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# *Form-focused Interaction in Online Tandem Learning*

**BREFFNI O'ROURKE**

*University of Dublin, Trinity College*

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## **ABSTRACT**

Tandem language learning—a configuration involving pairs of learners with complementary target/native languages—is an underexploited but potentially very powerful use of computer-mediated communication (CMC) in second-language pedagogy. Tandem offers the benefits of authentic, culturally grounded interaction, while also promoting a pedagogical focus among participants. CMC-based tandem promises, in addition, those benefits believed to accrue from text-based interaction, in particular, promotion of conscious attention to language forms in the course of meaningful communication. This paper presents data from a study based on the spontaneous interactions of tandem partners during a weekly, term-long synchronous exchange based in a MOO (Object-Oriented Multi-User Domain). It begins with an introduction to the concept of tandem language learning. The theoretical background, sketched briefly, is a model of instructed second-language acquisition that emphasizes the role of metalinguistic awareness. The empirical section examines negotiation of meaning, a discourse phenomenon held to bring about metalinguistic focus, and, more specifically, signal form and focus. The study analyzes learner interactions along the parameters of home country (Ireland or Germany), current tandem role (NS or NNS), and utterance language. It is suggested that the behaviors observed in this project have their roots in both the tandem learning setup and the text-based medium.

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## **KEYWORDS**

Tandem, CALL, CMC, MOO, Negotiation of Meaning, Metalinguistic Awareness

## **INTRODUCTION**

In a recent *CALICO Journal* article, Cziko (2004) pointed out that tandem language learning is far better established as an idea and a practice in Europe than in North America. His article reviewed a range of possible media through which tandem learning might be conducted. In this paper, I hope to offer an insight into what tandem learning looks like in one such medium, MOO (Multiple User Domain, Object-Oriented), focusing in particular on what the combination of tandem framework and synchronous computer-mediated communication (CMC) might mean for metalinguistic focus.

Tandem language learning is an arrangement in which two native speakers of different languages communicate regularly with one another, each with the purpose of learning the other's language. Tandem learning can support a combination of explicit form-focused learning and meaningful communication which is, in addition, highly authentic since tandem partners should in principle be interested in one another as individuals and not just as sources of language input. It also facilitates an autonomous mode of learning since partners can negotiate the desired balance between topical and pedagogical communication and choose conversational and pedagogical topics according to their interests and needs.

Two fundamental principles are taken as axiomatic in most work on tandem learning (e.g., Little & Brammerts, 1996; Little, Ushioda, Appel, Moran, O'Rourke, & Schwienhorst, 1999): reciprocity and learner autonomy. Reciprocity entails "the reciprocal dependence and mutual support of the partners" (Brammerts, 1996, p. 11), and the principle of learner autonomy holds that learners must take responsibility for their own learning: "they alone determine what they want to learn and when, and they can only expect from their partner the support that they themselves have defined and asked for" (Brammerts, 1996, p. 11). This disciplined mode of working is what sets the tandem partnership apart from the more informal ones between "keypals" and similar arrangements. Of course, in line with the more general principles of learner autonomy (Little, 1991), this discipline—to the extent that it actually emerges in real tandem exchanges—comes principally from within learners, rather than being imposed by the agendas of instructors. In that sense, tandem may in fact appear less formal than arrangements that are structured around prescribed sequences of tasks.

## **THEORETICAL PRELIMINARIES**

### ***Technologies, Pedagogical Frameworks and Learners***

One of the notions this special issue aims to address is that of CMC environment as cultural artifact, so it is worth making explicit the understanding of this matter that lies behind the analysis. The question arises out of the sociocultural turn taken by much recent research on CMC in language learning (Belz, 2002b, 2004; Darhower, 2002; Lee, 2004; Thorne, 2003; Warschauer, 1996b, 1997, 1998; Wegerif, 1998), as indeed elsewhere in the second-language field (Firth & Wagner, 1997; Kramsch, 1993; Lantolf, 2000; Lantolf & Aljaafreh, 1995; Lantolf & Appel, 1994; Nassaji & Swain, 2000; Swain, 2000). The sociocultural perspective is motivated by the conviction that interaction in CMC should be seen above all as a socially and culturally situated activity engaged in by learners as agents who co-construct not only shared meanings, but also their own roles (i.e., beyond those simply of 'learner' or 'nonnative speaker,' Belz, 2002a; Firth & Wagner, 1997). Further, CMC environments are themselves artifacts, which therefore ought not to be seen as nonnegotiable objects with direct and predictable effects on user behavior. Rather, their features are exploited, and often subverted, by users making active, strategic choices. The choices are shaped by the contingencies of task and interpersonal dynamics, which themselves are not objective 'givens' but are

instead constructed in negotiation. In ecological terms, the properties of the technology stand in a dialogic relation to the activities of users, giving rise to dynamic *affordances* (Thorne, 2003; Van Lier, 2000).

In this view, much research in the interactionist mold, in CMC and otherwise, with its conventional discourse-analytic methodology, is undermined by reductionism and determinism. It is argued that such research treats interactional patterns as quasinatural phenomena whose social constitution is recognized only superficially (Donato, 1994), with a consequent failure "to capture how utterances interact with social realities, evoking transformations of the social situation as well as constituting them" (Brooks & Donato, 1994, p. 263). In the view of sociocultural theorists, much CMC research in the information-processing tradition oversimplifies an ineluctably complex ecological system by separating environment from users and by construing the former to be rigid and objective and the latter to be objects rather than subjects, acted upon rather than acting.

The sociocultural view has unquestionably been useful in drawing attention to the complex nature of humans as sociocultural actors and technological settings as artifacts and as mediators, rather than determiners, of action and interaction. But I am less convinced by the methodological argument, specifically the deprecation of conventional interactional analysis, and indeed of reductionism generally. Space forbids close examination of these issues, but it is worth emphasizing that pedagogical environments—be they classrooms, computer programs, or communications media—must have distinctive, if indirect, effects on interaction since they have distinctive properties. They are flexible and they evolve, but at any given historical moment they have relatively identifiable contours. They are not infinitely negotiable. Continuity of form, indeed, is arguably the source of their peculiar power in cultural evolution (Tomasello, 1999): individual users, and successive generations, can adapt the wheel to its multiplicity of sociocultural uses precisely because they do not have to re-invent it. As with physical tools, so with technologies and pedagogical practices. Thus, any sociocultural analysis, be it 'microgenetic' or otherwise, needs to presuppose certain fixed properties of an environment, even if it does not explicitly draw them into any given interpretation. Though these properties are far from being determiners of behavior in any simple sense, they do influence it, at the very least through setting limits on possible choices. Just as it can be worthwhile to investigate the situated action of learners in the absence of focused consideration of environmental properties, so, too, it can be fruitful to investigate the influence of sociocultural tools and environment without close attention to, for example, construction of learner roles. Both enterprises are forms of legitimate reductionism.

O'Rourke (2002) and O'Rourke and Schwienhorst (2003) attempted to strike a balance between, on the one hand, technological determinism and, on the other, the view that the essence of a tool lies only in the wielding of it. Specifically, they suggested that features of artifacts and environments can be graded according to the strength of their tendency to promote attention to language form. This continuum, as observed in relation to particular features, can usefully be divided into three degrees of saliency: a feature may constitute a *pressure* to reflect on form; or

an *affordance* for reflection; or, the least compelling, a mere *potential* for reflection.<sup>1</sup> Where the environment provides *pressures*, little pedagogical intervention is required in order to promote reflection. *Affordances* for reflection will be taken advantage of only where other factors (e.g., affective or communication-strategic) make it natural or necessary; pedagogical intervention may encourage learners to take advantage of affordances. *Potentials*, such as re-reading MOO transcripts, may be entirely invisible to learners and are unlikely to be used by any but the most autonomous among them. Pedagogical intervention, perhaps in the form of appropriately designed tasks, is necessary if the majority of learners are to take advantage of potentials for reflection.

