The Blurring Boundaries Between Synchronicity and Asynchronicity: New Communicative Situations in Work-Related Instant Messaging

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Abstract

Instant messaging is one of the most popular communication technologies in virtual teams, enabling interactions to intertwine whole working days, thus creating the sense of copresence for team members who are geographically dispersed. Through close linguistic analyses of naturally occurring data from a virtual team, this article discusses the implications of two novel communicative situations enabled by instant messaging: presence information and the persistence of transcript. The preliminary findings of this study indicate that these new communicative situations require the flouting or rethinking of previously existing interactional norms and that communicative practices employed by the team members are not yet conventionalized/normalized, the expectations and interpretations of interactional rituals and timing vary highly, even within the same virtual team.

Keywords

computer-mediated discourse, Instant Messaging, communication in virtual teams, interactional norms, chronemic cues

Introduction

Communication in Virtual Teams

Virtual work allows spatially unrestrained cooperation between organizations, teams and individuals. During the last decade, this work form has become a "default" working practice (Pauleen, 2004), a "must" rather than an alternative (Tavčar, Zavbi, Verlinden, & Duhovnik, 2005). The growing success of virtual teams is due to the confluence of organizational and technological factors, as well as financial benefits. At an organizational level, companies can utilize the expertise and experience of specialists, the most appropriate individuals can be selected for the task, without the constraints of location or permanent work contracts, either from within or from outside organizations (Martins, Gilson, & Maynard, 2004). At a technological level, the constantly developing computer-mediated communication technologies encourage distant work, because they enable team members to work independently, across time and space (see, e.g., Berry, 2011). At a business/financial level, companies make considerable savings on relocation costs of employees, or even brick-and-mortar office costs (Solomon, 2001). In these virtual environments, communication is the fundamental tool of work activities: negotiations, information exchanges, requests, giving orders, brainstorming; but even social, non–task-related interactions take place via various mediated channels (Isaacs, Walendowski, Whittaker, Schiano, & Kamm, 2002). Because of the importance of these mediated interactions, the communicative practices used in the virtual environment have attracted considerable scholarly attention. Various aspects of communication, such as the creation of trust (Crossman & Lee-Kelley, 2004; Jarvenpaa & Leidner, 1999; Watson-Manheim & Belanger, 2002), the choice of communication technology (Cameron & Webster, 2005; Dietz-Uhler & Bishop-Clark, 2001; Pauleen & Yoong, 2001; Tavčar et al., 2005), the effect of culture (Anderson & Hiltz, 2001; Kwok, Lee, & Turban, 2001; Olaniran, 2007; Staples & Zhao, 2006), and management issues (Ale Ebrahim, Ahmed, & Taha, 2009; Hertel, Geister, & Konradt, 2005; Martins et al., 2004; Skovolt, 2009; Solomon, 2001) have been the subject of academic exploration. Although a considerable number of the above studies draw on discourse-analytic findings and maintain that the language use of the team members accounts for the success of the team up until now very little attention has been paid to the discourse of virtual teams and to the elemental question of *how* exactly communication happens in the virtual work environment.

Instant Messaging in the Workplace

To address this paucity in research, in this study I set out to explore naturally occurring language data from a virtual team. The focus of my analysis is synchronous text-based interactions. Instant messaging (henceforth IM) is one of the most popular communication technologies in virtual teams (Hoang & Radicati, 2011). Using IM in the virtual work environment has many documented benefits: first, it enables virtual team members to maintain an almost synchronous channel for interactions throughout the working day (Nardi, Whittaker, & Bradner, 2000), allowing colleagues to contact each other for quick questions and clarifications (Isaacs et al., 2002); second, it contributes to the notion of a

shared working environment (Cameron & Webster, 2005; Nardi et al., 2000). Garrett and Danziger (2008), for instance, observed that IM is a line that is left open indefinitely, allowing participants to query one another infrequently on an as-needed basis—thus creating a communicative situation that is only enabled by this relatively new communication technology.

An important point made in the observation above is the notion of the novel opportunity—the novel communicative situation that IM represents. Communicating via IM, because of its relative novelty both as a communication channel in general and as a tool for workplace interactions in particular, might result in unconventional language use and a shift from the previously known communicative norms. As a result of this shift, and because of the differing expectations and conventionality of interactional and discourse norms, frustration and tension might arise between the interactants (Lam & Mackiewicz, 2007; Reinsch, Turner, & Tinsley, 2008), which then affects communication and, consequently, work efficiency. To have a clear understanding of how IM affects communication in a virtual team and the cooperation within the team, it is therefore essential to understand what exactly the new communicative situation mentioned above entails, and how it impacts on communication in the workplace. To advance toward this understanding, in this article I give an account of what is known so far about the affordances of the IM medium in the work environment and through examples of naturally occurring data demonstrate how virtual team members respond to the novel communicative situations.

The article has the following structure: In the second section, I give a short account of how language use in synchronous text-based computer-mediated communication channels differ from face-to-face or written discourse and review the literature on what is known about timing and time-related cues in computer-mediated discourse. This section also discusses the synchronous/asynchronous nature of IM and introduces the two communicative situations that have an effect on interactional norms—in particular in relation to *interaction management*—and language use in IM. The third section provides a background for the choice of the analytical tools, and in the fourth section, through samples of naturally occurring data, I illustrate how members of a virtual team handle and respond to the unconventional aspects of IM interactions and handle the changing norms in interaction timing. Finally, in the fifth section, I discuss the theoretical and practical implications of the findings presented in this article.

