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Co-Constructing Meaning in Conversations With an Aphasic Man

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"No man is an island, entire of himself"
John Donne *Devotion XVIII*

A number of introductions to textbooks on language begin with a description of a mythological experiment. A Greek king ordered that two children be isolated on an island from birth. By seeing what they said without the social influences provided by a particular language community, he hoped to discover the original language of the human species. This article investigates the consequences of a contemporary natural experiment. Suppose that a man was told that for the rest of his life he could peak only three words. What words would he choose? What would his choice tell us about language? What form of life would

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emerge from the playing out, year after year, of a language game (Wittgenstein, 1958) with these constraints?

In 1979 Rob, a successful New York lawyer, a man who made his living through his ability to use language, suffered a massive stroke in the left hemisphere of his brain. The right side of his body was paralyzed and he suffered severe aphasia,[1] losing almost completely the ability to speak meaningful language. He was, however, able to understand what others said to him, and to use nonsense syllables to produce meaningful intonation melodies. On the advice of the nurse caring for him in the hospital, and against the advice of his neurosurgeons (who insisted that because nothing could be done to repair his brain he would spend the rest of his life in bed in a vegetative state), his family sent him to the Kessler rehabilitation center. After several months of intense work with therapists there, he learned to walk with a brace, and to speak three words: *Yes, No,* and *And.*[2] For years after the stroke his wife would dream that he was again able to talk to her. However, 13 years later, in 1992 when the videotape that provides the data for this article was made, these were still the only three words he could speak (and that remains the case as of this writing).

Of all the words in a language, why these three? Note that all three presuppose links to other talk. *And* ties other units of talk, such as clauses, to each other. *Yes* and *No* are prototypical examples of second pair parts (Schegloff & Sacks, 1973; Sacks, Schegloff, & Jefferson, 1974; Sacks, 1992), used to build a response to something that someone else has said. Unlike the isolated island chosen by the Greek king as the primordial site for the observation of language in its pure state, (or the brain as an isolated, self-contained entity that was the focus of the neurosurgeons' attention), this vocabulary set presupposes that its user is embedded within a community of other speakers. His talk does not stand alone as a self-contained entity, but emerges from, and is situated within, the talk of others, to which it is inextricably linked. This raises the possibility that despite the extraordinary sparseness of this system, its speaker might nonetheless be able to engage in complicated language games, to say a wide range of different things while performing diverse kinds of action, by making use of resources provided by the speech of others. This article investigates how such co-construction is accomplished. It contributes to an emerging body of research that uses the methods of conversation analysis to investigate how aphasia is organized within human interaction (Klippi, 1990, 1992; Silvast, 1991;

Aulanko & Lehtihalmes, 1992; Laakso, 1992, 1993; Lehtihalmes, 1992; Leiwo & Klippi, 1992; Milroy & Perkins, 1992; Schegloff, 1994).

ACTIVITIES AS INTERPRETIVE FRAMEWORKS

The following provides a first, simple example of such co-construction.[3] For approximately 10 years after Rob's stroke, his wife took care of him, not only preparing his meals and dressing him, but also giving him a long series of physical exercises every morning. This was very demanding work for a woman in her 70's. Shortly before this tape was made it was discovered that she had Parkinson's disease, and she underwent major surgery for an aneurysm. The family has therefore hired a nurse. The videotape was made on the nurse's second day back on the job, after being away for six months. In Example 1 the nurse is helping Rob get dressed by putting his socks on. As she moves to adjust the upper part of the sock, Rob says something (line 1) and points toward the sock. In line 3 the nurse states a guess about what Rob is trying to bring to her attention. This guess is delivered as a first pair part (visible in part through its rising terminal pitch). By virtue of its conditional relevance (Schegloff, 1968), a first pair part builds a context that shapes the interpretation of whatever will be said as a reply to it. Through her talk in line 3, the nurse creates a slot for Rob to either confirm or reject her proposed understanding of what he is trying to tell her, thus helping to construct a sequence in which they collaboratively search for what he is trying to say. His "Yes" does not stand alone as an isolated, self-sufficient sentence/action, but instead achieves a relevant sense by occurring within an environment that has been constructed through the prior work of his interlocutor.[4]

Several features of the processes of inference and action occurring here require further comment. First, despite his inability to speak novel sentences, Rob is able to recognize and participate in the pragmatic organization of talk-in-interaction, for example, to produce a competent reply at precisely the place where such a reply is relevant. Indeed, as is examined in detail throughout this article, it is this continuing competence that makes it possible for him to co-construct meaningful action by working in concert with others.

(1)

((*Nurse is pulling a sock up over Rob's leg. She has just moved her hands to work on the upper part of the sock.*))

1 Rob: Nyuh nuh. ((*points toward sock*))
2 (1.3) ((*Nurse looks to Rob and then back to sock*))
3 → Nurse: Up more?
4 → Rob: Yes.
5 (1.8) ((*Nurse pulls lower part of sock*))
6 Rob: Ye:s.

