CHARLES GOODWIN

Introduction

The chapters in this volume focus on the analysis of how the talk of parties suffering from aphasia, and other language impairments resulting from trauma to the brain, is organized within talk-in-interaction. This volume provides a new, pragmatic, and interactive perspective for the analysis of aphasia and other neurological deficits (see also the special issue of *Aphasiology*, *13*, nos. 4/5 [1999] edited by Ray Wilkinson and Lesser and Milroy 1993). Most research into the effects of brain damage on linguistic abilities has focused primarily on processes inside the individual patient, for example, what patterns of language breakdown can tell us about the cognitive architectures and brain structures implicated in normal language processing. Methodologically, patients' abilities have typically been assessed in isolation from relevant interactive and pragmatic contexts. However, damage to the brain has equally important consequences for the organization of talk-in-interaction, the primordial site where language emerges as action in the lived social world, and the place where the results of brain damage become both visible and consequential for people's lives. Moreover, it has long been recognized that traditional assessment measurements of language deficit do not correlate well with actual ability to engage successfully in real-world interaction. On the one hand, people with fairly intact syntactic and semantic ability have difficulty in engaging in social interaction outside the laboratory. On the other hand, parties with very severe language impairments are nonetheless able to say quite complicated things by successfully using the social and cognitive resources provided by the sequential organization of conversation to tie their talk to the talk of their interlocutors, as this volume shows. A focus on how damage to the brain shapes discourse sheds new light on both the practices participants use to ac-

complish meaning and action through temporally unfolding sequences of interaction and the diverse range of cognitive activities implicated in the production and understanding of language.

Theoretical point of departure: Conversation Analysis

In recent years a new and important perspective for the analysis of language impairment within discourse has emerged in the work of scholars in a number of different countries, many of whom are contributors to this volume. A central resource for much of this work can be found in the theories, methods, and theoretical perspectives of the field that has come to be known as Conversation Analysis (CA). Conversation Analysis emerged within sociology in the late 1960s through intense collaboration between Harvey Sacks and his colleagues Emanuel Schegloff and Gail Jefferson. While addressing sociology's long neglect of how talk was central to the constitution of social action and the organization of human interaction, conversation analysts developed a unique theoretical framework for the analysis of talk. Rather than restricting analysis to the isolated sentence and its constituents, they took as their point of departure *sequential organization*, the way in which individual utterances are understood by being embedded within larger sequences of talk and other action.[1] Such an analytic framework provides powerful resources for the analysis of talk in which the language abilities of one or more participants are impaired. Thus, I have analyzed (1995, chap. 4) how a man able to speak only three words (*Yes*, *No*, and *And*) is nonetheless able to say quite complicated things by embedding his talk within sequences of action co-constructed with his interlocutors. By way of contrast, if analysis were restricted to the structure of his utterances in isolation, most of his competence to understand and use language to build meaningful action in concert with others would be hidden. Similarly Wilkinson, Beeke, and Maxim (chap. 3) demonstrate how shortly after a stroke a man with limited vocabulary was able to carry on coherent conversation by using deictic expressions. By replacing words he has difficulty producing with terms that point to phenomena in the local context, he is able to incorporate into the structure of his utterance gestures he makes, which get their sense from the unfolding sequential structure of the conversation in progress.

Repair

During the past thirty years, the central analytic frameworks of conversation analysis have proved remarkably robust and productive and have led to the detailed study of a host of phenomena that can shed new light on the structure of the talk of impaired speakers. One major stream of research within Conversation Analysis has focused on the organization of *repair* (Goodwin, 1981; Goodwin & Goodwin, 1986;

Jefferson, 1987; Schegloff, 1987; Schegloff, Jefferson, & Sacks, 1977). Rather than studying repair mechanisms, including what others have sometimes treated as "speech errors," from a purely psychological perspective, or as instances of performance failures, conversation analysts have stressed the interactive organization of repair and its central importance as the self-righting mechanism of conversation, that is, the system that gives parties the ability to themselves recover from the systematic troubles that emerge within the social activity of sustaining a state of talk. Participants have systematic methods for displaying entry into repair by both a current speaker who can note upcoming trouble with speech perturbations such as cut-offs and sound stretches, and by one of his or her interlocutors who can initiate repair on what has been said in a next turn (Schegloff, 1992). Moreover, through structures such as the Error Correction Format (Jefferson, 1974), speakers are able to show that consequential lexical alternatives are being weighed. This body of research has provided detailed explication of the interactive organization of the repair process as a local, party-administered social activity, one that has its major home within the ordinary conversations of non-impaired speakers (Schegloff, Jefferson, & Sacks, 1977).