Timing as a Source of Paralinguistic Information

One of the most important features of IM is that it combines the elements of spoken and written language (Baron, 2004; Herring, 1999). It is spoken-like in that it is spontaneous, often unedited, responsive, and informal. At the same time, it resembles writing because the transcript is permanent and searchable, and the communication lacks the nonverbal cues of the traditional audiovisual sense. This latter feature of IM has been found a critical aspect in the evaluation of the success of IM communication, in particular from the point of view of interactional coherence (Baron, 2010; Berglund, 2009; Hancock & Dunham, 2001; Woerner, Yates, & Orlikowski, 2007). Apart from interactional organization, nonverbal cues are also responsible for contextualizing[1] interactions, which means that they contribute to both the clarification and disambiguation of content and interpersonal intent. Consequently, if interactional partners can correctly interpret contextualization cues, they can successfully decipher the intended meaning of the message as well as the relational intent.

Several cues of contextualizationin IM are represented by nonverbal signs, creatively created through the means of writing. Undoubtedly, the most well known cues, in particular for the communication of affective meaning, are the various forms of emoticons. The creative use of punctuation, spelling or written backchannel signals have also been found to convey nonverbal meaning and aid the contextualization of interactions (for a comprehensive taxonomy see Haas, Takayoshi, Carr, Hudson, & Pollock, 2011). Timing as a contextualization cue, however, is much harder to identify and analyze as it is not unequivocally present in the "printouts" or the transcripts of interactions. In spite of their "invisible" nature, their function in content and relational communication is prevalent, as will be illustrated in the following section.

Chronemics

Time-related or chronemic cues in traditional, face-to-face interactions include cues such as silences, gaps, overlaps, immediacy, or response time; and they are essential for the participants to orientate themselves in interpreting messages (or the lack of messages). These cues can also contribute to the maintenance of interpersonal relationships (Walther & Tidwell, 1995). The research of spoken interactions extensively dealt with issues such as the timing of the transference of speakership, the avoidance of long silences in turn-taking for seamless conversational flow, and the interpersonal effects of nonresponses (Sacks, 2000); however, the same issues have only received scant attention in the field of computer-mediated discourse analysis.

One of the most fundamental works in the field of chronemics in CMC is that of Walther and Tidwell (1995), who proved that chronemic cues have a significant influence on the relational communication expressed in e-mail messages. They examined the time of day that the messages were sent as well as the delay in responses and found that the chronemic cues are an important source for interactants to assess their communication partners. Skovholt and

Svennevig (2013) examined the meaning assigned to chronemic cues in e-mail exchanges and found that participants drew on various contextual cues when interpreting a delayed response or a nonresponse, and in the majority of the cases they construed the problem source as systemic rather than interpersonal. The importance of this realization lies in the fact that it highlights the complexity of chronemics in the computer-mediated environment: In text-based CMC, chronemic cues can be attributed to either the participants or to the environment. In the first case, apart from the conscious, intentional use of chronemic cues, interactants can communicate unconscious chronemic cues when, for example, the participants' typing speed is not as fast as expected by their conversational partner, or if participants are multitasking during the interaction and cannot respond within the expected time frame. At the same time, however, the timing issues can be ascribed to the communicative system, for instance, in terms of network lags (i.e., the display of the sent message is delayed because of the Internet connection or other system malfunction) or the inability of the participants to see each other's actions until a message is sent (Herring, 1999). Thus, it is clear that the participants of text-based CMC interactions are aware of and assign meaning to chronemic cues, but how exactly this is done and what convention they base their interpretation on is hitherto unexplored. This gap in research becomes even more salient if we take into consideration the fact that the new communicative situations enabled by the IM environment have serious consequences on the temporal aspect of the interactions. The next section, therefore, gives an account of the blurring boundaries between synchronicity and asynchronicity in IM and introduces the communicative situations that have an effect on the expectations regarding timing and the interpretation of chronemic cues.

Chronemics of CMC

Since the occurrence of computer-mediated communication technologies, there has been a well-articulated distinction between the various degrees of synchronicity of the different methods of communication (Ferris & Minielli, 2004). E-mail, for instance, has traditionally been considered as an asynchronous channel (Crystal, 2001; Herring, 2007), and because the interactional partners did not need to be logged on simultaneously, there was no expectation for immediate feedback and there could be a considerable time lag between two exchanges. IM, on the other hand, has been viewed as synchronous (Herring, 1999, 2001, 2007; Simpson, 2005) or quasi-synchronous (Markman, 2005; Ong, 2011) because conversational partners were typically co-present and the interaction took place in almost real time. This clear divide between synchronous and asynchronous genres, however, has become blurred in the recent years: E-mail is often used as a "synchronous" conversational tool, with almost no gaps between turns, whereas IM is used as an "asynchronous" communication mode, when minutes or even hours may pass between two conversational turns (Handel & Herbsleb, 2002). These changes have an inevitable effect on the timing of the interactions, in general, and consequently on the norms related to timing as well as the meaning assigned to chronemic cues.