Behind this framework is the belief that it is both legitimate and necessary to ask how pedagogical arrangements and technological artifacts may encourage learners—and may be manipulated with the aim of encouraging them—to exploit those arrangements and artifacts in ways that teachers believe will facilitate their language learning. I suggest that the framework, which originally focused on self-directed reflection on language form, can be extended to the capacity of a pedagogical/technological environment to promote negotiation of meaning in problematic communication and that the descriptive vocabulary of meaning-negotiation research can shed light on the relationship between pedagogical framework/technological environment and metalinguistic focus. I will briefly suggest in my conclusion how the analysis fits with the pressures/affordances/potentials framework.

### ***Communication, Metalinguistic Focus, and MOO Tandem Learning***

That communicative interaction plays a key role in language learning is a matter of broad consensus across a range of theories and practices (Breen & Candlin, 1980; Brumfit & Johnson, 1979; Canale & Swain, 1980; Dam, 2001; Krashen & Terrell, 1983; Legenhausen, 2001; Little, 1991; Widdowson, 1978). The role of conscious reflection on language form is also widely accepted, even if its precise role in acquisition is more controversial (Doughty & Williams, 1998; Gnutzmann, 1997; Harley, 1994; Hulstijn & De Graaf, 1994; Leow, 1997; Long, 1991; Rutherford & Sharwood Smith, 1987; Schmidt, 1995; Swain, 1998; Thornbury, 1997; VanPatten, 1994). The study described in this paper is based on a model of instructed second language acquisition (O'Rourke, 2002) which accords with theories that assign importance both to meaning-focused communication and to focus on form.<sup>2</sup> Specifically, it holds that attention to form can contribute only to metalinguistic knowledge; that metalinguistic knowledge is not in any sense converted into interlanguage; and that metalinguistic knowledge is a powerful sociocultural tool that both facilitates the development and refinement of further metalinguistic knowledge and, because it enables communication to proceed in the absence of adequately developed interlanguage, provides the conditions in which interlanguage can grow.

Three pedagogical principles follow from the model: (a) the central role of meaningful L2 communication; (b) the importance of a metalinguistic focus,

which can arise through explicit metalinguistic dialogue—that is, “reflective conversation” (Lamy & Goodfellow, 1999)—but also through spontaneous and transient language-related episodes (Ellis, 2000; Fortune & Thorp, 2001) such as negotiation of meaning that may support noticing and focus on form at some level; and (c) the importance of opportunities for individual and unpressurized reflection outside the general course of dialogue. This paper focuses on the second of the above three principles; in particular, it seeks to explore how form-focused discourse patterns in a MOO (i.e., a text-based, synchronous CMC environment) relate to the medium and to the tandem learning situation.

Before turning to the empirical research into the linguistic properties of CMC utterances and discourse, there are a number of *a priori* observations that we can confidently make in connection with MOOs.

### MOOs and speech

1. Like oral conversation, meaning in a MOO is negotiated rather than stipulated.
2. Oral and MOO texts have a turn-taking structure.
3. There is perceived social pressure to keep the lines of communication open by filling in apparent gaps in conversation (what Smith (2003) refers to as “communicative urgency”). Related to this is the fact that ...
4. communication proceeds under pressure of time, in the sense that, in contrast to asynchronous CMC, contributions cannot typically be deferred for periods longer than a few seconds.

These are some of the constraints and pressures under which we expect learners to be able to speak their target language, and to that extent MOO communication can provide relevant opportunities for practice. But other aspects of MOO communication are comparable to writing. In the following list, “message” is meant to encompass both spoken and written utterances.

### MOOs and writing

1. To begin with the obvious, the medium is textual and therefore calls on literate skills.
2. Message generation is private and invisible: one’s interlocutor cannot influence the shape of an individual message since complete messages are transmitted instantaneously.
3. Messages can be reviewed and altered, or even abandoned entirely, before transmission. Again, this is invisible to the interlocutor.
4. After transmission, messages from both interlocutors, being visible, are reliably available for consideration in a way that spoken utterances, which leave only a rapidly fading trace in the phonological loop (Baddeley, 1986), are not.
5. Entire dialogues can be archived for indefinite periods and are therefore available for subsequent review and consideration.

In summary, then, real-time text communication such as that in the MOO makes possible real-time dialogue, like speech, while offering opportunities for reflection, like writing (Smith, 2003). Furthermore, the dependence on a single channel for all communication may put a greater burden on the individual's conscious cognitive processes than that associated with face-to-face (F2F) situations: the textual mode means that communication is more susceptible to misunderstanding, and we might expect correspondingly altered patterns of negotiation, repair, and other metalinguistic phenomena.

A great deal of empirical research suggests that the language of CMC displays discourse and pragmatic functions of speech and the structural complexity of writing (Chun, 1994; Ferrara, Brunner, & Whittemore, 1991; Voiskounsky, 1996; Warschauer, 1996a; Werry, 1996) and that users perceive CMC discourse as a hybrid (Kötter, 2002). This corroborates our a priori speculations that the speech-like, real-time dialogue of a text-based CMC system affords opportunities for reflection that we usually associate with reading/writing situations. There is thus a *prima facie* case for the view that such communication furnishes a unique way of combining meaningful communicative practice with reflection on form. For these reasons, we might expect that learning conversations via CMC will sustain a higher level of metalinguistic awareness than oral interaction, and perhaps even more so than other reading and writing processes. Since conscious awareness of language form is of the essence in writing, any incidental promotion of such awareness associated with the online medium itself is clearly welcome.

A certain amount of research has also been conducted into problematic communication, and specifically negotiation of meaning, in synchronous CMC. It is by now well established that negotiation does indeed take place (Fernández-García & Martínez Arbeláiz, 2002, 2003; Kötter, 2002; Lee, 2002; Pellettieri, 2000; Smith, 2003) and that CMC negotiation is similar in some respects to F2F negotiation (e.g., a tendency to focus on lexis: Fernández-García & Martínez Arbeláiz, 2002, 2003; Pellettieri, 2000; Smith, 2003) and different in other respects (e.g., a predominance of direct over indirect signals of nonunderstanding [Kötter, 2002]). Much of this research has focused on classroom CMC settings, as opposed to distance situations, and has frequently elicited data through strictly defined tasks (exceptions include Kötter, 2002; Schwienhorst, 2002).

It is clear that a MOO provides a potentially highly useful and cost-effective way of bringing students together for tandem learning. But the foregoing discussion leads us also to speculate that this technology can bring with it benefits relating specifically to metalinguistic activity and reflection: the nature of the medium itself may bring language form more sharply into focus than is possible in oral conversation.

The research described below is naturalistic and exploratory. It would not be possible in such a study to unambiguously identify causal links between the tandem framework and/or the MOO medium on the one hand and interactional patterns on the other, even supposing it were meaningful to posit such links in the first place. Internal comparisons along various dimensions do reveal characteristic phenomena, however, and these can be tentatively explained in light of the char-

acteristics of tandem learning and the nature of MOO communication.

## THE STUDY

### *Pedagogical Context, Participants, and Data Collection*

The Irish and German students who participated in the tandem exchange examined in this study were from, respectively, Trinity College Dublin (TCD) and Fachhochschule Rhein-Sieg (FHRS). Both sides of the exchange were second-year undergraduates taking degrees in information and communication technologies and were learning their target language as a compulsory part of their course of study. All participated in the tandem project as a compulsory part of their language course. The two groups were thus closely matched in ways which previous experience suggests can maximize the chances of an effective and sustainable partnership (Little et al., 1999).<sup>3</sup>

Once a week for 9 weeks, during a scheduled 1-hour class period, the German and Irish groups assembled in a computer laboratory in their institutions (occasionally, students connected from home) and logged on to a MOO.<sup>4</sup> Each student met his or her partner in a virtual room that had been assigned to them by the organizers. Teachers rarely intervened in pair meetings. When they did, it was normally only to resolve organizational difficulties, such as asking an established pair to accept a third student whose partner was absent. A general announcement (by means of a communication function analogous to a public address system), asking students to change language, was made halfway through each session in an effort to enforce the tandem principle of bilingualism.