The approach to the study of repair developed within CA constitutes one major analytic point of departure for the investigation of discourse in which the language abilities of one or more participants are impaired. First, the way in which impairment becomes visible, salient, and consequential for the parties themselves is through the production of phenomena associated with repair. Indeed, visible problems in producing the appropriate word at the point where it is due within a conversation is perhaps the most pervasive feature of all forms of language impairment. Word searches have received extensive study within CA (Goodwin & Goodwin, 1986; Sacks, 1995/1992). Such research provides a comparative framework for the investigation of problems of lexical retrieval in the talk of speakers who have suffered brain damage. More crucially, CA has demonstrated how the process of finding a word is not restricted to a single party, but instead constitutes a systematic interactive activity in which interlocutors are very active co-participants (Goodwin & Goodwin, 1986). Through this process, participants are able to build meaning and action together that may be beyond the capacity of an isolated actor[2] (cf. Vygotksy's situating study of the child's intelligence within a social milieu). Aphasic speakers who are unable to produce a relevant lexical item themselves display great ingenuity in using other semiotic resources, including gesture, writing, and graphic representations (Klippi, 1996; chap. 5), to guide their addressees toward recovery of what they want to say. Rather than simply manifesting trouble in language production, repair constitutes a major organizational framework for the collaborative constitution of meaning and action.

Embodiment, participation, and activity

Within this process, visible displays of the body (gesture, facial expressions, and head positions that can alternatively display that the speaker is in the midst of a

search and does not want to be interrupted, even though he or she is not producing talk, versus a request that others actively help in the search, etc.) play a most important role. Thus, CA provides a theoretical framework in which the visible displays of the body are thoroughly integrated into language practice, something that is especially important for the analysis of the language ability of parties whose speech production is impaired.

Also, CA has devoted considerable analysis to the interactive organization of *participation frameworks* (C. Goodwin, 1981, 1984; M. H. Goodwin, 1997; Goodwin & Goodwin, 1992) and situated *activity systems* (M. H. Goodwin, 1990). The collaborative activity of evaluating or assessing something incorporates into a single course of action a diverse collection of heterogeneous phenomena including the hearer's use of syntax to project what a speaker is about to say next, the use of intonation to display stance, the use of overlap to demonstrate rather than claim understanding, language choices that make visible congruent evaluations of what is being assessed while simultaneously displaying that each party has different access to and experience of the assessable, the interactive organization of affect, and so on (Goodwin & Goodwin, 1987). Through changing participation displays, including concurrent assessments and appropriate use of the visible body, hearers not only co-construct an assessment being given voice by another speaker but, more important, display through their embodied actions their detailed understanding of the events in progress (Goodwin & Goodwin, 2000). Such processes provide important resources for analysis of the language abilities of participants whose speech is impaired. For example, someone not able to produce multi-word utterances on his own might nonetheless display detailed understanding of the talk in progress, including aspects of its emerging syntax, by performing relevant participation displays at appropriate places (Goodwin & Goodwin, 2000). Once again, CA provides an analytic framework capable of studying the sometimes limited linguistic displays of a speaker suffering from brain trauma as integral components of larger, socially organized language practices. The way in which affect and intonation have a prominent role in the organization of participation also creates the possibility for comparative analysis of the effects of different kinds of brain trauma within interaction.

Pragmatic competence and social life

More generally, CA offers unparalleled resources for the analysis of pragmatic competence. Levinson (1983: 284) in his classic survey of the field of pragmatics notes that "It is not hard to see why one should look to conversation for insight into pragmatic phenomena, for conversation is clearly the prototypical kind of language usage, the form in which we are all first exposed to language—the matrix for language acquisition." The way in which CA sheds light on pragmatic abilities is one of the central themes of Schegloff's chapter in this volume.

From a slightly different perspective, conversation is the place where language impairment emerges as a visible phenomenon in the natural world. Moreover, because of such placement at the interstices of human life and action, it has very real consequences for not only the afflicted party but also for those who interact with him or her, and most especially spouses and others who share a life with that person. Within talk-in-interaction, language impairment not only is rendered visible and consequential but also acquires a profound moral dimension, as all participants are forced to come to terms with how they are to treat someone manifesting troubles in the most central domain of human competence, the ability to use language to engage in relevant social action.