In terms of IM, the existing body of research has identified unique communicative situations, which, as we will see later, have a direct effect on the timing of and chronemic cues within the interactions. These features include presence awareness (Garrett & Danziger, 2008; Rennecker & Godwin, 2003) and the persistence of transcript (Churchill & Bly, 1999; Rennecker & Godwin, 2003; Woerner et al., 2007). The most important consequence of these features is that they enable communicative practices that are either unique in general or unique in the virtual environment, but in any case require a departure from the previously described classical synchronous–asynchronous polarity and therefore require an adaptation in the communicative practices and language use of the participants. In the light of this realization, the research questions this article aims to address are therefore the following:

1. How do team members adapt to the new communicative situations in their communicative practices?

2. How do team members respond to the changing norms of interaction management?

3. And, finally, what meaning do team members assign to the novel time-related cues in terms of message content and/or relational intent?

Methodological Considerations

In order to answer the questions above, my approach to the data will be language centered. My reasons are twofold: First, by concentrating on naturally occurring data from IM and by taking a bottom-up approach, I am hoping to identify the linguistic and discourse strategies the participants employ during the course of the interaction in the new communicative situations identified previously. A detailed linguistic analysis will enable me to comment on how team members adapt to these new situations as well as draw conclusions about their interactional negotiation of the changing norms and their interpretation of the time-related cues.

My second reason for drawing on discourse analysis is the lack of focus on computer-mediated discourse and language use in the business communication literature on virtual interactions. Previous studies addressing virtual communication seem to be impressionistic and lacking academic support, when, for instance, they state that "virtual communication is confusing" (Thompson & Coovert, 2003), "impoverished," and "more laborious and more

cognitively taxing" than face-to-face communication (Cornelius & Boos, 2003; Purvanova & Bono, 2009). There is also a considerable gap in research addressing paralinguistic cues, especially in data-driven description of their function and use (cf. Byron, 2008; Cornelius & Boos, 2003; Nardi et al., 2000). I expect that a fine-grained linguistic analysis will challenge these assumptions, in particular by proving that virtual team members do, in fact, draw on a set of discursive and linguistic resources when pursuing their communicative goals (cf. Ledbetter, 2008). The identification of these linguistic and discursive strategies will contribute to the understanding about how language functions in the virtual work environment and, in relation to the research questions posed in the second section, further our understanding of the communicative practices enabled by the *possibility of presence awareness* and the *persistence of transcript during asynchronous use of IM*.

The analysis draws on the theoretical and analytical framework of Conversation Analysis[2] in order to account for the negotiation of interaction management, speaker allocation, openings, and closing. It also draws on and employs analytical techniques of Interactional Sociolinguistics[3] in order to account for the contextualizing nature of timing cues. These discourse-centered frameworks will enable me to complete a fine-grained close analysis of the linguistic and discursive practices of the participants, but at the same time taking into account the wider context of the workplace. Finally, due to the nature of interactions and the team members' constant effort to display cooperative and respectful intent, the analysis will draw on the findings of linguistic politeness research.[4]

The naturally occurring Instant Messages come from data collected from a virtual team of a global consultancy company based in London, UK. The team comprises 18 members dispersed geographically across several countries. The official company language is English; the ratio of native and nonnative speakers is 9:9. The team has 13 female and 5 male members, and the positions of the members within the team spans 3 levels of the organizational hierarchy. With the consent of the national head of the group, I approached the group members to participate in this research and log IM conversations. Six team members volunteered to take part in my study and, over a period of 2 months, provided me with IM logs at regular intervals. Because of the mixed nature of the group in terms of native/nonnative speakers, male/female participants, and team members of higher/lower positions, the data provide a varied and authentic picture of interactions in a virtual work environment. The data were processed manually, and because of ethical considerations, the names of the participants have been changed and any business-critical data have been deleted and replaced with an indicative term.

The final data set consisted of 1,244 conversations[5] (approx. 310,000 words). In order to identify instances of disclosing availability information, during the first reading of the scripts, I identified a set of key words systematically co-occurring with availability information in the transcripts. These were noted, searched, and manually checked. The data contained 147 occurrences when the terms *on call*, *on a call* or *in a call*, and 144 occurrences when the phrases *away from my laptop/PC/computer/desk* were used to self-disclose nonavailability. The search identified 157 instances of automated availability responses. After a close reading of conversations, representative samples were chosen for close analysis in this study.

Data Analysis

Availability for Interaction

Information about who is available for interaction has been found to be a key part in the success of virtual teams (Handel & Herbsleb, 2002). The reason for this is that for effective cooperation it is essential for the team members to estimate the probability of success and the response time when they contact others (Rennecker & Godwin, 2003). Presence information is typically a built-in feature in most IM clients, for instance online coworkers appear in a directory, where color-coding is often used to indicate whether someone is online, does not wish to be disturbed, or is idle or offline. Furthermore, some IM programs allow the users to publish a status line, in which they can explicitly indicate whether or not they are available for interaction. Business/organizational research has extensively dealt with the implications of presence awareness, in particular from the point of view of interruptions and their effect on work efficiency (Garrett & Danziger, 2008; Rennecker & Godwin, 2003). However, if viewed through discourse-analytic lenses, the following transcripts indicate that presence indication and the participants' choice whether or not to consider it have an effect on a more elemental level of interpersonal interaction and on the whole affect the conventional interaction rituals.