Logs were collected for the last six of the nine weekly sessions.<sup>5</sup> Logs, hereafter referred to as transcripts, were automatically generated and mailed to each user when he or she logged off the MOO. Transcripts are digital text files that include all text that appeared on the user's screen, whether generated by the user him/herself or by other users.<sup>6</sup> With the consent of students, each transcript was simultaneously and automatically mailed also to the researcher.

Each of the 26 TCD students and 34 FHRS students was present in at least one of the sessions in which data were collected; hence we are concerned with 26 tandem partnerships and eight unpaired German students. Each of these eight unpaired students was invited to join an existing partnership for the duration of the exchange. Similarly, any student whose assigned partner was absent in a given session was invited to join another pair for that session.

### *Negotiation of Meaning: A Descriptive Framework*

I will examine negotiation of meaning as an exemplar of form-focused discourse in this MOO exchange. It must be emphasized that although I will draw on concepts and analytical frameworks used by mainstream researchers in this long-established research field, I do not thereby endorse the theoretical perspective that has driven negotiation research (Long, 1983, 1985; Pica, 1994). I agree that negotiation is likely to lead, in some circumstances, to at least a transient focus on linguistic form in relation to meaning. I do not believe that this focus, either

directly or indirectly, leads to acquisition in the sense of advancement of tacit L2 competence (interlanguage). Rather, I believe it may contribute to the development of conscious, metalinguistic knowledge; and though even this does not lead directly to acquisition, as described in the model set out above, metalinguistic knowledge plays a crucial enabling role in interlanguage growth.

An important legacy of interactional research is a framework of discourse-analytic concepts suitable for the examination of negotiation. This framework will be adopted here, bearing in mind the foregoing provisos regarding the adequacy of its theoretical underpinnings. One of the most widely used models of negotiation was introduced by Varonis and Gass (1985). In this model, a negotiation routine begins with a trigger, an utterance that creates a comprehension difficulty for the hearer, who responds with an indicator—now more usually called a signal—that comprehension is incomplete. The speaker utters a response, and the routine may come to an end when the hearer gives a reaction to the response. The model is outlined in Figure 1.<sup>7</sup>

Figure 1  
A Model of Negotiation of Meaning, after Gass and Varonis (1985)

Trigger	Resolution		
T	S	R	RR
	Signal	Response	Reaction to response
Speaker	Hearer	Speaker	Hearer

In this paper, “speaker” and “hearer” will be so labeled by virtue of their role in relation to the trigger utterance. For example, an interlocutor who utters (types and sends) a clarification request (a kind of failure signal) is designated “hearer” since that is his role in relation to the trigger utterance.

The analysis of negotiation that follows will focus on signals. The aim is to identify patterns of form and linguistic focus that can plausibly be traced to either the text-based, online medium, or the tandem pedagogical setting. There are three crucial differences between the pedagogical setting under consideration here and that of most other interaction studies. First, where previous research has looked at NNS-NNS (peer collaboration, frequently in immersion education) and NS-NNS settings, this study examines a pedagogical situation where, in a given meeting, each partner is expected to take both native and nonnative speaker roles at different points. Second, both partners share two languages to different degrees of proficiency. Third, most of the talk in this study is open ended rather than directed. Even in those sessions in which participants worked on a prescribed writing/reformulation task, the pairs were free to organize their task work as they pleased; there was no predetermined outcome. To this extent, the discourse we will be looking at is highly naturalistic compared to that in previous studies, which has mostly been based on short, closely specified tasks—information-gap and jigsaw tasks, collaborative writing, and so forth.

The tandem configuration gives rise to four possible categories of negotiation,

which we can distinguish according to the home country of the hearer (coded IR for the Irish students or GE for the German students), and according to his or her role with respect to the language of the trigger utterance, which I will call “tandem role”—native speaker (NS) or nonnative speaker (NNS). These possibilities are set out in Table 1.

Table 1  
Possible Negotiation Situations in Tandem Meetings

	Irish student (IR)	German student (GE)
Native speaker (NS)	IR-NS: Irish student signals a problem in understanding German partner's English utterance	GE-NS: German student signals a problem in understanding Irish partner's German utterance
Nonnative speaker (NNS)	IR-NNS: Irish student signals a problem in understanding German partner's German utterance	GE-NNS: German student signals a problem in understanding Irish partner's English utterance

In principle, an NNS exchange is an opportunity for modified L2 input to the nonnative (signaling) partner, while an NS negotiation is an opportunity for the nonnative (responding) partner to produce “pushed” L2 output (Swain, 1985, 1995, 2000).

### *Data*

One measure forms a crucial backdrop to all discussion of this exchange: the overwhelming predominance of English over German, in contravention of the principle of bilingualism. A simple count of utterances yields an English to German ratio of 5.3 to 1. Though an utterance count is in some ways a crude measure because it does not necessarily capture the quality or quantity of processing involved in learners' L2 production and comprehension or the balance between the languages in terms of time devoted to each during meetings, it is bound to bear some relation to these matters, particularly at extreme levels. It is tempting to speculate that the German utterances produced by Irish students, though fewer, might have in general made greater demands on the learner in the sense of requiring deeper processing (“pushed output”). Only impressionistic evidence can be offered on this hypothesis, but, if surface complexity is an indicator, then scrutiny of the transcripts argues against it. So although the measure is insensitive to some pedagogically significant details, the size of the imbalance it reveals must surely be considered significant. This must be borne in mind in subsequent analysis and evaluation of the exchange.

The imbalance is probably a consequence of the gap in proficiency between the German and Irish groups. Where communication is obviously and significantly more difficult in one language than the other, then affective factors—specifically, face-saving concerns—will likely lead both partners to fall into habitual use of the stronger learner's L2 as a lingua franca, in this case English. This tendency

may well be reinforced by the single-channel nature of the medium itself: there are no non- or paralinguistic channels to facilitate communication when linguistic communication proves problematic, leading to an increased likelihood of falling back on a reversion-to-L1 strategy as the line of least resistance.<sup>8</sup> Furthermore, it may be that the social aspect of the situation is of paramount importance and that the desire to communicate meaningfully with peers therefore quickly overrides the intention to use the L2 once difficulties arise. Only the most determined and autonomous learners are likely to resist these pressures. The German partners, having the greatest opportunity to practice their L2, might seem to benefit most from this effect, but they might also feel that the burden of effort they carry is unfair. This lingua-franca effect is thus doubly undesirable and underlines the importance of the principle of bilingualism.

### Form of Failure Signals

A total of 95 signals were identified in the transcripts (not all of which led to negotiations). The 95 signals are broken down according to the above negotiation types in Table 2.

Table 2  
Negotiations Occurring in the Transcripts by Home Country and Current Tandem Role

	IR	GE	Total
NS	11	24	35
NNS	40	20	60
Total	51	44	

Evidently home country is not a strong predictor of disposition to initiate negotiation since Irish and German students initiated similar numbers of negotiations (51 Irish-initiated to 44 German-initiated). Current tandem role is a better predictor, with nonnative speakers about 1.7 times more likely to signal a comprehension problem than native speakers (60 NNS signals to 35 NS signals); hence there are more opportunities for modified input than for pushed output.

It is revealing to break down the figures according to trigger language (see Table 3).

