

Conversation Analysis of Computer-Mediated Communication

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ABSTRACT

The potential of computer-mediated communication (CMC) for language learning resides mainly in the possibility that learners have to engage with other speakers of the language, including L1 speakers. The inclusion of CMC in the L2 classroom provides an opportunity for students to utilize authentic language in real interaction, rather than the more traditional institutionally asymmetric, nonnegotiable, and teacher controlled classroom discourse. However, still much research is needed addressing what happens during CMC interaction and the effectiveness of this tool for language learning. This article explores the potential of conversation analysis (CA) to contribute to the understanding of L2 CMC. It presents previous CA research on synchronous CMC (SCMC) and L2 interaction, and, as an illustration of how CA can be employed for the study of CMC, a longitudinal case study of a Spanish L2 learner engaged in interaction with a L1 Spanish speaker is microanalyzed using CA. Finally, the article outlines the strengths of CA for the analysis of CMC and identifies the limitations of the method both for the study of CMC as well as for language learning in general and provides future possible lines of research.

KEYWORDS

Text-based Computer-mediated Communication, Conversation Analysis, L2 Learning, Trouble-talk

INTRODUCTION

The potential of CMC for L2 development resides mainly in the possibility that learners have to engage with other speakers of the language, including L1 speakers, which is especially important for the acquisition of not only linguistic resources but also social and pragmatic competence. As Thorne (2006) states "the use of Internet technologies to encourage dialogue between distributed individuals and partner classes proposes a compelling shift in second (L2) and foreign language (FL) education, one that ideally moves learners from simulated classroom-based contexts towards actual interaction with expert speakers of the language they are studying" (p. 3).

The inclusion of CMC in the L2 classroom provides an opportunity for students to utilize authentic language in interaction, rather than the more traditional institutionally asymmetric, nonnegotiable, and teacher controlled classroom discourse, producing a more student-centered environment (Beauvois, 1998; Chun, 1994; Kern, 1995) which promotes greater student empowerment, autonomy, and equality (Kroonenberg, 1995; Warschauer, Turbee, & Roberts, 1996).¹ These student-centered computer environments allow for abundant participation and interaction, providing opportunities to use the language and engage in interactional practices and types of discourse different from those produced in the regular classroom (Beauvois, 1997, 1998; Chun, 1994; Lee, 1998; Freiermuth, 2002; Kern, 1995; Smith, 2003; Tudini, 2003; Warschauer, 1996).

To further explore the possibilities of CMC, several language teachers and researchers have established telecollaborative projects in which individual students or entire classes engage in activities and conversations with expert speakers of the target language. Defined by Belz (2003), telecollaboration “involves the application of global computer networks to foreign (and second) language learning and teaching in institutionalized settings” (p. 2). For a review of telecollaboration and its European counterpart “tandem learning” see Thorne (2006). Telecollaborative projects offer an interesting research environment because they can open a window through which observing and analyzing L2 students in a naturalistic setting (given that CMC is one the most used forms of communication in today’s world) full of different social discourse practices. Telecollaborative projects can be an excellent tool for the study of intercultural communication (provided that the exchanges and activities in which the students engage are designed with this goal in mind), the development of intercultural competence (Bauer, deBenedette, Furstenberg, Levet, & Waryn, 2006; Belz, 2005; Furstenberg, Levet, English, & Maillet, 2001; Thorne, 2003), and the research of social and linguistic aspects of L2 sociopragmatic and pragmalinguistic competence (Belz, 2003, 2005; Belz & Kinginger, 2002, 2003; Kinginger, 2000; González-Lloret, 2008).

CA FOR THE STUDY OF L2 INTERACTION

According to Schegloff, Koshik, Jacoby, & Olsher (2002), CA offers the potential for useful contribution to intercultural communication studies. “CA studies of speaking practices across languages and cultures can provide a basis for comparison of L2, or language learner, speaking practices with L1 speaker norms in both L1 and L2” (p. 16). Following this line of investigation, several studies have been conducted as part of an educational institutional setting and/or with a pedagogic purpose that investigate the interaction of L2 students with L1 speakers (other than their teacher). These studies are consistent with results of studies of L2 speakers (outside a pedagogic context) which show that participants engage in collaborative work to maintain interaction rather than focusing on language problems (Hauser, 2005; Mori, 2004a; Wong, 2005), orienting to different activities and membership categories to accomplish and co-construct understanding (Kasper, 2004; Kasper & Kim, 2007). L2 learners already bring a full range of competences from their L1 to the interaction despite their lack of linguistic proficiency (Lee, 2006) and are able to employ multiple interactional resources (Mori, 2004a; Mori & Hayashi, 2006). The studies suggest that L2 speakers in a language learning environment orient to language issues only partially and are able to maintain a successful interaction with more competent speakers of the language.