Methodology

Methodologically, CA has developed procedures for recording talk-in-interaction within the consequential settings where people actually live their lives (the home, meals, medical encounters, the workplace, relevant social settings from children's peer groups to scientific laboratories, etc.) and rigorous analytical methods for describing the procedures participants use to construct meaningful talk and action in such environments. Central to such methodology is recording and analysis of multiple, differentiated participants who are relevant to the organization of a strip of talk (e.g., not just the party speaking, for example, an aphasic patient, but also his or her interlocutors), as well as relevant features of the setting where talk occurs. Such resources are especially important for the analysis of a range of phenomena implicated in the organization of aphasia from repair to the co-construction of meaning. Recording in the homes of parties suffering from brain trauma sheds new light on the importance of particular kinds of co-participants such as spouses. For example, a person with limited vocabulary can nonetheless tell an intricate narrative by getting his or her spouse to recall events from the past and then commenting on the telling. When the spouse is removed, an important part of that person's memory as something that can be mobilized socially within talk also disappears. Similarly, some participants who have difficulties saying certain things use resources in the setting where talk occurs (maps, objects, points in relevant directions, etc.; see Klippi, chap. 5) to make themselves understood.

A number of innovative scholars, Audrey Holland and her colleagues in particular, have long recognized the importance of situating language impairment within a conversational context (e.g., Holland, 1977, 1982, 1991). Accumulating research within CA provides important new resources for the analysis of how brain impairment is manifested within discourse. Such work sheds light simultaneously on basic pragmatic processes implicated in the general organization of talk-in-interaction and on the distinctive patterns of discourse that arise when a participant suffers from brain trauma.

The chapters in this book

A number of common themes run through the essays in this collection. First, a particular geography of cognition is invoked. Instead of focusing just on the language abilities of a single individual, the person whose brain has been damaged, all of the chapters take as their basic unit of analysis sequences of talk constructed through the collaborative actions of multiple parties. Such frameworks for the organization of talk-in-interaction provide parties whose language abilities have been impaired in some fashion a greatly expanded set of resources for accomplishing meaning and action. First, as demonstrated in most of the chapters, they can use the words of others to say what they cannot. Thus, though Chil in chapter 4 can speak only three words, he can say quite complicated things by getting others to produce the words he needs. More generally, through processes of repair (see chapters 6, 7, 8, and 3), the interlocutors of a person with language impairment can provide candidate versions of what their partner appears to be trying to say. Rather than being unique to talk that includes a person with language impairment, these processes build upon an organization of repair that is generally used in talk-in-interaction. However, as noted by Anward, Perkins, Laakso, and Oelschlaeger and Damico, repair becomes much more elaborated when one participant suffers from language impairment. Indeed, Schegloff has suggested that because of such repair's pervasiveness and centrality in such conversations it might not be appropriate to think of it as equivalent to the more limited repair that occurs in conversations without impaired participants. It nonetheless draws upon the same basic set of practices for accomplishing meaning through human interaction.

In addition to its cognitive and meaning-making practices, such repair has important consequences for how the parties are constituting each other as skilled or incompetent social actors. This issue is given particular attention by Oelschlaeger and Damico and is present in many other chapters as well. The ability to produce relevant speech can be seen as a major failing in human competence. By producing candidate words in a way that treats the party with a language impairment as nonetheless the ultimate source and judge of what is being said (for example, with rising intonation as a guess that can be rejected as well as accepted), others can continue to treat that party as a competent and consequential social actor. The way in which persons with language impairment can use the talk of others to make themselves understood also has important consequences for therapy. For example, conducting therapy in an environment that systematically removes such resources can lead to a very biased picture of someone's actual abilities to participate relevantly in interaction.

All of this depends upon the way in which the talk of separate parties is constituted as meaningful and relevant through organization into larger sequences of action. Thus, what B says is heard as a candidate guess of what A might be trying to say by virtue of its placement right after A's efforts. Spoken elsewhere, these exact same words could have a very different meaning and relevance. Such sequential organiza-

tion seems to provide a master matrix for the constitution of meaning and action within interaction. Moreover, it can encompass far more than talk. This can be very consequential for the ability of persons with language impairment to make themselves understood. In face-to-face interaction, participants have not only their voices but also their bodies. Chapter 2 focuses on someone who has had a commisurotomy, an operation that severs the *corpus callosum*, the pathway between the two hemispheres of the brain. He is being tested for pragmatic abilities. Schegloff demonstrates that, independent of the test itself, this man demonstrates a crucial range of pragmatic competence through the finely tuned way in which he performs relevant action with his body at precisely the place such action is called for by the emerging sequences of action in which he is embedded. Formal analysis of interactive practices, developed on a range of materials drawn from vernacular conversation, is able to shed important light on basic abilities of parties with brain damage.

