

# Human Sociality as Mutual Orientation in a Rich Interactive Environment: Multimodal Utterances and Pointing in Aphasia

*Charles Goodwin*

A primordial site for the study of human sociality can be found in a situation in which multiple participants are carrying out courses of action together, frequently through use of language.<sup>1</sup> These situations are not only pervasive, but in their intricacy, their processes of dynamic change, and the range of resources they draw on, quite unlike anything else found in the animal kingdom (although building from processes found in other animals). The practices used to build collaborative action frequently encompass a range of quite diverse phenomena including language structure, gesture, participation frameworks, practices for seeing and formulating structure in the environment, and embodied action and tool use. This diversity has frequently obscured the intrinsic organization of the process itself. For example, in part because of the way in which the human sciences have each claimed distinctive phenomena, language structure was treated as the special domain of linguistics, and the organization of action through language was not a focus of mainstream sociology (despite most important work by the Prague school, Boasian linguistic anthropology, Bakhtin and his followers, Mead, Goffman, and Bateson, and most recently conversation analysis).

To build collaborative action, each party must in some relevant sense understand the nature of the activities they are engaged in together. The accomplishment of joint action is also a central environment for cognitive activity. The ability of participants to publicly scrutinize both

what each other is doing, and the unfolding structuring of events is central to this process. Note that in many cases what must be attended to extends far beyond talk, to encompass, for example, the embodied activity of hearers. Following Wittgenstein (1958), this suggests a public order of multimodal sign use lodged within action.

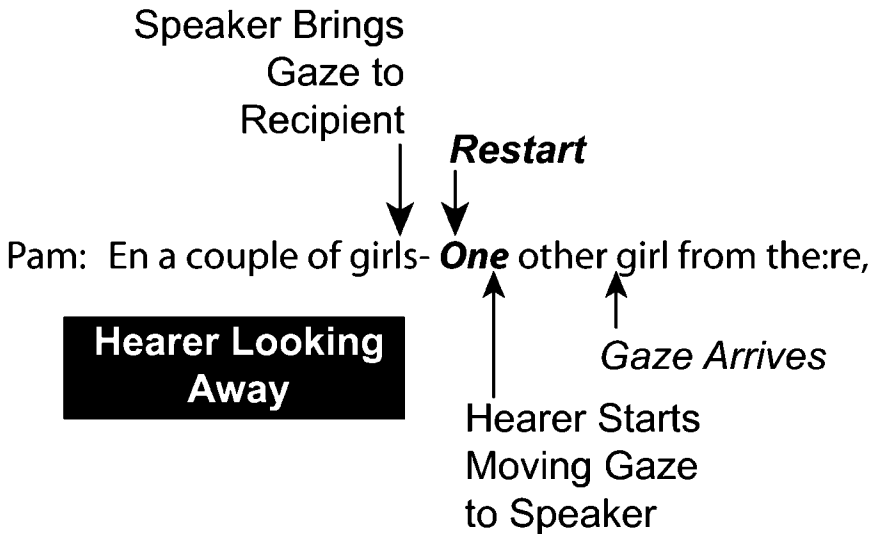
In this chapter, I examine such issues in the following way. First, language provides a central resource for the organization of action within human interaction. Drawing on some of my earlier research (Goodwin 1981), I begin by investigating the production of individual utterances as multiparty activities, something done through the collaborative actions of both a speaker and a hearer. During this process hearers are largely (although not completely) silent. They display how they are participating in the activities of the moment through use of their visible bodies. The construction of an utterance in face-to-face interaction is not only a multiparty activity, but also a multimodal one, something that is accomplished through the joint interplay of structurally different kinds of sign systems, including both the language of the speaker, and the embodied displays of both the hearer and the speaker. Our default practices for representing such events, especially writing (but also parties' own later reports about what happened in an encounter, i.e., they talk about what others "said"), typically privilege one component of this process, language, that is what was said, while rendering other embodied displays, and just about everything the hearer did, invisible. This leads quite easily to an ideology in which language is conceptualized as an isolated self-contained system, the outcome of private psychological processes situated within a single individual, the speaker, rather than as a form of public practice lodged within the organization of action within human interaction.

I then look at the pointing activities of Chil, a man with very severe aphasia. Despite his almost complete lack of productive language, he nonetheless acts as a powerful speaker in conversation. He accomplishes this by using a range of meaning-making practices beyond language itself to bring phenomena to the attention of his interlocutors who attribute relevant communicative intentions to his actions and who work hard to figure out what he wants to tell them. This calibration of meaning is accomplished through the sequential organization of talk in interaction. The way in which Chil uses systematic practices to get others to produce the language he needs again demonstrates the relevance of focusing on the public organization of collaborative action within interaction. This analysis also contributes to the set of chapters that focus on pointing in this volume.

## Embodied Hearers and Language Structure

In an important recent volume, Tomasello (2003) offers a detailed, usage-based theory of language acquisition as an alternative to, and critique of, Chomsky's theory of an innate language module. Central to Tomasello's argument is a distinctively human form of intentionality, the ability to recognize in actions embedded communicative intentions, a process that is lodged within the common ground provided by joint attentional frames (Tomasello 2003:22–26). Tomasello describes the mutual attentiveness of speaker and addressee within a framework that focuses primarily on the mental life of the actors. It is, however, possible to investigate crucial aspects of this process as forms of public practice. The gaze direction of an actor (which is typically displayed not only by the eyes themselves but also through the head and postural configuration) allows others to make inferences about what that party is attending to. Goodwin (1981, 2000b) finds that speakers who discover that they do not have the gaze of their addressee interrupt the utterance in progress. Fig. 3.1 provides an example.

Marking the sentence in progress as defective precisely at the point at which the absence of a hearer is discovered provides some evidence first, that speakers treat mutual attentiveness as something that is



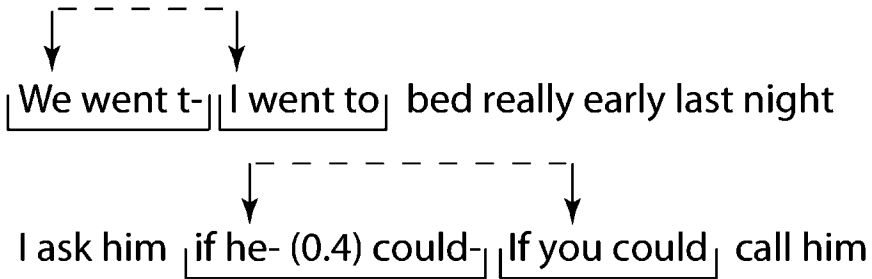
**Figure. 3.1.** Requesting the gaze of a hearer.

demonstrated through public, embodied sign use, and second that the visible coparticipation of a hearer is central to the constitution of an utterance. Further support for this is provided by what happens next. Independent of content, the marked interruption of the emerging utterance's prosodic contour before it has reached a point of possible completion produces a very salient signal in the stream of speech. Immediately after hearing this hearers typically start to move their gaze to the speaker, who now produces a version of the utterance that is visibly being attended to by a hearer. In essence the very noticeable phrasal break acts as a request for a hearer. When the speaker actually gazes at the nongazing hearer the utterance in progress at that point is typically abandoned, and a new sentence begun after the phrasal break. However, if the speaker has not actually gazed at the nonattending hearer, what follows is frequently a pause, a silence during which the hearer moves gaze to the speaker. When this happens the unit in progress is continued.