CA FOR SLA

CA was developed as an approach to the analysis of social interaction for the study of ordinary conversation, although it soon spread to other forms of talk-in-interaction. As such, it was not conceived for the study of language acquisition, and only recently an interest for its possible application to language learning has begun. However, the methodological feasibility of CA to demonstrate learning is a current ongoing debate (see Magnan, 2004) in which several authors have suggested that CA cannot address language acquisition at this point because it is not a language learning theory (Egbert, Niebecker, & Rezzara, 2004; Hauser, 2005; He, 2004). Several authors, however, defend the possibility of using CA, and the interactional practices that CA explores, for the study of SLA by combining CA with theories of learning such as sociocultural and activity theories (Ishida, 2006; Mondada & Pekarek Doehler, 2004; Ohta, 2001; Thorne, 2000) and situated learning theory (Brouwer & Wagner, 2004; Hellermann, 2006; Young & Miller, 2004) which view learning as a form of socially distributed cogni-

tion. Recently a view that recognizes the potential of longitudinal CA for the study of language learning, independent of other theories of learning, has emerged (Markee, 2000, 2008). This view of CA for SLA adopts a wide definition of 'learning' that includes not only the learning of language but also the participants' orientation to the organization of the interaction (e.g., turn taking, sequence organization, eye gaze, and embodied actions) and the deployment of "intersubjective resources to co-construct with their interlocutors locally enacted, progressively more accurate, fluent, and complex interactional repertoires in the L2." (Markee, 2008, p. 406). In this view, SLA is understood not only as the acquisition of linguistic forms but also the development of interactional patterns and behaviors necessary to become competent users of the language. Although this interest in the use of CA for SLA is fairly recent, there are previous examples of CA as a theory for learning, such as Wootton's (1997) developmental study of requests. Wootton used CA to investigate longitudinally the development of requests by Amy, his daughter, from the age of 12 to 24 months. In this study, Wootton frames learning as situated in the local sequence of actions in which the child engages. Learning is viewed as the emergence of intersubjectivity, that is, the emergence of "the capacity to recognize that other people are acting on understandings and the capacity to act on such recognitions" (p. 24).

CA FOR THE STUDY OF SCMC²

Most of the studies to date which examine SCMC incorporate some type of qualitative analysis with excerpts of the data; however few do this in a microanalytical perspective. CA offers an alternative for the investigation of authentic interaction which focuses on how participants orient, understand, and construct each other's actions. CA focuses on the description of the organization of ordinary conversation, as well as interaction in institutional contexts, based on the idea that interaction is structurally and systematically organized and that is mediated or accomplished through the use of sequential patterns. In order to discover such sequential patterns, and participants' orientation to them, it is important to do a bottom-up, inductive, data-driven analysis in which such patterns are not the result of preformulated theoretical conceptions but rather those which emerge from the participants during the interaction.

Several authors have taken a CA approach to native speaker CMC interaction, investigating the nature of sequence organization and the turn-taking system in SCMC and comparing them to well established findings of sequence organization in oral communication (Sacks, Schegloff, & Jefferson, 1974; Schegloff, 1968, 1996, 2007; Schegloff, Jefferson, & Sacks, 1977; Garcia & Jacobs, 1999; Herring, 1999; Hutchby, 2001; Murray, 1989). In addition, some studies have employed a CA perspective to study special conversation sequences in SCMC such as openings (Rintel, Mulholland, & Pittam, 2001), lack of response (Rintel, Pittam, & Mulholland, 2003), repair (Schönfeldt & Golato, 2003), negotiation of face (Golato & Taleghani-Nikazm, 2006), and identity construction (Stommel, 2008). As for the investigation of language learners' SCMC data, only a handful of CA studies have been conducted so far (Kitade, 2000, 2005; Negretti, 1999; Thorne, 2000; González-Lloret, 2007, 2008, 2009).