Gesture provides another class of embodied practices that can provide crucial resources for making meaning. It is important to recognize that gesture rarely stands alone but instead becomes meaningful by elaborating, and being elaborated by, other meaning-making practices that it is tied to through sequential organization. Thus, Wilkinson, Beeke, and Maxim (chap. 3) demonstrate how even a very short time after a stroke a man is able to produce fluent conversation by 1) using proterms (e.g., deictic expressions such as "do that") in his talk to 2) instruct his hearer to take into account his hand, which is pointing toward 3) an enactment (of someone walking) being made by his legs. Rather than existing entirely in the stream of speech, this man's utterance is built as a multimodal semiotic package that incorporates both structure in the stream of speech and two quite different kinds of signs displayed by the body (the deictic point with the hand and the gestural enactment). All of these are embedded within a larger embodied participation framework constituted through the mutual orientation of this man and his interlocutor, who is thus visibly positioned to see what is being displayed through gesture. Moreover, all of this work is in the service of a finely tuned interactive fluency as this man, despite his problems in producing certain kinds of language, moves his utterances and turns smoothly toward completion with minimal delay.

In addition to talk and gesture, this interactive matrix can encompass meaningful structure in the environment. Ramsberger and Menn describe how a speaker who recognizes her problems in producing names organizes a narrative by first getting a piece of paper and establishing in the space it provides a place for each principal character. She then points to these places when identifying characters. Such fields of meaning-making resources can also include objects of various types. This is most vividly demonstrated in Klippi's chapter. The situation she is examining is a meeting in which a therapist and people with different kinds of aphasia come together. One of the men wants to tell the others about his experiences as a prisoner, in Russia during World War II. To tell the others where he was kept as a prisoner, he draws upon a quite extraordinary range of different kinds of resources. Thus, he explicitly

uses abilities that others have that he lacks. While he can write, he cannot read. He therefore has another patient read what he has written to see if it makes sense. He also draws upon semiotic structure carried by objects in the environment. The therapist has a small notebook that contains a map. However, using this map successfully requires further creative improvisation. The town where he was kept cannot be found. He therefore takes a pencil, points it at Moscow, and then holds it an angle. One of his co-participants is able to figure out that he is indicating a compass direction from Moscow.

The way in which participants creatively use so many different kinds of resources to work out what they are saying to each other (talk, posture, gesture, maps, pencils to be seen as virtual compass needles, etc.) might seem to pose enormous difficulties for an analyst, who is now faced with a potentially unbounded set of phenomena that must be taken into account. It is important therefore to recognize that what makes a particular, clearly defined subset of phenomena in a setting relevant to the participants, and to the analyst, is the emerging sequential organization of their action. The map and pencil in Klippi's analysis become relevant only when the participants turn to them to try and solve problems that arise in the processes of meaning-making they are engaged in together. The general practices used to organize the production of talk and action in situated interaction make only some features of the environment relevant to the participants and thus to the analyst. It is not necessary to exhaustively inventory everything in a setting, but instead to describe the practices participants use to make just those phenomena that are consequential to their action relevant and salient.

Though different chapters focus on different kinds of phenomena (particular structures in talk, collaborative repair, gesture, posture, tools and artifacts, etc.), what emerges from them as a collection is a demonstration of how a person suffering from language impairment nonetheless continues to use as a point of departure for the construction of relevant meaning and action an environment that contains a rich constellation of powerful semiotic resources. I (2000) describe how fully competent speakers in mundane interaction (for example, girls playing hopscotch) build action by assembling a range of quite different kinds of sign systems in different media (linguistic structure in the stream of speech, prosody, posture, gesture, participation frameworks, sequential organization, the built environment, etc.) to build multi-modal contextual configurations. Rather than being coded entirely in a single semiotic system, meaning and action are constituted through the mutual elaboration of these different kinds of sign systems (e.g., gesture gets its sense from the talk it is tied to, while simultaneously elaborating what is being said in the talk).

Human language is both distinctive and crucial in this process. However, it exists within a larger ecology of sign systems lodged within the primordial site for human action: multiple participants using talk to build action while attending to the distinctive properties of a relevant setting (Goodwin, in press). One of the things that can happen when language impairment occurs is a reorganization of this ecology. For

example, talk and the gesture that accompanies it are typically produced by a single individual, the speaker.[3] However, the gestures that Chil produces in chapter 4 are explicated by talk produced by others: his interlocutors trying to work out with him what he wants to tell them. The basic practical, public logic of talk and gesture mutually informing each other remains. However, roles in this process are reallocated as interlocutors take on work typically performed by speakers.