### **Repairs and the Display of Language Structure**

Such public practices for negotiating a state of mutual attentiveness are relevant to another issue raised by Tomasello (2003:38–39), that of how someone (such as a baby) who does not yet know a language can figure out how to segment the stream of speech into relevant subunits (see also Pinker 1994:267 for the argument that this problem demonstrates the necessity of innate linguistic knowledge). Despite persistent claims by linguists and psycholinguists that people are unaware of the pervasive “performance errors” in their actual speech, the way in which parties who have not been attending the speaker immediately start to shift their gaze after such a phrasal break demonstrates that they are not only heard but treated as making relevant particular kinds of subsequent action (see also Clark and Fox Tree 2002). Moreover, insofar as the phrasal breaks used to request the gaze of a hearer involve not only a rupture in the emerging syntax of the utterance in progress but also a very noticeable cutoff of the current prosodic contour, they can be recognized even by someone who has not yet mastered the structure of that language. Could they be in any way useful to someone in such a position? Precisely because of the way in which such speech errors disrupt smooth syntactic flow they provide crucial information about the structure of the language in progress. Consider Fig. 3.2.

As is characteristic of repair in conversation (Schegloff 1979, 1987; Schegloff et al. 1977) the talk that follows the cutoff reuses, although



**Figure 3.2.** Displaying slots and alternatives.

with significant changes, some of the initial talk. Such repetition has the effect of delineating the boundaries and structure of many different units in the stream of speech (for a related argument about the importance of the visibility of such parsing see Byrne this volume). Thus, by analyzing what is the same and what is different in these examples one is able to discover: first, where the stream of speech can be divided into significant subunits; second, that alternatives are possible in a particular slot; third, what some of these alternatives are (here different pronouns); and fourth, that these alternatives contrast with each other in some significant fashion, or else the repair would not be warranted. In essence, these repairs provide a distributional analysis of relevant phenomena in the stream of speech, and, indeed, their form is in many respects analogous to techniques developed by linguists, such as elicitation frames and minimal pairs, for determining structure in the stream of speech.

Repairs in other examples not only delineate basic units in the stream of speech (e.g., noun phrases) but also demonstrate the different forms such units can take, and the types of operations that can be performed on them (see Goodwin 1981:170–173). Consider Fig. 3.3.

The repair in this utterance provides a range of information about structures utilized in the language. First, it separates out a relevant unit, a noun phrase, from the stream of speech. Second, it shows where that unit can itself be subdivided (see Byrne this volume). Third, it provides an example of the type of unit, an adjective, that can be added to the noun phrase. Fourth, it locates at least one place in the noun phrase in which such an addition is permitted. Finally, in the contrast between the first and second version of the noun phrase, the repair shows that such an addition is optional. Thus, insofar as repairs provide for significant

Somebody said looking at my; son, he has

**Figure 3.3.** Decomposing a noun phrase.

differences in form to be displayed within a context of repetition, they give clear information about contrasts within the language that are significant to its users, as well as information about how the stream of speech is divided into appropriate units, the operations that are possible on those units, and the combinations they can form.

Repairs further require that a listener learn to recognize that not all of the sequences within the stream of speech are possible sequences within the language, for example that in Fig. 3.2 “I” does not follow “to” in “We went t- I went to. . . .” To deal with such a repair, a hearer is required to make one of the most basic distinctions posed for anyone attempting to decipher the structure of a language: to differentiate what are and are not possible sequences in the language, that is between grammatical and ungrammatical structures. The fact that this task is posed may be crucial to any learning process. If the party attempting to learn the language did not have to deal with ungrammatical possibilities, if, for example, he or she were exposed to only well-formed sentences, he or she might not have the data necessary to determine the boundaries, or even the structure of the system. Chomsky’s (1965) argument that the repairs found in natural speech so flaw it that a child is faced with data of very “degenerate quality” is unwarranted. Rather, it might be argued that if children grew up in an ideal world in which they heard only well-formed sentences they would not learn to produce sentences themselves because they would lack the analysis of their structure provided by events such as repair.

These practices also contain, as part of their organization, a public structure of intentionality, a displayed reason for why the speaker is repairing the talk in progress. Thus, in Fig. 3.2 the party being talked about has been misidentified, and this is remedied by the change in pronouns. Noticeably missing is any indication that the talk is being disrupted to request the orientation of a hearer. Consider what would happen if the addressee’s disattention were officially and explicitly noted, for example with a request such as “Look at me.” The talk in progress would shift from what the speaker had been in the process of saying to talk about the current orientation of the participants toward each other. This would be a very poor way to get the hearer to

listen to what the speaker had been in the process of saying. By way of contrast the salient repair with its visible reorganization of the emerging utterance draws heightened focus to the details of the talk in progress. It displays a reason for its occurrence that is functionally adapted to the specific tasks it is accomplishing (see also Goodwin 1987). There is visible motivation for the speaker to perform this action now (to repair something in the talk), and for the hearer to give the talk in progress heightened attention.

Speakers' ongoing analysis of their hearers can have a range of other significant consequences for the content and organization of the talk in progress. Goodwin (1981) describes how a speaker who addresses three separate hearers during a single sentence by moving his or her gaze from one to the other, changes the emerging content and structure of the sentence in progress at each gaze shift so as to maintain the appropriateness of the talk of the moment for its current addressee. The sentence that finally gets spoken is not the one that the speaker began with. What seems crucial in such a process is not the syntactic organization of the final sentence, a single complex tree structure for example, but, rather, the way in which each emerging unit of talk projects a constrained but nonetheless variable range of possible next units that might follow it. Parties building action through use of units with these properties are working with resources that simultaneously provide both rich structure and enormous, although constrained flexibility. This can be exploited on a moment by moment basis to adapt in a relevant fashion to changing circumstances while still visibly remaining within the framework provided by an existing course of action (such as an emerging sentence). Moreover this is not simply a linguistic or a symbolic process. When the actions of the hearer are taken into account it constitutes a distinctively human form of collaborative social organization.

### **Pointing in Aphasia**

The pointing activities of Chil, a man with severe aphasia, will now be examined. This phenomenon is relevant to study of the interactive infrastructure of human sociality, and to other work in this volume, in a number of different ways. First, it provides a particularly clear, indeed dramatic, example of how human meaning and action are constructed through systematic processes of human interaction. Chil requires others to produce the words he needs to say something meaningful. Second, pointing is a topic of a number of other chapters in this volume

including Tomasello's on pointing (or rather its absence) in apes, Liszkowski's on pointing in infants and Goldin-Meadow's on pointing in both deaf children communicating through home sign and learners and teachers working on math problems. Chil's situation provides yet another perspective on pointing, a phenomenon that has emerged as an interesting subtheme in this volume and the conference that led to it. Simultaneously the methods used by Chil and his interlocutors to construct meaning together are instances or variations of more general practices described by Schegloff, such as repair (Schegloff et al. 1977), for the organization of action in talk in interaction and require the recipient design and mutual relevance noted by Levinson, Enfield, and others. The way in which Chil draws heavily on structure that is already present in his lifeworld is relevant to Clark's discussion of common ground.

In 1979, when Chil was 65 years old a blood vessel in the left hemisphere of his brain ruptured. He was left completely paralyzed on the right side of his body and with a vocabulary that consisted of only three words: *yes*, *no*, and *and*. Despite this, he continued to function as a powerful actor in conversation, and indeed had an active social life in his community, going by himself to a coffee shop in the morning, doing some of the family shopping, and so forth.

Chil was my father. I visited him several times a year from the time of his stroke in 1979 until his death in 2000. In 1992, I began to videotape him, eventually recording approximately 210 hours of interaction in which Chil was a participant. None of the recordings were in clinical environments. Most took place in his home, although a few were made in settings such as stores where Chil was shopping. The sequences to be examined here were recorded in 1995 and 1997, 16–18 years after his stroke, when Chil was in his early eighties. In most of them Chil is sitting in his kitchen talking to me, his son Chuck, who was then in his early fifties.