SEQUENCE ORGANIZATION

Some researchers have pointed out that the multidimensional and nonlinear sequentiality of SCMC poses a problem for the classical sequential approach to data in CA³ (Beisswenger, 2008; Garcia & Jacobs, 1999; Murray, 1989). The sequence organization in SCMC seems chaotic, highly disrupted, without any adjacency (Herring, 1999), mainly due to the fact that the exact timing of message placement cannot be controlled by the interactants. That is, they do not know exactly where in the interaction their message is going to be placed, and this is even

more unpredictable when more participants join the interaction (Beisswenger, 2008; Schönfeldt & Golato, 2003). In SCMC there seems to be a difference between the overall structure of the interaction (which seems chaotic and not adhering to patterns of sequence organization), and individual strands or conversions which do seem to adhere to the basic rules of sequential organization, especially with respect to adjacency pairs (Schönfeldt & Golato, 2003; González-Lloret, 2009). Turns that appear next to each other in oral interaction are viewed as adjacency pairs, which form a strongly interrelated sequence.⁴ However this is not the case in SCMC. When we observe turns that appear next to each other in Extract 1 below, we can see that the turns do not constitute adjacency pairs; they do not reflect interconnected actions. However, a closer look shows that interlocutors' messages clearly orient to specific previous messages within the conversation (see reorganized sequence in Extract 2). This phenomenon, present in L1 SCMC was termed "virtual adjacency" by Schönfeldt and Golato (2003) and is widely present in L2 learners' data also (González-Lloret, 2007, 2009).

Extract 1 (personal data, 2009)

- | | |
|---|---|
| 1. Heidi (10:41:31 PM): Hola chicas! | Heidi: Hello girls |
| 2. Heidi (10:41:37 PM): como estan? | Heidi: how are you? |
| 3. John (10:41:46 PM): Buena! escuchas que carlos va a Hawaii para escuela? | John: good! You hear that Carlos is going to Hawaii for school? |
| 4. Sheila (10:41:54 PM): hola, bien, y tu | Sheila: hello, good and you |
| 5. Heidi(10:41:58 PM): no! | Heidi: no! |
| 6. John (10:42:03 PM): si es la verdad | John: yes it is the truth |
| 7. Sheila (10:42:12 PM): cuando llegara? | Sheila: when will he arrive? |
| 8. Heidi (10:42:14 PM): bien. | Heidi: good |
| 9. John (10:42:45 PM): este verano, pienso en junio | John: this summer I think in June |
| 10. Heidi (10:43:08 PM): o perfecto! el puede empezar con el semestre de verano | Heidi: oh perfect! He can start with the summer semester |

If Extract 1 above is separated into the different strands of communication rearranging the turn sequence, it can be observed that in fact there are several adjacency pairs intertwined in the interaction, for example: greeting-greeting (1/2-4, 1/2-8, 1/2-3), question-answer (3-5, 7-9), and exclamation-upgraded response (5-6).

Extract 2

- | | |
|---|--|
| 1. Heidi: Hola chicas! | Heidi: Hello girls |
| 2. Heidi: como estan? | Heidi: how are you? |
| 4. Sheila: hola, bien, y tu | Sheila: hello, good and you |
| 8. Heidi: bien. | Heidi: good |
| 3. John: Buena! escuchas que carlos va a Hawaii para escuela? | John: good! Do you hear that Carlos is going to Hawaii for school? |
| 5. Heidi: no! | Heidi: no! |
| 6. John: si es la verdad | John: yes it is the truth |

- | | |
|---|--|
| 7. Sheila: cuando llegara? | Sheila: when will he arrive? |
| 9. John: este verano, pienso en junio | John: this summer I think in June |
| 10. Heidi: o perfecto! el puede empezar con el semestre de verano | Heidi: oh perfect! He can start with the summer semester [<i>semester</i>] |

TURN-TAKING SYSTEM

There is high agreement among SCMC studies that the turn-taking system in SCMC is quite different from any face-to-face turn-taking system and that it is highly constrained by the medium (Beisswenger, 2008; Garcia & Jacobs, 1999; Herring, 1999; Murray, 1989; Negretti, 1999; Schönfeldt & Golato, 2003; Thorne, 2000). While in oral conversation the floor usually belongs to one speaker at a time (Sacks et al., 1974), in SCMC all participants can compose and post messages simultaneously. The sequence in which the messages will appear depends on when they are received by the server, which in turn depends on the length of the turn, the composer's typing speed, and the connection speed between the participant's computer and the server. Therefore, there is no competition for the *right* to submit a message (all messages can be submitted at any time)—no “temporally constrained competition” (Thorne, 2000)—although there may be competition to submit a posting first in a specific turn space (Garcia & Jacobs, 1999; Schönfeldt & Golato, 2003) because the farther a message is placed from its referent, the higher probability for it to be misunderstood or ignored.