Rather than looking at language development as a process entirely situated within the brain of the individual, it thus becomes possible to investigate creative rearrangements of public practices that adapt, and to some extent compensate for, changes in the abilities of individuals. The practices Chil uses to build meaning and action are not lodged within his body alone, but instead within a unit that includes his interlocutors, the sequential environment, and a semiotically structured material setting. It is here, and not through examination of linguistic output alone, that the ability to constitute meaning within states of talk must be assessed. What we see in a family with an aphasic speaker is a process of development, though one situated within the social group rather than the individual and occurring at the end of the life cycle rather than the beginning.

This raises the question of relationship between work in this volume, which uses the organization of talk-in-interaction to examine aphasic talk, and the long and important research traditions, which have used structural features of the talk produced by aphasics to investigate structures in the brain that make human language possible. The relationship between these approaches can be conceptualized in a number of different ways. First, it is possible to see them as complementary enterprises, one focused on the public organization of human discourse and the other using intricate combinations of formal theories of grammatical organization and actual investigation of particular kinds of damage to the brain to probe the biological infrastructure of language. There is much to be said for this position, especially when one considers the very different kinds of skills and analytic practices required for these different studies.

However, it also possible to see work in these separate domains quite relevant to each other, and indeed this argument is made explicitly by a number of chapters in the collection. Simply put, the organization of utterances, including aspects of their grammatical structure, is shaped by the primordial environment where utterances emerge in the natural world: talk-in-interaction (Schegloff, 1996). In an important article, Kolk and Heeschen (1992) argued that rather than giving a transparent window into processes in the brain, the distinctive grammatical impairments found in the talk of aphasics constituted an adaptation by speakers with limited linguistic abilities to the task of producing meaningful talk for a hearer. In the first part of their chapter here, Heeschen and Schegloff describe a movement from cognitive-experimental to conversation-analytic approaches to the study of aphasia. They note that data for the analysis of aphasic language have typically been obtained in situations that differ in important ways from mundane interaction. Thus, many of the tests used to elicit

samples of talk from aphasics are designed to maximize the length of turns at talk by aphasics, something that contrasts quite markedly with preferences for minimization within conversation itself. Such design of the testing situation of course limits the possibility for co-construction by persons with aphasia and their interlocutors found to be so important in many of the other chapters in this volume. In the first part of their, chapter, Heeschen and Schegloff provide quantitative evidence that "telegraphic utterances" characteristic of aphasic speech are far more common in interactive situations than in non-interactive ones and thus constitute a systematic adaptation that is interactionally motivated. The second part of their chapter examines sequences of talk-in-interaction in detail to investigate why such structures might be useful. For example, the nonfinite verbs characteristic of German aphasic speech both occur at the ends of turns, and thus can signal speaker transition, and contain a rich argument structure. Such structure forms the point of departure for interactive unpacking by the aphasic speaker's interlocutor. These utterances are thus adaptive in that they provide resources that facilitate the systematic co-construction of meaning through multi-party interaction. A most important feature of Heeschen and Schegloff's analysis is demonstration of the rich variety of different kinds of activities that can be done through the silences and talk that are typical of aphasic speech, not only by the person with aphasia but also her interlocutor. This variety, and the necessity for nuanced, detailed study of actual sequences, is further demonstrated in Heeschen and Schegloff (1999).

Many of these themes are further developed in the chapter by Wilkinson, Beeke, and Maxim. Their analysis focuses on the extensive use of proterms, such as "do that" or "do it" in the talk of a man who recently suffered a stroke. They argue that rather than directly reflecting processing difficulties in the brain, such use of proterms constitutes a creative solution to the task of producing meaningful, fluent action within the semiotic environment and time constraints created by the context in which such utterances emerge. A primary component of that context is turns at talk occurring within specific sequential positions within conversation. Wilkinson, Beeke, and Maxim provide a quite detailed analysis of this environment and the problems it poses for someone whose language capacities have been impaired. Thus, the inability of an aphasic speaker to produce the appropriate word at the point where it is due both disrupts the flow of the conversation by interrupting the onward progression of his or her turn and makes noticeable a consequential lack of basic competence. Proform utterances nicely avoid these problems by proceeding smoothly toward completion while using structure in the local context (e.g., talk by other speakers that the proterms tie to, or visible phenomena in the surround such as gesture) to provide relevant information that the aphasic speaker would find difficult to specify lexically. Not only does this solve the problem of accomplishing reference with limited linguistic resources but the attention of the participants remains focused on what is being talked about, rather than shifting to the competence, or lack of it, of the aphasic speaker. The contextual environment, and the interactive tasks posed

in such an environment, thus sheds crucial light on why forms of a particular type occur in the talk of an aphasic speaker.