Second, the actions of his interlocutor here take a very special form, for example, a guess about what he is trying to say. In order to make that guess, a key inferential resource used by the nurse is orientation to a relevant activity. Here, it is the immediate, local activity that they are both engaged in together (putting on his sock), and she manages to figure out what he is trying to tell her almost immediately. The texture of intelligibility provided by a mutually recognized activity is central to the processes of inference and action through which Rob and his collaborators accomplish situated meaning (see also Goode, 1994). Indeed in line 6, Rob ties his talk not to something the nurse has said, but to an action she has performed in that activity. Consider, however, the problems he would face if he wanted to introduce a "new topic." How could he invoke and make visible to his recipient a nonpresent activity? Though analysis of that process is beyond the scope of the present article, it is one of the major difficulties he faces, and a clear

place where interactive competence cannot overcome the inability to say whatever words he wishes.

Despite the rapidity with which an adjacency pair, such as that in lines 3–4, passes, it provides a pervasive example of a consequential social world, one that is collaboratively built through the deployment of language structures within interaction.

SEARCH SEQUENCES

The sequences through which it is collaboratively determined what Rob is trying to say are built through use of basic structures providing for the organization of talk-in-interaction. However, the specifics of the sequences used by Rob and his family constitute a specialized language game, one that shapes interaction in a distinctive fashion. The following provides a simple example of how such sequences are characteristically expanded; additional turns are added between the initial question in line 35 and its final answer in line 45.[5] At the point where this exchange begins, the nurse is at the refrigerator asking Rob what he wants for breakfast.

(2)

31		Nurse:	English muffin?
32			(3.4)
33		Husband:	Ye:s.
34			(0.4)
35	→	Nurse:	A:nd what would you like on it.
36		Wife:	[Just one.
37			(0.8)
38	→	Nurse:	Jelly?
39			(1.0)
40	→	Husband:	No:
41			(0.8)
42		Wife:	Butter?
43	→	Nurse:	[Butter?
44			(0.3)
45	→	Husband:	Yes.
46			(0.6)
47	→	Nurse:	Okay.

The most pervasive way in which sequences are expanded to take into account the limitations of Rob's vocabulary is through the addition of alternative guesses (formatted as try markers; see Sacks & Schegloff, 1979) as to what Rob might want or be trying to say.[6] This expansion ends when Rob accepts a guess. Thus in line 38, after asking Rob what he wants on his English muffin (line 35), the nurse proposes a first possibility, "Jelly?" When Rob rejects this with a "No:" (line 40), she offers a second possibility, "Butter?" (line 43); and when this is accepted by Rob (line 45), the search sequence reaches its conclusion. As interactive objects Rob's "Yes" and "No" constitute very different kinds of events; "Yes" provides an exit from the guessing sequence, whereas "No" leads to the cycling of another round with a new guess. The sequence in (2), with a single additional guess, is an example of a simple, brief expansion. However, on many occasions these expansions become quite protracted, as a long, and sometimes exhausting, search is begun for what Rob is trying to tell those around him.[7]

A number of phenomena implicated in the organization of such sequences are visible in example (2). First, unlike many problematic negotiations, it is assumed that there is a correct answer to the search, and that one particular party, Rob, knows that answer and is entitled to tell others whether they are right or wrong. In this, the process has a gamelike quality, and indeed members of Rob's family sometimes describe such sequences as versions of "Twenty Questions." Second, as a consequence of this, and the restrictions on what Rob is able to say, there is a strong division of labor; the activity generates a set of structurally different kinds of participants who perform different kinds of action: Rob accepts or rejects proposals about what he might be trying to say, whereas his interlocutors provide relevant guesses. Third, in order to formulate new guesses, Rob's interlocutors engage in systematic work, for example, searching for alternatives within the same natural category set (e.g., butter as an alternative to jelly within the set of foods that are spread on English muffins). Like the encompassing activity, the category set provides a texture of intelligibility that participants use as a resource for the organization of the activity they are engaged in. However, as is seen later in this article, it is quite possible for those producing guesses to select the wrong category system and thus lead the sequence into a tangent that from Rob's perspective is going nowhere. Fourth, though Rob is the party who speaks the least, the organization of the activity locates him as the central, focal participant.

The sometimes frustrating and tedious work of everyone else is being done only in order to uncover what Rob is trying to say. Thus, though his wife participates in the sequence (line 42), it is at the service of helping someone understand what her husband wants, not to speak on her own behalf.

RESISTING INTERPRETIVE FRAMEWORKS

Further complexities of the process through which what is said is collaboratively established are revealed by the talk that immediately preceded the previous sequence:

(3)

1		Nurse:	Would ya like toast?
2			(0.6)
3	→	Husband:	Yes:,=
4	→		=uh no:,
5			(0.7)
6		Husband:	[( )
7		Nurse:	[Cheese?
8			(0.2)
9	→	Husband:	No no.
10			(1.2)
11		Nurse:	Butter?
12			(0.3)
13	→	Husband:	No.
14			(2.4)
15		Nurse:	[uhm:
16	→	Husband:	[No:,
17			(1.2)
18		Wife:	Just jelly?
19			(1.0)
20	→	Husband:	No-
21			(0.9)
22		Nurse:	[Lemme show ya.
23		Wife:	[English muffin?

24			(0.3)
25	→	Husband:	Yes.
26			(0.3)
27		Wife:	Do you want an English muffin.
28			(0.4)
29	→	Husband:	Yſe:s.
30			(0.9)
31		Nurse:	English muffin?
32			(3.4)
33	→	Husband:	Ye:s.
34			(0.4)
35		Nurse:	A:[nd what would you like on it.
36		Wife:	[Just one.
37			(0.8)
38		Nurse:	Jelly?
39			(1.0)
40	→	Husband:	No:
41			(0.8)
42		Wife:	Butt[er?
43		Nurse:	[Butter?
44			(0.3)
45	→	Husband:	Yes.
46			(0.6)
47		Nurse:	Okay.