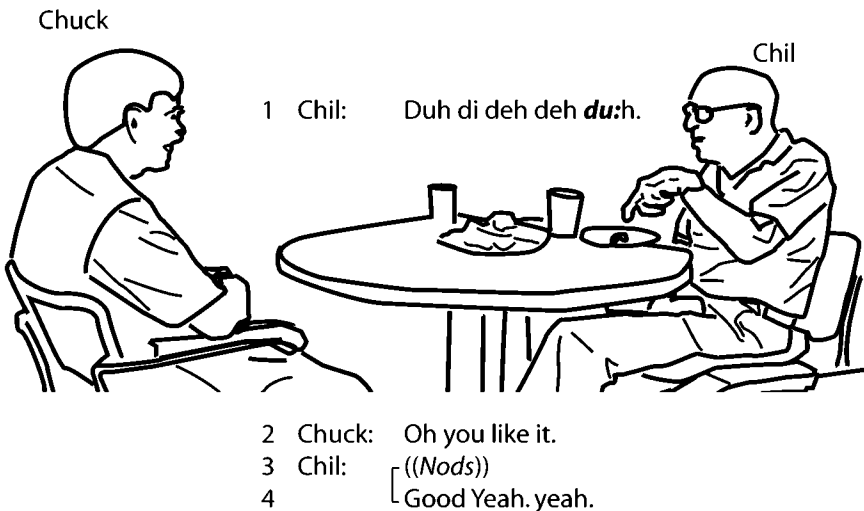
How is it possible for someone with a vocabulary of three words to say something relevant and perform complicated action in conversation? In brief, by creatively using the sequential organization of action in human interaction Chil got others to produce the language he needed to say what he wanted to say (Goodwin 1995, 2003b, 2004). Despite his lack of productive language, Chil possessed a wide and important range of communicative resources that could be used to guide his interlocutors. First, his ability to understand what others were saying was excellent. Second, he was able to use prosody to display both affect and a range of subtly differentiated stances toward talk, other participants and events. Indeed, what appear in a printed transcripts as strings of nonsense



syllables (e.g., “*ih dih dih dih dih:::!*”) frequently function as carriers for subtle and quite expressive prosodic tunes (Goodwin et al. 2002). When placed precisely with reference to the actions of others such expressive prosody could create a variety of locally relevant actions. Moreover by producing single words or strings of his three words—for example “*No no no*”—with varying prosody he could use his limited vocabulary to create a range of quite different actions with varying meaning (see also Stivers 2004). Indeed, when the unit being analyzed includes both his words and their intonation, it would be accurate to say his vocabulary was larger than written versions of his semantic repertoire would indicate.

Third, Chil was able to produce many different kinds of gestures. In Fig. 3.4 during line 1 Chil points toward a bagel he has just tasted.

In line 2 Chuck responds to the pointing gesture (indeed his deictic “it” ties his talk to the target of Chil’s point). Perfectly consistent with the arguments of Tomasello (Tomasello 2003, this volume), Chuck recognizes that with his gesture Chil is intending to communicate something to his addressee, to focus the attention of his addressee on something. By using Chil’s pointing gesture as the point of departure



**Figure 3.4.** Multimodal assessment.

for subsequent action that attempts to explicate it Chuck is treating Chil as someone with a rich mental life, as someone who is trying to say something relevant through his gesture, rather than as a body waving its hand around randomly.

Such attributions of intentionality are frequently argued to be essential for crucial forms of human action (see, e.g., Tomasello, Levinson, Enfield, and others in this volume), and indeed what distinguishes us from other animals. It would, however, be possible to interact with Chil and not make such attributions, for example to treat the nonsense syllables in line 1 as the incoherent ravings of an idiot. When Chil was in the hospital several days after his stroke doctors inserted a catheter. As they were doing this Chil vividly gestured and spoke, although without being able to produce meaningful language. The doctors dismissed what he was doing as the ravings of a man whose brain had visibly just suffered great injury, and did not in any way treat his talk and gesture as relevant to what they were doing. Several days later they discovered that they had inserted the catheter inappropriately, and that Chil had been attempting to tell them this. Attributing communicative intent to another's sounds and gesture and thereby treating that person as a full-fledged human being capable of performing relevant, consequential action, and being willing to do the work to find out what the other is saying, thus has not only a cognitive dimension, but also a moral one.

Recognizing that Chil's pointing finger embodies the intention to indicate something to Chuck is not, however, sufficient for Chuck, or an addressee in general, to grasp the action being performed by the gesture. The addressee is not being asked to simply attend to the indicated object, to contemplate it, but instead to construe it in a way that is relevant to the activities in progress at the moment, and to use the pointing gesture as the point of departure for a relevant next move. In line 2 Chuck proposes that Chil was making an assessment, that he was telling Chuck that he "likes" the indicated bagel that he just tasted. What leads Chuck to understand the pointing gesture in just this way, or more generally what are the practices through which the intelligibility of Chil's gesture as a specific, locally relevant form of action is achieved?

In brief, I argue that Chil's gesture does not stand alone as an isolated pointing hand, but is instead elaborated by a number of other co-occurring signs, including a range of quite different kinds of embodied displays. This multimodality is not specific to aphasia, but is instead quite general in the organization of human gesture and action. However, because of Chil's inability to explicate his gestures with rich, explicit

language, what he is trying to say and do with his gestures is calibrated with his interlocutors through distinctive action sequences that do not typically occur after the gestures of fluent speakers (in essence his addressee provides a candidate understanding after each gesture, which Chil then accepts or rejects). Through this process very general forms of practical logic that are central to the organization of gesture, specifically the way in which the intelligibility of gesture is accomplished through the mutual elaboration of the gesture and the talk that accompanies it, are sustained, but with a significant rearrangement of participant roles. The activity of making a meaningful gesture is here accomplished through the collaborative work of multiple actors, with one party, Chil, producing the gesture and someone else the talk that explicates it.

First, Chil's gesture occurs within a joint attentional frame (Tomasello this volume), a participation framework (Goodwin 1981, 2000a, 2002; Kendon 1990) constituted through the embodied mutual orientation of Chil and Chuck. Spatially Chil's pointing gesture is organized not only to indicate the object that is the target of the point (the bagel under his index finger) but also with reference to the gaze of its addressee. Chil's pointing finger is positioned right where Chuck is looking. This is not accidental. In other data (Goodwin 2003d) Chil can be seen actively working to line up a recipient's gaze before proceeding to produce a relevant gesture.

It is common to speak, sometimes loosely, about the embodied nature of human action, cognition, and experience. It is therefore important to note that Chil's body is contributing to the organization and intelligibility of the action in progress in a number of quite different ways (Goodwin 2000a, 2002). His pointing gesture is bringing something in the immediate environment to the attention of his addressee, and is about that object. Like individual utterances in conversation, the temporal duration of the gesture is quite short and linked to what is being said and done at the current moment. By way of contrast, his embodied orientation toward his addressee, and the multiparty participation framework it helps to construct, is not about the specifics of what is being talked about at the moment (here a particular bagel), but instead about the relevant orientation of the participants toward both each other and the events they are attending to in common. Moreover, it has a quite different temporal duration. Rather than changing moment by moment as the talk unfolds, such participation frameworks can frame extended stretches of focused interaction, multiple topics and so forth. Although both are displayed through the visible body, the gesture and the participation framework are structurally different kinds

of sign systems. The action in progress is not only multimodal but also constructed in part through the mutual elaboration of quite different kinds of sign systems (e.g., the participation framework makes visible the joint attentional frame that enables Chil's pointing gesture to function as a communicative action).