Many of these same themes arise in a series of chapters here focused on the organization of repair in aphasic conversation. As noted earlier, repair has a particular relevance to the talk of someone whose language ability is impaired since it constitutes a primary set of resources available to parties in conversation for working out the troubles that occur in their talk. Wilkins, Beeke, and Maxim describe a set of practices that enabled a speaker to avoid repair. By way of contrast, Perkins provides extended analysis of some of the contingencies that arise when possibilities for extensive repair do occur. She uses as a point of departure a range of earlier work (Milroy & Perkins, 1992; Perkins, 1995) demonstrating that the organization of repair in aphasic conversation is structurally different from repair in ordinary discourse. Persons with aphasia are not able to rapidly close repair sequences by producing the word(s) that would constitute a successful and appropriate outcome. Such extended repair sequences both disrupt the onward progression of the conversation and draw attention to the distinctive impairments of the person with aphasia. This can lead to a range of subtle but consequential choices as to whether to pursue repair, with its attendant disruption and troubles, and whether a less than entirely adequate outcome will be accepted as sufficient for the purposes at hand. Visible trouble and lack of full understanding may be allowed to pass in order to avoid protracted repair. This deprives the aphasic speaker of the interactive scaffolding demonstrated throughout this volume as necessary for the social accomplishment of meaning. What the aphasic participant is trying to say is not made clear. He or she then becomes something less than a full-fledged participant in the conversation. Repair, understanding, and the constitution of the person with aphasia as a particular kind of social actor are thus intimately linked.

Laakso demonstrates how some of the long, somewhat incoherent utterances characteristic of fluent (Wernicke's) aphasics might emerge interactively from the kinds of choices made during repair sequences. Participants with difficulties in producing appropriate lexical items are affected in different ways at different points in the basic repair trajectory outlined by Schegloff, Jefferson, and Sacks (1977). While *repair outcome* is typically done by producing specific lexical items, and can thus be problematic for aphasics, the *initiation* of repair can be accomplished through operations on emerging units of talk (self-interruption, sound lengthening, etc.) that are not tied to the specifics of particular, potentially problematic, lexical units. Aphasic speakers thus have much more difficulty in successfully accomplishing repair outcome than in initiating repair. Moreover, the different possibilities for action that arise at alternative points in the repair trajectory can aid aphasic speakers in engaging the help of others to work out interactively what they are trying to say, a process documented in most of the chapters in this volume. Thus, when initiating repair, or shortly after this point, speakers having trouble locating a word can solicit the help of others. Indeed, this is done extensively in both normal and aphasic conversation (Goodwin

& Goodwin, 1986; Laakso & Klippi, 1999; Lindsay & Wilkinson, 1999; Oelschaelager and Damcio and most of the other chapters in this volume). However, if interlocutors are unable to or refuse to provide help, the person searching for the word is thrown back upon his or her own resources. For persons suffering from fluent aphasia, this can be especially consequential, since efforts to produce the sought-for lexical item can lead to further problematic lexical items, and thus exponentially extend the length of the repair process. If interlocutors do not join in this process with contributions of their own, what emerges is a very long utterance characterized by extensive efforts to repair and inappropriate lexical items.

Laakso argues that the kind of talk characteristic of Wernicke's aphasics can thus emerge incrementally as the outcome of a series of interactive decisions in the repair process. Interlocutors' failure to participate has the effect of shifting the responsibility for producing the further talk needed to exit from the repair sequence back onto the aphasic speaker alone and of extending that party's utterance. Moreover, Laakso finds that different kinds of interlocutors make significantly different choices when called upon for aid. Spouses help by providing relevant lexical items, and this leads to comparatively short repair sequences. However, therapists may lack the detailed knowledge of the aphasic's life world required to find what is being sought and, moreover, might have a professional commitment to having the aphasic produce as much lexical material on his or her own as possible. Thus, unlike spouses, therapists frequently shift the burden of repair outcome back to the aphasic. General features of the interactive organization of repair thus have strong, situationally variable consequences for the distinctive forms of talk that a person with fluent aphasia produces.

Anward also investigates repair in talk between a fluent aphasic and a therapist. His analysis is in strong agreement with Laakso's that difficulties in lexical retrieval make self-outcome of repair especially difficult for fluent aphasics. However, he explores such issues by taking into account yet another aspect of the interactive organization of the repair process: the footing (Goffman, 1981) or alignment taken up by a speaker and his or her hearers toward visible problems that emerge in talk. When a speaker recognizes that she is making an error, she can use a variety of devices, including laughter and intonation changes, to reframe what is occurring. In Anward's data, when the speaker realizes that she cannot find a necessary word, she frequently produces laughter. Even in the absence of the ability to produce a successful outcome, such reframing demonstrates a basic competence to recognize that what is being said is not right. Despite her hopefully temporary lapse, the speaker lays claim to participation in the larger cognitive and moral order that is visible in competent talk-in-interaction.