If one looks just at the talk of the husband here, he appears to be a powerful, but very limited actor, someone who responds almost like a binary robot, as others frame choices for him. However, in fact he is able to deploy a large repertoire of subtly differentiated actions, each precisely fitted to the environment within which it emerges. To investigate this, it is necessary to examine both the details of how activity unfolds and the way in which the husband makes visible his changing participation in it through intonation and body behavior.

Within this sequence in example (3), framing issues pose particular problems for the participants. Rob is being asked what he wants for breakfast. In lines 23–29 it is established that he wants an English muffin. In light of this, note the problems posed for him in building an answer to the nurse's query in line 1 regarding whether he would like toast. One problem with a vocabulary restricted to *Yes* and *No* is that,

as logical operators, the words themselves frame everything as a clear binary choice. However, in practice, a proposal might be neither clearly wrong nor exactly what is being sought, but instead "almost right," "in the ballpark"—something that although not entirely correct, should not be rejected, because its closeness to what is actually being sought provides a strong clue, a point of departure for further work. Although Rob doesn't want toast he wants one of its closest relatives, an English muffin, and indeed this is something that is always served toasted. If Rob were to answer with an outright *No* it is possible that his interlocutors would start to search for alternatives to toast as things to have for breakfast, for example, a bowl of cereal, eggs, and so on, when in fact Rob does want a type of toast, though not toast itself. In brief, neither "*Yes* (I want toast)" nor "*No* (I don't want any toast)" is an answer that will smoothly guide future talk toward queries about English muffins.

Yes as a Textured, Nonbinary Answer

Although Rob's vocabulary is very limited, he is able to visibly take a stance toward what he is saying, through both the detailed way in which he says a word (e.g., intonation, sound stretches) and through body behavior. In reply to the nurse's query about toast, he says the word *Yes,* but ends it with falling rising intonation (indicated in the transcript by a comma). This contour frequently occurs after nonterminal items in a list and is one way of displaying that the larger unit in progress (e.g., the list itself) has not yet come to completion. It was noted earlier that in the language game being investigated here, *Yes* and *No* can function as different kinds of sequential objects, with *Yes* closing the search and *No* keeping it open. Here the speaker says the word *Yes* but uses intonation to display that the search should not yet be closed. He thus combines semantic and sequential resources to build an object that might be heard as affirming that toast in some form is wanted but that his interlocutors should continue their guessing and probe further.

Consistent with such a possibility is the way in which this "Yes" spoken in line 3 contrasts markedly with how that word is said in lines 29 and 32.

(4)

27		Wife:	Do you want an English muffin.
28			(0.4)
29	→	Husband:	Y1e:s.
30			(0.9)
			((*Nurse goes to refrigerator and holds up package of muffins for Rob to see*))
31		Nurse:	English muffin?
32			(3.4)
33	→	Husband:	Ye:s.

Here, where the search has successfully reached its conclusion, both "Yes's" end with the prototypical intonational display of final completion, a falling terminal contour (indicated by the period in the transcript). Other features of Rob's intonation—for example, the rise in pitch in the midst of "Y1e:s" in line 29—makes visible a range of other kinds of alignment to the talk being spoken, for example, appreciation and enthusiasm.

Wittgenstein (1958) argued that language deceives us by making phenomena that are in fact quite diverse appear identical to each other. Though Rob is using what is semantically the same word, *Yes,* through variation in the way that he speaks it he is able to construct consequential different objects that project alternative trajectories of future action (e.g., closure of the search vs. continued pursuit). To further explore the diverse entities that can be clothed in the same word, consider the "Yes" in line 25:

(5)

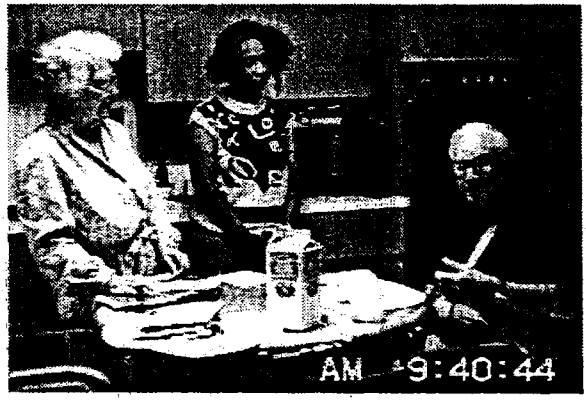
22		Nurse:	[Lemme show ya.
23		Wife:	[English muffin?
24			(0.3)
25	→	Husband:	Yes.
26			(0.3)
27		Wife:	Do you want an English muffin.
28			(0.4)
29		Husband:	Y1e:s.