Second, as Chil points he also speaks. Although the syllables in line 1 lack semantic content, their prosody can be heard as displaying appreciation, indeed enthusiasm.<sup>2</sup> Chuck's "Oh you like it" (line 2) proposes, correctly (line 3), that the evaluation visible in Chil's prosody is what he wants to say about the bagel he is pointing at.

The use of pointing and embodied displays by persons suffering from aphasia to compensate for limited language structure is not unique to Chil. Wilkinson et al. (2003) describe how an aphasic man is able to communicate quite fluently shortly after a stroke by producing limited deictic terms in his talk while pointing toward a relevant enactment (of someone not able to walk) being done with his feet, and how such economy enables him to maintain crucial features of the organization of talk in interaction.

Chil's talk, specifically its prosody, and his gesture form a larger package of meaning-making practices within which each elaborates the other. Hearers can use the talk to figure out why the indicated object is being brought to their attention, what is being said about it, and simultaneously can use the pointing gesture to locate what the talk is appreciating. Looking at this from a slightly different perspective, Chil's prosody is making a comment about the entity topicalized through this gesture. Understanding Chil's gesture requires not only recognizing that it is embodying a communicative intention but also taking into account the other meaning-making practices Chil is using to contextualize it (Goodwin 2003b).

The mutual elaboration of talk and gesture is not unique to Chil or aphasia, but instead is central to the organization of action in fully fluent speakers as well. There is, however, one way in which Chil's gestures differ from those of normal speakers. A single individual typically produces gesture and the language structure that contextualizes it. Indeed the characteristic locus of these different but interrelated forms of expressions within a single individual has formed the basis for much important research, which explains the relationship between language and gesture as parallel outcomes of a unitary psychological process, as in McNeill's analysis (McNeill 1992) of two interrelated forms of expression that emerge from a common growth point. Chil cannot produce the rich language structure required for this process to work

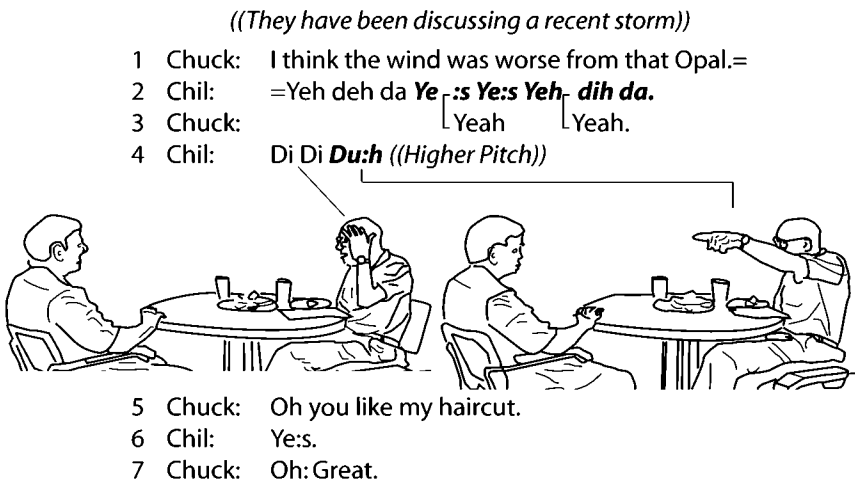
rapidly and transparently. Frequently what he is trying to say and do with a gesture that he can contextualize only through prosody and sequential placement is genuinely problematic. Rather than simply decoding an utterance, his hearers are faced with the task of using the signs he has produced as a point of departure for trying to figure out what he is saying. Instead of advancing the conversation further, moves following one of his gestures frequently take the form of a guess, a candidate understanding of what Chil is trying to say, as in line 2 of Fig. 3.4. Chil then rejects or accepts this guess, as he does with his nod in line 3. The net effect of this is that the gesture (line 1) and the talk that explicates it (line 2) are produced by separate individuals, something that cannot be described by focusing exclusively on psychological processes within the individual. Instead what is at issue is an interactive field that calibrates the psychological processes of separate individuals within a common course of action.

Chil's actions are constructed through a complex footing (Goffman 1981) in which he is the principal and author of the statement being made through the gesture while his interlocutor animates the talk required to explicate the gesture. Cast in terms of the finer distinctions offered by Kockelman (2004:145), Chil and his interlocutor animate different elements of the complex carrier (gesture + talk) used to construct Chil's action, although Chil alone is the principal who commits himself to what is being asserted. His genuine agency arises from the way in which he is implicated in different stages of this process and visibly responsible for the proposition voiced by his interlocutor. Consistent with the arguments of Hutchins (this volume), Chil's action, and the cognitive activities required to accomplish it, is distributed across multiple actors and sign media (see also Hutchins 1995 and Goodwin 2000a).

Not only must hearers attribute rich communicative intentions to Chil, but he in turn requires active, cognitively complex interlocutors to make sense out of those gestures, that process being organized through systematic sequences of interaction. Others produce the language structure Chil requires to make himself understood. Description of the forms of sociality through which his actions and meaning are constituted requires an analytic framework that takes into account not only the mental, cognitive, and psychological lives of individual actors but also the public organization of the sign systems, including language, they are using to build action together, and how these systems are calibrated, linked to each other, and articulated in real time through sequential organization.

Figure 3.5 provides an example of how Chil can use a complex two part pointing gesture to initiate a new topic. Chuck and Chil have been discussing a recent storm, with Chil in line 2 showing agreement and appreciation of what Chuck has just said through both “yes” and syllables that carry expressive prosody. In line 4, he produces a three-syllable unit with a marked rise in pitch. During the first two units Chil raises his open hand to top of his head and taps it. Then, during the longer third unit,<sup>3</sup> that also displays stronger appreciation, he moves his hand forward while simultaneously changing its shape so that it ends with his index finger pointing toward Chuck’s head. Chuck, in line 5, immediately and correctly (line 6) sees this gesture as an appreciative comment about Chuck’s haircut.

Chil’s action contains two quite separate, although linked pointing gestures, a first to his own head and hair (locating just what Chil’s hand is indicating is not automatic or transparent but a genuine, problematic task for an addressee), and then a point to Chuck’s head and the actual haircut that is being topicalized. Why does Chil produce two points? In the abstract it might seem far more economical to use only the second, especially because the ultimate target is Chuck’s hair, not Chil’s. However, if only the second point occurred, it could be quite difficult to locate just what Chil was indicating, and what kind of action he was trying to invoke. Given the distance between the pointing finger and



**Figure 3.5.** Topic initiation.

its target, it requires work to figure out whether Chil is pointing toward Chuck in general, to his hair, to something on his face, and so forth. Moreover, a general point toward someone could be implicated in many different actions, such as a request that the addressee do something. By first indicating a particular region of his own head and then transferring that place to his addressee (the continuity of the gestures, the way in which they are organized as parts of a single unfolding action is a crucial feature of their organization), Chil is able to create a context that strongly, and successfully, constrains how the final point will be seen and interpreted (see Enfield's discussion of "grounding for inferring" in this volume).

Through the way in which he organizes his actions here, Chil demonstrates that he has a reflexive awareness of both the interpretive tasks faced by an addressee trying to locate a relevant action in his gestures (something quite relevant to the analysis of theory of mind offered in other chapters in this volume), and of the limitations of the sign displays he must use to make himself understood. Like other speakers in conversation, the organization of Chil's action reveals subtle attention to issues of recipient design, and indeed as demonstrated by the chapters of Enfield, Levinson, Schegloff, and others in this volume this seems to be central to the interactive organization of human sociality. From a slightly different perspective, despite his severely impoverished ability to produce syntactic structures, here we see that in the realm of gesture Chil can combine different signs in an ordered pattern to make visible a particular kind of action.