Table 3  
Negotiations by Trigger Language

	English language trigger (IR-NS, GE-NNS)	German language trigger (GE-NS, IR-NNS)
NS	11	24
NNS	20	40
Total	31 (32.6%)	64 (67.4%)

Table 3 shows that German causes more than twice as many problems as English (31 English-triggered against 64 German-triggered failure signals); that is, Irish students evidently have far more problems in comprehending German input and in producing comprehensible German output than do the German students with English input and output. The situation emerges in even starker terms than these figures suggest when we recall the more than five-to-one predominance of English over German. So, while a randomly chosen utterance from the transcripts is five times more likely to be English than German, a randomly chosen problem utterance (trigger) is nearly twice as likely to be German as English. Of course, this finding reinforces the observation that the German students are more proficient in their L2 than the Irish, but, if we accept that negotiation is a beneficial feature of L2 communication, then the Irish group stand to gain more than the Germans since they should have more exposure to modified input (40 IR-NNS negotiations vs. 20 GE-NNS) and are more often "pushed" to produce comprehensible output (24 GE-NS vs. 11 IR-NS). However, we need also to bear in mind Aston's (1986) caution that too much negotiation can be unfavorable to the smooth progress of social relationships. In addition, since this article focuses on characterizing signals, it must be stressed that these negotiations represent opportunities for modified input and output, which, in turn, represent opportunities for learning at the metalinguistic level. What is made of these opportunities can only be determined by examining responses to signals.

We turn now to form of the signal, which represents the kind of negative input received by the learner in NS-initiated negotiations or, in NNS negotiations, the manner in which the nonnative draws attention to a comprehension problem. An initial distinction is often made between confirmation checks and clarification requests, while Varonis and Gass (1985) established the following, more fine-grained catalogue of signal forms for their data:

1. explicit indication of nonunderstanding, frequently *wh*-questions (e.g., "What do you mean?"), but also statements such as "I don't understand;"
2. echoing of word or phrase from previous utterance;
3. nonverbal response;
4. summary, or reformulation ("Do you mean ... ?");
5. surprise reaction ("Really?");
6. inappropriate response; and
7. overt correction.

To fit MOO tandem data, this taxonomy needs to be modified, both on a priori grounds and on the evidence of the MOO transcripts. Varonis and Gass (1985) applied the "nonverbal response" category in F2F communication principally to silences, though intuitively it would seem that an uncomprehending silence is likely to be accompanied by cues of another kind (e.g., facial, kinesic, and gestural cues). During MOO interaction, "silence"—deliberate relinquishing of a turn—is difficult to identify since there is always some delay between transmission of an utterance and receipt of a response: one can never be certain that a response is not

forthcoming. There are many possible reasons, including technical ones, for long delays, but incomprehension is not the most likely of these reasons, and hearers are certainly highly unlikely to signal incomprehension by failing to respond. The MOO data bear out this intuition: there are no cases in which a response delay perceived as abnormally long was interpreted as a failure signal.

There are some instances, like examples 1 and 2, where orthography is used in a way that could be seen as analogous to nonverbal cues.

1. You [GE] say, "... ?? ;-)
  - Try in English, ich hab Dich nicht verstanden!"
  - [I don't understand you!]

2. GE says, "?"

However, in most cases, as in example 1, the marked use of orthography supplements linguistic encoding of the signal and is perhaps better considered an analogue of intonation. (Example 2 is the sole case of a purely orthographic failure signal.) The "nonverbal" category will not be applied to the present data.

A new category of signal emerges from the data, however: explicit suggestions for resolution of the problem, an instance of which can be seen in example 1 above, "Try in English." This is not in principle restricted to either the online setting or the tandem framework since even in F2F and NS-NNS dialogue one might explicitly ask for a reformulation or a repetition. In this context, though, four out of the five instances of explicit requests for resolution come from German partners asking for an English version of the problem utterance. The one remaining case is an Irish student apparently asking for a repetition of the sentence (see example 3).

3. IR19 says, "Ich verstehe nicht die ganze satz - konnst du es wieder schreiben bitte?"
  - [I don't understand the whole sentence - can you write it again please?]

Presumably this learner means to elicit a reformulation rather than a repetition since the sentence in its original version remains available for reading on his screen.

Even with these adjustments, Gass and Varonis's inventory of signal types emerges from the data analysis as too rigid. Many of the attested signal utterances are combinations of two or more of the Gass and Varonis types. Rather than attempting to force hybrid signals into a single type, some of them were given multiple classifications. Table 4 gives the breakdown of the 95 signals in the data into the categories identified above, together with examples of each type.

Table 4  
Signal Categories

<b>Clarification requests</b>	
Explicit indications ( <i>wh</i> -questions and statements)	48
4. IR12 says, "Was bedeutet genauern?" [What does genauern (more precise, dative plural) mean?]	
5. IR15 says, "Ich verstehe nicht" [I don't understand]	
Suggestions for repair	2
6. GE3 says, "can you repeat the last sentence in english"	
Overt correction	0 <sup>a</sup>
7. GE7 says, "Wolltest du mit "fast" "nicht annähernd" sagen?" [Did you mean by "fast" (nearly) "nicht annähernd" ("nothing like" as many)?]	
Echoes	13
8. IR1 says, "are [you] going to sue the guy?" [...] GE1 says, "sue ... ?"	
Expressions of surprise (found only in hybrid signals, see below)	0
Inappropriate response	4
9. [signal:] IR10 says, "Für meine Sunden ich bin auch ein Kavallier!! Ist das schlecht?" [For my sins I'm a gentleman too! Is that bad?]  GE10 says, "Ich verstehe deinen letzten Satz nicht. Mein letzter Satz war: So, you are a gentleman?" [I don't understand your last sentence. My last sentence was: So, you are a gentleman?] <sup>b</sup>	
Orthographic	1
10. GE15 says, "?" (see example 2)	
<b>Confirmation checks</b>	
Summary/reformulation	6
11. IR25 says, "[*]Was arbeit muss du machen für die 10 monat?" [What work do you have to do for the 10 months (of community service)?]  [signal:] GE25 says, "Welche aufgaben hat man in den zehn Monaten?" [What tasks does one have in the ten months?]	
<b>Hybrid signals</b>	
<i>wh</i> -question + summary/reformulation	5
12. IR8 says, "Wir wissen nicht [...] aber die Leuten sind da, ich bin [*]positiv" [We don't know [...] but the people are there, I'm positiv (false cognate: IR means "positive" in the sense of "certain.")]  [...]  [signal:] GE34 says, "Wie du bist positiv. HIV-positiv?" [How do you mean you're positiv. HIV-positive?]	

<i>wh</i> -question + echo	3
13. GE25 says, "I understand the corrected text, but it was hard for me to formulate the text like this"	
[...]	
[signal:] IR25 says, "like this?? What do you mean?"	
<i>wh</i> -question + explicit statement	2
14. GE22 says, "And then there is time to celebrate Christmas on the two Christmas days"	
GE22 says, "Can I say this: to celebrate Christmas?"	
[signal:] IR22 says, "yes thats perfect though the sentence doesn't really make sense"	
IR22 says, "what do you mean?"	
<i>wh</i> -question + expression of surprise	1
15. IR8 says, "How do you mean, your not sure if you want to break up with him yet you live together???"	
Explicit statement + instruction/suggestion	4
16. GE13 says, "Could you just repeat that in english? I don't understand you."	
Explicit statement + echo	1
17. GE23 says, "fussy ?? / i don't know fussy / i only know fuzzy-logic from my washing-machine ... :-)"	
Explicit statement + overt correction	1
18. GE17 says, "your sentence doesent make sence, there is no verb!!! / [...] / the translation of your sentence wouls be.. / i will, about computer, bad are. / [...] / not very logic isn't it"	
Echo + summary/reformulation	2
19. IR25 says, "Heer? Is das ein Typ soldat"	
[Heer? (infantry) Is that a kind of soldier]	
Echo, summary/reformulation + overt correction	1
20. GE25 says, "You speak it [Irish] flowly?"	
[signal:] IR25 says, "flowly?? U mean fluently? I[f] you do then Yes"	
Summary/reformulation + overt correction	1
21. GE7 says, "Wolltest du mit "fast" "nicht annähernd" sagen?"	
[Did you mean by "fast" (nearly) "nicht annähernd" (nothing like)?]	

<sup>a</sup> Overt correction is found only in hybrid signals.

<sup>b</sup> In this case IR's response was perceived by GE as irrelevant and she deduces that IR has misunderstood; therefore she attempts repair through translation. In fact, the response was appropriate and the repair unnecessary. The problem lay not in IR's comprehension of GE's preceding turn, but in his unidiomatic reply and her (GE's) failure to understand it.