If the "Yes" in line 25 is heard as an acceptance of the proposal in line 23 (e.g., that what he wants is an English muffin), then the sequence in

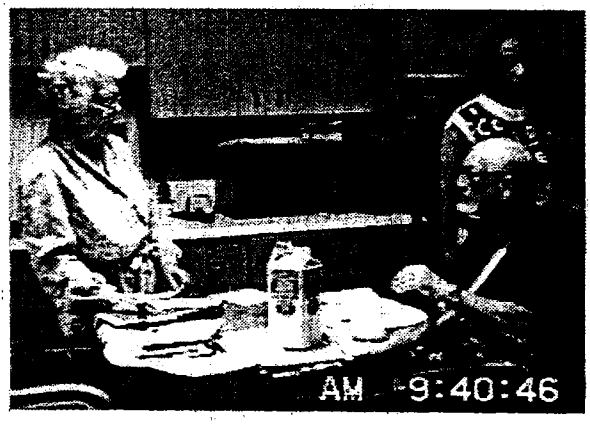
lines 27–29 in which this same request is made and affirmed, appears somewhat bizarre, a repetition of something that has already been done. However, through both the way in which he speaks the "Yes" in line 25 and his body movement, Rob frames the request as something different than an outright acceptance. Note that "English muffin?" in line 23 is spoken within an environment in which it is being overlapped by the talk of the nurse in line 22, something that can well pose problems of both hearing and focus (e.g., would a *Yes* be heard as an answer to the talk of the wife or that of the nurse?). Moreover, just before this sequence, Rob had withdrawn his gaze (A in example 6) and thus dismantled the state of heightened mutual orientation that had been sustained until this point (this process is investigated in more detail later). On hearing "English muffin?" he jerks his head back toward his wife and gazes intently at her with an expectant look (B in example 6). The "Yes." at line 25 is spoken in such a way as to simultaneously display heightened interest while soliciting further talk (unfortunately, capturing this on the printed page is beyond my powers of transcription; however, see the pitch track in Figure 1). Through the way that he organizes his body and his talk Rob shapes his "Yes" here as a combination of a next turn repair initiator (Schegloff, 1992)—a request to hear again what his wife has just said—and an expectant though still tentative "I think you've got it."

Such an object is quite different from the confirmatory, appreciative "Yɪe:s." that follows in line 29. Some of the ways in which differences in these two types of action are signaled—by not only their sequential position, but also through the detailed way in which each is spoken—are visible in their waveforms and pitch tracts,[8] as shown in Figure 1. The two "Yes's" differ from each other in pitch shape, pitch height, duration, and amplitude. Thus, the "Yes" in line 29 begins with a strong rise in pitch that extends well above anything in line 25. It is also louder and longer. These two objects are, however, related to each other. Thus, the expansive, appreciative character of the second "Yes" builds upon, and satisfies, the expectation invoked by the prior "Yes" in line 25 that what the participants have been searching for has at last been found. Moreover, by virtue of the way in which the first "Yes" leads to a replay, the resolution of the search is extracted from an environment marked by both overlap and withdrawal of gaze, and constituted as something that occurs within a state of heightened mutual orientation.

(6)



A



B

18		Wife:	Just jelly?
19	A		(1.0)
20		Husband:	No-
21			(0.9)
22		Nurse:	[Lemme show ya.
23		Wife:	[English muffin?
24			(0.3)
25	B	Husband:	Yes.
26			(0.3)
27		Wife:	Do you want an English muffin.
28			(0.4)
29		Husband:	Yţe:s

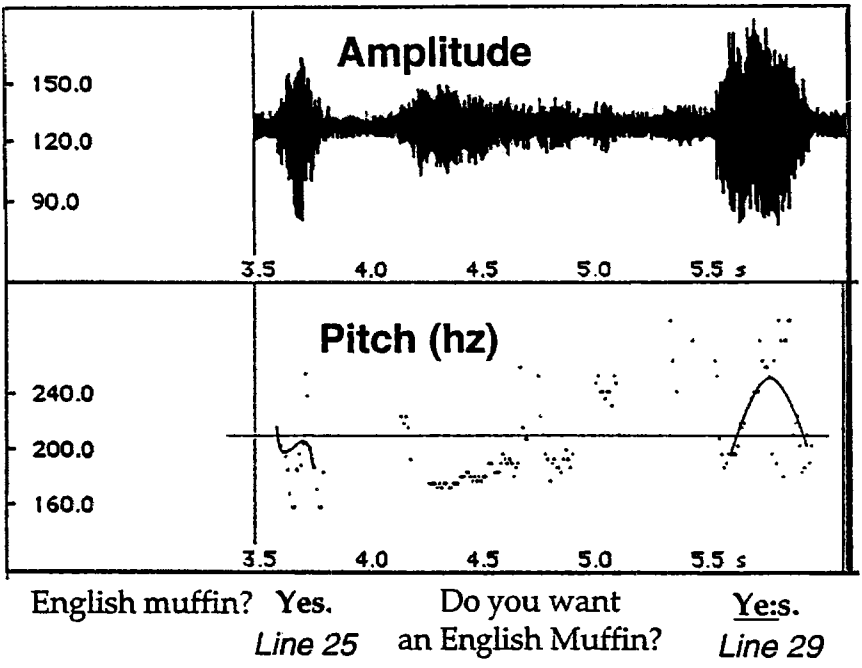


FIGURE 1 Pitch track.