Extract 1

(1) [09:27] Abigail: morning
(2) [09:27] *** Auto-response sent to Abigail: I am currently idle.
(3) [09:27] Abigail: just wanted to see if you are in town this week and if you're interested in dinner maybe Wed or Thurs . . . ?
(4) [09:35] karen: hello
(5) [09:35] *** One or more messages may have been undeliverable.
(6) [09:35] karen: dinner sounds like a plan

(7) [09:36] Abigail: great! when would suit?

(8) [09:36] karen: let me check probably wed night

(9) [09:37] Abigail: OK. thinking about it, I'm probably going to work from home on Wed, so we could do that kitchen table bottle of wine thing. . . .

In Extract 1, the presence indicator is an automatic message generated by the messaging system (2) to inform Abigail about her communicative partner being idle (meaning that the person was not actively using the messenger client, thus implying that she was not available for communication). Abigail disregards this message by posting her utterance in (3). By doing so, she accepts the fact that her conversational partner is unlikely to respond to her message promptly. This means that her communicative strategy of taking part in a single-sided conversation is a diversion from the traditional dyadic conversations in which participants are required to respond when addressed. Her usage of the adverb just (3) as well as her hesitation mark (…) could function as mitigation, either to soften the face threat imposed by the direct question to Karen (Brown & Levinson, 1987), or as a recognition of the unconventional communicational situation created by the asynchronous use of IM. Either way, her friendly intent is acknowledged by her conversational partner, who reacts 8 minutes later and the conversation continues without any evident halt or breakdown.

In the next example, however, the unavailability of one of the participants is verbally clarified during the course of the interaction and blatantly disregarded by the conversational partner.

Extract 2

(1) [12:48 p.m.] Asid: Hi . . . a couple of quick points:

(2) [12:48 p.m.] Jodie: ok . . . on call now with Larry . . . but will respond as I can

(3) [12:49 p.m.] Asid: (cool, no immediate response needed, and that's why I'm pinging you)

(4) [12:49 p.m.] Asid: 1. I would like a leave on Jan-19, due to my sister's wedding (as per email sent earlier)

(5) [12:50 p.m.] Asid: 2. Jan-26 is a public holiday in India.

(6) [12:50 p.m.] Jodie: ok w/ ur leave

(7) [12:50 p.m.] Asid: but I can join in a call, if needed on either day—w.r.t. the Project discussions with Larry and the rest of the [name] gang.

(8) [12:51 p.m.] Jodie: also for S'pore . . . Jan 26 & 27

(9) [12:51 p.m.] Jodie: call w/ Larry changed to 22 Jan

(10) [12:52 p.m.] Asid: great, thanks! let me know the time whenever finalised, as I have to conduct an induction session also that day.

(11) [12:58 p.m.] Jodie: k

(12) [12:58 p.m.] Asid: thanks.

In Extract 2, Jodie clearly indicates her unavailability for interaction by letting Asid know that she is participating in a phone call (2). Asid's response in (3) acknowledges this information—using brackets as a nonverbal sign of signaling a (secondary) comment status of his utterance. What is more, he does not merely acknowledge the status indication of his conversational partner, but states that he was, in fact, counting on this and wanted to use the opportunity to present Jodie with his requests. Thus, he continues his turns (4 and 5), and without expecting a prompt response from Jodie, uses the IM as a "notice board" to display his messages. In the next turn, in spite of her stated inability to respond, Jodie reacts to Asid's ideas without hesitation (6) and the conversation continues seamlessly.

In Extract 1, the idle message was generated by the messaging system, so the digression from the reciprocity of a conversation only took part on Abigail's part, who ignored the availability information about her conversational partner and sent her message nonetheless. In Extract 2, the unavailability was stated during the course of the interaction, thus making Asid's strategy to disregard it even more salient. This interactional behavior, as stated previously, is a digression from the traditional dyadic synchronous conversation, and the communicational practice is comparable to the use of "sticky notes" (Isaacs et al., 2002). In both cases, and generally across the data set, these practices are handled positively. Based on the close linguistic contexts, in both cases the disregard for the unavailability for communication was treated as an acceptable practice, as well as the use of IM as a notice board for displaying messages to be acted upon at a more convenient time. This practice, however, suggests that team members might not view availability information as accurate or trustworthy. Previous research has found that presence indicators in IM are a blunt measure of availability (Cameron & Webster, 2005) as they are not necessarily updated and are often ignored. Extract 3 exemplifies a communicative situation, when conversational partners make an attempt to (re)establish interaction six times, using both system- and user-generated availability information, some of which are clearly inaccurate.

Extract 3

(1) [6:19:22 p.m.] Andy: Hi!

(2) [6:19:24 p.m.] Yori: I am away from my computer right now.