These data highlight the variety of signals used by both native and nonnative speakers in the MOO-based tandem setting. They also show that confirmation checks in the data only manifest themselves as summaries/reformulations, which, in turn, are necessarily semantic or pragmatic in focus. This does not follow necessarily from the definition of confirmation check: in speech, checks may just as well be morphosyntactic ("Days [as opposed to day]?"), lexical ("Several [not seven]?"), or phonological ("Her name is Joanne [not Joanna]?"). Such checks are

not uncommon even in NS-NS speech. However, note that even in these (invented) morphosyntactic and lexical examples, the source of the problem is originally acoustic/phonological. The fact that in this MOO discourse confirmation checks are relatively infrequent and that where they occur they are always semantic or pragmatic indirectly suggests that, in speech, these kinds of negotiation serve mainly to resolve phonological difficulties. Perhaps they serve, as a side effect, to reinforce forms in the phonological loop. It may be that in the MOO the fact of reading and perhaps re-reading not only obviates the need to confirm one's perception of forms but also focuses attention adequately on those forms.

The presence in the data of many hybrid signals weakens the value of Varonis and Gass's exhaustive classification, even as adapted to the current data. The fact that some signals carry the illocutionary force of both clarification requests and confirmation checks (e.g., examples 12, 19, 20, and 21) means that we cannot rely on this higher-level classification either. A potentially more useful, though looser, distinction is made by Gass and Varonis (1985) between direct and indirect signals. Direct signals "directly express unaccepted input, leaving no doubt that there has been a lack of understanding," while an indirect signal "is a more gentle means of indicating that comprehension has been in some sense incomplete" (Gass & Varonis, 1985, p. 154). The value of the distinction lies in the fact that it relates to affective/pragmatic factors as well as to specificity of signals, both of which are potentially important variables in interpreting the influence of the tandem framework and the MOO. This point will be elaborated below.

Unfortunately, Gass and Varonis do not exhaustively specify which of their signal types they consider direct and indirect. Though making the distinction is more difficult in practice than the dichotomy would lead us to believe (there is a continuum rather than a dichotomy between "direct" and "indirect" speech acts), I nonetheless propose the categories in Table 5 as a meaningful categorization of the above signal types.

Table 5  
Signal Types Reclassified as Direct and Indirect

Direct signals	Indirect signals
Explicit indications of nonunderstanding— <i>wh</i> -questions and statements	Echoes
Overt corrections	Summaries and reformulations (= confirmation checks)
Suggestions for repair	Surprise reactions Orthographic expression

This still leaves the question of hybrid signals. It is clear that a direct formulation overrides the indirectness of, for example, an echo; hence any hybrid signal that contains within it a direct formulation will be classified as direct, while those hybrids composed only of indirect formulations will be classified as indirect.

Table 6 summarizes the occurrence of direct and indirect signals in the various categories and subcategories.

Table 6  
Direct and Indirect Signals in All Tandem Categories

	IR		GE	
	Direct	Indirect	Direct	Indirect
NS	8	3	21	3
NNS	28	12	12	8

The grand totals of the figures in Table 6 are 69 direct signals and 26 indirect signals, a ratio of 2.65:1. The observed overall predominance of direct over indirect signals is clear. While direct signals also predominate in all negotiation categories, there is no effect of home country ( $\chi^2 = 4.4$ ,  $df = 1$ ,  $p = .631$ ). However, whereas there are insufficient instances of IR-NS signals to determine whether there is a tandem-role effect for the Irish group, the difference is significant for German tandem role ( $\chi^2 = 4.4$ ,  $df = 1$ ,  $p = 0.036$ ). In other words, the German students' preference for direct over indirect signals is significantly greater when using L1 than L2. One is tempted to speculate that this result has to do with the fact that trigger (problem) utterances in NS negotiations are probably speaker mistakes and readily identifiable as such by native speakers, while triggers in NNS negotiations are more likely due to gaps in one's own (the hearer's) knowledge. To signal failure in an NS negotiation is to identify a gap in the interlocutor's knowledge, while to signal difficulties in an NNS negotiation is to admit shortcomings in one's own target-language proficiency. Hence, one is more likely to be direct in the former than in the latter situation. But why should this be true of the German side of the exchange but not of the population of students taken together? Cultural stereotypes of both nationalities inevitably come to mind, but it is probably nearer the mark to relate this phenomenon, too, to the proficiency gap and the social roles it brings with it: most German students will feel distinctly more linguistically proficient than their Irish partners, possibly fostering the adoption of a didactic role, and with it a readiness to correct their partners' German and a corresponding reluctance to highlight their own shortcomings in English.

Whatever the finer details, the overall pattern is unmistakable, and it corroborates findings relating to MOO tandem by Kötter (2002). Although we must be careful about comparing this result to that of Gass and Varonis (1985)—since they analyzed NNS-NNS interaction and were not explicit about the scope of the terms direct and indirect—it is nonetheless worth noting that this is the reverse of their findings and that the overall ratio of direct to indirect signals of 2.65 to 1 is substantial. The reasons that these learners are more apt to use direct strategies for signaling communication difficulties are likely to be complex. Some compound of the two factors under scrutiny seems likely to be involved.

### 1. Tandem learning as a pedagogical setting

It may be the case that partners' awareness of the learning purpose of the exchange and their shared status as learners, leads them to use direct failure signals that would in nonpedagogical situations be regarded as face threatening to their nonnative partners (in NS negotiations) or to themselves (in NNS negotiations).

### 2. The MOO medium

Most negotiation studies have been based on transcribed audio tapes, so that much nonlinguistic (e.g., kinesic, facial, and gestural) and paralinguistic information is lost. It may be that the linguistic expression of indirect signals in these studies is only one component of the information conveyed and that in fact information from other channels does some of the work of signaling incomplete communication (i.e., providing redundancy). In the MOO, there are no means other than linguistic means to convey comprehension difficulties. The burden of communication thus falling entirely on utterances, it may be necessary to preclude any ambiguity by making signals as explicit as possible.

Whether or not these are in fact the principal factors at play in promoting direct strategies for signaling failure among tandem MOO learners, we can reasonably postulate that the predominance of direct signals is a positive factor in the fostering of awareness of language form. Direct signals by definition make more explicit the *fact* that communication has been incomplete, and, in some cases (certain *wh*-questions, all overt corrections, and indeed hybrid signals which include an echo), they also serve to pinpoint the source of the problem; they are local rather than global signals, in Smith's (2003) terms. Indirect signals, on the other hand (especially summaries/reformulations), tend to preserve a focus on meaning.

### Focus of Negotiation Routines

If attention does in fact turn towards language during negotiation, at what linguistic level is it brought to bear? We could look to any of three of Varonis and Gass's (1985) "primes" in attempting to answer this question: to the trigger, the signal, or the response to signal. Pellettieri (2000), who is also concerned with online, synchronous communication, opts to examine triggers, while Pica (1994) looks both at signals and responses to signals. Now, NNS triggers might give an insight into the state of interlanguage, but they need not tell us anything about what comes to be focused on in the course of negotiation since the speaker is not necessarily aware of the nature of the problem in the utterance, beyond the fact that comprehension has not been complete. Likewise, in the case of NS-triggered routines, it is what the NNS calls attention to in signaling a problem that is likely to become the focus of negotiation. In any case, in so far as it is possible to determine the problematic component of the trigger utterance, we can do so only by examining the rest of the negotiation routine and, in particular, the signal utterance.

The taxonomy chosen for the present study is more fine grained than that of Pica (1994) or Pellettieri (2000), less so than that of Fortune and Thorp (2001). The transcript data suggest the following levels of analysis:

1. lexical selection,
2. lexical semantic,
3. sentence semantic,
4. pragmatic,
5. idiomatic, and
6. morphosyntactic.