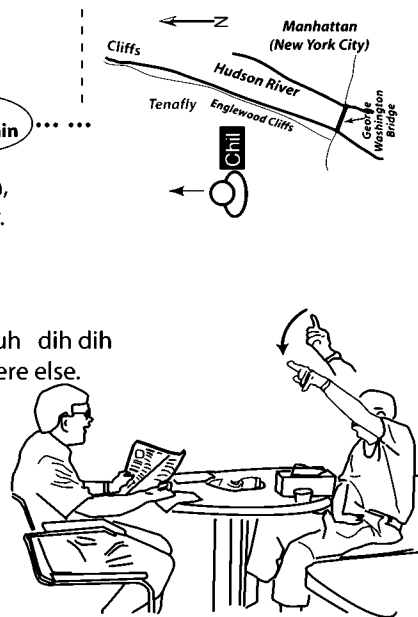
Prosody also plays a significant role in the organization of this action. As in the examples above, the evaluative stance displayed by Chil's voice plays a crucial role in specifying what is being said about the object being pointed at. However, additional work seems to be being done by the marked pitch rise. Chil's point occurs immediately after prior talk, but that talk should *not* be used as a point of departure for its interpretation. The sudden, very noticeable pitch change seems to create a boundary with what went to just before it, and thus to act as a misplacement marker (Schegloff and Sacks 1984). In brief, despite his almost complete lack of productive language, the organization of this complex pointing action provides some demonstration that Chil, nonetheless, retains the ability to build subtle actions with fine attention to the tasks his addressee must perform to make appropriate sense out of them.

The pointing gestures of Chil examined above are all "concrete" in McNeill's sense (McNeill 1992:18) in that they point toward objects

that can be seen by the participants in the immediate environment. However, Chil frequently points toward objects that cannot be seen. Figure 3.6 provides one example. Chuck suggests that they take a drive and Chil enthusiastically agrees. Chuck then suggests a place for the drive: “up along the river.” In line 13 Chil produces a string of syllables that through their prosody display that is proposing an alternative. As he does this he makes an emphatic pointing gesture, and from this gesture Chuck is able to correctly figure out where Chil wants to go instead: Bear Mountain, a park many miles up the river.

In common with all of the gestures examined above the vector established by Chil’s pointing arm correctly indicates the direction of the target. In this respect Chil’s pointing gestures are similar to the absolute pointing described by Levinson (1996) and Haviland (1996, 2003). The success of his points to locations that cannot be seen in the local space depends on Chil and his interlocutor inhabiting together an extended, meaningful geographic and social space with features and directions that they recognize in common, indeed quite literally what Clark (1996, this volume) refers to as common ground. Indeed, such practices for

- 3 Chuck: Maybe we can take a drive.  
 4 Yih know go up the uhm;  
 5 Chil: **Y-eah!**  
 6 Chuck: (°cliffs) **Bear Mountain** ...  
 7 Chil: **Yea-h!**  
 8 Chuck: It'd be nice ta go up uh,  
 9 yih know up along the river.  
 10 (0.2)  
 11 Chuck: en things.  
 12 (0.4)  
 13 Chil: Oh dih dih dah dah duh duh dih dih  
 14 Chuck: Oh you wanna go somewhere else.  
 15 up- up-  
 16 Aw Oh okay  
 17 up to uh **Bear Mountain?**  
 18 Chil: Yes.  
 19 (0.3)  
 20 Chuck: All that **far?**  
 21 (0.2)  
 22 Chil: Yeh



**Figure 3.6.** Pointing toward a distant alternative.



building intelligible action by embedding comparatively simple gestures within a cognitively rich space, are structurally similar to the way in which Chil amplifies his limited vocabulary by tying to the rich talk of others.

How is Chil able to indicate that his addressee should not try to find the object being indicated in the local space, but should instead extend the vector created by the point to some considerable distance (in this case many miles)? The embodied performance of Chil's gesture displays more than simply a particular direction. First, unlike, for example, the point toward Chuck's hair in Fig. 3.5, this gesture is made with the arm stretched upward, indeed well over Chuck's head (see Fig. 3.6). Second, the point is done several times with the hand vigorously thrusting forward toward the indicated direction. Chil inflects his directional gesture with additional components that both intercept a default local reading (e.g., by not dropping to relevant objects in the current space) and visibly mark an extended distance. The addition of embodied movements to the gesture is structurally similar to the way in which he adds consequential prosody to his syllables. What is being indicated is further constrained by the activity in progress (choosing a destination for a drive), the immediately prior talk, and the way in which Chil's speech is proposing an objection and alternative to what Chuck has just said. Chil's pointing gestures are capable of some complexity, and this can be used to extend their reference well beyond the local scene.

Despite the skill within which Chil used pointing to construct a range of quite diverse action, the gestures so far examined are in a number of important ways more limited than those of fully fluent speakers. For example, unlike some of the gesturers described by Haviland (2003) he has not constructed gestures in narrated, transposed, or laminated spaces in which his pointing takes as its frame of reference something other than the space of the current interaction. Thus, even when Chil indicated something many miles distant in Fig. 3.6, he built a point that constructed a vector from his current position to that location. In this respect, his pointing made extensive use of what Levinson (Levinson 2000) calls an absolute frame, but not either a relative frame of reference calculated in terms such as "left" and "right," or an intrinsic frame relying on properties of the objects being located, such as the "front" of a house. Such restrictions seem quite plausible in view of Chil's situation. A pointing arm can easily construct absolute vectors starting from a speaker's current position.

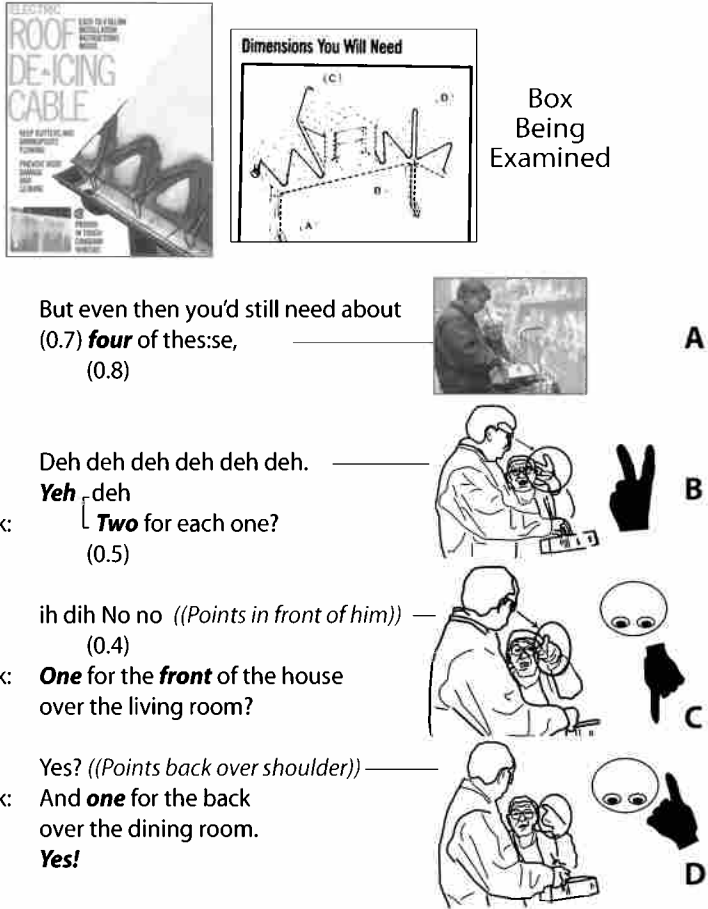
However, in appropriate circumstances Chil can point within a transposed space, and use both relative and intrinsic frames of reference