(3) [6:19:49 p.m.] Andy: since it's getting late, I will send the country templates to the LETs directly, with a copy to you.
(4) [7:27:33 p.m.] Yori: Hi Andy
(5) [7:27:39 p.m.] Yori: I have some minutes now
(6) [7:27:47 p.m.] Yori: do you want to have a quick chat?
(7) [7:31:18 p.m.] Andy: I am away from my computer right now.
(8) [7:33:10 p.m.] Andy: unfortunately, about to start a call and will be occupied for at least 30 minutes. . . .
(9) [7:33:10 p.m.] Yori: I am away from my computer right now.
(10) [7:33:22 p.m.] Andy: it's probably too late for you after that, right?
(11) [7:33:37 p.m.] Yori: it's fine for now
(12) [7:33:51 p.m.] Yori: and after your call
(13) [7:34:05 p.m.] Yori: you can ping me when you done
(14) [7:34:36 p.m.] Andy: I'll ping you once the call is through, if you're still around.
(15) [7:34:36 p.m.] Yori: I am away from my computer right now.
(16) [7:34:56 p.m.] Yori: :)
(17) [8:34:27 p.m.] Andy: Hi . . . you still there?
(18) [8:34:27 p.m.] Yori: I am away from my computer right now.
(19) [8:34:31 p.m.] Yori: hi
(20) [8:35:19 p.m.] Andy: possible to speak now? It must be really late your time, and so please don't say yes unless you are really okay.
(21) [8:35:30 p.m.] Yori: yes. I am ok
(22) [8:35:34 p.m.] Yori: could you call me?
(23) [8:35:40 p.m.] Yori: (number)
(24) [8:35:48 p.m.] Andy: yes, calling you now . . .
(25) [8:35:58 p.m.] Andy: in the meantime, open the file I sent you earlier today
(26) [8:36:23 p.m.] Yori: ok

The script of Extract 3 requires skillful reading, as the time indicators in brackets play a crucial role in the interpretation of the unfolding conversation, and also because the system-generated messages are not marked (as in Extract 1). In this conversation first Andy greets Yori (1), and receives a (supposedly user-generated but automated) idle message (2). Andy disregards the unavailability information and goes on to post a new message (3). In this utterance, he justifies his reason for flouting the previously received unavailability information by referring to the lateness of the message. An hour later, Yori returns his greeting (4) and signals his availability (5 and 6), but receives a supposedly automated idle response from Andy (7) reinforced by stated unavailability information (8). Andy here employs verbal and nonverbal linguistic devices (unfortunately, hesitation mark [. . .]) as linguistic politeness strategies to mitigate the force of his refusal. Surprisingly, Yori sends him an unavailability message (9), which, given the immediacy of the message and the obvious inaccuracy, is clearly system-generated, and probably the result of an inaccurate system setting. An idle message is repeated in (15), again, clearly a false one, as Yori had been previously interacting with Andy within the same minute (12–14). An hour later, following Andy's tentative inquiry about Yori's availability (17), Yori's IM client sends a supposedly automated idle message (18) which is immediately contradicted by Yori's greeting in line (19).

In Extract 3, out of the six instances when unavailability is communicated, three are clearly inaccurate (9, 15, and 18) and one is blatantly disregarded (2), thus giving an excellent illustration of the varying expectations and interpretation of chronemic messages regarding someone's availability for interaction.

In order to maintain the interaction without breakdowns, the discursive strategies used in these novel communicative situations have to be conventional, and interpreted by all team members as compliant with the interactional norms. Yet, as we have seen above, all of the participants invest considerable amount of work to produce linguistic politeness strategies, in order to mitigate the force of the directness of the refusal of interaction or the blatant disregard of someone's availability for interaction. This clearly indicates the participants' awareness of the possibility of flouting of a norm or the prospect of being seen as impolite. This awareness is even more salient if the power relation between the team members is not equal, as in Extract 4.

Extract 4

(1) [17:05] Bert: Hi Sam - this is Bert Smith - are you available right now?
(2) [17:05] Sam: nope sorry on a call
(3) [17:06] Sam: sorry
(4) [17:06] Sam: we have a call right!
(5) [17:06] Sam: in 25 min
(6) [17:06] Bert: yes - at 17:30
(7) [17:06] Sam: do you need to move the call?
(8) [17:07] Bert: no, but I would like to ask if you can please all me at my home phone number - (number)?

(9)   [17:07] Sam: sure
(10)   [17:08] Bert: Thanks - talk to you soon!
(11) [17:10] Sam: great

Sam is contacted by Bert (1), Sam's superordinate, who is inquiring about her availability for interaction. Her negative response is followed by two apologies (2 and 3), the latter being even more prominent as it constitutes the complete message. Following the apology, Sam holds the floor for two more turns and goes on to clarify her next availability for interaction (4 and 5). Her discursive behavior exemplifies the uncertainty about the new communicative situation when, in spite of her apparent presence on IM, she declines her availability for interaction. It is clear from the interaction that the reason of her unavailability is multichannel communication—that is, she is simultaneously using both telephone and IM channels. Yet, her apologetic discursive strategies signal her awareness of a communicative situation that could be interpreted as rejection, in particular, if we take into consideration the hierarchical relations between Sam and Bert.

As we have seen above, synchronous IM channels constitute a situation where the online presence of the interactants does not necessarily mean their availability for interaction, or vice versa, their disclosed unavailability does not necessarily exclude them from the interaction. However, as participants do not have visual information about one another, they use the communication channel at hand to probe and/or self-disclose availability. These discussions often result in interactional situations that could be interpreted as impolite or too direct (e.g., refusal or disregard of information), thus threatening the face (cf. Goffman, 1967) and consequently the interpersonal relation, between the coworkers. It is also clear from the above that the norms regarding contacting a team member who (self)disclosed their unavailability or the norms of using IM as a means for displaying information for latter consideration have not yet conventionalized.