In oral conversation, participants indicate the end of their turn-construction unit (TCU) to coparticipants through vocal and nonvocal behaviors. When the end of the turn can be projected, turn transition becomes relevant, at which point the current speaker may select the next speaker. If this does not happen, the next speaker may self-select; if the next speaker does not self-select, then the current speaker may continue (Sacks et al., 1974). Turn allocation is highly conditioned by the characteristics of the computer-mediated mode, including the characteristics of the technology used for communication.⁵ The lack of visual and audio clues limits the strategies that the participants use for turn allocation. Common features such as gaze, intonation, and gestures that have proved important for oral communication among language learners (Mori & Hayasi, 2006; Olsher, 2004) are not available in SCMC. In addition, since turns in SCMC appear on screen as complete units, it is difficult for recipients to anticipate transition-relevance places; in fact, each posted message is viewed as a transition-relevance place (Garcia & Jacobs, 1999). Based on this factor, most authors have claimed that the concept of the TCU is irrelevant to SCMC, and that chat interactions cannot exhibit overlaps (but see Smith & Gorsuch, 2004; González-Lloret, 2009 for clear examples of this phenomenon), recycled turn beginnings, collaborative completions, interruptions, continuers, and so forth (Garcia & Jacobs, 1999; Schönfeldt & Golato, 2003). Nevertheless, SCMC participants employ a variety of different turn-allocation techniques. They select the next speaker, or what Garcia and Jacobs (1999) have termed “next poster,” by addressing their postings to a specific participant when there are multiple participants in the conversation, especially in public chat rooms in which turns are highly displaced by the large number of postings from multiple participants (Herring, 1999; Schönfeldt & Golato, 2003).

In oral conversation, the current speaker may decide to hold his or her turn and continue speaking beyond a transition-relevance place. This practice would usually be accompanied by nonfinal pitch (Selting, 1996) and/or nonverbal cues that would prevent a potential next speaker from treating the turn as having reached a transition-relevance place. In text-based SCMC, turn-keeping practices are highly constrained since prosodic and nonverbal cues are limited. One of the techniques that both L1 and L2 speakers use to hold the floor is to post

shorter messages that can be typed and submitted faster or, if the message is too long, divide it in two or more separate turns (Garcia & Jacobs, 1999, González-Lloret, 2009).

Although interaction in SCMC does not allow participants to utilize the same resources as in oral conversation (e.g., relying on the prior turn as context or accessing a turn as it is being produced to project an upcoming transition-relevance place), L2 participants have been shown to still engage in meaningful and organized interaction much in the same way as L1 speakers and to be able to allocate turns employing a turn-taking system borrowed from oral communication but re-shaped and adapted to SCMC (Kitade, 2000; Negretti, 1999; González-Lloret, 2007, 2009).

Considering all these factors, it may well be that SCMC does not conform to the turn-taking sequence as proposed by Sacks et al. (1974) because it is not a purely oral conversation and its sequential principles are tightly related to the medium. Therefore, rather than imposing existing structures on the new medium, we should examine the ways in which participants achieve different sequence types in the new medium, much in the same way that telephone conversations were first explored using a CA approach (Schegloff, 1979, 2002a, 2002b).

LEARNING TO TROUBLE-TALK IN SCMC: A LONGITUDINAL CASE

As a practical example of how CA can be employed for the investigation of SCMC, a case study involving a L2 Spanish learner, Jacy and Cid (both pseudonyms), her L1 Spanish/L2 English partner is presented. This case study is part of a larger project where L2 Spanish speakers interacted with L1 Spanish speakers in a telecollaborative project for 8 weeks as part of their L2 learning curriculum. The participants connected using Yahoo! Messenger outside the classroom, saved their conversations and emailed them to the researcher and their respective teachers for credit. Yahoo! Messenger was selected because it is not an open-to-the-public type of chat room. No one can enter a conversation unless they are invited into the room. Yahoo! Messenger allows adding time stamps to the conversation, a useful feature for a CA analysis, and it is free and easy to download for participants, regardless of computer platform. The following interactions illustrate the development of Jacy's competence to interact in trouble-talk in SCMC.

Trouble-talk sequences (Jefferson, 1988) are equivalent to the more traditional speech acts of complaining and commiserating (Boxer, 1993). According to Boxer (1993), indirect complaining (gripping, grumbling) is the initiating speech act of a trouble-telling event and is defined as "the expression of dissatisfaction to an interlocutor about a speaker himself/herself or someone/something that is not present" (p. 2). Indirect complaining is employed frequently by expert speakers as an attempt to establish solidarity. From the possible responses to a complaint, Boxer (1993) found that commiseration was the most frequent by far and realized through a variety of responses, from exclamations to full statements, designed to make the interlocutor feel better. The most common types of commiserative responses Boxer found were: agreement with the speaker, elaboration of the speaker's complaint, or confirmation of the validity of the complaint.