The lexical-selection category is similar in principle to Fortune and Thorp's subcategory of the same name: it applies to cases where what is in doubt is the speaker's choice of word or lexical phrase, not its meaning. However, since Fortune and Thorp are concerned with NNS-NNS collaborative dialogue around L2 production tasks, their lexical-selection episodes look quite different to those in the MOO transcripts. Since lexical selection is usually unproblematic for native speakers, at least in informal conversation, and since in any case nonnative speakers are unlikely to suggest that a native speaker has selected an inappropriate word, all the cases of negotiation at this level involve the NS partner drawing attention to a word that does not make sense in context. There are only five such instances in the data, exemplified by 22 below:

22. IR12 says, "Wer war er [\*]irgendwie?"  
[Who was he somehow?]

GE12 says, "irgendwie? what do you mean by that?"

The lexical semantic category covers those cases where a word is not recognized at all, a situation which arises in both NS and NNS negotiations.

23. IR25 says, "I use Irish when i dont want people to know what im sayin. When I was in France i used Irish because otherwise they would think i was English."

GE25 says, "You speak it flowly?"

IR25 says, "flowly?? U mean fluently? I[f] you do then Yes"

24. GE10 [to IR11]: "Ist er immer so muffelig wenn er müde ist?"  
[Is he always so grumpy when he's tired?]

IR11 says, "Was bedeutet muffelig?"

[What does muffelig mean?]

Example 23 is an NS negotiation: the German nonnative speaker presumably made an educated guess at an English equivalent of German *fliegend* (a deriva-

tive of *fliessen* 'to flow'), which the NS fails to understand, though he deduces the intended word. Example 24 shows an NNS negotiation, which is more common: a nonnative speaker encounters an unfamiliar target-language word in the input.

Negotiations are classed as sentence semantic if the signal either pinpoints a (nonlexical, nonidiomatic) phrasal structure or does not isolate at all the source of the problem: the category stands in opposition principally to the lexical semantic, pragmatic, and idiomatic categories. These signals typically comprise some combination of wh-question, explicit statement of nonunderstanding, and request for translation. Of course, it is always possible that even in the case of very general indications of complete failure, the hearer can in fact reconstruct some portion of the speaker's intended meaning but decides on a global rejection as more appropriate for some reason (e.g., efficiency of communication) if precision would require too much effort and time. Nevertheless, even if this were the case, in the absence of any more precise indication the speaker must respond to the signal as though his or her utterance had failed entirely.

Examples 25, 26, and 27 illustrate sentence-semantic failures that are signaled by a wh-question, an explicit statement and a translation request respectively.

25. GE3 says, "In Deutschland hat es zugenommen in den letzten Jahren ..."

[In Germany it has increased in recent years ...]

GE3 says, "und viele Dinge kann man über das Internet erledigen."

[and one can do many things on the Internet.]

IR3 says, "Was bedeutet Dein letzten satz?"

[What does your last sentence mean?]

26. GE8 says, "Vielleicht denke ich zu positive [sic] über die Menschheit"

[Maybe I think too positively about humanity]

IR8 says, "Ich verstehe nicht"

[I don't understand]

27. GE13 says, "Hast du ein Berufsziel?"

[Do you have a career in mind?]

IR13 says, [\*]"Nein Ich habe nicht aber berfuf in der zukunft denken, und du?"

[No I haven't thought about a career in the future, and you?  
(likely interpretation)]

GE13 says, "Could you just repeat that in english? I don't understand you."

The pragmatic category applies to cases where the literal meaning is evident to the hearer, but the speaker's meaning is either misinterpreted (example 28) or not understood at all (example 29).

28. (NB: all names in the following extract have been changed.)

GE23 says, “by the way the guy sitting next to me wants to know who girl #[X] is ?? (reference to an online photograph of an Irish student)”

IR23 says, “Jane is her name”

[...]

GE23 says, “he is talking about her with his partner joe at the moment

GE23 says, “he likes her”

IR23 says, “joe???”

IR23 says, “hmmmm I seee”

GE23 says, “no his partner”

IR23 says, “Ohhhhh rightie then”

29. (discussing the text produced by IR17:)

GE17 says, “but you are just translation english sentences into german”

GE17 says, “abit complicatetd”

IR17 says, “how was your doctors appointment?”

GE17 says, “ok”

GE17 says, “he didnt give me quite new infos”

IR17 says, “yes, you are right, I should have kept it more simple”

GE17 says, “häh?”

[huh?]

IR17 says, “ich soll es [\*]mehr leicht machen?”

[I am to make it more easy?]

IR17 says, “is that right”

[signal] GE17 says, “waswillst du leichter machen?”

[what do you want to make easier?]

IR17 says, “die Text”

[the text]

A negotiation is deemed to be idiomatic if the cause of failure lies in interpretation or use of an idiom, on the assumption that it is so identified by the hearer. The following examples are clear cut:

30. IR11 says, “Hello Luise [GE10 - name changed] how are you today”

[...]

GE10 says, “Fine, but a little bit lonely. Tony [her partner, IR10 - name changed] is a “treulose Tomate”” [literally “unfaithful tomato”]

IR11 says, "What is a "treulose Tomate"?"

31. IR11 says, "I'm 18"

GE10 says, "Since when?"

IR11 says, "Since February I'm one of the youngest in the year I get a lot of stick"

GE10 says, "What meant by A lot of stick?"

IR11 says, "made a joke of you know for a laugh"

Less obvious are those cases where a nonnative speaker misinterprets an idiom since the exchange has the quality of a pragmatic failure in these instances.

32. GE26 says, "[...] i will do my english text by this weekend and then send it to you, ok?"

GE26 says, "you can looking forward to getting and correcting it"

[...]

IR26 says, "I cant wait!"

GE26 says, "but i don't have any text done yet, should i bring something up now? "The history of the internet has started in 1969 with the first connection of four of the main computers ..."

[...]

IR26 says, "I didn't mean that I couldn't wait for you. It is just a saying that we use that means I am looking forward to it."

GE26 says, "that's a funny misunderstanding mistake, i am ashamed"

The final category, morphosyntactic negotiation, is represented by one solitary occurrence.

33. GE17 says, "now, lets plan the essay"

[...]

IR17 says, "Ich werde uber wie schlecht Komputer sind"  
[I will about how bad computers are]

[...]

GE17 says, "your sentence doesent make sence, there is no verb!!!"

IR17 says, "werde?"

IR17 says, "is that not will"

IR17 says, ""will""

IR17 says, “sein” [to be]

IR17 says, “I mewant (meant) at the end”

IR17 says, “oops”

GE17 says, “the translation of your sentence wouls (would) be ...”

GE17 says, “i will, about computer, bad are.”

IR17 says, “he he”

GE17 says, “not very logic isn’t it”

Table 7 summarizes negotiations as classified by the foregoing levels of linguistic analysis.

Table 7  
Negotiations Classified by Level of Linguistic Analysis in Signal

Linguistic category	IR-NS	GE-NS	IR-NNS	GE-NNS	Total	%
Lexical semantic	3	3	22	10	38	40.0
Sentence semantic	2	12	16	4	34	35.8
Pragmatic	5	3	1	2	11	11.6
Idiomatic	1	0	1	4	6	6.3
Lexical selection	0	5	0	0	5	5.3
Morphosyntactic	0	1	0	0	1	1.0
Total	11	24	40	20	95	100.0

There is a considerable gap between the two most common kinds of negotiation, lexical-semantic and sentence-semantic, and the next most common kind, pragmatic. Together the two top categories account for 75.8% of negotiations. In the lexical-semantic category, NNSs account for 84% of the miscommunications, a significantly greater proportion than in the case of sentence-semantic focus ( $\chi^2 = 5.8$ ,  $df = 1$ ,  $p = 0.016$ ). That is, students focus on problematic word meanings mainly when using L2, whereas they may indicate more generalized meaning problems either in L1 or L2. This is as we would expect in a text-based medium: apart from cases of extremely deviant spelling, whether due to mistyping or to actual orthographic uncertainty (e.g., a “German” word *\*wehlunga*, “English” words *\*surving* and *\*employ*) native speakers will rarely fail to recognize a written word, whereas NNS phonological difficulties can more easily obscure the meaning of spoken words.