for the organization of such points. Figure 3.7 provides an example. After a series of unusually cold and snowy winters Chil's house has been leaking because of ice forming on the roof. He and Chuck have measured relevant dimensions of the house and gone to a local hardware and building supply store to buy electric heating cables to prevent the ice from forming. They find the cables but discover that the package shows that they should be installed in a series of triangles, which makes figuring out how much cable to buy quite difficult. As Fig. 3.7 begins Chuck is staring at his notes about dimensions and at the diagram on the box trying to figure out how many boxes of cable to buy (A). Chil, in line 8, image B, produces talk with a two-fingered hand gesture. Chuck turns to him and makes a guess about what "two" might refer to (line 10). In line 12, image C, Chil rejects Chuck's proposal while pointing in front of him. Chuck reads this gesture as Chil indicating one cable for the front of the house. Chil agrees and then in line 16 image C points behind him, which Chuck correctly reads as indicating the back of the house.

Unlike all of the examples above, here Chil's pointing is not organized within local or extended actual geographic space, but instead with reference to the intrinsic properties of a particular kind of object, the front and back of his house. Although the hardware store around him provides an extremely rich collection of objects that could be pointed at, his pointing activity is located instead within a transposed space, the house he is discussing with his interlocutor.

A number of resources and practices enable Chil and his addressee to rapidly locate the spatial organization of the nonpresent house as the appropriate ground for the interpretation of his pointing. First, the activity they are explicitly engaged in is buying cables for the roof of that house. This is why Chuck is staring so intently at the diagrams on the package that show a house roof using the cables, and musing aloud about what they mean for what they should buy. Thus, although the house is not physically present, relevant features of its spatial organization are what the participants are looking at in a generic image, and also what they are talking about. By virtue of such sequential placement the space of the house is the most salient and relevant frame for the organization of the pointing gestures that occur here.

Second, to draw attention to the intrinsic features of the house Chil makes use of the orientation of his own body. Thus, the point in front of his body is interpreted as a point toward the front of the house being talked about, and then a contrasting point behind him locates the back of the house. The intrinsic spatial organization of the house



**Figure 3.7.** A complex gesture sequence grounded in a nonpresent space.

is laminated on the intrinsic organization of Chil’s body. As in Fig. 3.5 where Chil pointed first to his own hair to topicalize Chuck’s haircut, Chil repetitively relies on the intrinsic properties of his own body as a resource of indicating something else, and indeed the use of such local metrics appears to be a quite general practice for rendering nonpresent events within talk in interaction (Goodwin 2003c).

Despite Chil’s inability to produce linguistic syntax, the sequence of gestures that occurs here do not simply occur one after another as isolated single actions, but instead have a systematic, complex organization. At B in Fig. 3.7 Chil shoves a hand with two fingers between Chuck and the box he is staring at. This gesture accomplishes two actions that are

crucial to the subsequent organization of the sequence. First, it secures Chuck's gaze, and creates a relevant joint attentional frame in which Chuck is looking at Chil's hand when the gestures that follow are made. Second, it can be seen as prefacing, and indeed projecting, the two-item list (front of the house and then the back) constructed through Chil's two subsequent points. The two gestures that follow are built as a systematic contrast, both spatially in the salient difference between points toward the front and back of his body, and sequentially with the first point providing a frame for the contrasting second. Chil's "yes!" in line 19, in which he enthusiastically accepts Chuck's gloss of what he has been saying through his gestures, marks the end of the projected two part list. Here both participants shift their gaze from each other back to the box and notes they have been working with. Chil's gestures here are recognized as a complex three part action, with the two-finger handshape at B projecting a two part list, the point at C providing the first item, and that at D a contrasting second, at which point both parties bring the activity to completion.

Chil is able to accomplish meaning and action through pointing precisely because his gesturing hand does not stand alone as a complete, self-contained sign or action, but is instead embedded within a constellation of other semiotic activities and meaning-making activities. These include among others (1) multiparty embodied participation frameworks that create shared attentional frames within which his gestures can be both seen and treated as relevant to the organization of current activities; (2) the way in which those interacting with Chil treat his hand movements as embodying a relevant communicative intention, and indeed work hard to figure out what he is trying to say and do by pointing; (3) existing structure in his environment, including a world full of meaningful objects, social organization, space, and a local context that is continuously being sustained, modified and updated by the unfolding activities, including talk, that he is engaged in with others; (4) the sequential organization of talk in interaction, and action more generally, which provides both a crucial contextual point of departure for the interpretation of his gestures and limited talk, and sequential structures after a gesture that allow specification and calibration of what he is saying with it as others propose possible readings that he can then accept, reject, or further specify.

In many respects these resources are quite unremarkable, and not in any way specific to aphasia. With a few significant exceptions, such as the way in which Chil relies on others to produce the words he needs to explicate his gestures, these same practices are central to the

organization of talk and action by fully fluent speakers as well. However, appreciation of their importance requires an analytic framework that takes into account the social and multimodal organization of human language, cognition and action, and indeed this has recently become the focus of research by a number of scholars in different parts of the world (Goodwin 2003a; Wilkinson 1999). By way of contrast the vast majority of research on aphasia has taken processes inside the brain of the speaker as the primary object of interest (e.g., attempts to correlate damage to a particular area of the brain with a specific language deficit). To study this rigorously the person suffering from aphasia is typically examined in a laboratory setting where almost all of the resources that Chil used to accomplish meaning and action in concert with others—the talk of his interlocutors, meaningful objects, the material, geographic and social structure of his home environment, and so forth—have been systematically removed. In such a setting Chil would be rendered a far more impoverished actor. This is not to deny the great and enduring importance of such research, and the way in which its methods artfully make a range of crucial phenomena accessible to study. However it does demonstrate the importance of investigating human language as not only a complex symbolic calculus but as itself a primordial form of human sociality. Only within such a framework does Chil's genuine competence as a speaker, his ability to make relevant, consequential moves in conversation, emerge.

## **Conclusion**

Sitting at the center of much of what is most distinctive about human sociality, cognition, and language use is the utterance, that is the action through which one party says something to someone else. No other animal is able to construct anything like human utterances. The utterance constitutes the prototypical environment within which language emerges in the natural world. It is a central locus for human symbolic and cognitive activity. Moreover, as amply demonstrated by the findings of conversation analysis (Sacks et al. 1974; Schegloff 1968; Schegloff et al. 1977), talk in interaction constitutes a central form of human social organization, a primordial site for human sociality. Indeed, documenting the thoroughly pervasive practices through which human beings build consequential action through interaction with each other would seem to be a first task for any ethologist attempting to provide a general description of human social behavior.

At first glance an utterance might be characterized as a strip of talk produced by a speaker, that is as the outcome of linguistic activity by a single individual. Analysis could, and indeed frequently does, focus exclusively on structure in the talk provided by the utterance, and on linguistic, psychological, and neurological processes within the mind and brain of a speaker that might account for the production of complex strips of talk. It might seem possible for there to be a comfortable division of labor with linguistics and psychology describing the mechanisms required to produce the language structure found within an utterance, while students of social life take over at its boundaries as multiple parties exchange talk with each other.