Similar to Boxer's (1993) commiserating action, after the interlocutor is presented with the source of trouble in a CA trouble-talk sequence, the preferred response is an affiliative turn expressing empathy or sympathy (Drew & Holt, 1988; Jefferson, 1988; Pudlinski, 2005).

Jacy and Cid had exchanged one email before the following interaction, introducing themselves and agreeing on a date and time to meet in the chat room in Yahoo! Messenger. This is the first of their interactions in the private chat room.

Extract 3

Jacy and Cid, Interaction 1⁶

1. Jacy (9:58:33 AM): Hola Cid	Jacy: Hello Cid
2. Cid (9:58:46 AM): hola Jacy	Cid: hello Jacy
3. Jacy (9:58:58 AM): Como estas?	Jacy: How are you?
→ 4. Cid (9:59:00 AM): primero de todo, pedirte perdon pero es que he tenido unos problemas	Cid: first of all, I want to apologize to you but I've had some problems
5. Cid (9:59:07 AM): muy bien	Cid: very well
6. Cid (9:59:09 AM): y tu?	Cid: and you?
7. Jacy (9:59:12 AM): No tengo problemas	Jacy: I don't have problems
→ 8. Cid (10:00:10 AM): se me rompio el ordenador	Cid: my computer crashed
→ 9. Jacy (10:00:18 AM): no te preocupas.... soy feliz proque ahora podemos hablar!	Jacy: don't worry [<i>preocupes</i>] ... I am [<i>estoy</i>]happy because [<i>porque</i>] now we can talk
→ 10. Cid (10:00:18 AM): y ahora tengo a mi padre en el hospital	Cid: and now my father is in the hospital
→ 11. Jacy (10:00:34 AM): Lo siento.....	Jacy: I'm sorry ...
12. Cid (10:01:06 AM): ya esta bien	Cid: he is ok now
→ 13. Jacy (10:01:16 AM): bueno....vamos a conocernos	Jacy: all right ... let's get to know each other

After an exchange of greetings, Cid starts with an apology for not having connected before (*primero de todo, pedirte perdon pero es que he tenido unos problemas*). This turn seems to be produced in overlap with Jacy's line 3 ('how are you') since Cid completes the greeting sequence right after his apology (and there are only two seconds of difference by the timestamp). In line 7, Jacy orients to Cid's reciprocating question as part of turn 4 rather than his greeting in turn 5 when she answers *No tengo problemas*. The preferred response to a statement sharing a personal problem would be another statement expressing sympathy, understanding, or inquiring about the problem. However, Jacy does not produce such a turn, and Cid self-selects as the next speaker after a considerably long pause (almost a minute on the time stamp). He produces a new turn post, expanding his troubles-talk sequence and providing another opportunity for Jacy to uptake. However, Jacy's response is again not a preferred response in this case since it is minimal and does not attend to the problem or sympathize with the speaker. Cid upgrades his troubles by adding another problem to his computer problems, a more serious problem of his father being in the hospital. However, Jacy's response is very minimal (*lo siento ...*) and Cid's delayed response (almost 30 seconds by the timestamp) seems to orient to Jacy's response as incomplete. When Jacy intervenes again in line 13, she initiates a new sequence, marked by a transition (*bueno ...*), closing the previous sequence and initiating a new topic (*vamos a conocernos*). Cid never receives a sympathy uptake from Jacy for his multiple problems, in spite of the possibilities afforded by the conversation.

Similarly, in their next interaction (Extract 4), when Cid complains about having a lot of homework in his classes, Jacy does not orient to it as a complaint in need of sympathy, she orients to it as a news report by confirming it and moving to a different, related topic (*si ... qué año en la Universidad estás?*).

Extract 4

Jacy and Cid, Interaction 2

- | | |
|--|--|
| 73. Jacy (8:55:28 AM): si...has leído los libros escrito por Dan Brown? En inglés los libros se llaman "The Davinci Code y Angles and Demons" Este escritor escribe mucho sobre la iglesia catholica | Jacy: yes...have you read the books written by Dan Brown. In English the books are called "The Da Vinci Code and Angels and Demons" This writer writes a lot about the Catholic church |
| → 74. Cid (8:56:21 AM): he oído hablar de ellos, pero no los he leído, últimamente no leo mucho... demasiadas tareas en la university | Cid: I've heard about them, but I haven't read them, lately I don't read much...too much homework at the university |
| → 75. Jacy (8:57:45 AM): si...qué año en la universidad estás? Yo soy un "junior" y voy a graduarme el próximo año | Jacy: yes...what year of the university are you? I'm a "junior" and I'm going to graduate next year |

It is not until their fourth interaction that Jacy starts displaying interest and sympathy responses when presented with trouble talk as illustrated in the following extract.

