to show here how users nevertheless distinguish between them, although with different levels of clarity and interpretation. They are often combined in the relationship, with the user alternating between the two, depending on the situation and on his or her interlocutors' engagements. Finally, more or less clear affordances for these configurations are found in different types of sociability and situations, as well as in the material devices through which interaction takes place.

Our analysis suggests that the use of mobile communication devices and of different forms of textual electronic exchange tends to correspond to the connected mode of maintaining relations. These different interactional devices help to reduce the physical investments, cognitive efforts, and financial costs of initiating a connection, so that permanent accessibility—the representation of which helps to ground the connected mode—becomes conceivable. Transaction costs are thus redistributed in the negotiation of the interlocutors' availability. This availability becomes a matter of calculation. Characteristically, it is the discourse of users of SMS (a mode of interaction that does not require the interlocutor's immediate availability) which is the most imbued with a rhetoric of 'everywhere and at any time', typical of the connectionist world. But the mode of interaction chosen or the relational repertoire mobilized—conversational or

connected (especially as they appear reflexively to the actors as distinct and explicit modes)—is also a strategic calculation framed by the maintenance of a relationship. We have seen how sending an SMS could deliberately be used to defuse a tense situation, reaffirming a form of connected presence. The proliferation of communication devices reinforces this tendency by allowing the actors to distribute their interaction across a wider range of interactional resources, and by diversifying the trade-offs that they are prompted to make. Between the development of connected management of relations and technological innovation multiplying interactional resources, we see emerging a rationalization of relational practices. This rationalization is amplified by the trace-ability of mediated interactions on which innovations such as itemized billing, reduced rates on certain numbers, and archiving of e-mail (so that it can be sorted at a click by subject, interlocutor, etc) are based. All these devices enable the actors to visualize a detailed and quantifiable history of the relational interaction they have had and of the time and money they spent on it.

We may wonder why people distinguish—probably more and more explicitly—the maintenance of relations in a connected mode as a particular and autonomous practice. One of the reasons is probably that it conveys particular modalities of social control. It becomes either necessary to be available for interaction, or necessary to justify and renegotiate one's unavailability. The very possibility of the expectation of connected presence tipping over into control induces a dialectic of normative constraint and internalized discipline in which presence and absence, availability and unavailability, will be regulated in a game of expectations, obligations, and constraints practised in this microphysics of the link. The increasing traceability of mediated interactions also opens the possibility for different types of institution to constitute panoptic pictures, on different scales, of interpersonal communication and interaction, and sometimes even of their content. For example, in the domestic sphere an itemized telephone bill is a medium for many negotiations concerning the legitimacy and possibility of the relational practices of the different members of the family. Connected practice, characterized by the proliferation of interactions to maintain a link which is constantly threatened by distance and absence, could then constitute a technology of power. (18) Another direction for research would then be to show how the repertoire of connected management of relations would be likely to irrigate modes of interaction, communication, and transactions between people in a wide range of contexts. It would be necessary to seek out this configuration of practices in all its occurrences, way beyond the telephone relations and sociability between close friends and family considered here. It is, for example, interesting to note in this respect how the question of a continuously commercially stimulated electronic relationship between e-commerce sites and Internauts—that is, a connected management of a commercial relationship—forms a basis for current discourse on e-commerce and a driving force behind its development (Licoppe, 2001).

From a historical point of view, we could consider that the management of relations in a 'connected' mode is rooted in the current trend on the information technology scene. But these roots have the form of a global and mediated relational economy in which even communication practices concerning the oldest communication devices are reshaped by the adoption of new ones. It is remarkable to note that the average duration of conversations on the domestic telephone is tending to shrink while the total duration of all communications is changing only slightly. This effect reflects a stronger tendency to make frequent, short calls on the home telephone. Communication practices on the home telephone are thus being redirected towards connected practice,

which clearly shows the correlation of the different interpersonal communication practices. Another direction for research concerns the dynamic balance between face-to-face and distant interactions in the movement of sociability. We have seen how devices such as SMS on mobiles could constitute a resource for delaying engagement in face-to-face relations (or telephone conversations) perceived as potentially embarrassing or risky. A research objective would then be empirically to show how this 'connected' management contributes to a redefinition of trade-offs between face-to-face and distant interactions, and their meaning.

This also raises other questions concerning the relation between sociability and information technologies. With regard to mediated interactions, we can, for example, consider that the fact of maintaining this connected presence, ratified by the interlocutor, allows for a lesser formality of mediated interaction: it becomes less necessary to reassert the formal and institutional aspects of the frame of interaction at each call if one is feeling connected to the other person through a continuous flow of small communicative acts. As regards interpersonal relations, the question is also how the redistribution of the modes of interaction changes the nature of relations, if at all. But between the conversational mode and the connected mode, there is a difference in the way in which a common experience and a shared world are constructed. And this construction impacts on actors' perceptions of the status of a relationship. In the case of relations which are constructed solely through electronic interaction on the Internet, detailed ethnographic studies have shown that the switch from 'fleeting' electronic interaction to a 'virtual' relationship, which is perceived as strong, occurred when the interlocutors took the initiative to tell each other, during their electronic interaction, about important events in their lives (for example, a family event such as a birth). In other words, it happened when they decided to share an intense experience through mediated electronic interactions, over a distance (Miller and Slater, 2000). Furthermore, the construction of a common world of signification in the frame of a particularly strong and personal relationship redefines the status of other relations in the world of sociability. In marriage, for example, where the other person is present in every aspect of daily life, it is not only daily experience that is shared but also the past which is reinterpreted together, as well as future horizons which are reconstructed and scaled down to suit the relationship. This might explain why marriage often reconfigures the perception and terms of former friendships (Berger and Kellner, 1964). My hypothesis is therefore that a redistribution of the way of operating and shaping interactions in a relationship, and a shift in forms of sharing and the construction of a common space of experience and meaning—the existence of which I have tried to show here—do contribute towards a transformation of interpersonal relations and sociability.

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