Such reframings are consequential for hearers as well as speakers. Jefferson (1979) has demonstrated that laugh tokens can constitute invitations for others to participate in the laughter. Such changes in footing thus constitute an interactive practice for attempting to exit from the repair process without producing a successful outcome. However, this strategy explicitly draws attention to her lapses in com-

petence, and it frequently leads to a request for further repair, with its attendant problems in producing specific lexical items, from the therapist.

A second telling a month later is far more successful in terms of steady progression toward completion, without being sidetracked by extensive repair sequences. The patient is no more successful in word retrieval, but the footing changes that she makes when difficulties arise do not focus attention on her lapses of competence as a speaker. In light of the extensive problems faced by this patient in her retellings, Anward examines the standard story that is being used as a stimulus to elicit talk from the patient. He finds that its complicated temporal organization poses particular problems for the aphasic speaker who systematically gets into trouble when she attempts to integrate temporally distinct episodes within a single syntactic unit.

Oelschlaeger and Damico focus on how participants constitute themselves as competent social actors through the details of how they participate in word search sequences. Unlike the aphasic speakers investigated by Laakso and Anward, the aphasic speaker in this study suffers from nonfluent rather than fluent aphasia, and all of the sequences examined occur between him and wife. However, the basic architecture for repair is the same. Like speakers without any brain impairment, the aphasic speaker uses standard repair initiators to display to others he is having difficulty finding a word. Oelschlaeger and Damico look in detail at how different kinds of choices for participating in this activity constitute the competence and authority of the person with aphasia. It is clear that in many, but by no means all, cases the spouse can be reasonably certain that her solution to the word search task is accurate (e.g., they have participated in the event being described together). However, rather than rushing in immediately when he first displays trouble, and thus interrupting her aphasic husband's attempts to find the word being sought on his own, the wife waits until he signals that he is requesting help. She then offers a candidate solution to the search as a guess, for example, by speaking it with rising intonation, rather than as definitive statement on her part. She thus publicly displays that ultimate authority for what will count as a correct and appropriate solution to the word search continues to reside with the aphasic speaker, despite his visible difficulties in producing the word being sought on his own. This position is ratified when he marks her choice as correct by saying it without uncertainty, with falling intonation. His action also demonstrates his ability to produce the word correctly. Variations on this process, including alternative guess sequences, demonstrate the visible competence of the aphasic speaker.

When this analysis is compared with others in this volume, it becomes clear that within repair sequences the competence and status of the aphasic speaker can be constituted in a range of quite different and very consequential ways. Thus, unlike the speaker here, Chil in chapter 4 did not have the ability to produce a word being sought correctly even after others spoke it. However, like the speaker here, he was treated as the ultimate authority for what would count as an adequate outcome to the search, and indeed he insisted that others pursue quite extended sequences to reach

that point. By way of contrast, some of the aphasic speakers in Perkins's analysis are treated as something less than full-fledged co-participants whose talk must be taken into account by the way in which their interlocutors refuse to do the work required to adequately determine what the aphasic speaker is trying to say. In a quite different fashion, some of the fluent aphasics in Laakso's chapter are put in the position of producing long, rather incoherent utterances when their interlocutors fail to take visible opportunities to help specify the lexical items the aphasic speaker is searching for. Anward finds that repair becomes a crucial locus for consequential shifts in footing. Perhaps because of its pervasiveness and centrality to the interactive constitution of adequate meaning and shared understanding, the repair process provides central resources for formulating the social and intellectual standing of an aphasic participant.

Ramsberger and Menn tie many of the themes in this volume together. First, they explicitly contrast a medical model of aphasia, focused on the individual, with the social perspective visible in all of the chapters in this volume. They also explicitly address the question of how these different frameworks might mutually inform and complement each other. Given the authors' long and distinguished backgrounds in basic aphasia research, and the study of what might constitute effective therapeutic help for people suffering language impairment because of brain damage, their efforts are especially important.

Second, many of the chapters here explore how the abilities of aphasic speakers become fully visible only when they can draw upon an interactive matrix that includes the talk of others and frequently phenomena in their environment. Such settings are sometimes contrasted, implicitly or explicitly, with the medical and therapeutic settings where most assessment of aphasia occurs. Traditionally, tests used to measure the capacities of an aphasic speaker try to control their results by systematically minimizing talk by other participants, which might aid the aphasic speaker in the performance of the test. In an important effort to expand the power of researchers to assess the full, socially enabled communicative abilities of aphasics, Ramsberger and Menn developed a procedure to measure success in talk-in-interaction within a clinic setting. Aphasic speakers were encouraged to use the full resources of talk-in-interaction and co-participation with their interlocutors to make themselves understood as they told the story of what happened on an engrossing television show to someone who had not seen it. With this task, Ramsberger and Menn are able to show statistically reliable differences in communicative success in interaction.