Extract 5

Jacy and Cid, Interaction 4

- | | |
|--|--|
| 25. Cid (10:01:30 AM): me he retrasado porque un amigo mio tuvo ayer un accidente y me he pasado a verle al hospital | Cid: I'm late because a friend of mine had an accident yesterday and I went to the hospital to see him |
| → 26. Jacy (10:02:12 AM): que terrible! Qué pasa? | Jacy: how awful! What's wrong? |
| 27. Cid (10:02:30 AM): nada, ya está bien... posiblemente el lunes vuelva a casa (several lines omitted) | Cid: nothing, he's ok now ... he'll probably go home on Monday (several lines omitted) |
| 76. Jacy (10:23:24 AM): en la universidad aquí, tenemos que tomar 4 semestres de una lengua... | Jacy: at the university here, we have to take 4 semesters of a language [<i>lengua</i>] |
| 77. Cid (10:23:54 AM): nosotros 4 horas semanales de ingles durante los 3 años | Cid: we 4 hours a week of English for three years |
| → 78. Jacy (10:24:49 AM): si muy intensiva!!! | Jacy: yes very intensive!!! |

When Cid states that he is late because his friend is in the hospital, Jacy orients to it as a problem, and this time she produces a preferred answer: a sympathy turn which includes an exclamation to validate the severity of the problem followed by an invitation for elaboration (Boxer, 1993). According to Jefferson and Lee (1981), when an elaboration occurs, a more emotional turn follows the telling of a problem and a sympathetic response, and a moment of intimacy between the interactants is constituted. However, we can see that Cid does not produce such a turn, but rather downgrades the problem (*nada, ya está bien ... posiblemente el lunes vuelva a casa*) displaying then a lack of intimacy with Jacy. Later in the interaction when

Jacy complains about having to take 2 years of a foreign language (in line 76), Cid uptakes by sharing his similar experience, a common practice to affiliate with another's problems (Pudlinski, 2005). Jacy orients to this as a new trouble-telling sequence and uptakes by expressing her own feelings about his trouble in line 78 (Pudlinski, 2005), a frequent commiseration response (Boxer, 1993).

Their last interaction illustrates another instance of Jacy's uptaking after Cid's initiation of a trouble-telling sequence.

Extract 6

Jacy and Cid, Interaction 5

- | | |
|---|--|
| 1. Jacy (8:26:15 AM): Hola! | Jacy: Hello! |
| 2. Cid (8:43:57 AM): hola Jacy | Cid: hello Jacy |
| 3. Cid (8:44:01 AM): q tal tu dia? | Cid: how was your day? |
| 4. Jacy (8:44:47 AM): bien...mi familia y yo salimos a un restaurante para el cumpleaños de mi abuelita...y tú? | Jacy: fine ... my family and I went to a restaurant for my grandma's birthday ... and you? |
| 5. Cid (8:45:05 AM): realmente mal... | Cid: really bad ... |
| → 6. Jacy (8:45:17 AM): porque> | Jacy: why> |
| 7. Cid (8:45:52 AM): llegué de toledo a las 16.00 h, después me fui a la autoescuela, llegue a mi casa a las 18.00 h, y he estado toda la tarde con dolor de cabeza. Ahora he cenado, y he vomitado | Cid: I got back from Toledo at 4 pm, then I went to the driving school, I got home at 6 pm, and I have had a headache all evening. I just had dinner, and I threw up |
| 8. Cid (8:45:57 AM): parezco un zombie!! jeje | Cid: I look like a zombie!! hehe |
| → 9. Jacy (8:46:50 AM): ahhh! Estas enfermo? | Jacy: ohhh! Are you sick? |
| 10. Cid (8:47:06 AM): mas o menos... con unos grados de fiebre y dolor de estómago | Cid: more or less ... with some fever and a stomachache |
| 11. Cid (8:47:16 AM): espero q se me quite esta noche, y mañana estar al 100% | Cid: I hope it goes away tonight, so tomorrow I'll be 100% well |
| → 12 Jacy (8:47:32 AM): yo también!
(Several lines omitted) | Jacy: me too! |
| 19. Jacy (8:48:27 AM): tenías escuela hoy, no? | Jacy: you had school today, didn't you? |
| 20. Cid (8:48:39 AM): si... desde las 8.00 am | Cid: yes ... from 8.00am |
| → 21. Jacy (8:49:04 AM): wow...un día largísimo no? | Jacy: wow ... a very long day, wasn't it? |
| 22. Cid (8:49:12 AM): largo, largo, largo
(Several lines omitted) | Cid: long, long, long |