In opposition to such a view, I have attempted in this chapter to demonstrate that individual utterances are intrinsically multiparty, requiring at a minimum both a hearer and a speaker, and are built through coordinated social action from the outset. Moreover, to describe the social coordination that builds an utterance it is necessary to encompass analytically not only the structure of talk but also the visible embodied displays of hearers, and frequently structure in the surround. Utterances are multiparty, multimodal activities constructed through the mutual elaboration of different kinds of signs.

The social, cognitive, and multimodal organization of utterances has been investigated here by examining two quite different, but mutually relevant, processes. First, "performance errors" have been argued by linguists to demonstrate that actual speech provides only degenerate data for the analysis of language structure (although there is very important analysis in linguistics of how such errors might shed light on mental processes implicated in the production of language, e.g., Fromkin 1971). Here, however, restarts were found to be systematically used by speakers to secure the gaze and orientation of hearers. Rather than providing evidence for a loose acceptance of flawed, fragmentary speech in actual conversation, restarts allow a speaker to begin anew a sentence when its hearer is at last orienting to it. They demonstrate speakers' precise concern for producing coherent sentences, not into the air, but instead when their addressees are actually attending to the speaker. Moreover, the processes of repair used to do this typically involve recycling of a structure already produced with some significant modification. Repairs provide within ongoing talk itself an endogenous analysis of how the stream of speech can be divided into relevant units, and the kinds of operations that are possible on those units. Such performance errors are not only a locus for the ongoing achievement of mutual orientation between speaker and hearer, that is, for constituting

through ongoing practice the multiparty participation framework that sits at the center of human language, but also a crucial resource for the task posed for someone who does not yet know a language of uncovering its structure.

Second, the pointing activities of Chil, a man with very severe aphasia, were examined. It was found that despite his almost complete lack of productive language (his vocabulary consisted of only three words), Chil was able to construct locally relevant meaningful utterances, and indeed to function as a powerful actor in conversation. Again the multiparty, multimodal, organization of utterances constructed through multiple sign systems was central to this process.

A range of diverse factors contributed to the organization of Chil's pointing. First, his points frequently, although not always (see Fig. 3.5), emerged within a local sequential context and larger activity. These provided a detailed interpretive point of departure for what he might be indicating through a point. Second, his points typically invoked meaningful structure, an historically shaped common ground, that had been sedimented into the social and physical world that he inhabited with relevant others. He builds action within a world that has already been shaped by the semiotic activities of others. Their actions provide him with both a prior sequential context, and a surround filled with meaningful structure. Third, through sequential practices following the pointing gesture, Chil and his interlocutors could calibrate both what he was indicating through the point, and more crucially the action he was attempting to accomplish by pointing. Chil got others to produce the words he needed, with the effect that his utterances (such as a proposal to visit Bear Mountain in Fig. 3.6) were constructed through the collaborative activities of several different participants, within a process that included embodied participation frameworks, and meaningful structure in the environment. The multiparty, multimodal organization of utterances, and the way in which action is sequentially organized within ongoing interaction, provide the crucial environments that enable Chil to make rich meaning, and act in concert with others despite his catastrophic loss of productive language.

Such a perspective on the practices through which utterances and actions are built might be relevant to investigation of the roots of human sociality in a number of different ways. First, an initial, but most important stage in any analysis occurs when the boundaries of the phenomenon to be studied are defined. If crucial components of the process being examined are rendered invisible and inaccessible to study, phenomena that might be seen as rather straightforward within

a more inclusive view become deeply mysterious. Thus, the decision to exclude performance errors and treat only well-formed sentences as appropriate data for the study of how grammatical structure might be recognized leads Pinker (1994:267) and others to posit a *deus ex machina* outside the system itself, an innate module, to explain how someone using language might be able to divide the stream of speech into relevant units. By way of contrast, consider what happens when the analytic frame is expanded to include not only well-formed sentences and abstract speakers but also repair and embodied hearers. The decomposition of the stream of speech into relevant subunits, the different ways in which these units can and cannot be arranged, and the task of distinguishing grammatical from ungrammatical structures, are now made visible through the endogenous practices participants use to build action together through talk. Such autopoietic organization in which the resources necessary to produce, sustain, and modify a system are continuously reconstituted through the workings of the system itself, is precisely what would be expected of any natural system built through evolutionary processes (Favareau 2004). A framework that lodges the production of strips of talk within the activities of multiple, embodied actors building action together, frequently in relevant, consequential environments, is also most relevant to the study of human sociality in that it links the details of language use, with all of its symbolic and cognitive import, to not only the psychology and the mental life of the speaker, but also to elementary forms of human social organization.

Second, attempting to specify an analytic frame that does not exclude crucial components of the phenomenon being examined might enable us to ask more sensible questions. For example, in light of what has been seen in this chapter, asking how language as an isolated self-contained system might have evolved does not seem to be a reasonable question. Clearly what must have evolved is this entire ecology of embodied interactive practices being used by a species to build in concert with each other the actions that make up their lifeworld (i.e., not only linguistic structures in the stream of speech but also embodied participation frameworks through which participants publicly display to each other frames of mutual attention and relevance within which those units can function as meaningful events). Sign systems do not evolve in isolation as self-sufficient wholes, but rather through their use by agents to accomplish relevant actions.

From this perspective it is interesting to examine the interactive matrix that makes it possible for Chil to construct relevant meaning and action. Consider Fig. 3.4 in which Chil accompanies a point toward a bagel



with an appreciative prosodic contour. First, these actions are lodged within a participation framework in which he and his interlocutor are visibly attending to each other and thus are able to take what each other is doing into account. Second, his addressee treats Chil's pointing as a communicative act. Tomasello (this volume) argues that attributing such communicative intentions to a pointing gesture is something that distinguishes us from highly intelligent apes. Third, within this framework Chil produces talk, although it is semantically empty and encodes no propositional content whatsoever. If one had only the stream of speech it would be impossible to figure out what was being talked about. However, by virtue of the other co-occurring sign systems within which Chil's speech is embedded it is possible, indeed easy, for his interlocutor to see the talk as in some way commenting on what is being pointed at, and in Fig. 3.4 to locate a possible positive assessment from Chil's appreciative prosody. Chil is able to locate a topic and make a comment about it without language. Note that this is *not* done entirely through gesture alone but, rather, through the interdigitation of a number of quite different systems (prosody, embodied participation frameworks, pointing, sequential organization, etc.) that mutually elaborate each other within an embodied shared attentional frame that constitutes a primordial site for human sociality. On many, many occasions Chil's interlocutors have difficulty figuring out what he wants to say. However, lack of understanding can be remedied through subsequent sequences of action in which interlocutors propose candidate readings that Chil then accepts, rejects or modifies.

Chil's situation provides a tragic natural experiment that allows us to probe taken-for-granted assumptions about the generic organization of talk. Although Chil's case appears exceptional the practices that make it possible for him to build relevant meaning and action in concert with others are central to the organization of all talk in interaction.