Persistent Transcript

Delay. The usage of IM messages as "sticky notes"—as discussed above—is only possible because of the persistent nature of the transcripts in IM. The persistent nature of IM has been found to be a useful resource in the workplace, both as a reminder of the actual task in progress, which can be revisited over and over again (Woerner et al., 2007), or as an official documentation of ongoing business issues (Garrett & Danziger, 2008). The persistence of transcript is the feature that enables IM to be viewed/utilized as a less "intrusive" medium (Nardi et al., 2000), because when contacted via IM team members do not feel obliged to reply, as they would, for instance, in a face-to-face encounter or when they answer the phone. IM requests can be left unanswered, and dealt with at a time that causes the least interruption in the workflow. Nardi et al. (2000) argue that this "intermittent" nature of interaction when team members can move in and out of the conversations are also an important way of creating a common working context, which is essential for effective communication and cooperation. However, this intermittent usage brings to the foreground issues regarding interactional norms, in particular questions regarding time-related expectations and pragmatic rules of interaction. Time-related expectations in this instance can refer to the acceptable response time or delay in a conversation, as will be illustrated in the extracts below.

Extract 5

(1) [15:25] Kate: HELLOOOOOO
(2) [15:25] Kate: kep trying to say hello to you, you busy and my internet dodgy
(3) [16:22] Izzie: hello
(4) [16:22] Kate: aha!
(5) [16:22] Izzie: sorry missed your messgaing was gosipping over lunch with the girls and John

Extract 6

(1) [08:37:04 a.m.] Chris: hi Tom
(2) [08:37:05 a.m.] Chris: good morning
(3) [08:37:15 a.m.] Thomas: hey Chris
(4) [08:37:57 a.m.] Thomas: how are u?>
(5) [09:36:35 a.m.] Thomas: hi Chris
(6) [09:36:37 a.m.] Thomas: ooops
(7) [09:36:39 a.m.] Thomas: Chris
(8) [01:50:10 p.m.] Thomas: Hey Chris

Extract 7

(1) [10:13 a.m.] Francesca: hi Derek

(2) [10:13 a.m.] Francesca: can u call me?
(3) [10:13 a.m.] Francesca: i am seeing stars with Toms email and your dsp
(4) [10:13 a.m.] Francesca: its not the same!!
(5) [10:13 a.m.] Francesca: help!
(6) [10:13 a.m.] Francesca: hello?????
(7) [10:13 a.m.] Derek: which Tom email?
(8) [10:14 a.m.] Francesca: 23 apr
(9) [10:14 a.m.] Francesca: he has so many extra dates

The above extracts give a good indication of the differing expectations regarding response time in IM. Extract 5 shows that the time lapse between Kate's initial greeting turns (1 and 2) and Izzie's response (3) is close to one hour. Although Izzie's message to explain her absence (5) is evidence of her understanding of this delay being perhaps over the limit, Kate's "vocal" response (4) and the continuing friendly tone shows that the delay was not interpreted as problematic.

In Extract 6, Chris contacts Tom (1 and 2), who responds to the greeting within 10 seconds. Tom then waits 40 seconds to reestablish the connection (4). Approximately an hour later, he makes another attempt to greet his conversational partner (5). The "vocal" reaction in line (6) is a clear indication of Tom's emotional involvement, although it is not entirely clear whether he was expressing his disappointment, surprise, or frustration. The following line (7) is another attempt to reestablish the connection. Tom contacts Chris approximately 4 hours later, this time successfully. What is interesting in this example is Tom's repeated attempts to establish connection with his team member, at some point as often as three times within 1 minute. This strategy could be the result of the complexity of chronemics described in 2.1, namely, that participants are unsure whether the timing is caused by the participants themselves or the communication channel. The multiple connection checking done by Thomas (3–8) coincides with the findings of Rintel, Pittam, and Mulholland (2003), who argue that in asynchronous chat environment, users deal with delays or nonresponses as if it was a problem caused by "not hearing," a problem often attributed to the system rather than the users themselves. The authors suggest that when users assign meaning to chronemic cues, they try the "easiest solution" for clarifying the nonresponse and pursuing response, and only after attempts of regreeting and reconnecting do they move to the more "interpersonal demanding meta-lingual connection checking" (pp. 12).

Extract 7 also illustrates emotional involvement of one of the participants, but in this case the combination of written contextualization along with contextualization based on timing make the emotional state of the participant obvious: the vocabulary and punctuation mark use (5 and 6) combined with the quick succession of six messages posted within 1 minute (1–6) indicates impatience and a requirement for prompt response. Extract 7 is proof that in certain instances virtual team members find even the shortest delay unacceptable.

There is evidence in research that organizational and team culture influences or determines time-related communication norms within a company (Pauleen & Yoong, 2001; Watson-Manheim & Belanger, 2002), but the above examples show that even within one team expectations might differ. In their study, Isaacs et al. (2002) noticed a link between response time, experience in IM usage and the relationship between participants. They argue that the more experienced "heavy" users engage in more intense interactions, with short, often intertwining turns but allowing for considerably longer gaps. They go on to speculate that it could be due to politeness issues that people tend to respond quicker if they converse with lesser-known partners. My data suggest that factors, such as the urgency of matter and hierarchical relation between the participants, might affect the tolerable delay time, but the matter clearly requires further, more detailed exploration.