It was noted above that a sentence-semantic negotiation, which arises from problems with either a complete sentence or a phrase, indicates quite a severe communication breakdown. It is notable that 82% of such miscommunications emerge from German-language exchanges (i.e., GE-NS and IR-NNS)—dramatic evidence of the proficiency gap, in view of the more than 5 to 1 predominance of English over German.

With just 11, 6, 5 and 1 occurrences, respectively, it is more difficult to gener-

alize about the pragmatic, idiomatic, lexical selection, and morphosyntactic categories. However, we might note that native speakers signaled more than twice as many pragmatic difficulties as nonnatives (8:3). As was indicated above, many of these pragmatic or speaker-meaning problems arise from use of idioms: for the purposes of this study, they are distinguished from idiomatic negotiations by whether the hearer recognizes the problem as arising from an idiom (idiomatic category) or not (pragmatic category). Examination of the various cases of pragmatic failure suggests that many are caused by NNS language that is not formally incorrect, but unidiomatic and thus vague or otherwise unclear, as in 34.

34. GE25 says, "I understand the corrected text, but it was hard for me to formulate the text like this"

IR25 says, "like this?? What do you mean?"

A possible explanation is that in such cases the lack of disambiguating clues from other nonlinguistic channels increases the likelihood of communication failure. However, this explanation also assumes that NNSs do not have corresponding problems in interpreting idiomatic NS utterances and that they usually find them referentially clear. Yet the evidence from idiomatic negotiations, such as it is, runs counter to such a claim (5 NNS vs. 1 NS negotiation). In any case, the evidence is highly limited and further research might well prove this finding not to be stable.

The fact that all five cases of negotiation emerging from lexical selection are GE-NS warrants comment. Recall that this category comprises instances where a recognized lexical item is not understood in context, that is, the reason for its selection is at issue. First, the fact that there are no NNS negotiations of this kind suggests that where a lexical item known by a NNS is not understood in the context of an NS's sentence, the NNS will not focus on the lexical item, perhaps instead escalating the signal to a more general failure of comprehension such as sentence semantic. A native speaker can more readily identify a contextually inappropriate item as the source of miscommunication. As to the German-Irish imbalance, the most obvious generalization is simply that the Irish students select wrong L2 lexical items more than the German students. Examination of the five cases reveals that three of them involve false cognates, two of these (35 and 36) occurring within directly translated idioms.

35. GE8 says, "Mein Vater hat Opel Vectra"

[My father has an Opel Vectra]

IR8 says, "Opel!!!! Das ist sehr [\*]gross in Irland!!!!"

[Opel!!!! That is very big in Ireland!!!!]

[...]

GE8 says, "Was meinst du gross?"

[What do you mean by gross?]

36. (discussion of privacy on the Internet)

GE8 says, “Wer will schon deine persönliche Briefe auffangen?”

[Who wants to intercept your personal letters?]

[...]

GE34 says, “Der CIA oder der BND ...”

[The CIA or the BND (Bundesnachrichtendienst, German intelligence service) ...]

[...]

IR8 says, “Wir wissen nicht [GE34’s name deleted] aber die Leuten sind da, ich bin [\*]positiv”

[We don’t know (...) but the people are there, I’m positive (i.e., ‘certain’)]

[...]

GE34 says, “Wie du bist posit[i]v. HIV-positiv?”

[How do you mean you’re positive. HIV-positive?]

37. GE13 says, “[...] Wie ist denn deine Meinung zur Todesstrafe?”

[...] So what’s your opinion on the death penalty?

[...]

IR13 says, “Ich bin im zwei meinung (two minds) uber [\*]die facher, und du?”

[I’m in zwei meinung (literally, ‘two opinion,’ i.e., ‘two minds’) about die facher (approximates die Fächer, literally ‘the (curricular) subjects’)]

[...]

GE13 says, “Huh? Was meinst du mit “die Fächer”? Die Angelegenheit?”

[Huh? What do you mean by “die Fächer”? The issue?]

IR13 says, “The subject”

GE13 says, “Das Thema.”

It is natural that matters of form in negotiation are of interest to interlocutors only in so far as they bear on meaning, but even evidence of reflection on the relation of form to meaning rarely comes to light in these data. Those levels of negotiation that have most potential for a focus on form would seem to be idiom, morphosyntax, and lexical selection, but these three are the least well represented, making a total of only 12.6% of the negotiations. The other 87.4% of the negotiations comprise lexical-semantic, sentence-semantic, and pragmatic issues. It is thus clear from these data that when communication difficulties arise in the tandem MOO setting, learners focus above all on meaning in global terms (especially sentence semantic) and the primary meaning-bearing units, words. That is to say,

they signal their difficulties not in terms of form but in terms of intended meaning. In particular, the predominance of a concern for disambiguation of word meaning corroborates most previous research into meaning negotiation (e.g., Brock, Crookes, Day, & Long, 1986; de la Fuente, 2002; Pellettieri, 2000; Sato, 1986; Wesche, 1994). Such research has shown that in NS-NNS interaction, little attention is paid (as evidenced by negotiation routines) to such elements as morphology, which typically have at least a degree of redundancy built in (though to different extents in different languages). While one might be tempted to hypothesize that the increased burden carried by the segmental dimension of language in the synchronous text-based context should lead to an increased awareness of such elements, these data do not support the hypothesis: interlocutors remain concerned with global meaning and tend to be minimally specific with regard to the formal expression of it. Where they are specific, it is mostly in terms of lexical units. It should also be noted, though, that these data do not overturn the more general hypothesis that interlocutors notice and take opportunities for attention to form *outside* of negotiation routines: the data cannot be interpreted as negative evidence in this regard. Any instances where the (hypothesized) more favorable conditions for attention to idiomatic and morphosyntactic form are used effectively cannot be identified through a study such as this which focuses only on the end product of communication rather than moment-by-moment cognitive processes.

## CONCLUSIONS

The question posed at the beginning of this paper was whether the online, text-based medium or the tandem framework can be shown to have effects on the negotiation of meaning. The points below have emerged in regard to the medium.

The taxonomies of signal and response types used in the literature cannot be applied unmodified to negotiation in the MOO. Most obviously, Varonis and Gass's (1985) nonverbal category is irrelevant: MOO users do not employ "silence" (nonresponse) as a nonunderstanding signal, and there are no other available nonverbal channels. A corollary to this finding is that the burden of feedback falls squarely on language, although occasionally supplemented or even substituted by typographical means. To capture the range of strategies employed in the MOO, more fine-grained taxonomies of linguistic level (in signals and, by extension, negotiations generally) and response strategies have been necessary. It was also noted that a great many signals were compounded of two or more of the generally recognized signal types. It may be that the need for explicitness leads speakers to employ a wider range of response types, but this idea is speculative and not capable of confirmation without reference to the original data of previous studies.

What is clear is that, in contrast to speech-based negotiation studies, MOO users employ more direct than indirect failure signals, which may be due in part to the complete reliance on the verbal channel (see Feenberg, 1989 on the general tendency towards increased explicitness in text-based online environments). It is tempting to speculate that the use of direct signals leads to relatively greater focus on form since direct signals are more explicit about the fact that communication has been incomplete and, in many cases, pinpoint the source of the prob-

lem. This hypothesis needs to be tempered by the observation that interlocutors do not show any tendency to focus on formal aspects of problematic utterances in *resolving* communication difficulties (O'Rourke, 2002). Rather, they remain focused on global meaning (semantic or pragmatic), and in cases in which they are specific, it is mostly in relation to words, as has been found repeatedly in negotiation research. Indeed, the pragmatic focus in particular may be exaggerated by one distinctive property of discourse in this medium, namely, the interweaving of topics caused by "lag," the lapse of time caused by (a) the dissociation of utterance formulation from transmission and (b) delays caused by network-related conditions. Though experienced users of online synchronous communication may become accustomed to this phenomenon and develop strategies for dealing with it, the situation is clearly more difficult when a second language is involved. Thus there are several instances of incomplete communication apparently caused by uncertainty with respect to the relevant context of an utterance or, more precisely, its relevant co-text.