Framing Opposition: Taxonomic Organization as Resource and Constraint

Getting to the place where the search can be terminated has required resolution, through specific interactive practices, of intricate issues of framing and taxonomic organization. This process is now examined. The choices offered in lines 7, 11, and 18 ("Cheese?", "Butter?", and "jelly?") are not alternatives to toast, but things that can be spread on members of the class that contains toast, English muffins, rolls, bread, and so on (see Figure 2). The two classes stand in a complementary relationship to each other, as integrated components of the natural activity of making a certain kind of food, but each is distinct from the other. The sequence beginning in line 7 poses choices about condiments.

(7)

1	Nurse:	Would ya like toast?
2		(0.6)
3	Husband:	Yes:,=
4		=uh no:,

5			(0.7)
6		Husband:	[( )
7	→	Nurse:	[Cheese?
8			(0.2)
9		Husband:	No no.
10			(1.2)
11	→	Nurse:	Butter?
12			(0.3)
13		Husband:	No.
14			(2.4)
15		Nurse:	[uhm:
16		Husband:	[No:,
17			(1.2)
18	→	Wife:	Just jelly?
19			(1.0)
20		Husband:	No-

If Rob participates in the condiment-choice sequence, he walks down a path that not only leaves "toast" itself immune from probing, but that actually seems to presuppose that the bread to be used has already been chosen. By making choices here, he moves farther and farther away from his English muffin. In order to get back to a place where alternatives to toast can be explored, he is faced with the problem of objecting to the sequence of action that is now being pursued. One of the three words in his vocabulary, *No,* constitutes the prototypical speech form used to voice objections. However, within the particular

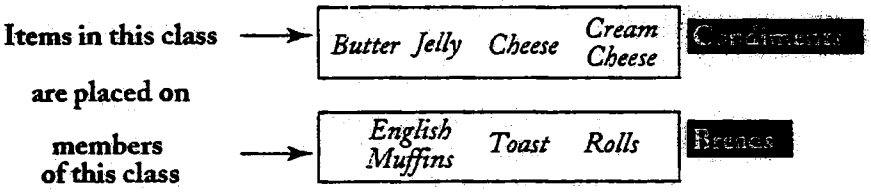


FIGURE 2 Condiment diagram.

sequential environment created by his collaborators here, the word *No,* occurring right after a proposed choice, will be heard as the rejection of a specific alternative, that is, an appropriate next move within their sequence, rather than as an objection to the condiment sequence itself.

(8)

7	Nurse:	Cheese?
8		(0.2)
9	Husband:	No no
10		(1.2)
11	Nurse:	Butter?

When heard as rejecting the choice just offered, "No" leads to an elaboration of the sequence, as his interlocutor offers another alternative. In order to get his English muffin, Rob is thus faced with the practical problem of producing a *No* that, instead of extending the sequence, will exit from it. To investigate how this is done, it is necessary to look in detail at the "No's" that occur here.

Immediately after saying "Yes:," to the query about toast in line 1, Rob adds "uh: no," and immediately follows this with a gesture, in which he holds his hand in the air while rotating it from side to side (see picture in example 9).

With the benefit of hindsight it is easy for an analyst to argue that by saying both "Yes" and "No" Rob might have been trying to create an answer that could display that toast was almost, but not quite, right, and that his gesture could be glossed as "kind of like toast but not toast itself." However, interpreting both talk and gesture like this is a continuing, difficult task for those who live with Rob, indeed one of the main contingencies they face. Rather than providing solutions to interpretive problems, such gestures pose them. What can be said reliably is that the gesture contributes to an embodied complex of action that successfully signals that the search for what Rob wants has not yet been resolved, despite the "Yes" in line 3. By quickly offering a guess as to what else he might be looking for ("Cheese?"), the nurse treats it as holding the search in progress open.

Rob's response to "Cheese?" is not a simple "No" but "No no". Though establishing this point analytically requires a larger data collection (something I don't yet have), intuitively it seems that the duplicated "No no" is frequently used to oppose a line of activity, to

(9)

1	Nurse:	Would ya like toast?
2		(0.6)
3	Husband:	Yes:,=
4		=uh no:,
5		(0.7)

6	Husband:	[( )
7	Nurse:	[Cheese?
8		(0.2)
9	Husband:	No no

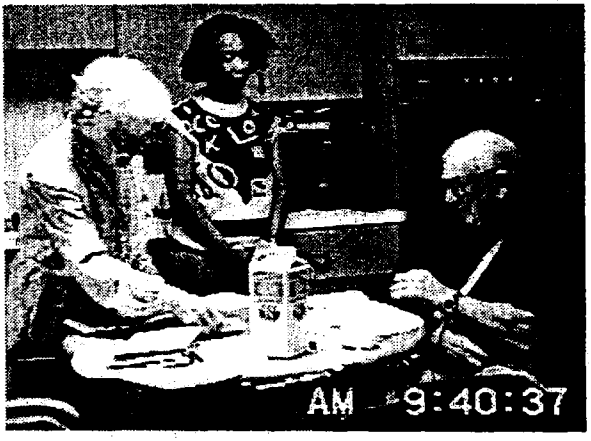
object to what someone is doing. As such it would stand in alternation to participating in the further development of an activity in progress, by, for example, providing a response to a proposal. However, though this may well be correct and what Rob is trying to do, the subtlety of the process is clearly demonstrated by the fact that the person he's talking to (who is faced with the difficult task of coming up with something to say next in face of the tight time constraints of real-time interaction) continues to search for alternative condiments.