Openings and closings. The second issue that has to be noted regarding "intermittent" interactions lies in the pragmatic dimension of interactions: When lines are kept open indefinitely, team members often initiate conversations without the ritualistic opening preambles and leave the interaction without employing closing sequences (Isaacs et al., 2002). Similarly to the previous issue, claims about this phenomenon remain on an impressionistic level (Woerner et al., 2007), and no systematic research addresses how these interactions are coordinated without the lack of explicit signaling of the beginning and end of the conversation. The lack of convention in this matter is clear from the highly varied data, which range from formal greetings ranging over three turns (Extract 8), to greetings and small talk (Extract 10, lines 1–5, 7), to single-line informal greetings (Extract 11), and no greetings at all (Extract 9).

Extract 8

(1) [12:46] Jasmine: Halo Karen
(2) [12:46] Jasmine: this is Jasmine
(3) [12:46] Jasmine: reaching out to you regard the regional sizing data
(4) [12:46] karen: hello
(5) [12:46] karen: i am fine thanks and how r u doing
(6) [12:47] Jasmine: I am doing well
(7) [12:47] Jasmine: Gordon just ping me that he will work on the BI portion of the data today

Extract 9

(1)[12:22:02] Katie: you done?
(2)[12:22:07] Jack: not yet . . .
(3)[12:22:11] Katie: oh goodness
(4)[12:22:15] Jack: very gripping discussion in turkish
(5)[12:22:24] Katie: LOL
(6)[12:22:25] Jack: are u done?
(7)[12:22:30] Katie: yip
(8)[12:22:37] Jack: did you end by saying bye?
(9)[12:22:43] Jack: or Foff
(10)[12:23:45] Katie: no all friendly in the end
(11)[12:24:02] Jack: OK

The above extracts, similarly to the ones in previous sections, bring to the fore issues about conventionality of interactional norms, as the rules and expectations seem to differ in each example. The findings about the correlation between the flouting of the traditional communication/interactional norms and experience in IM usage (Isaacs et al., 2002) could also be applicable in the above instances. However, other factors should also be accounted for, such as the familiarity of the participants with each other or length of time spent in the group. Extract 8 for instance exemplifies an interaction between a new and an established member of the team, the new member being overtly polite (1–3), even introducing herself (2)—a rather unexpected utterance in an IM setting as the participants' names are automatically displayed in the dialogue window. On the other end of the spectrum is Extract 9, where no opening and no closing section is present. The participants of this interaction are colleagues working in the same level of hierarchy, on a regular basis, and who maintain a close, friendly relationship.

The personal and/or the hierarchical relationship between the participants might also determine whether the opening section of a dialogue—considered as a boundary marker for interactions and often an obligatory site for small talk (Holmes & Stubbe, 2003)—are in fact used for non–work-related discussions.

Extract 10

(1)[09:39] Sam: Hey Danielle
(2)[09:39] Sam: how r u doing
(3)[09:39] Danielle: Good morning Sam
(4)[09:39] Danielle: I am doing well, thanks
(5)[09:39] Danielle: how was your weekend?
(6)[09:40] Sam: r u aware of any SLA failures from last wee - sessions delivered on time, material not
      delivered on time etc
(7)[09:40] Sam: it was good thanks and how was yours
(8)[09:41] Danielle: unfortunately I am not, can you possibly check with Larry?

Extract 11

(1)[01:11:51] Jonnie: Hi Harry
(2)[01:12:20] Harry: hey Jonnie
(3)[01:12:45] Jonnie: just sent u an email to cancel the HPT session in Q
(4)[01:13:10] Jonnie: ...but - just looking at the dates loaded on the DSP
(5)[01:13:19] Jonnie: they say the course is running 17-18 Nov
(6)[01:13:27] Jonnie: but the course is scheduled for 18-19 Nov
(7)[01:13:39] Jonnie: session ID
(8)[01:13:46] Harry: yep,i got it
(9)[01:14:06] Harry: okay
(10)[01:14:29] Jonnie: please can you update the dates on the DSP?
(11)[01:15:23] Harry: oh . . . sure i will update Jonnie . . .
(12)[01:16:04] Jonnie: thanks
(13)[01:16:21] Harry: NP

Extract 10 exemplifies the practice of engaging in small talk during the opening section of a conversation. Here Sam, superordinate to Danielle, initiates a conversation, starting with a greeting (1) and a formulaic inquiry about Danielle's well-being (2). Danielle reciprocates the greeting (3), responds to the question (4) and engages in small talk inquiring about Sam's weekend (5). Sam's response in (6) indicates that she is ready to move on to business matters, but after sending her message about the work-related issue, she responds to Danielle's non–task-related inquiry (7) and continues with returning the question about her conversational partner's weekend. In Extract 10, the use of opening preambles,

small talk, and the establishment of social connection before moving on to work-related issues happens similarly to face-to-face workplace interactions (Holmes & Stubbe, 2003). Some researchers argue that these informal exchanges are a critical prelude to interactions in IM (Nardi et al., 2000), because they aid the creation and preservation of the sense of conversational context for virtual team members. In the presently discussed data set, however, a high proportion of interactions are started and finished by simple two-turn opening and closing sessions, as exemplified in Extract 11. Here, both of the interactants are male, and they only engage in a short greeting exchange (1 and 2) before going on to discuss work-related issues. Their closing session is also two turns (12 and 13), where Jonnie thanks his partner for the information provided, who responds to it with a formulaic, abbreviated "no problem" (13). This practice seems to question the critical importance of small talk for the establishment of an effective virtual working environment, and similarly to the previously discussed communicative practices, raises issues about the interactional and pragmatic norms and expectations of work-related IM interactions.