When we consider the effect on negotiation behavior of the tandem framework, it is evident that the proficiency imbalance and the consequent lingua franca status of English has a substantial impact. The effect is so clear in so many different dimensions of the data that one might well wonder whether it is in fact obscuring any effects that the medium might have. We saw that the German language triggered more than twice as many negotiations as English, in both NS- and NNS-initiated routines, although there are five times as many English utterances as German; that four out of five cases of one particular signal type (explicit suggestions for repair, in practice, calls for translation) were from German students seeking English translations of problematic utterances; and that 82% of instances of one of the most used linguistic categories of negotiation—sentence semantic, indicative of the most generalized kind of comprehension failure—were triggered by German language problems, contrasting starkly with the five-to-one English-German ratio.

This is the most salient effect of the tandem framework on negotiation in the MOO, and it is one that deserves to be taken very seriously in the design of further tandem exchanges. German students presumably benefit from the sheer volume of L2 input and output but also from the increased metalinguistic focus I believe arises from modified input and pushed output; Irish students correspondingly lose out in all of these areas. If their L1 is seen as the preferred and most effective solution to most communication problems, we can scarcely expect increased focus on target language form. While we should not draw hasty conclusions about the consequences for learning—either among the stronger (German) or the weaker (Irish) side of the exchange—the magnitude of the various measures described shows that a significant gap in proficiency, and the attendant lingua franca effect, substantially alters the linguistic, pedagogical, and affective nature of a tandem exchange. This gap constitutes empirical corroboration of what has long been intuitively recognized in the field of tandem learning: that partners ought to be as closely matched in proficiency as possible (e.g., see Little et al., 1999). This is, of course, far easier said than done, and in the exchange arrangement under

discussion, every effort was indeed made to match classes by proficiency. Where the gap is unavoidable, other strategies may mitigate the ill effects—raising students' awareness of the need for bilingualism and “pushed output” in advance of the exchange, most obviously. Technical tools may also play a role: a system has recently been developed in the Centre for Language and Communication Studies at Trinity College that displays language balance and other pertinent statistics to MOO users after each session, based on an automatic and transparent analysis of the session transcript. Where there is clear overreliance on one language or the other, this system draws both partners' attention to it and encourages them to make efforts to correct it. Initial results are promising (see Schwienhorst & Borgia, in press).

An interesting and unexpected outcome of the medium-focused and interpretive nature of this work has been the sidelight that it casts on speech-based negotiation research. In considering why direct signals predominate over indirect in this MOO data, in contrast to F2F research, it was suggested that *verbal* indirectness in F2F might not in fact equate with overall *communicative* indirectness: it is possible that nonverbal, but equally unambiguous, cues have been missed through reliance on audio recordings. Looking at the predominance of NNS over NS negotiations regarding lexical semantics, it became apparent that faulty NNS spelling is inherently less problematic than NNS pronunciation, and it follows that pronunciation might well lie at the root of many F2F negotiations. This possibility suggested itself also in relation to the relative infrequency of confirmation checks in the MOO data: even where, on a purely linguistic analysis, the source of difficulty of a spoken trigger utterance may appear to be morphosyntactic or lexical, the problem may in fact be articulatory/auditory. These are speculations, certainly, but they at least demonstrate the potential of CMC research to highlight, contrastively, features of F2F communication that might otherwise be overlooked. Properties absent from CMC can serve to bring into sharper focus certain properties of F2F communication usually taken for granted.

In summary, patterns emerge from negotiation analysis that point to possible effects of the medium and the tandem framework on the nature of metalinguistic focus, the single most important factor likely being the absence of nonlinguistic cues rather than, say, the visibility and persistence of text. Identification of these effects is tentative, however, and it is certainly clear that students' primary focus remains on meaning. What benefits there are in using a MOO do not come for free: focus on form through negotiation is not a *pressure*, but it is perhaps an *affordance* in the sense of the framework alluded to above. There is thus a substantial role for the teacher in awareness raising and task setting, as noted by O'Rourke and Schwienhorst (2003). This is a further reason among many why a successful tandem exchange requires planning and monitoring and, to the greatest extent possible, minimization of any proficiency gap and mitigation of its effects.

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**NOTES**

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<sup>1</sup> “Affordance” in this model, though certainly related to the term in Gibson’s ecological theory of perception (Gibson, 1979), is not identical to it. Here it should be understood simply as the intermediate term between “pressure” (a feature which positively compels a behavior) and “potential” (a feature which makes possible a behavior but is likely to give rise to it only given a considerable degree of strategic awareness). Peter Skehan (personal communication) has suggested that this framework is to some extent analogous to one proposed by Loschky and Bley-Vroman (1993), according to which a grammar structure may be natural, useful, or essential to the completion of a task.

<sup>2</sup> Though it resembles other such models in its insistence on both form and meaning focus, it is quite distinct from them in drawing on nondialogic aspects of Vygotsky’s theory and on Karmiloff-Smith’s (1992) representational redescription model of cognitive development.

<sup>3</sup> It should be noted, though, that there is typically a mismatch in proficiency between German and Irish students after secondary school, which can partly be attributed to asymmetry in the perceived utility value of the target languages and partly to duration and intensity of instruction: in Ireland, foreign language instruction begins at the age of about 12, in Germany at age 10. Furthermore, English is allocated more curriculum time in Germany than foreign languages are in Ireland.

<sup>4</sup> The MOO is a virtual environment, rather than a simple conduit for chat; however, only its basic communication functions (i.e., generation of utterances through the say command) are involved in the present study.

<sup>5</sup> The reasons for collecting the logs of the last six days were (a) so that the participants would have adequate time to accustom themselves to the medium and (b) because a tandem writing/reformulation task, the focus of a particular strand of research reported in O’Rourke (2002), ran over weeks four to six.

<sup>6</sup> The content of page and whisper commands, which are visible only to a user specified by the sender, appear only in the receiver’s transcript. One substantial parallel conversation via page commands took place between two German students in the present data, but that conversation is not relevant to the present purposes.

<sup>7</sup> Smith’s (2003) version of the Varonis and Gass model, which is modified to better fit CMC, has not been adopted here. The model is descriptively richer, but it adds little to the explanatory power of the simpler version, at least in relation to the data under consideration here.

<sup>8</sup> One *Calico Journal* reviewer points out that arguments from reduced cues are controversial. My understanding of this question is that the problem lies not in recognizing that CMC is less informationally multiplex than F2F communication but, rather, in inferring from this fact that CMC is deficient in some or many respects. I draw no such inference here. The single-channel modality is one of the nonnegotiable properties of MOOs, a characteristic affordance (in the broad sense), not a deficiency, of many forms of CMC and hence one of the properties that needs to be brought into the analysis.

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### AUTHOR'S BIODATA

Breffni O'Rourke is Manager of Language Learning Technologies and Resources and Lecturer in Applied Linguistics in the Centre for Language and Communication Studies, Trinity College Dublin. He received an M.Phil. in Linguistics and a Ph.D. in Applied Linguistics from Trinity College Dublin, and a B.A. in French and German and an M.A. in German from the National University of Ireland, Galway. He teaches graduate and undergraduate courses in pedagogical grammar, classroom discourse, technologies in language learning, text linguistics, and German language. In addition to CALL, his research interests include written language and metalinguistic awareness, and sociocultural and cognitive perspectives on second language acquisition.

### AUTHOR'S ADDRESS

Breffni O'Rourke,  
Centre for Language and Communication Studies,  
Trinity College,  
Dublin 2

Phone: +353 (0)1 6083162

Fax: +353 (0)1 6082941

Email: [breffni.orourke@tcd.ie](mailto:breffni.orourke@tcd.ie)