At this point, in the silence following "No no" in line 9, Rob withdraws his gaze from the nurse in order to visibly engage in a solitary search (see example 10).

He is thus no longer positioning himself as a hearer, whose gaze displays a readiness to listen to a next utterance from his interlocutor; instead he shows engagement in a solitary search.[9] He looks up briefly and again says "No." (line 13), with special emphasis after nurse asks

(10)

7	Nurse:	Cheese?
8		(0.2)
9	Husband:	No no.
10		(1.2)



11	Nurse:	Butter?
12		(0.3)
13	Husband:	No.

"Butter?". Note that butter is precisely the condiment he eventually chooses for his English muffin, in line 45. This contrast with his later choice provides further support for the argument that the "No" in line 13 marks opposition to the activity itself, rather than rejection of an alternative offered within it.

In line 16, Rob is able to demonstrate that he is opposing the sequence itself, rather than the choices being offered within it, in a much more clear and vivid fashion.

(11)

11		Nurse:	Butter?
12			(0.3)
13		Husband:	No.
14			(2.4)
15	→	Nurse:	uhm:
16	→	Husband:	No:,

Rob says "No:," before the nurse has even produced a next alternative. By speaking *where* he does, Rob uses the one appropriate word available to him to mark opposition to what the nurse is trying to do—the condiment sequence itself—rather than a particular choice emerging within it.

In line 20, Rob uses both the expressive possibilities of his voice and the visible behavior of his body to display frustrated disengagement from the process. It was noted in example 10 that after line 9 Rob withdrew his gaze from his interlocutor in order to engage in a solitary search. Though the gaze withdrawal there proposed that he was no longer acting as an expectant hearer to the nurse, by visibly engaging in a search (perhaps for a gesture that would communicate what he wanted), he demonstrated that he was still very actively involved in the larger activity in progress. While his head was lowered his upper body remained positioned toward his coparticipants (**A** in Figure 3). In line 20, in response to his wife's "Just jelly?", Rob, who had been gazing intently toward his wife as she spoke, produces a soft, short "No-" while moving his gaze beyond where she and the nurse are standing (**B** in Figure 3), and thus outside the facing formation being constituted through the mutual orientation of their bodies (Kendon, 1990). As he does this, his face, gesture, and body vividly show frustration (an emotion whose analytical home is not a state internal to the actor, but what he has, and has not, been able to accomplish in the midst of the contingencies of action within which he is embedded).

Some demonstration that his co-participants see this as challenging, or finding serious problems with, the line of action they have been pursuing until this point, is provided by what they do next. In different ways each moves to a different activity. The nurse, who had been standing in one place throughout the sequence, starts walking toward the refrigerator to attempt a different way of finding out what he wants, for example, showing him what is in the refrigerator. Simultaneously, the wife shifts category classes, exiting from the condiment sequence to ask if he wants an English muffin.

The organization of taxonomies and other category systems has been a major focus of research in fields such as cognitive anthropology (see, e.g., Tyler, 1969). Using as a model Saussure's notion of *langue*, classical work on taxonomic domains, such as kinship, divorced category systems from actual, situated courses of practical action. The ultimate products of such analysis were abstract, timeless systems,

A
Search
(line 9)

B
Frustrated Withdrawal
(line 20)

FIGURE 3 Two frame-grabs showing search and frustrated withdrawal.

described in terms of underlying distinctive features, generative rules, and hierarchical tree diagrams. The present data allow us to explore taxonomic organization as a form of temporally unfolding, situated practice, in which locating the appropriate taxonomy emerges as a collaboratively constituted, contingent accomplishment. The fact that Rob wanted an English muffin was determined through a tortured, collaborative walk through contested taxonomic space.

CONCLUSION

The way in which the production of meaning emerges through a collaborative process of co-construction is demonstrated in particularly vivid fashion in these data, because of the severe restrictions on Rob's ability to produce speech. The sequence types deployed within his family to accomplish understanding generate what is quite literally a form of life. The system includes a clear division of labor in which different kinds of participants perform different kinds of cognitive and sequential work. Within this system one party emerges as the focal participant, and indeed others can complain that their own voice gets lost as everyone mobilizes extensive work to figure out what Rob is trying to tell them. The system not only organizes action and understanding, but also produces a range of different kinds of involvement, that affect the actors in a variety of ways, leading, for example, to frustration, anger, or joy, as a mystery is at last unraveled. Moreover, Rob's severe deficits in the production of words are *not* accompanied by equal restrictions on his ability to recognize, and actively participate in, the pragmatic organization of talk-in-interaction. In order to make himself understood, he both relies upon, and helps structure, the sequential organization of the talk within which he is embedded. His sparse semantic repertoire does not imply equal restrictions on the range of action types that he constructs with these three words. By (1) attending to the sequential placement of his talk, and (2) using the full expressive powers of his body (intonation, gesture, affective displays of his face and body), he is able to build a broad range of subtly differentiated action, each fitted in fine detail to the contingencies of the local organization where it is placed.

Though occurring at the opposite end of the life cycle, the structure of the sequences through which meaning is accomplished by Rob and his caretakers is strikingly similar to that described by Ochs, Schieffelin, and Platt (1979) for how very young children, and their caretakers and peers, collaboratively establish what a child with limited language resources is attempting to say. Most crucially, in both settings, propositions are not encoded in the self-contained sentences of an isolated speaker, but instead are constituted through distributed structures that span the utterances of different participants.