Discussion

As demonstrated in the sections above, the persistent nature of IM enables interactions to intertwine whole working days, thus creating the sense of copresence for team members who are geographically dispersed. I have shown through extracts from IM logs that team members exploit the affordances of the communicative medium by using it both as a synchronous and asynchronous medium. The two novel communicative situations detailed in this article, the signaling of the availability for interaction as well as the persistence of transcript, contribute to the creation of communicative situations that require the flouting or rethinking of previously existing communicative norms. The data samples demonstrated that new communicative practices are not yet conventionalized/normalized, and that the expectations and interpretations of interactional rituals and timing vary highly, even within the same virtual team. Previous research found that factors such as the communication culture in an organization (Pauleen & Yoong, 2001; Watson-Manheim & Belanger, 2002) and the familiarity of the participants with the medium of IM and each other (Isaacs et al., 2002) have considerable impact on time-related expectations and the employed interactional strategies, but the analyses presented in the article suggest that other variables, such as the hierarchical relation of the team members, the length of membership within the team, other personal variables (gender), or the urgency of a matter might have a considerable effect on what is considered acceptable, normative, or as a flouting of the norm.

In the section "Availability for Interaction," I examined instances when participants disregarded someone's unavailability for interaction (whether system generated or self-disclosed), and found that team members often consider the information provided about someone's availability inaccurate, or unimportant in cases where they do not require a prompt response. However, the analysis of the extracts identified a high number of politeness strategies, which is a clear indication of the participants' awareness of the possibility of being seen as too direct or impolite in these unconventional communicative situations.

In the section "Persistent Transcript," I first discussed the chronemics of the delay in the response when IM is used in an asynchronous way and found that the expectations regarding reaction time vary highly. Second, I examined how the intermittent nature of IM affects the rituals of the interpersonal interaction, in particular in terms of interaction openings. In both cases, questions about shifting from previously known discourse and pragmatic norms have, yet again, come to the fore. The findings of unconventional or not yet normalized linguistic and discursive practices are of particular importance if we consider that in the work environment, breaching the communicative norms might lead to the formation of wrong impressions about team members (Adkins & Brashers, 1995), to communication breakdowns (Watson-Manheim & Belanger, 2002), frustration (Reinsch et al., 2008), and consequently less efficient cooperation.

As I have indicated in the introduction, synchronous IM in the workplace has attracted considerable scholarly attention, but the previous literature provided only a limited insight into the changing expectations and the formulation of the interactional and language use norms in the virtual work environment. This exploratory study aimed to provide the first step in identifying the communicative practices—in particular during the course of interaction management and relational work—that emerge because of the affordances of the new medium of IM. However, to understand the consequences of these changing practices in terms of group work or leadership, clearly further work is needed in the broader field of communication studies. The data samples and the close analyses presented above might serve as a basis for comparison for researchers who are interested in finding out whether IM communicative practices are group specific or a more ubiquitous phenomenon (Handel & Herbsleb, 2002).

At a theoretical level, the exploration of the changed timing and its effect on interaction, communicative practices, and discourse furthers our understanding of computer-mediated business discourse and contributes to the appreciation of the important role of synchronous messaging in the overall communication ecology of the virtual workplace. The language-centered approach draws attention to the linguistic and discursive strategies used in text-based computer-mediated interactions, in particular, the work invested in the avoidance of being seen as impolite or too direct. The evolving norms of interaction when disregarding availability information or the asynchronous use of IM, illustrated above, might be of great relevance for business communication scholars when addressing effective communication, conflict management, or miscommunication in virtual teams. At a practical level, however, these findings can feed directly back to corporations when they devise training material for prospective virtual team members and managers.

The understanding of the complex communication issues that arise from the new communicative practices created by IM—for instance the carefully balanced communication of the inability to respond to a boss due to being away from the computer—will undoubtedly raise awareness of possible breakdowns in communication, thus helping avoid interpersonal conflict and misunderstandings within the work environment.

Notes

1. Contextualization refers to speakers' and listeners' use of verbal and nonverbal signs in order to retrieve the presuppositions they must rely on to maintain conversational involvement and assess what is intended (Gumperz, 1982).
2. Conversation analysis (CA; see, e.g., Sacks, 2000) views interaction as a joint organized activity and is primarily concerned with how the interaction unfolds across a range of utterances. The utterances as well as paralinguistic information are viewed as highly context-dependent and jointly negotiated, which is why conversation analysts are reluctant to aggregate instances of language use for quantitative analysis. (Stubbe et al., 2003, p. 354)
3. Interactional sociolinguistics (IS) build on the methodology of CA, but besides a micro-level exploration of interactional data, it also takes a top–down approach to consider sociocultural conditions that could account for communicative practices. (Gumperz, 1982)
4. Linguistic politeness, a theory developed by Brown and Levinson (Brown & Levinson, 1987), revolves around speech acts that could potentially threaten the "face" (cf. Goffman, 1967) of the speaker or hearer. Face threatening acts (FTAs) include speech acts like requests, complaints, compliments, or apologies (Stubbe et al., 2003). Analysts drawing on this framework traditionally examine linguistic and discursive strategies that enable the participants to soften the force of the FTAs.
5. Conversations were defined in the light of previous findings on the intermittent nature of IM at the workplace (cf. Isaacs et al., 2002; Nardi et al., 2000): interactions that took place during 1 working day, even if separated by longer pauses, were considered as one single conversation.

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