48. Cid (8:58:00 AM): jeje, suele pasar, en toledo, por ejemplo, cuando llegao hay caravana a eso de las 8.00	Cid: hehe, it happens, in Toledo, for example, when I arrive there is traffic backup at about 8.00
49. Cid (8:58:16 AM): pero luego poco a poco va desapareciendo hasta las 15.00h	Cid: but later little by little it disappears until 15.00h
50. Jacy (8:58:35 AM): y las italianas conducen más rápido en sus coches pequenitos	Jacy: and the Italians drive faster in their tiny cars
→ 51. Jacy (8:58:46 AM): yuck...mucho caravanas	Jacy: yuck ... lots of backup
52. Cid (8:58:46 AM): jeje	Cid: hehe
53. Cid (8:58:55 AM): muchas caravanas, better	Cid: ' <i>muchas caravanas</i> ' better
54. Jacy (8:59:04 AM): gracias..	Jacy: thank you
55. Cid (8:59:13 AM): ;)	Cid: ;) [winking]

In this sequence, as part of a greeting sequence, Cid's response *realmente mal ...* to Jacy's reciprocating greeting seems to be a presequence advance bid for trouble-telling, a "trouble premonitory" response (Jefferson, 1988). Jacy orients to it as such (rather than as the second part of a greeting sequence) by asking Cid to elaborate on his trouble-telling (line 6).

When Cid tells his problem, Jacy displays understanding with a change-of-state token *ahhh* 'ohhh' (Heritage, 1984) and asks for confirmation of her understanding of his problem (line 9). At this point, Cid upgrades his state of sickness from a headache to fever and stomach pain. Since Cid self-selects as next speaker, proposing a wish for improvement, Jacy is not provided with an interactional space to produce a sympathy turn, but she agrees with him on his wishes of recovery in the following turn (line 12). A little later in the same interaction, when Cid produces a response to Jacy's display of shared knowledge (line 19) by elaborating his answer *si* with a complaint *desde las 8:00am*, Jacy orients to it as problem by producing another sympathy turn composed of an exclamation and an emphatic restatement of the problem (line 21), confirming the validity of the complaint, the most frequent form of uptake or commiseration by L1 speakers (Boxer, 1993).

Jacy employed this combination of exclamation and restatement of the problem frequently as a resource to produce a sympathy turn for the rest of their interactions (line 51 being another example later in this same interaction). From their fourth interaction forward, Jacy consistently produced uptakes to Cid's trouble-telling, much in the same way that L1 speakers do. Thus the CA of the longitudinal data clearly reveals how the learner, through SCMC, develops her L2 competence to interact in trouble-talk with the Spanish speaker. With respect to the pedagogical significance of this case study, we can see that the L2 student's engagement in interaction with an expert speaker of the language for discussion purposes was a fruitful activity in which she developed a significant interactional practice: the providing of sympathy turns when presented with a problem or trouble by another speaker, something which she most likely would not have the chance to develop in her classroom interactions.

IS CA SUITABLE FOR THE STUDY OF SCMC?

As demonstrated by this and other studies, CA can be an appropriate tool for the study of SCMC, depending on the focus of the study. CA is better suited for discovering patterns of

how the participants carry out the interaction and how they orient to the sequences developed while they construct authentic conversation, and CMC produces large quantities of authentic materials, being one of the fastest growing communicative media in the world. Although it has been suggested that CA may not be suitable for the study of text-based CMC (Garcia & Jacobs, 1999) because it cannot capture the nuances of what happens during interactions, from a CA perspective the need for video recording of the participants while engaged in the interaction would only be required depending on the subject of study. From a CA perspective, what happens before turns are posted is not relevant to the interaction unless it is "brought into being by the actions people produce" (Pomerantz & Fehr, 1997, p. 70), that is, unless the participants themselves orient to it during the interaction. If the item of study requires data gathering through video (e.g., SCMC composition process, repair sequences in SCMC, etc.) in order to better understand the patterns under study, a detailed analysis that includes visual and auditory clues should be conducted (Beisswenger, 2008; Marcoccia, Atifi, & Gauducheau, 2008; Smith, 2008) or even more sophisticated tools such as gaze-tracking should be employed (Smith & Gorsuch, 2004), much in the same way that CA studies of face-to-face gaze, intonation, and gesture combine text with information from the audio and video recordings and consider the interaction of each in the microanalysis (Egbert, 1996; Lerner, 2003; Mori & Hayasi, 2006; Olsher, 2004).