Central to this process are the possibilities for building context and meaning, provided by what conversation analysts study as sequential organization (Sacks, Schegloff, & Jefferson, 1974; Atkinson & Heritage, 1984; Heritage, 1984). It is precisely the flexible possibilities provided by the changing textures of relevancies invoked through emergent sequential organization that makes it possible for an actor such as Rob to perform a wide range of different kinds of action with limited semantic resources. Moreover, the three words in Rob's vocabulary—*yes, no,* and *and*—seem to be present not simply because they are high frequency words in the English language, but rather because they allow him to tie his talk to the talk of others within ongoing sequences of action. With this specific vocabulary he is able to parasitically build on relevant linguistic structure provided by his interlocutors.

Rob makes himself understood, and constitutes himself as a meaningful actor, through his visible *participation* in the activity of the moment. Through variations in both the way he says things (e.g., intonation and a host of other phenomena implicated in the production of speech) and how he organizes his body (gesture, orientation, facial displays, etc.), he is not only able to respond to what others are doing, but also to take up stances toward what is occurring and thus steer the interaction into the directions he wants to pursue. One approach to the analysis of participation in interaction focuses on the production and organization of categories for different kinds of participants (e.g., speaker, hearer, overhearer, target, etc.; see Goffman, 1981; Levinson, 1988; Hanks, 1990). By way of contrast, changing the displays of participation within the unfolding, contingent flow of a specific activity allows actors to show both their understanding of and their stance on the events within which they are enmeshed, and in so doing to shape the further trajectory of the activities in progress. Rather than being constituted primarily as an abstract category set for various kinds of

entities implicated in the organization of a state of talk (e.g., a typology of possible actors), participation is a temporally unfolding form of action requiring intricate attention to the specifics of the activity occurring at the moment. From such a perspective, participation is central to the collaborative constitution of meaning. It is one of the key ways in which understanding is organized (and challenged) within distributed, multiparty frameworks of action as relevant events unfold through time. The social and the cognitive components of participation are inextricably intertwined within temporally unfolding processes of co-construction.

The processes of co-construction investigated here require that others treat Rob as a competent co-participant; for example, to deal with his talk and gesture as an effort to say something meaningful, rather than the random movements of a man whose brain has been massively damaged. Continued guessing presupposes that Rob not only has something to say, but can evaluate what his interlocutors are saying to him. Though he does not have the ability to speak himself, he is treated as someone who can understand complex spoken language. In that the correctness of these assumptions is demonstrated by his continuous, precisely placed participation in sequences of interaction with others, this presupposition of competence might seem so obvious as to not merit comment. However, cross-culturally there is tremendous variation in the competence attributed to those, such as children, who cannot speak (Ochs, 1988; Schieffelin, 1990). Moreover, within U.S. society, others can, and do, refuse to treat an adult such as Rob as a competent, responsible actor. Right after his stroke, a group of doctors inserted a catheter into his urinary track. As they were doing this he kept pointing and vocally objecting. Rather than recognizing him as a co-participant in the procedure being performed (indeed, one with a particularly relevant vantage point, e.g., the only one who could feel what was happening), the doctors treated the gestures and sounds he was making as the ravings of a man who had just suffered massive brain damage and did not know what he was doing. Three days later they discovered that the catheter had been inserted wrong, and that Rob had been in pain because of it the entire time.

In 1982, Holland (1982, p. 50) could write that "no published observational studies of aphasic patients' natural communication are currently available." Since that time there has been growing attention to the "need to place greater emphasis in management programmes on

aphasics using language in everyday contexts" (Green, 1984, p. 35; see also the work cited at the beginning of this article and in note 6). Moreover it is recognized that the global notion of "context" has to be decomposed into relevant sets of organizational practices (Goodwin & Duranti, 1992). According to Foldi, Cicone, and Gardner (1983, p. 83), it is necessary to

> go further than simply saying "context" helps communication. Of course it does. But it is only by testing out its various components and manifestations—ranging from vehicles like intonation and gesture to pragmatic structures like speech acts, presuppositions, turntaking, or the redundancies of narrative—that the notion of context can be given significant meaning.

The present article has contributed to detailed analysis of how one key component of context, sequential organization, makes it possible for someone with severe aphasia to engage in meaningful conversation with others.

For clarity, the present article has focused on the ability of Rob, and those around him, to accomplish understanding in simple request sequences. However, he is also able to engage in complicated narrative by getting his wife to remember an event they shared together that he wants to tell to the others present. He is then able to comment, through both intonation and the limited resources of his vocabulary, on her telling.[10] Drawing attention to the wide and important range of pragmatic competence he uses to make himself understood is not in any way meant to suggest that he has the full communicational abilities of someone who can speak. If he could have said as simple a phrase as "English muffin," all of the work examined here would have been unnecessary. However, the events investigated here do call into question traditional assessments of competence based purely on the ability to produce language.[11] When Rob was in the hospital, his doctors, who had focused entirely on the trauma within his brain, said that any therapy would be merely cosmetic and a waste of time, because the underlying brain injury could not be remedied. Nothing could have been farther from the truth, and medical advice based on such a view of the problem can cause irreparable harm to patients such as Rob and their families. As an injury, aphasia does reside within the skull. However, as a form of life, a way of being and acting in the world in concert with others, its proper locus is an endogenous, distributed, multiparty system.