It is interesting to speculate how linguistic structure might emerge within such a framework. Chil's big problem as a semiotic actor is that he is imprisoned in a web of intrinsically meaningful signs; his gestures and prosody are indexical and iconic and thus capable of being read in multiple ways. After almost every one of his utterances his interlocutors have to check if they have correctly grasped what he wants to say. Consider what would happen if such meaningful, analogic displays were replaced with meaningless signs (e.g., something like the precursors of phonetic units). It would then be necessary to operate with conventionalized shared understandings about how to interpret these units. Structures already in place provide the resources necessary

to interactively organize arbitrary sounds as public, meaningful signs and avoid the calibration sequence found after every new sign by Chil. These resources include relevant interpretive frames created by the local organization of collaborative action, and endogenous repair processes that provide practices for working out misunderstandings and calibrating meaning, Bakhtin (1999:124) suggestively alluded to a “first speaker, the one who disturbs the eternal silence of the universe.” However, were linguistic structure to emerge within existing frameworks of shared intersubjectivity and action it would already be positioned within a host of other meaning-making practices and tied to the ongoing organization of collaborative action. It would not emerge from a prior silence but, rather, within a world, and a framework for collaborative action that was already rich in relevant meaning and structure. Rather than depending on a single dramatic change in neurology, such a process could be incremental and would from the outset not be lodged within a single individual but, rather, be implicated advantageously in the consequential social life of the group, setting the stage for progressive elaboration of both the system and the neurological machinery required to support it.

## Notes

1. I am deeply indebted to Candy Goodwin and John Haviland for insightful discussions about the phenomena described in this chapter, and to Nick Enfield, Steve Levinson, and two anonymous reviewers for very helpful comments on an earlier draft.

2. I recognize only too well that I am unable to adequately re-represent this prosody on the printed page, and that unfortunately the reader will have to accept on faith my gloss for what I hear on the tape and what Chuck heard while he was listening. However, because the tape exists it is possible for others to listen themselves and possibly challenge my gloss, and certainly for phoneticians to more precisely describe what in the stream of speech leads to such hearing. However, that is beyond my ability and the scope of this chapter.

3. See Jefferson (1979) for three-part units, with two sames followed by a different, in laughter.

## References

- Bakhtin, M. M. 1999. The problem of speech genres. In *The Discourse Reader*, edited by A. Jaworski and N. Coupland, 121–132. London: Routledge.
- Chomsky, N. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Clark, H. H. 1996. *Using language*. Cambridge: Cambridge University Press.
- Clark, H. H., and J. E. Fox Tree. 2002. Using *uh* and *um* in spontaneous speaking. *Cognition* 84:73–111.
- Favareau, D. 2004. The biosemiotic turn: Towards a natural history of signs. Ph.D. dissertation, Department of Applied Linguistics, University of California, Los Angeles.
- Fromkin, V. 1971. The non-anomalous nature of anomalous utterances. *Language* 47:27–52.
- Goffman, E. 1981. Footing. In *Forms of talk*, edited by E. Goffman, 124–159. Philadelphia: University of Pennsylvania Press.
- Goodwin, C. 1981. *Conversational organization: Interaction between speakers and hearers*. New York: Academic Press.
- . 1987. Forgetfulness as an interactive resource. *Social Psychology Quarterly* 50(2):115–130.
- . 1995. Co-constructing meaning in conversations with an aphasic man. *Research on Language and Social Interaction* 28(3):233–260.
- . 2000a. Action and embodiment within situated human interaction. *Journal of Pragmatics* 32:1489–1522.
- . 2000b. Practices of seeing, visual analysis: An ethnomethodological approach. In *Handbook of visual analysis*, edited by T. van Leeuwen and C. Jewitt, 157–182. London: Sage.
- . 2002. Time in action. *Current Anthropology* 43(4–5):19–35.
- , (ed.). 2003a. *Conversation and brain damage*. Oxford: Oxford University Press.
- . 2003b. Conversational frameworks for the accomplishment of meaning in aphasia. In *Conversation and brain damage*, edited by C. Goodwin, 90–116. Oxford: Oxford University Press.
- . 2003c. Embedded context. *Research on Language and Social Interaction* 36(4):323–350.
- . 2003d. Pointing as situated practice. In *Pointing: Where language, culture, and cognition meet*, edited by S. Kita, 217–242. Hillsdale, NJ: Erlbaum.
- . 2004. A competent speaker who can't speak: The social life of aphasia. *Journal of Linguistic Anthropology* 14(2):151–170.

- Goodwin, C., M. H. Goodwin, and D. Olsher. 2002. Producing sense with nonsense syllables: Turn and sequence in the conversations of a man with severe aphasia. In *The language of turn and sequence*, edited by C. Ford, B. Fox, and S. Thompson, 56–80. Oxford: Oxford University Press.
- Haviland, J. B. 1996. Projections, transpositions, and relativity. In *Rethinking Linguistic Relativity*, edited by J. J. Gumperz and S. C. Levinson, 271–323. Cambridge: Cambridge University Press.
- . 2003. How to point in Zinacantán. In *Pointing: Where language, culture, and cognition meet*, edited by S. Kita, 139–170. Mahwah, NJ: Erlbaum.
- Hutchins, E. 1995. *Cognition in the wild*. Cambridge, MA: MIT Press.
- Jefferson, G. 1979. A technique for inviting laughter and its subsequent acceptance/declination. In *Everyday language: Studies in ethnomethodology*, edited by G. Psathas, 79–96. New York: Irvington Publishers.
- Kendon, A. 1990. *Conducting interaction: Patterns of behavior in focused encounters*. Cambridge: Cambridge University Press.
- Kockelman, P. 2004. Stance and subjectivity. *Journal of Linguistic Anthropology* 14(2):127–150.
- Levinson, S. C. 1996. Language and Space. *Annual Review of Anthropology* 25:353–382.
- . 2000. Frames of spatial reference and their acquisition in Tenejapan Tzeltal. In *Culture, thought, and development*, edited by L. Nucci, G. Saxe and E. Turiel, 167–197. Hillsdale NJ: Erlbaum.
- McNeill, D. 1992. *Hand and mind: What gestures reveal about thought*. Chicago: University of Chicago Press.
- Pinker, S. 1994. *The Language instinct: How the mind creates language*. New York: HarperCollins.
- Sacks, H., E. A. Schegloff, and G. Jefferson. 1974. A simplest systematics for the organization of turn-taking for conversation. *Language* 50:696–735.
- Schegloff, E. A. 1968. Sequencing in conversational openings. *American Anthropologist* 70(6):1075–1095.
- . 1979. The relevance of repair for syntax-for-conversation. In *Syntax and semantics 12: Discourse and syntax*, edited by T. Givón, 261–288. New York: Academic Press.
- . 1987. Recycled turn beginnings: A precise repair mechanism in conversation's turn-taking organisation. In *Talk and social organisation*, edited by G. Button and J. R. E. Lee, 70–85. Clevedon: Multilingual Matters.

- Schegloff, E., and H. Sacks. 1984. Opening up closings. In *Language in use: Readings in sociolinguistics*, edited by J. Baugh and J. Sherzer, 263–274. Englewood Cliffs, NJ: Prentice-Hall.
- Schegloff, E. A., G. Jefferson, and H. Sacks. 1977. The preference for self-correction in the organization of repair in conversation. *Language* 53:361–382.
- Stivers, T. 2004. “No no no” and other types of multiple sayings in social interaction. *Human Communication Research* 30(2):260–293.
- Tomasello, M. 2003. *Constructing a language: A usage-based theory of language acquisition*. Cambridge, MA: Harvard University Press.
- Wilkinson, R. 1999. Special issue on Conversation analysis and aphasia. *Aphasiology* 13(4–5):327–343.
- Wilkinson, R., S. Beeke, and J. Maxim. 2003. Adapting to conversation: On the use of linguistic resources by speakers with fluent aphasia in the construction of turns at talk. In *Conversation and brain damage*, edited by C. Goodwin, 59–89. Oxford: Oxford University Press.
- Wittgenstein, L. 1958. *Philosophical Investigations*, edited by G. E. M. Anscombe and R. Rhees; translated by G. E. M. Anscombe. 2nd edition. Oxford: Blackwell.