Third, such quantitative differences pose the question, of how a conversational exchange succeeds or fails. To begin to answer this question, Ramsberger and Menn look in detail at the patterns of interaction that occurred between an aphasic speaker and her partner in one telling. The aphasic speaker used creative combinations of bits of talk, gesture, and artifacts to provide information about the story, but rarely expressed complete ideas. Instead, she relied upon the ability of her partner to go beyond what was actually said through processes of inference. This required that the

aphasic speaker perform as an active cognitive actor by engaging in continuous monitoring of how she was being understood.

What Ramsberger and Menn find is quite consistent with themes developed in the other chapters in this volume. They note that such a social and interactive framework can be important not only theoretically but may also have real consequences for people's lives. There seems to be a very limited time frame after damage to the brain for recovery of actual linguistic ability. Social practices for building meaning and action within interaction are thus most important for both the assessment, and the treatment, of the chronic consequences of language impairment.

The chapters here thus explore new analytic frameworks, situated within the analysis of talk-in-interaction, for investigating both the language and the meaning-making practices of speakers suffering from language impairment because of damage to the brain. In addition to expanding our understanding of aphasia, by investigating in detail a series of tragic natural experiments, these chapters also aid our understanding of basic practices structuring the use of language to engage in human interaction.

Finally, the phenomena described in these chapters have implications for how social actors are to be conceptualized. The participants whose language capacities have been impaired are all deeply dependent upon others for their ability to function as consequential linguistic, cognitive, and social actors. Their ability to say something relevant requires the collaboration of others. Moreover, the injury to the brain that impairs language frequently leaves the body damaged in other ways as well. It is not uncommon for someone suffering aphasia after a stroke to be also left with partial or complete paralysis on one side of the body. A person in such a situation requires the help of others for not only economic support but also for such basic body needs as bathing, dressing, and going from place to place. The lives of not only the patient but of spouses and other close companions are forever changed. However, most theories of the basic human competence for language, of the social contracts argued to form the basis for the moral and ethical structure of human society, and of social justice take as their point of departure a self-contained actor fully endowed with all that is necessary to produce language and construct action, what Nussbaum (2001) refers to as "the fiction of competent adulthood." These chapters are consistent with recent work that challenges such an assumption (see, for example, Kittay, 1999). Though lacking the ability to produce fully fluent speech, many of the aphasics examined here display remarkable creativity in finding ways to manipulate language, not as something locked inside the individual but instead as socially distributed ecology of public sign systems, in order to produce, in concert with others, consequential meaning and action. They are able to do what they do precisely because they are not isolated actors but participants within a larger social and cognitive world being structured through ongoing processes of human interaction. John Donne (1923/1624, Devotion XVIII) argued that "[n]o man is an island, entire of himself; every man is a piece of the continent, a part of the main." Recognition that human actors are not self-sufficient agents illuminates basic human capacities. While acknowledging the

terrible consequences and real limitations of impaired language ability, what emerges from these chapters is not a study of how such actors are defective but instead a subtle and detailed picture of their very real competencies and strengths. It is my own hope that, in addition to the theoretical contributions and therapeutic relevance of what these chapters report, they might also help in some small way to change how people with aphasia are perceived and treated in society.

Notes

1. Schegloff's (1968) formulation of *conditional relevance* provides an early but very clear exposition of how each utterance, as a form of action, creates a framework that shapes both the production and interpretation of the actions (and other events) that occur after it (see also Heritage's [1984: 18] discussion of how utterances in conversation are simultaneously *context shaped* and *context renewing*). The most powerful general treatment of how sequential organization is relevant to the organization of talk-in-interaction can be found in the model for turn-taking developed by Sacks, Schegloff, and Jefferson (1974). It is, however, a pervasive theme in most research by conversation analysts (for example, the extensive lectures on conversation by the late Harvey Sacks [1995/1992]).

2. Vygotsky's (1962; see also Cole, 1985) notion of a zone of proximal development in which the development of children's cognitive abilities is shaped through processes of interaction with more skilled adults provides a model of this process at the opposite end of the life cycle.

3. This had led to very interesting models of how talk and gesture might be complementary manifestations of a single underlying psychological process (McNeill, 1992).

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