NOTES

1 *Aphasia* is defined in Webster's *New World Dictionary* as "a total or partial loss of the power to use or understand words, usually caused by brain disease or injury."

2 Initially therapists tried to teach Rob a wide range of communicative strategies, and at some point he could speak one or two other words (e.g., *wine*). However, his vocabulary eventually stabilized on *Yes, No,* and *And.* These three words are central to the sequences of interaction through which meaning and understanding are negotiated in his family. Any implication that Rob "chose" these words simply frames the issue of functional selection from a larger set of possibilities, rather than indicates that there was some single moment when Rob decided which words he would learn and which he would ignore. From another perspective, it is clear that his vocabulary in fact contains far more than three "words." As this article demonstrates, the terms *Yes* and *No* encompass a broad range of functionally differentiated forms of action and meaning. Moreover, some of his intonation melodies (e.g., *"duh* duh *duh* duh *duh"* spoken with a characteristic pattern of pitch and stress) are used regularly and systematically to communicate specific stances and responses in much the way that *Yes* and *No* are. In the present article, only Rob's use of *Yes* and *No* is investigated.

3 Talk is transcribed using a slightly modified version of the system developed by Gail Jefferson (Sacks, Schegloff, & Jefferson, 1974, pp. 731–733). The original videotapes were recorded on Hi-8. Frame-grabs from the tape were digitized using a Colorsnap 32+ image capture card in a Macintosh computer. The images were then imported into Adobe Photoshop to adjust contrast and darkness. Sometimes more substantial changes were made in the original image. For example, to compensate for poor lighting in Rob's bedroom, which produced a muddy, low contrast video image, I erased the background in the first frame-grab so that the actors would stand out more clearly.

4 See Ochs and Schieffelin (1983) for analysis of how *topic* is best analyzed as something co-constructed by multiple participants.

5 See Schegloff (1972) and Jefferson (1972) for analysis of insertion sequences.

6 Sequences such as these have been examined from a number of different perspectives in research on aphasia. Using as a point of departure the analysis of repair in conversation by Schegloff, Jefferson, and Sacks (1977), Laakso (1993, p. 11) found that collaboratively determining what someone with aphasia is trying to say "is shaped by a complex interplay between aphasia and the interactional situation and the choices participants make in selecting whether and by what means to initiate self-repair or other-repair." Lubinski, Duchan, and Weitzner-Lin (1980) noted the pervasiveness of "hint and guess cycles" in aphasic communication. Milroy and Perkins (1992) used Clark and Shaefer (1987) to develop a model of collaborative repair sequences. Ochs (1988, pp. 132–235) provided analysis of variation in the organization of clarification sequences that

is quite relevant to the process being investigated here (e.g., these sequences would not occur if Rob's interlocutors did not treat him as competent actor with something specific to say). Schegloff (1988) provided detailed analysis of how guessing sequences are used to organize the collaborative production of bad news. Most relevant to the present analysis is how such a process allows a recipient, rather than the party with the news to tell, to actually state the news.

7 On one occasion, a search begun in a telephone call—in which Rob, his wife, and their nurse were talking together (over a speaker phone) to their son—was left unresolved. The son was quite surprised to receive another call that evening in which the nurse told him that after several hours of work they had at last figured out what Rob was trying to tell him. On another occasion, when Rob was unable to get his son to recognize something, Rob led him out to the car, had him drive to a mall with Rob's electric wheelchair, and then the two of them moved from store to store searching for an example of what Rob was trying to make visible.

8 Pitch tracks were made using the *Signalyze* Signal Analysis program (available from InfoSignal Inc., 91 Baldwin St., Charlestown MA 02129) on sound that had been digitized using the MacRecorder on a Macintosh IIci computer. The top image is a waveform showing changes in amplitude (e.g., loudness). Each dot in the bottom graph displays the value in cycles per second for the fundamental frequency of the speaker's talk at that point in the utterance (indicated below the graph with both a verbal transcript and measurement along a time scale marked in seconds). There is, of course, some noise in the signal. To highlight for the reader the pitch tracks of the two examples of "Yes" being compared here, I have, by hand, drawn lines connecting the pitch values that make up each contour. The waveform, pitch track, and "Yes's" in the transcript are precisely aligned with each other (in order to make the transcription of the talk between the two "Yes's" fit the space available, it was written on two lines so that precise alignment was lost). Were I to digitize the sound now I would do it on one of the new Power Macintosh computers that can digitize 16 bit (44 kHz) instead of 8 bit (22 kHz) sound.

9 See Goodwin and Goodwin (1986) for a more detailed analysis of how changes in orientation propose alternative co-participation frameworks as extended word searches unfold through time.

10 Consider, for example, what would happen to Rob's memory, indeed his cognitive life in general, if he were to be isolated from his wife and family, or if he lived in a family that did not treat him as a competent intelligent actor, a man with something to say.

11 Foldi, Cicone, and Gardner (1983, p. 83) noted that by ignoring the contingencies of action and context in the lived lifeworld, the experimental situation not only underestimates the actual communicative ability of patients like Rob, who have severe left-hemisphere damage, but also overestimates the abilities of patients with right-hemisphere damage, who retain syntax and low-level semantics, but have difficulties with more complicated communicative tasks.

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