As for the methodological feasibility of CA to demonstrate learning, expanding the definition of learning may be necessary, as discussed above, so that SLA is not limited only to linguistic features but also includes the social context and sequential development of interactions. In this sense, learning is understood as *participation based*, focusing on the improvement of the interactional resources used by learners for talk-in-interaction rather than just on their linguistic skills (Mori, 2004b, Markee, 2008). CA's potential as a theory for learning can be explored by "extending the scope of CA itself from socially distributed cognition to socially distributed learning (Seedhouse, 2004)" (as cited in Kasper, 2006, p. 91), exploring the participants' social actions as they display them to each other in their interactional behavior.

This case study, in line with Markee's (2008) longitudinal learning behavior tracking methodology for CA in SLA, shows learning as the difference between the structures and resources employed by the learner in early and later encounters, differences that emerge through the microanalysis of the longitudinal, authentic, and interactive data. It was through such microanalysis that we could see the evolution of Jacy, the L2 speaker, from not responding to trouble-talk to actually learning to produce sympathy tokens and utterances and interacting in a more target-like manner in these types of trouble-talk communicative situations, all of which suggests that CA can be an appropriate approach to the study of L2 text-based computer-mediated interaction.

PEDAGOGIC IMPLICATIONS AND FUTURE RESEARCH

One of the most important pedagogic implications of this study is the possibility that SCMC offers for language teachers to connect their students with native speakers of the target language so that they can engage in real interaction. SCMC can be used as part of the language classroom or outside. In a recent study, Sanders (2006) compared SCMC during class time and outside of class time and found that production was greater when students met with their own work groups outside of class. The use of SCMC outside of the class would encourage students to become more autonomous learners and create relationships with a variety of interlocutors, allowing them to engage in a more complex set of pragmalinguistic rules of engagement than those offered by the language classroom. I am not arguing that every language teacher should let their students loose to explore any chat environment just because it

is in the target language. It is important to remember that the student described here was an adult engaged with a native speaker as part of a telecollaboration project set up by language teachers, and the interactions had a clear L2 learning purpose.

Research on CMC in general could greatly benefit from further methodological reflection on data collection and analysis (Androutsopoulos & Beisswenger, 2008). There is a clear need for studies, in line with this special issue, that investigate different approaches and research traditions to CMC data and compare their findings. Moreover, it is important to critically reflect on the challenges that arise when these research traditions are applied to the new CMC environments (email, forums, blogs, text-based SCMC, multimodal SCMC, mobile devices, etc.)

In terms of future research, the use of CA for the study of multimodal SCMC is still relatively new (Jenks, 2009). As interactional software becomes more sophisticated and internet connection becomes more powerful and fast, the use of video in connection with audio and text is becoming more common. Although some research has already been conducted comparing interaction in the different modes of CMC (Jepson, 2005; Wang 2004a, 2004b, 2007), there is still much research to be conducted investigating the intersection of the three modes and how they affect the patterns of interaction among L1 speakers and between L1 and L2 speakers, as well as the potential of different tools for language teaching and learning.

NOTES

¹ It is important to note that although CMC offers this potential, its value depends on how and for what purpose it is used. The mere use of CMC does not guarantee a student-centered, rich environment. This would imply a determinist view of technology (Warschauer, 1998) that is not at all intended in this paper.

² SCMC is used here for text-based computer-mediated communication, or what is usually known as "chat." See Garcia and Jacobs (1999) for a different view on the synchronicity of text-based CMC.

³ For a more complete overview of CA, see Hutchby & Wooffitt (1998) and Have (1990, 2007).

⁴ Although very common in SCMC, the interruption of adjacency pairs is not exclusive to this medium. Insertion sequences, repairs, and utterances from a multiparty oral conversation might as well interrupt an adjacency pair in face to face conversation (Schegloff 1995, 2007).

⁵ Several tools present the participants with extra information such as "xxxx is typing" which also conditions the turn-allocation process. Much research is needed on the effect of variations in the technological environment on the resulting patterns of interaction.

⁶ The transcription of the data is somewhat unusual for CA. This is mainly due to the fact that there are not clear standards of transcription for SCMC L2 data. The data are arranged in two columns. The left column is the text from the synchronous computer-mediated interactions without any modifications. Any orthographic symbols were used as such by the participants. Nothing has been added or subtracted; only the names of the participants have been changed. The data have been kept in a column which resembles closely the actual look of the interaction for the participants. The second column contains the translation from Spanish to English. In this column terms incorrectly used/spelled by the speaker are translated with the correct possible L2 form in brackets.

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